# GANGA INSTITUTE OF TECHNOLOGY \& MANAGEMENT 

Approved by AICTE, Ministry of Education, New Delhi, Recognized under section 2(f) of UGC Act, 1956 Affiliated to Maharshi Dayanand University, Rohtak ('A+' Grade University Accredited by NAAC) and HSBTE, Panchkula

Reference No. GITAM/
Date

Query 1.3.2: Provide Document showing the experimental learning through project work/field work/internship as prescribed by the affiliating university / affiliating university curriculum. Provide Minutes of the Boards of Studies/ Academic Council meetings with approvals for these courses for the year 2016-17, 2017-18, 2018-19 and 2019-20, 2020-21.

Response: The curriculum scheme prescribed by affiliating University is provided by highlighting the courses offering experimental learning through project work/field work/internship. The minutes of Board of Studies/Academic Council for these courses for the year 2016-17, 2017-18, 2018-19, 2019-20 and 2020-21 are also attached.


2016-17

Semester-III

| Paper Code | Course | University Exams | Internal Assessment | Total Marks | $\begin{aligned} & \text { Credits } \\ & \text { (L:T:P) } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 17MCA33Cl | Computer Graphics | 80 | 20 | 100 | 4:0:0 |
| 17MCA33C2 | Operating Systems | 80 | 20 | 100 | 4:0:0 |
| 17MCA33C3 | Advance Database Systems | 80 | 20 | 100 | 4:0:0 |
| 17MCA33C4 | Data Communication and Computer Networks | 80 | 20 | 100 | 4:0:0 |
| 17MCA33C5 | Object Technology | 80 | 20 | 100 | 4:0:0 |
| 17MCA33CLI | SoftwareLab-5 <br> i) Graphics Programming <br> Using C/C++. <br> ii) UNIX / Shell Programming. | 100 | ---- | 100 | 0:0:3 |
| 17MCA33CL2 | SoftwareLab-6 <br> i) Java Programming <br> ii)ADBMS (PLSQL \& MYSQL) | $100{ }^{*}$ | --- | 100 | 0:0:3 |
|  |  |  |  |  | 26 Credits |

Semester-IV

| Paper Code | Course | University Exams | Internal Assessment | Total Marks | $\begin{aligned} & \text { Credits } \\ & \text { (L:T:P) } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 17MCA34Cl | Advanced Java Programming | 80 | 20 | 100 | 4:0:0 |
| 17MCA34C2 | Object Oriented Analysis and Design using UML | 80 | 20 | 100 | 4:0:0 |
| 17MCA34DAI/ <br> 17MCA34DA2/ <br> 17MCA34DA3 | i) Theory of Computation or <br> ii) Software Engineering or <br> iii) Multimedia and Its <br> Applications | 80 | 20 | 100 | 4:0:0 |
| 17MCA34DB1/ 17MCA34DB2/ 17MCA34DB3 | i) Analysis and Design of Algorithms or <br> ii) Computer Security or iii)Digital Image Processing | 80 | 20 | 100 | 4:0:0 |
| 17MCA34C3 | Artificial Intelligence and Expert System | 80 | 20 | 100 | 4:0:0 |
| 17MCA34CLI | SoftwareLab-7 <br> Advance Java Programming | 100 | --- | 100 | 0:0:3 |
| 17MCA34CL2 | Software Lab-8 <br> i) Object Oriented Analysis and Design using UML <br> ii) PROLOG | $10{ }^{*}$ | --- | 100 | 0:0:3 |
| 17MCA34C4 | Minor Project-I | - | 100 | 100 | 0:2:0 |
|  | Total |  |  |  | 28 Credits |



Total Credits= $\mathbf{3 1}$ Credits

* 20 marks out of 100 will be based on the evaluation/assessment of the candidate in Test(s) and Assignment(s) during the semester, which will be forwarded by the Head of Dept./Director to the Examiner(s). Further, both practical exams of a semester may be conducted on the same day in 2 sittings each maximum of 3 hours.



## MCA Third Year

| Semester-V |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Paper Code | Course | University Exams | Internal Assessment | Total Marks | $\begin{aligned} & \text { Credits } \\ & \text { (L:T:P) } \end{aligned}$ |
| 18MCA3SCI | Advanced Technology | 80 | 20 | 100 | 4:0:0 |
| 18MCA35C2 | Soft Computing | 80 | 20 | 100 | 4:0:0 |
| 18MCA35C3 | Data Warehousing and Data Mining | 80 | 20 | 100 | 4:0:0 |
| 18MCA35DA1/ 18MCA35DA $2 /$ 18MCA35DA3 | (i) Cloud Computing or <br> (ii) Big Data Analytics or <br> (iii) Software Testing and Quality Assurance | 80 | 20 | 100 | 4:0:0 |
| 18MCA35DB1/ 18MCA35DB2/ 18MCA35DB3 | (i) Internet of Things or <br> (ii) Mobile Computing or <br> (iii) Embedded Systems | 80 | 20 | 100 | 4:0:0 |
| 18MCA35CLl | Software Lab-9 <br> .NET Programming Using C\# | $10{ }^{*}$ | --- | 100 | 0:0:3 |
| 18MCA35CL2 | Software Lab-10 <br> Soft Computing | 100 | ---- | 100 | 0:0:3 |
| 18MCA35C6 | Minor Project-II | - | 100 | 100 | 0:2:0 |
|  | Total |  |  |  | 28 Credits |
| Open Elective (0) |  |  |  |  |  |
| To be Chosen from the pool of Open Electives provided by the University (excluding the open elective prepared by the Department of Comp Sc. \& Appls.) |  |  |  |  | 3 |

Total Credits= 31 Credits
20 marks out of 100 will be based on the evaluation/assessment of the candidate in Test(s) and Assignment(s) during the semester, which will be forwarded by the Head of Dept./Director to the Examiner(s). Further, both practical exams of a semester may be conducted on the same day in 2 sittings each maximum of 3 hours.

## Semester-VI

| Paper Code | Course | University <br> Exams | Internal <br> Assessment | Total <br> Marks | Credits |
| :--- | :--- | :---: | :---: | :---: | :---: |
| 18MCA36C1 | Major Project | 400 | 100 | 500 | 20 Credits |
|  | Grand Total of 3 Years/Credits |  |  |  |  |



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## MAHARSHI DAYANAND UNIVERSITY, ROHTAK SCHEME OF STUDIES \& EXAMINATIONS <br> B.Tech 2nd YEAR CIVIL ENGINEERING, $3^{\text {rd }}$ SEMESTER <br> Proposed 'F' Scheme w.e.f 201D

| Subject Code | Subject Name | L | T | P |  | Total | Theory Marks | Class <br> Marks | Practical Marks | Total Marks |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{array}{\|c} \text { MAT-201-F } \\ \text { Or } \\ \text { HUM-201-F } \end{array}$ | Mathematics-III <br> Or <br> Engineering <br> Economics | 3 | 1 | 0 |  | 4 | 100 | 50 | 0 | 150 |
| HUM-203-F | Fundamental of Management | 3 | 1 | 0 |  | 4 | 100 | 50 | 0 | 150 |
| CE-201-F | Structural <br> Analysis-I | 3 | 1 | 0 |  | 4 | 100 | 50 | 0 | 150 |
| CE-203-F | $\begin{gathered} \hline \text { Building } \\ \text { Construction } \\ \text { Materials } \\ \hline \end{gathered}$ | 3 | 1 | 0 |  | 4 | 100 | 50 | 0 | 150 |
| CE-205-F | Fluid Mechanics-I | 3 | 1 | 0 |  | 4 | 100 | 50 | 0 | 150 |
| CE-207-F | Surveying-I | 3 | 1 | 0 |  | 4 | 100 | 50 | 0 | 150 |
| CE-209-F | Building Drawings | 1 | 0 | 3 |  | 4 | 0 | 25 | 25 | 50 |
| CE-211-F | Structural Analysis-I Lab | 0 | 0 | 2 |  | 2 | 0 | 25 | 25 | 50 |
| CE-213-F | Fluid Lab-I Lab | 0 | 0 | 2 |  | 2 | 0 | 25 | 25 | 50 |
| CE-215-F | Surveying-I Lab | 0 | 0 | 2 |  | 2 | 0 | 50 | 50 | 100 |
|  | Total | 19 | 7 | 9 |  | 35 | 600 | 425 | 125 | 1150 |



MAHARSHI DAYANAND UNIVERSITY, ROHTAK SCHEME OF STUDIES \& EXAMINATIONS B.Tech 2nd YEAR CIVIL ENGINEERING, $4^{\text {th }}$ SEMESTER
Proposed 'F' Scheme effective w.e.f 2010

| Subject Code | Subject <br> Name | L | T | P | Total | Theory <br> Marks | Class <br> Marks | Practica <br> IMarks | Total <br> Marks |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| MAT-201-F <br> Or 201-F | Maths III <br> Or <br> Engg. <br> Economics | 3 | 1 | 0 | 4 | 100 | 50 | - | 150 |
| CE-202-F | Structural <br> Analysis-II | 3 | 1 | 0 | 4 | 100 | 50 | 0 | 150 |
| CE-204-F | Fluid <br> Mechanics- <br> II | 3 | 1 | 0 | 4 | 100 | 50 | 0 | 150 |
| CE-206-F | Design of <br> Concrete <br> Structures-I | 3 | 1 | 0 | 4 | 100 | 50 | 0 | 150 |
| CE-208-F | Surveying-II | 3 | 1 | 0 | 4 | 100 | 50 | 0 | 150 |
| CE-210-F | Construction <br> and concrete <br> technology | 3 | 1 | 0 | 4 | 100 | 50 | 0 | 150 |
| CE-214-F | Structural <br> Analysis-II <br> Lab | 0 | 0 | 2 | 2 | 0 | 25 | 25 | 50 |
| CE-216-F | Fluid <br> mechanics <br> Lab | 0 | 0 | 2 | 2 | 0 | 25 | 25 | 50 |
| CE-218-F | Surveying <br> Lab | 0 | 0 | 2 | 2 | 0 | 25 | 25 | 50 |
| GP-202-F | Concrete <br> Lab | 0 | 0 | 2 | 2 | 0 | 25 | 25 | 50 |
| General <br> Proficiency | - | - | 2 | 2 | 50 | - | - | 50 |  |
| Total | 18 | 6 | 10 | 34 | 650 | 400 | 100 | 1150 |  |

## Note:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of Calculator and other materials will not be permitted in the examination.
2. Each student has feundergo practical training of 6 weeks during summer vacation and its evaluation shal pei carried put in the V semester.


# MAHARSHI DAYANAND UNIVERSITY, ROHTAK <br> SCHEME OF STUDIES \& EXAMINATIONS B.Tech. $3^{\text {rd }}$ YEAR CIVIL ENGINEERING, SEMESTER- V <br> Proposed " $F$ " Scheme effective from 2011-12 

| Subject <br> Code | Subject Name | $\mathbf{L}$ | $\mathbf{T}$ | $\mathbf{P}$ | Total | Sessional <br> Marks | Theory <br> Marks | Sem <br> Practical <br> Marks | Total Marks |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| CE-301-F | Design of Steel <br> Structure- I | 3 | 1 | - | 4 | 50 | 100 | 0 | 150 |
| CE-303-F | Transportation Engg--I | 3 | 1 | 0 | 4 | 50 | 100 | 0 | 150 |
| CE-305-F | Water Supply- <br> Treatment | 3 | 1 | 0 | 4 | 50 | 100 | 0 | 150 |
| CE-307-F | Soil Mechanics | 3 | 1 | 0 | 4 | 50 | 100 | 0 | 150 |
| CE-309-F | Numerical Methods And <br> Computing Techniques | 3 | 1 | 0 | 4 | 50 | 100 | 0 | 150 |
| CE-311-F | Hydrology | 3 | 1 | 0 | 4 | 50 | 100 | 0 | 150 |
| CE-313 F | DSS-Drg.Lab | 2 | 0 | 3 | 5 | 25 |  | 25 | 50 |
| CE-315-F | Soil Mechanics Lab | 0 | 0 | 2 | 2 | 25 | 0 | 25 | 50 |
| CE-317 F | Transportation Lab-I | 0 | 0 | 2 | 2 | 25 | 0 | 25 | 50 |
| CE-319-F | Survey Camp | 0 | 0 | 0 | 0 | 50 | 0 | 0 | 50 |
| CE-321-F | Auto Cad Lab | 0 | 0 | 2 | 2 | 25 | 0 | 25 | 50 |
|  | Total | 20 | 6 | 9 | 35 | 450 | 600 | 100 | 1150 |

## Note:

1) Students will be allowed to use non-programmable scientific calculator. However, sharing of calculator will not be permitted in the examination.
2) Assessment of Practical Training-I, undergone at the end of IV semester, will be based on seminar, viva-voce, report and certificate of practical training obtained by the student from the industry. According to performance letter grades A, B, C, F are to be awarded. A student who is awarded ' F ' grade is required to repeat Practical Training.


## MAHARSHI DAYANAND UNIVERSITY, ROHTAK

SCHEME OF STUDIES \& EXAMINATIONS B.Tech. $3^{\text {rd }}$ YEAR CIVIL ENGINEERING, SEMESTER- VI Proposed "F" Scheme effective from 2011-12

| Subject <br> Code | Subject Name | $\mathbf{L}$ | $\mathbf{T}$ | $\mathbf{P}$ | Total | Class <br> Marks | Sem <br> Theory <br> Marks | Sem <br> Practical <br> Marks | Total <br> Marks |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| CE-302-F | Design of Concrete Structures- <br> II | 4 | 2 | 0 | 6 | 50 | 100 | 0 | 150 |
| CE-304-F | Irrigation Engineering-I | 3 | 1 | 0 | 4 | 50 | 100 | 0 | 150 |
| CE-306-F | Geotechnology | 3 | 1 | 0 | 4 | 50 | 100 | 0 | 150 |
| CE-308-F | Sewerage And Sewage <br> Treatment | 3 | 1 | 0 | 4 | 50 | 100 | 0 | 150 |
| CE-310-F | Transportation Engg.-II | 3 | 1 | 0 | 4 | 50 | 100 | 0 | 150 |
| CE-312-F | Engineering Geology | 3 | 1 | 0 | 4 | 50 | 100 | 0 | 150 |
| CE-314-F | Geotechnology Lab | 0 | 0 | 2 | 2 | 25 | 0 | 25 | 50 |
| CE-316-F | Transportation Engg.-II Lab | 0 | 0 | 2 | 2 | 25 | 0 | 25 | 50 |
| CE-318-F | Engineering Geology Lab | 0 | 0 | 2 | 2 | 25 | 0 | 25 | 50 |
| CE-320-F | Environmental Engg. Lab | 0 | 0 | 2 | 2 | 25 | 0 | 25 | 50 |
| GPCE-318-F | General Proficiency | 0 | 0 | 1 | 1 | 0 | 0 | 50 | 50 |
|  | Total | 19 | 7 | 9 | 35 | 400 | 600 | 150 | 1150 |

## NOTE:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of Calculator will not be permitted in the examination.
2. Each student has to undergo practical training of 6 weeks during summer vacation and its evaluation shall be carried out in the VII semester.


# MAHARSHI DAYANAND UNIVERSITY, ROHTAK <br> SCHEME OF STUDIES \& EXAMINATIONS 

B. Tech. $4^{\text {th }}$ YEAR CIVIL ENGINEERING, SEMESTER-VII
(Scheme-F)

## EFFECTIVE FROM THE SESSION 2012-13

| Subject Code | Subject Name | Teaching schedule |  |  |  | Marks <br> For class <br> work | Marks for Examination |  |  Dotal <br> Marks  | Duration of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | $\mathbf{P}$ | Total |  | Theory | Practical |  |  |
| CE-401-F | Design of Steel Structure-II | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| CE-403-F | Disaster Mitigation and Management | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 4 |
| CE-405-F | Estimating and Costing | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| CE-407-F | Irrigation Engg-II | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| - -------- | Elective | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| CE-451-F | Hydro Power Engg. | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| CE-453-F | Ground Water Engg | 3 | 1 | 0 | 4 | 50 | 100 | 0 | 150 | 3 |
| CE-453-F |  | 0 | 0 | 2 | 2 | 50 | 0 | 50 | 100 | 3 |
| CE-455-F | Irrigation Drawing Lab | 0 | 0 | 2 |  |  | - | - | - |  |
| CE-457-F | Practical Training - II | - | - | 2 | - | - |  |  |  |  |
| $\begin{aligned} & \text { GFCE- } \\ & 459-F \end{aligned}$ | General Fitness for the Profession | - | - | - |  | - | ${ }^{-}$ | 50 | 50 |  |
|  | Total | 21 | 7 | 4 | 32 | 400 | 700 | 100 | 1200 |  |

## Note:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of calculator will not be permitted in the examination.
2. Student will be permitted to opt for any one elective run by the department. However, the departments will offer only those electives for which they have expertise. The choice of the students for any elective shall not be a binding for the department to offer, if the department does not have expertise.
3. Assessment of Practical Training-II, carried out at the end of VI semester, will be based on seminar, viva-voce and project report of the student. According to performance letter grades A, B, C, F are to be awarded. A student who is awarded ' $F$ ' grade is required to repeat Practical Training.

## ELECTIVES

1) CE -409-F - Energy planning and management
2) CE-411-F - Environmental pollution and control
3) $\mathrm{CE}-417-\mathrm{F} \quad$ - Finite Element Methods
4) CE-421-F - Environmental impact and management
5) CE-423-F - Elements of Earth Quake Engg.
6) CE-433-F - Hydraulic System Modeling


# MAHARSHI DAYANAND UNIVERSITY, ROHTAK <br> SCHEME OF STUDIES \& EXAMINATIONS 

## B.Tech. $4^{\text {th }}$ YEAR CIVIL ENGINEERING, SEMESTER- VIII <br> (Scheme-F)

## EFFECTIVE FROM THE SESSION 2012-13

|  |  |  | Subject | Internal <br> Marks | External <br> Marks |
| :--- | :--- | :---: | :---: | :---: | :---: |
| 1. | CE-402-F | Industrial Training/Institutional Project Work | 150 | 150 | 300 |

## Note:

The students are required to undergo Industrial Training in State/Central PWD, Railways and other Originations or Institutional Project Work of duration not less than 4 months in a reputed organization or concerned institute. The students who wish to undergo industrial training, the industry chosen for undergoing the training should be at least a private limited company. The students shall submit and present the mid-term progress report at the Institute. The presentation will be attended by a committee. Alternately, the teacher may visit the Industry to get the feedback of the students.

The final viva-voce of the Industrial Training or Institutional Project Work will be conducted by an external examiner and one internal examiner appointed by the Institute. External examiner will be from the panel of examiners submitted by the concerned institute approved by the Board of Studies in Engg. \& Technology. Assessment of Industrial Training or Institutional Project Work will be based on seminar, viva-voce, report and certificate of Industrial Training or Institutional Project Work obtained by the student from the industry or Institute.

The internal marks distributions for the students who have undergone Industrial Training consist of $\mathbf{5 0}$ marks from the industry concern and $\mathbf{1 0 0}$ marks by the committee members consisting of faculty members of concerned department of the parent institute.

The teachers engaged for Institutional Project work shall have a workload of 2 hours per group (at least 4 students) per week.


# Maharshi Dayanand University, Rohtak 

## SCHEME OF STUDIES \& EXAMINATION

 MASTER OF TECHNOLOGY (STRUCTURAL DESIGN)
## SEMESTER-III

EFFECTIVE FROM 2012-13

| Course No. | Course Title | Teaching Schedule |  |  | Marks |  | Total | Duration of Exam (Hrs) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Sessional | Exam. |  |  |
| MTSD 301 | Design of Structures- III | 4 | - | - | 50 | 100 | 150 | 3 |
|  |  |  |  |  |  | 100 | 150 | 3 |
| MTSD 302 | Professional Practices | 4 | - | - | 50 | 100 | 150 | 3 |
|  | Elective-III | 4 | - | - | 50 | 50 | 100 | 3 |
| MTSD 303 | Computational Laboratory-III | - | - | 3 | 50 | 50 | 50 |  |
| MTSD 304 | Seminar \& Technical Writing | - |  | 2 | 100 | - | 100 |  |
| MTSD 305 | Dissertation Phase-I | - |  | 4 | 100 |  |  |  |
|  |  | 12 | - | 9 | 350 | 350 | 700 |  |
| TOTAL |  |  |  |  |  |  |  |  |

1. The paper setter shall set each theory paper of 100 marks covering entire syllabus. However the Examiner shall evaluate the performance of the student in the theory paper finally by assigning one of the grades out of $A+A, B, C, D \& E$. The examination of practical courses shall also be evaluated on the basis of these grades.
2. The sessionals of theory and practical courses shall also be evaluated in the basis of these grades.
3. The choice of student for any elective shall not be binding on the department to offer it.
4. The grading system is define at the end of scheme of studies \& examinations and will be supplied by the University to the examiner(s).


## Maharshi Dayanand University, Rohtak

 SCHEME OF STUDIES \& EXAMINATION MASTER OF TECHNOLOGY (STRUCTURAL DESIGN) SEMESTER-IVEFFECTIVE FROM 2012-13

| Course No. | Course Title | Teaching <br> Schedule |  | Marks |  | Total <br>  | L | Duration <br> of Exam <br> (Hrs) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| MTSD 401 | Dissertation | - | - | 24 | Sessional | Exam. |  |  |
| TOTAL |  |  |  |  |  | 400 | 600 | 3 |

NOTE:

1. The sessionals of Dissertation shall be evaluated on the basis of grades i.e $A+, A, B, C, D \& E$.
2. The Dissertation shall be evaluated by an examination committee consisting of the head of the department, Dissertation Supervisor and one External examiner. The evaluation should be based on above grades.
3. The grading system is define at the end of scheme of studies \& examinations and will be supplied by the University to the examiner(s)


## List of Electives:

## Elective- I

MTSD 107 - Composite Structures
MTSD 108 - Analysis and Design of Plates \& Shells
MTSD 109 - Advanced Foundation Design and Geotechnics
MTSD 110 - Material Science

## Elective- II

MTSD 207- Advanced Steel Design
MTSD 208 - Advanced Reinforced Concrete Design

MTSD 209-Earth Retaining Structures
MTSD 210-Construction Failures

## Elective- III

MTSD 306- High Rise Structures
MTSD 307- Design of Hydraulic Systems
MTSD 308- Design Of Bridges


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## M.D UNIVERSITY <br> SCHEME OF STUDIES AND EXAMINATION B.TECH. II YEAR (COMPUTER SCIENCE \& ENGINEERING) <br> SEMESTER III

' $F$ ' Scheme effective from 2010-11

| $\begin{aligned} & \text { Sl. } \\ & \text { No } \end{aligned}$ | Course No. | Subject | Teaching Schedule |  |  |  | Examination Schedule <br> (Marks) |  |  |  | Duration of Exam (Hours) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P | Total | Mark s of Class work s | Theory | Practi cal | Total |  |
| 1 | $\begin{aligned} & \text { MATH-201-F } \\ & \text { OR } \\ & \text { HUM-201-F } \end{aligned}$ | Mathematics III <br> Common to <br> (CSE,IT,ME,ECE,BM <br> E,EE,EEE,E\&I,I\&C) OR ENGG. ECONOMICS | 3 | 2 | - | 5 | 50 | 100 | - | 150 | 3 |
| 1 | CSE-201 F | Data Structures Using C (CSE,ECE,IT,EI) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 3 | CSE-203 F | Discrete Structures (CSE,IT) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 4 | EE-217-F | Digital \& Analog Communication (CSE,IT) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 5 | EE-204-F | Digital Electronics (Common with $4^{\text {th }}$ Sem. - EE,EL,EI \& IC) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 6 | HUM-203 F | Fundamental of Management (Common for all branches) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 7 | IT-201-F | PC Lab (CSE,IT) | - | - | 3 | 3 | 50 | - | 50 | 100 | 3 |
| 8 |  | Data Structures Using | - | - | 2 | 2 | 25 | - | 25 | 50 | 3. |
|  | CSE-205-F | C Lab (CSE,ECE,IT,EI) |  |  |  |  |  |  |  |  |  |
| 9 |  | Digital Electronics Lab (CSE,IT \& Common with $4^{\text {th }}$ Sem. EE,EL,EI \& IC) | - | - | 3 | 3 | 50 |  | 50 | 100 | 3 |
|  | EE-224-F | EE,EL,EI \& IC) | 18 | 7 | 8 | 33 | 425 | 600 | 125 | 1150 |  |

NOTE: 1. Students will be allowed to use non-programmable scientific calculator. However, sharing of Calculator will not be permitted in the examination.
M.D UNIVERSITY

SCHEME OF STUDIES AND EXAMINATION
B.TECH. II YEAR (COMPUTER SCIENCE
B.TECH. II YEAR (COMPUTER SCIENCE \& ENGINEERING)

SEMESTER - IV
' $F$ ' Scheme effective from 2010-11


Note:

1) Students will be allowed to use non-programmable scientific calculator. However, sharing of
2) Calculator will not be permitted in the examination.
3) Each student has to undergo practical training of 6 weeks during summer vacation and its evaluation shall be carried out in the $V$ semester.

## M. D. UNIVERSITY, ROHTAK

## Scheme of studies \& Examination

## Bachelor of Technology (Computer Science \& Engineering)

Semester - V
' $F$ ' Scheme Effective from 2010-11

| S. No. | Course No. | Subject | Teaching Schedule |  |  |  | $\begin{aligned} & \text { Examination Schedule } \\ & \text { (Marks) } \end{aligned}$ |  |  |  | Duration of Exam (Hours) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P | Total | Marks of Class work | Theory | Practic al | Total |  |
| 1 | CSE-301 F | Principles of Operating System (CSE,IT) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 2 | EE-309-F | Microprocessors and Interfacing (EL,CSE,IT,EI, IC, EEE, AEI) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 3 | CSE-303-F | Computer Graphics (CSE,IT) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 4 | CSE-305-F | Theory of Automata Computation | 3 | 1 |  | 4 | 50 | 100 | - | 150 | 3 |
| 5 | CSE 307-F | Web Development (Common with IT - VI Sem) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 6 | IT-204-F | Multimedia Technologies (Common with IT- IV- Sem) | 3 | - | - | 3 | 50 | 100 | - | 150 | 3 |
| 7 | CSE-309-F | Computer Graphics Lab. (CSE,IT) | - | - | 3 | 3 | 25 | - | 25 | 50 | 3 |
| 8 | CSE-311-F | Web Development \& Core JAVA Lab. (Common with 6 Sem.-IT) | - | - | 2 | 2 | 25 |  | 25 | 50 | 3 |
| 9 | IT-208-F | Multimedia Tech. Lab (Common with IT-IVSem) | - | - | 2 | 2 | 25 | - | 25 | 50 | 3. |
| 10 | EE-329-F | Microprocessors and Interfacing Lab. (EL,CSE,IT,EI, IC, EEE, AED. | - | - | 2 | 2 | 25 | - | 25 | 50 | 37 |
| 11. | CSE-313-F | O.S. Lab. (CSE, IT) | - | - | 2 | 2 | 25 | - | 25 | 50 | - |
| 12 | CSE-315-F | Practical Training-I | - | - | 2 | 2 | - | - | - | - | $-1$ |
|  |  | TOTAL | 18 | 5 | 13 | 36 | 425 | 600 | 125 | 1150 |  |

## Note:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of calculator will not be permitted in the examination.
2. Assessment of Practical Training-I, undergone at the end of IV semester, will be based on seminar, viva-voce, report and certificate of practical training obtained by the student from the industry. According to performance letter grades A, B, C, F are to be awarded. A student who is awarded „F" grade is required to repeat Pradtical Training.


## M.D. UNIVERSITY, ROHTAK

## Scheme of studies \& Examination Bachelor of Technology (Computer Science \& Engineering) <br> Semester - VI <br> ' $F$ ' Scheme Effective from 2010-11

| S. No. | Course No. | Subject | Teaching Schedule |  |  |  | Examination Schedule (Marks) |  |  |  | Duration of Exam (Hours) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P | Marl of Total wor | ss | Theory | Practi cal | Total |  |
| 1 | CSE-302 F | Principles of Software Engineering (CSE,IT) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 2 | CSE-304 F | Intelligent Systems (CSE,IT) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 3 | IT-305 F | $\begin{aligned} & \text { Computer Networks (CSE, } \\ & \text { EL \& Common with 5 Sem. } \\ & \text {-IT, AEI) } \end{aligned}$ | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 4 | IT-303 F | Systems Programming \& System Administration (Common with 5 Sem - IT) | 3 | 1 |  | 4 | 50 | 100 | - | 150 | 3 |
| 5 | CSE-306 F | Analysis \& Design of Algorithms | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 6 | EE-310-F | Digital System Design (EL,EE,CSE,EI, IC, AEI) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 7 | CSE-308 F | $\begin{aligned} & \text { Intelligent Systems Lab. } \\ & \text { (CSE,IT) } \end{aligned}$ | - | - | 3 | 3 | 25 | - | 25 | 50 | 3 |
| 8 | EE-330-F | Digial System Design Lab. (EL,EI, IC,CSE, AEI) | - | - | 3 | 3 | 25 | - | 25 | 50 | 3 |
|  |  | Computer Network lab | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| 9 | $\frac{\text { CSE-310-F }}{\text { CSE-312-F }}$ | Visual Programming Lab. | $\cdots$ | $\square$ | 2 | 2 | $\frac{25}{25}$ | - | 25 | 50 | 3 |
|  | CSE-312-F |  | $\cdots$ | - |  | $\cdots$ | 50 | - | - | 50 | 3 |
| 9 | GP-302-F | General Proficiency |  |  |  |  |  |  |  |  | - |
|  |  | TOTAL | 18 | 6 | 10 | 34 | 450 | 600 | 100 | 1150 |  |

Note:

1. Each student has to undergone practical training of 6 weeks during summer vacation and its evaluation shall be carried out in the VII semester.
2. Students will be allowed to use non-programmable scientific calculator. However, sharing of calculator will not be permitted in the examination.

## M.D.UNIVERSITY, ROHTAK Scheme of Studies / Examination

Bachelor of Technology (Computer Science \& Engineering) SEMESTER VII
'F' Scheme Effective from 2012-13

| Sl. No. | Course No. | Subject | Teaching Schedule |  |  |  | Examination Schedule (Marks) |  |  |  | Duration of Exam <br> (Hours) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P | Total | Marks of Class work | Theory | Practical | Total |  |
| 1 | CSE-401 F | Advanced Computer Architecture | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 2 | CSE-403 F | Software Project Management (CSE.IT) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 3 | CSE-405 F | Compiler Design | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 4 | CSE-407 F | Neural Networks | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 5 | CSE-409 F | Advanced Java (CSE, IT) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 6 |  | Elective | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 7 | CSE-411 F | Compiler Design Lab | - | - | 2 | 2 | 25 | - | 50 | 75 | 3 |
| 8 | CSE-413 F | Neural Networks Using MATLAB | - | - | 2 | 2 | 25 | - | 50 | 75 | 3 |
| 9 | CSE-415 F | Advanced JAVA <br> Lab (CSE, IT) | - | - | 3 | 3 | 50 | -- | 100 | 150 | 3 |
| 10 | CSE-417 F | PRATICAL TRAINING-II | - | - | $-$ | - |  | - | - |  |  |
|  |  | TOTAL | 18 | 6 | 7 | 31 | 400 | 600 | 200 | 1200 |  |

## List of Electives

| 1. | CSE-423 F | Distributed Operating System |
| :--- | :--- | :--- |
| 2. | IT-465F | Network Security \& Management |
| 3. | CSE-421 F | Real Time Systems |
| 4. | CSE-435 F | Advanced Database Management Systems |
| 5. | IT-467 F | Computer Software Testing |
| 6. | TT-473 F | High Speed Networks |

## Note:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of calculator will not be permitted in the examination.
2. Student will be permitted to opt for any one elective run by the department. However, the departments will offer only those electives for which they have expertise. The choice of the students for any elective shall not be a binding for the department to offer, if the department does not have expertise.
3. Assessment of Practical Training-II, carried out at the end of VI semester, will be based on seminar, viva- voce and project report of the student. According to performance letter grades A, B, C, F are to be awarded. A student who is awarded ' $F$ ' grade is required to repeat Practical Training.


## MAHARSHI DAYANAND UNIVERSITY, ROHTAK <br> SCHEME OF STUDIES \& EXAMINATIONS <br> B.Tech. $4^{\text {th }}$ YEAR COMPUTER SC \& ENGINEERING, SEMESTER-VIII

(Scheme-F)

## EFFECTIVE FROM THE SESSION 2012-13

|  |  |  | Internal <br> Marks | External <br> Marks | Total Marks |
| :--- | :---: | :---: | :---: | :---: | :---: |
| 1. | CSE-402-F | Industrial Training/Institutional Project Work | 150 | 150 | 300 |

## Note:

The students are required to undergo Industrial Training or Institutional Project Work of duration not less than 4 months in a reputed organization or concerned institute. The students who wish to undergo industrial training, the industry chosen for undergoing the training should be at least a private limited company. The students shall submit and present the mid-term progress report at the Institute. The presentation will be attended by a committee. Alternately, the teacher may visit the Industry to get the feedback of the students.

The final viva-voce of the Industrial Training or Institutional Project Work will be conducted by an external examiner and one internal examiner appointed by the Institute. External examiner will be from the panel of examiners submitted by the concerned institute approved by the Board of Studies in Engg. \& Technology. Assessment of Industrial Training or Institutional Project Work will be based on seminar, viva-voce, report and certificate of Industrial Training or Institutional Project Work obtained by the student from the industry or Institute.

The internal marks distributions for the students who have undergone Industrial Training consist of 50 marks from the industry concern and 100 marks by the committee members consisting of faculty members of concerned department of the parent institute.

The teachers engaged for Institutional Project work shall have a workload of 2 hours per group (at least 4 students) per week.

M.D. UNIVERSITY, ROHTAK (HARYANA)

SCHEME OF STUDIES \& EXAMINATION FOR MASTER OF TECHNOLOGY COURSE IN

| SEMESTER- <br> Course No. | Course Title | Teaching Schedul |  |  | Marks |  | Total | Credits | Duration of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | $\mathbf{P}$ | Sessional | Exam |  |  |  |
| MTCE-701A | Knowledge based system design | 4 | - | - | 50 | 100 | 150 | 4 | 3 |
| MTCE-703A | Advanced database management syt. | 4 | - | - | 50 | 100 | 150 | 4 | 3 |
| MTCE-705A | System \& Network Administration | 4 | - | - | 50 | 100 | 150 | 4 | 3 |
| MTCE-707A | Elective III | 4 | - | - | 50 | 100 | 150 | 4 | 3 |
| MTCE-709A | Al lab | - | - | 4 | 50 | 100 | 150 | 4 | 3 |
| MTCE-711A | Minor Project | - | - | 4 | 50 | 50 | 100 | 2 | 3 |
| MTCE-713A | Seminar | - | - | 2 | 50 | - | 50 | 1 | - |
| Total |  | 16 | - | 10 | 350 | 500 | 850 | 21 | - |

## ELECTIVE-1II

MTCE 707A(A) Software Project Management
MTCE 707A(B) Security of Information Systems
Note :

1. The paper setter shall set each theory paper of 100 marks covering the entire syllabus and the same will be evaluted on marks.
2. The Sessionable of theory/Practical Courses shall also be evaluated on the basis of marks.
3. The choice of students for any elective shall not be binding on the Deptt. to offer it.
M.D. UNIVERSITY, ROHTAK (HARYANA)

SCHEME OF STUDIES \& EXAMINATION FOR MASTER OF TECHNOLOGY COURSE IN COMPUTER SCIENCE ENGINEERING
SEMESTER-IV

| Course No. | Course Title | Marks |  |  | Credits |
| :--- | :--- | :--- | :--- | ---: | ---: |
|  |  | Sessional | Exam | Total |  |
| MTCE-702 A | Dissertation \& Viva | 100 | 400 | 500 | 12 |

Note :
The university shall combine both sessional and external exam. marks and compute the overall grade of the subject on the guidelines approved by the university.


## M.D. UNIVERSITY <br> SCHEME OF STUDIES AND EXAMINATION <br> M.TECH 1st YEAR (COMPUTER SCIENCE \& ENGINEERING) <br> SEMESTER 1st <br> CBCS Scheme effective from 2016-17

| $\begin{aligned} & \text { Sr. } \\ & \text { No } \end{aligned}$ | Course No. | Subject | Teaching Schedule |  |  |  | Examination Schedule (Marks) |  |  |  | Duratio <br> n of Exam (Hours) | No of hours/ week |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P | Total Credi ts | Marks of Class works | Theor <br> y | Practi cal | Total |  |  |
| 1 | 16CSE21C1 | Data Communication and Computer Networks | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 2 | 16CSE21C2 | Advanced Operating Systems | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 3 | 16CSE21C3 | Advanced Database <br> Management System | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 4 | 16CSE21C4 | Data Warehouse and Mining | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 5 | 16CSE21C5 |  | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 6 | 16CSE21C6 | Seminar | - |  | - | 2 | 50 | - | - | 50 |  | 2 |
| 7 | 16CSE21CL1 | Advanced Operating Systems Lab | - | - | 2 | 2 | 50 | - | 50 | 100 | 3 | 2 |
| 8 | 16CSE21CL2 | Advanced Database Management System Lab | - | - | 2 | 2 | 50 | - | 50 | 100 | 3 | 2 |
|  |  | TOTAL | 26 |  |  |  |  |  |  |  |  |  |

## NOTE:

Examiner will set nine question in total. Question one will be compulsory and will comprises of all section and remaining eight questions to be set by taking two questions from each unit. The students have to attempt five questions in total, first being compulsory and selecting one from each Unit.


## M.D. UNIVERSITY <br> SCHEME OF STUDIES AND EXAMINATION M.TECH 1st YEAR (COMPUTER SCIENCE \& ENGINEERING) <br> SEMESTER 2nd CBCS Scheme effective from 2016-17

| $\begin{aligned} & \text { Sr. } \\ & \text { No } \end{aligned}$ | Course No. | Subject | Teaching Schedule |  |  |  | Examination Schedule (Marks) |  |  |  | Durat ion of Exam (Hour s) | No of hours /wee k |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P | $\begin{gathered} \text { Tota } \\ \text { I } \\ \text { Cred } \\ \text { its } \end{gathered}$ | Marks of Class works | Theor y | Practi cal | Total |  |  |
| 1 | 16CSE22C1 | Soft Computing | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 2 | 16CSE22C2 | Algorithm Design | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 3 | 16CSE22C3 | Seminar | - |  | 2 | 2 | 50 | - | - | 50 | - | 2 |
| 4 | 16CSE22CL1 | Soft Computing Lab | - | - | 2 | 2 | 50 | - | 50 | 100 | 3 | 2 |
| 5 | 16CSE22CL2 | Algorithm Design Lab | - | - | 2 | 2 | 50 | - | 50 | 100 | 3 | 2 |
| 6 | $\begin{aligned} & \text { 16CSE22D1 or } \\ & \text { 16CSE22D2 or } \\ & \text { 16CSE22D3 or } \\ & \text { 16CSE22D4 } \end{aligned}$ | Elective-1 | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 7 |  | Open Elective |  |  |  | 3 |  |  |  |  |  | 3 |
| 8 |  | Foundation Elective |  |  |  | 2 |  |  |  |  |  | 2 |
|  |  |  | 23 |  |  |  |  |  |  |  |  |  |

NOTE:Examiner will set nine question in total. Question One will be compulsory and will comprises af all section and remaining eight questions to be set by taking two questions from each unit. The students have to attempt five questions in total, first being compulsory and selecting one from each Unit.

Elective 1: Choose any one from the following papers

| 16CSE22D1 | Mobile and Wireless Communicat |
| :--- | :--- |
| 16CSE22D2 | Optimization Techniques |
| 16CSE22D3 | Discrete Mathematics |
| 16CSE22D4 | Internet and Web Development |

Elective 2
A candidate has to select this paper from the pool of Open Electives provided by the University
Elective 3
A candidate has to select this aser from the of of Foundation Electives provided by the University.


## Maharshi Dayanand University, Rohtak

## SCHEME OF STUDIES \& EXAMINATION <br> MASTER OF TECHNOLOGY <br> (CYBER FORENSICS AND INFORMATION SECURITY) <br> SEMESTER-III <br> EFFECTIVE FROM 2013-14

| Course No. | Course Title |  | Teaching <br> Schedule |  | Marks |  | Total | Duration <br> of Exam <br> (Hrs) |
| :--- | :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L T | P | Sessional | Exam. |  |  |  |
| MTCF 301 | Preserving \& Recovering <br> Digital Evidence | 4 | - | - | 50 | 100 | 150 | 3 |
| MTCF 302 | Cyber Laws \& Security <br> Policy | 4 | - | - | 50 | 100 | 150 | 3 |
|  | Elective-III | 4 | - | - | 50 | 100 | 150 | 3 |
| MTCF 307 | Dissertation Phase 1 | - | - | 8 | 100 | - | 100 | 3 |
| MTCF 308 | Seminar \& Technical Writing | - | - | 2 | 50 | - | 50 | - |
| TOTAL |  | 12 | - | 10 | 300 | 300 | 600 |  |

Elective- III

MTCF 303- Biometric Security
MTCF 304- Applied Cryptography
MTCF 305-Distributed Systems Security
MTCF 306- Secure Software Engineering


# Maharshi Dayanand University, Rohtak 

SCHEME OF STUDIES \& EXAMINATION MASTER OF TECHNOLOGY (CYBER FORENSICS AND INFORMATION SECURITY)

## SEMESTER-IV

## EFFECTIVE FROM 2013-14

| Course No. | Course Title | Teaching <br> Schedule |  | Marks |  | Total |  |
| :--- | :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Sessional | Exam. |  |
| MTCF 401 | Dissertation Phase-II | - | - | 24 | 200 | 400 | 600 |
|  |  |  |  |  |  |  |  |
|  | Total |  | - | 24 | 200 | 400 | 600 |



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# M.D UNIVERSITY <br> SCHEME OF STUDIES AND EXAMINATION <br> B.Tech II YEAR (ELECTRONICS \& COMMUNICATION ENGINEERING) <br> SEMESTER III 

' $F$ ' Scheme effective from 2010-11

| Sr No | Course Title | Teaching Schedule |  |  |  | Marks <br> of <br> Class <br> Work | Examination |  | Total Marks | Duration of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Total |  | Theory | Practical |  |  |
| HUM-201-F OR <br> MATH-201-F | ENGG. ECONOMICS OR MATHEMATICS - III | $\begin{array}{\|l\|} \hline 3 \\ 3 \\ \hline \end{array}$ | 1 | - | $4$ | 50 | 100 | - | 150 | 3 |
| HUM-203-F | FUNDAMENTALS OF MANAGEMENT (COMMON FOR ALL BRANCHES) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-201-F | ELECTRONICS DEVICES \& CIRCUITS(ECE,EL,EE,EEE,I C) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-203-F | NETWORK THEORY (ECE,EI,EE,EEE,IC) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-205-F | $\begin{aligned} & \text { ELECTROMECHANICAL } \\ & \text { ENERGY } \\ & \text { CONVERSION(ECE,EL,IC) } \end{aligned}$ | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| CSE-201-F | DATA STRUCTURE USING <br> ' C' (ECE,EI,CSE,IT) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-221-F | ELECTRONIC WORKSHOP, PCB DESIGN \& CIRCUIT LAB(ECE,EI) | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| EE-223-F | NETWORK THEORY LAB(ECE,EI,EE,EEE,IC) | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| EE-225-F | ELETRICAL WORKSHOP \& MACHINE LAB (ECE,EI) | - | - | 3 | 3 | 50 | - | 50 | 100 | 3 |
| CSE-205-F | DATA STRUCTURE USING 'C' Lab (ECE,EI,CSE,IT) |  | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
|  | TOTAL | 18 | 7 | 9 | $\begin{aligned} & \hline 33 \\ & \mathrm{Or} \\ & 34 \\ & \hline \end{aligned}$ | 425 | 600 | 125 | 1150 |  |

NOTE:

1. Students will be allowed to use non-programmable scientific calculator. However, Sharing of Calculator and other material will not be permitted in the examination.


SCHEME OF STUDIES AND EXAMINATION
BE. II YEAR (ELECTRONICS \& COMMUNICATION ENGINEERING)
SEMESTER - IV
' F ' Scheme effective from 2010-11

| Course No. | Course Title | Teaching Schedule |  |  |  | Marks <br> of <br> Class <br> Work | Examination |  | Total Marks | Duration of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Tota 1 |  | Theory | Practical |  |  |
| HUM-201-F <br> OR <br> MATH- <br> 201-F | ENGG. ECONOMICS OR MATHEMATICS - III | $\begin{aligned} & 3 \\ & 3 \end{aligned}$ | $\begin{aligned} & 1 \\ & 2 \end{aligned}$ |  | $\begin{aligned} & 4 \\ & 5 \end{aligned}$ | 50 | 100 | - | 150 | 3 |
| EE-228-F | SIGNALS SYSTEMS(ECE,EI) \& | 3 | - | - | 3 | 50 | 100 | - | 150 | 3 |
| EE-202-F | ANALOG ELECTRONICS (ECE,EL,EE,EEE,IC) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-204-F | DIGITAL ELECTRONICS (ECE,EI,EE,EEE,IC) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-206-F | $\begin{aligned} & \text { COMMUNICATION } \\ & \text { SYSTEMS(ECE) } \\ & \hline \end{aligned}$ | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-208-F | ELECTRO MAGNETIC THEORY (ECE,EI,EE,EEE,IC) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-222-F | ANALOG ELECTRONICS LAB(ECE,EL,EE,EEE,IC) | - | - | 2 | 2 | 25 |  | 25 | 50 | 3 |
| EE-224-F | DIGITAL ELECTRONICS <br> LAB(ECE,EI,EE,EEE,IC) | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| EE-226-F | COMMUNICATION SYSTEMS LAB (ECE) | - | - | 2 | 2 | 25 | - | 25 | 50 | $3 \quad 4$ |
| $\begin{aligned} & \text { MATH-204 } \\ & -\mathrm{F} \end{aligned}$ | NUMERICAL METHODS OF COMPUTATIONAL <br> PROGRAMMING LAB(ECE,EI,EE,EEE,IC) | 1 | 1 | 2 | 4 | 25 | - | 25 | 50 | 3 |
| GP-202-F | GENERAL PROFICIENCY <br> (COMMON FOR ALL <br> BRANCHES) | ${ }^{-}$ | - | 2 | 2 | 50 | O00 | 100 | 1150 | 3 |
|  | TOTAL | 19 | $\begin{aligned} & \hline 6 \\ & \text { Or } \\ & 7 \\ & \hline \end{aligned}$ | 10 | $\begin{aligned} & \mathbf{3 5} \\ & \text { Or } \\ & \mathbf{3 6} \end{aligned}$ | 450 | 600 | 100 | 1150 |  |

## Note:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of Calculator and other materials will not be permitted in the examination.
2.Each student has to undergo practical training of 6 weeks during summer vacation and its evaluation shall be carried out in the $V$ semester.


## M.D UNIVERSITY <br> SCHEME OF STUDIES AND EXAMINATION <br> BTech. III YEAR (ELECTRONICS \& COMMUNICATION ENGINEERING) SEMESTER V

Modified ' $F$ ' Scheme effective from 2011-12

| Course No. | Course Title | Teaching Schedule |  |  |  | Marks of Class Work | Examination |  | Total <br> Marks | Duration of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  | L | T | P | Total |  | Theory | Practical |  |  |
| EE-301-F | COMMUNICATION Engg. | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-303-F | ELECTRONIC MEASUREMENT \& INSTRUMENTATION (EL,EL,IC,EE,EEE,AEI) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-305-F | ANALOG ELECTRONIC CIRCUITS <br> (EL,EL,IC,EE,EEE,AEI) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-307-F | ANTENNAS,WAVE PROPAGATION\& TV Engg. | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| $\begin{array}{\|l} \hline \text { CSE-210- } \\ \mathrm{F} \end{array}$ | COMPUTER ARCHITECTURE AND ORGANISATION (EL, EI, IC, Common with IV sem. CSE, IT ) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-309-F | MICROPROCESSORS AND INTERFACING (EL,EL,IC,CSE,IT,EEE,AEI) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-323-F | ELECTRONIC MEASUREMENT \& INSTRUMENTATION LAB (EL,EL,IC,EE) | - | - | 2 | 2 | 25 | - | 25 | 50 |  |
| EE-325-F | ANALOG ELECTRONIC CIRCUITS LAB (EL,EL,IC) | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| EE-329-F | MICROPROCESSORS AND INTERFACING LAB (EL,EL,IC,CSE,IT,EEE,AEI) | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| EE-335-F | PRACTICAL TRAINING |  | - | 2 | 2 |  | - |  |  |  |
| $\begin{aligned} & \text { GPECE30 } \\ & \text { 1-F } \end{aligned}$ | GERNERAL PROFICIENCY |  |  |  |  | 50 |  |  | 50 | 3 |
|  | TOTAL | 18 | 6 | 8 | 32 | 425 | 600 | 75 | 1100 |  |

## Note:

1) Students will be allowed to use non-programmable scientific calculator. However, sharing of calculator will not be permitted in the examination.
2) Assessment of Practical Training-I, undergone at the end of IV semester, will be based on seminar, viva-voce, report and certificate of practical training obtained by the student from the industry. According to performance letter grades A, B, C, F are to be awarded. A student who is awarded ' $F$ ' grade is required to repeat Practical Training.


# M.D UNIVERSITY,ROHTAK <br> SCHEME OF STUDIES AND EXAMINATION B.Tech. III YEAR (ELECTRONICS \& COMMUNICATION ENGINEERING) SEMESTER - VI 

Modified ' $F$ ' Scheme effective from 2011-12

| Course No. | Course Title |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Teaching Schedule |  |  |  | Marks of Class Work | Examination |  | Total Marks | Duration of Exam |
|  |  | L | T | P | Total |  | Theory | Practical |  |  |
| EE-302-F | MICROWAVE AND RADAR ENGINEERING | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| $\begin{aligned} & \text { EE-304- } \\ & \mathrm{F} \\ & \hline \end{aligned}$ | CONTROL SYTEMS ENGG. (EL,EE, EEE) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-306-F | VLSI Design | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| IT-305-F | COMPUTER NETWORKS | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-310-F | DIGITAL SYSTEM DESIGN (EL,EI, IC,EE,CSE, AEI) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-308-F | MICROCONTROLLER \& EMBEDDED SYSTEM | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| $\begin{array}{\|l\|} \hline \text { EE-328- } \\ \mathbf{F} \\ \hline \end{array}$ | MICROCONTROLLER \& EMBEDDED SYSTEM LAB | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| $\begin{array}{\|l} \hline \text { EE-326- } \\ \mathrm{F} \\ \hline \end{array}$ | DIGITAL SYSTEM DESIGN LAB (EL,EI, IC,EE,CSE, AEI) | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| $\begin{array}{\|l\|} \hline \text { EE-322- } \\ \mathrm{F} \\ \hline \end{array}$ | MICROWAVE AND RADAR LAB | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| EE-324- | CONTROL SYTEMS ENGG. |  | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| F | LAB <br> (EL,EE, EEE,AEI) |  |  |  |  |  |  |  |  |  |
|  | TOTAL | 18 | 6 | 8 | 32 | 400 | 600 | 100 | 1100 |  |

## NOTE:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of Calculator will not be permitted in the examination.
2. Each student has to undergo practical training of 6 weeks during summer vacation and its evaluation shall be carried out in the VII semester.


## M.D. UNIVERSITY, ROHTAK

## Scheme of studies \& Examination

 B. Tech. (Electronics and Communication Engg.)SEMESTER VII

F'Scheme Effective from 2012-2013

| Course No. | Course Title | Teaching Schedule |  |  |  | Marks <br> of <br> Class <br> Work | Examination |  | Total Marks | Duration of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Total |  | Theory | Practical |  |  |
| ECE-405-F | WIRELESS COMMUNICATION | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ECE-403-F | SATELITE COMMUNICATION ENGINEERING | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ECE-407-F | DATA COMMUNICATION | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ECE-415-F | OPTICAL COMMUNICATION SYSTEMS | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
|  | *Dept Elective-I | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ECE-409-F | Digital Signal Processing | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ECE-423-F | Wireless \& Satellite |  |  | 3 | 3 | 50 | - | 50 | 100 | 3 |
|  | Communication Lab |  |  |  |  |  |  |  |  |  |
| ECE-427-F | Digital Signal Processing Lab | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| ECE-429-F | Data Communication | - | - | 3 | 3 | 50 | - | 50 | 100 | 3 |
|  | Lab |  |  |  |  |  |  |  |  |  |
| GFEE-401-F | General Fitness For The Profession | - | - | - | - |  | - | 50 | 50 | 3 |
| ECE-404-F | Practical Training II |  |  |  |  |  |  |  |  |  |
|  | TOTAL | 18 | 6 | 8 | 32 | 425 | 600 | 175 | 1200 |  |



## List of Dept Electives-I

| ECE-419-F | Mobile Communication |
| :--- | :--- |
| ECE-461-F | Genetic Algorithms \& Applications |
| ECE-453-F | Radar and Sonar Engg. |
| ECE-411-F | Wireless Sensor Network |
|  |  |
|  |  |

## Note:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of calculator will not be permitted in the examination.
2. *Student will be permitted to opt for any one elective run by the other departments. However, the departments will offer only those electives for which they have expertise. The choice of the students for any elective shall not be a binding for the department to offer, if the department does not have expertise.
3. A team consisting of Principal/Director, HOD of concerned department and external examiner appointed by University shall carry out the evaluation of the student for his/her General Fitness for the Profession.

NOTE:-

1. Assessment of Practical Training-II, ( ECE-404F) carried out at the end of VI semester, will be based on seminar, viva-voce and project report of the student from the industry. According to performance letter Grades A, B, C, F are to be awarded. A student who is awarded ' $F$ ' grade is required to repeat Practical Training.


## M.D. UNIVERSITY, ROHTAK

## Scheme of studies \& Examination

 B. Tech. (Electronics and Communication Engg.)
## SEMESTER VIII

F ' Scheme Effective from 2012-2013

Training of Six Months

| Course No. | Course Title | Teaching Schedule |  |  |  | Marks of Class Work | Examination |  | Total Marks | Duration of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Total |  | Theory P | ctical |  |  |
| ECE-402-F | Industrial Training /Institutional Project work | - | - | 8 | 8 | 150 | $\pm$ | 150 | 300 | - |
|  | Total |  |  | 8 | 8 |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |

## Note:

1. The students are required to undergo Industrial Training or Institutional Project work of duration not less than 4 months in a reputed organization or concerned institute. The student who wish to undergo industrial training, the industry chosen for should be a private limited company. The final Viva-voca of the industrial training or Institutional Project work will be conducted by the
2. external examiner and one internal examiner appointed by the institute. External examiner will be from penal of examiner.
Assessment of traing or project will be based on Seminar, viva-voca, report and certificate of Industrial Training or Institutional project work.
3. The internal marks distribution for students who have undergone Industrial training consist of $\mathbf{5 0}$ marks from the Industry concern and $\mathbf{1 0 0}$ Marks by the committee members consisting of faculty members of concerned department of the present institute.
4. The teacher engaged for institutional project work shall have a workload of $\mathbf{2}$ hours per group ( at least 4 students per work)


## M.D.UNIVERSITY, ROHTAK (HARYANA)

## SCHEME OF STUDIES \& EXAMINATION FOR

 MASTER OF ENGINEERING DEGREE COURSE IN ELECTRONICS \& COMMUNICATION
## SEMESTER-III

| Course No. | Course Title | Teaching Schedule |  |  | Marks |  |  | Credits |  |  | Durat ion of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L $\mathbf{L}$ | T | P | Sessional | Exam | Total | Sessional | Exam | Total |  |
| MEEC-601 | Neural Networks \& fuzzy Logic | 4 | - | - | 50 | 100 | 150 | 2 | 4 | 6 | 3 |
| MEEc-603 | CDMA System | 4 | - | - | 50 | 100 | 150 | 2 | 4 | 6 | 3 |
|  | Elective-III | 4 | - | - | 50 | 100 | 150 | 2 | 4 | 6 | 3 |
| MEEC-613 | Seminar | - | - | 2 | 50 | - | 50 | 2 | - | 2 | - |
| MEEC-615 | Project | - | - | 4 | 50 | 50 | 100 | 2 | 2 | 4 | 3 |
| MEEC-617 | Dissertation (Phase-I) | - | - | 4 | 100 | - | 100 | 4 | - | 4 |  |
| - | Total | 12 | - | 10 | 350 | 350 | 700 | 14 | 14 | 28 |  |

## ELECTIVE III

## Emerging Network Technologies

Digital Signal Processors \& Applications
(MEEC-605)
(MEEC-607)
48. Image Processing
49. Computer Communications
(MEEC-609)
(MEEC-611)

NOTE: 1The paper setter shall set each theory paper of 100 marks covering the entire syllabus. However, the examiner shall evaluate the performance of the student in the theory paper finally by assigning one of the grades out of $\mathrm{A}, \mathrm{A}(-), \mathrm{B}, \mathrm{B}(-), \mathrm{C}, \mathrm{C}(-), \mathrm{D} \& \mathrm{~F}$. The Examination of practical courses shall also be evaluated on the basis of three grades.
2. The Sessionals of Theory/Practical/ Dissertation (Phase-I)/ Seminar/ Project Courses shall also be evaluated on the basis of these grades.
3. The choice of students for any elective shall not be binding on the Deptt. to offer it.
4. The Grading System is defined at the end of the Scheme of Studies \& Examinations \& will be supplied by the Univ. to the examiner(s)


## M.D.UNIVERSITY, ROHTAK (HARYANA)

## SCHEME OF STUDIES \& EXAMINATION FOR

 MASTER OF ENGINEERING DEGREE COURSE IN ELECTRONICS \& COMMUNICATION
## SEMESTER-IV

| Course No. | Course Title | Teaching Schedule |  |  | Marks |  |  | Credits |  |  | Durat ion of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Sessional | Exam | Total | Sessional | Exam | Total |  |
| MEEC-602 | Dissertation | - | - | 20 | 150 | 600 | 750 | 6 | 24 | 30 | 3 |
|  | Total | - | - | 20 | 150 | 600 | 750 | 6 | 24 | 30 | - |

NOTE: 1 Sessionals of Dissertation Course shall be evaluated on the basis of the grades out of $\mathrm{A}, \mathrm{A}(-), \mathrm{B}$, B(-), C, C(-), D \& F.
2. The dissertation shall be evaluated through an exam. by a Committee of Examiners consisting of Head of the Department, Dissertation supervisor \& one External Examiner. The evaluation shall be based upon the above grades.
3. The grading system is defined at the end of the Scheme of Studies \& Examination \& will be supplied by the Univ. to the examiner(s)


## M.D.UNIVERSITY, ROHTAK <br> SEMESTER 1 EAR (ELECTRONICS \& COMMUNICATION)

CBCS Scheme effective from 2016-17

| $\begin{aligned} & \text { Sl. } \\ & \text { No } \end{aligned}$ | Course Code | Subject | Credit Pattern |  |  |  | Examination Schedule (Marks) |  |  |  | Dura tion of Exam (Hou rs) | No of Hours /week |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P | Total Credi ts | Mark $\mathbf{s}$ of Class work | $\begin{gathered} \text { Theor } \\ y \\ \hline \end{gathered}$ | $\begin{gathered} \text { Practic } \\ \text { al } \\ \hline \end{gathered}$ | Total |  |  |
| 1 | 16ECE21Cl | Advance Microprocessor \& Microcontroller | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 2 | 16ECE21C2 | Satellite and Space Communication | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 3 | 16ECE21C3 | Information and Communication Theory | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 4 | 16ECE21C4 | Advanced Digital Signal Processing | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 5 | 16ECE21C5 | Data Communication Networks | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 6 | 16ECE21C6 | Seminar | - |  | - | 2 | 50 | - | - | 50 |  | 2 |
|  | 16ECE21CL1 | Satellite Lab | - | - | 2 | 2 | 50 | - |  | 100 | 3 | 4 |
| 7 |  |  |  |  |  |  |  | - | 50 |  |  |  |
| 8 | 16ECE21CL2 | Advance Microprocessor \& Microcontroller Lab | - | - | 2 | 2 | 50 | - | 50 | 100 | 3 | 4 |
|  |  | TOTAL | 26 |  |  |  |  |  |  |  |  |  |

NOTE:
Examiner will set nine question in total. Question One will be compulsory and will comprise short answer type questions from all sections and remaining eight questions to be set by taking two questions from each unit. The students have to attempt five questions in total, first being compulsory and selecting one from each Unit.


## SCHEME OF STUDIES AND M.D.UNIVERSITY, ROHTAK \& COMMUNATION M.TECH 1st YEAR (ELECTRONICS CBCS Scheme effective from 2016-17

| $\begin{gathered} \mathbf{S I} \\ \dot{\mathbf{N}} \end{gathered}$ | Course No. | Subject | Credit Pattern |  |  | Examination Schedule (Marks) |  |  |  | Duration of Exam (Hours) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 1 T | P | Total Credi ts | Marks of Class works | Theory | Practical |  |  |
| 1 | 16ECE22C1 | Wireless Mobile Communication | 40 | - | , | 50 | 100 | Practical | 150 | 3 |
| 2 | 16ECE22C2 | Optical <br> Communication | 40 | - | 4 | 50 | 100 | - | 150 | 3 |
| 3 | 16ECE22C3 | Seminar | ven | - | 2 | 50 | - | - | 50 |  |
| 4 | 16ECE22CL1 |  | - | 2 | 2 | 50 | - | 50 | 100 | 3 |
|  |  |  | - | 2 | 2 | 50 | - | 50 | 100 | 3 |
|  |  |  |  |  |  |  |  |  |  |  |
| 6 | 16ECE22D1 <br> or <br> 16ECE22D2 <br> or <br> 16ECE22D3 <br> or <br> 16ECE22D4 | Elective-1 | 40 | - | 4 | 50 | 100 | - | $150$ | 3 |
|  |  | Open Elective |  |  | 3 |  |  |  |  |  |
| 8 |  | Foundation Elective |  |  | 2 |  |  |  |  |  |
|  |  | TOTAL |  |  | 23 |  |  |  |  |  |

NOTE: Examiner will set nine questions in total. Question One will be compulsory and will comprise short answer type questions from all sections and remaining eight questions to be set by taking two questions from each unit. The students have to attempt five questions in total, first being compulsory and selecting one from each Unit.

Elective 1: Choose any one from the following four papers:

> 16ECE22D1 - Electronic System Design
> 16ECE22D2 - Image Processing
> 16ECE22D3 - ADVANCED MATHEMATICS FOR ENGINEERS 16ECE22D4 - VLSI Design

Open Elective: A candidate has to select this paper from the pool of Open Electives provided by the University. Foundation Elective: A candidate has to select this paper from the pool of Foundating flectives provided by the University.


YVLHOY रLISGGAIN GNVNVAVG IHSIZVHVW

M.D UNIVERSITY

SCHEME OF STUDIES AND EXAMINATION
B.Tech II YEAR (ELECTRICAL ENGINE B.Tech II YEAR (ELECTRICAL ENGINEERING)
' F ' SMESTER III

| Course No. | Course Title |  |  |  |  | 0-11 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Teaching Schedule |  |  |  | Marks of Class Work | Examination |  | Total Mark s | Duration of Exam |
| HUM-201-F |  |  | T | P | $\begin{aligned} & \text { Tot } \\ & \text { al } \\ & \hline \end{aligned}$ |  | Theory | Practica 1 |  |  |
| OR <br> MATH-201- <br> F | $\stackrel{\text { OR }}{\text { MATHEMATICS - III }}$ | $\begin{aligned} & 3 \\ & 3 \end{aligned}$ | $\begin{aligned} & 1 \\ & 2 \end{aligned}$ | - | $4$ <br> 5 | 50 | 100 | 1 | s 150 , | 3 |
| HUM-203-F | FUNDAMENTALS MANAGEMENT (COMMON FOR ALL BRANCHES) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-201-F | ELECTRONIC DEVICES \& CIRCUITS (ECE,EI,EE,EEE,IC) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-203-F | NETWORK THEORY <br> (ECE,EI,EE,EEE,IC) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-207-F | ELECTRICAL MACHINES-I <br> (EE, EEE) | 3 | 1 | - | 4 | , 50 | 100 | - | 150 | 3 |
| EE-209-F | ELECTRICAL MEASUREMENTS \& MEASURING INSTRUMENTS (EE, EEE) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-223-F | NETWORK THEORY LAB. (ECE,EI,EE,EEE,IC) | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| EE-211-F | ELECTRICAL <br> MEASUREMENTS <br> MEASURING INSTRUMENTS <br> LAB. (EE, EEE) | - |  | 2 | 2 | 25 | - | 25 | 50 | 3 |
| EE-213-F | ELECTRICAL WORKSHOP (IC,EE, EEE) | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| EE-215-F | ELECTRICAL MACHINES-I LAB. (EE, EEE) | - | - | 3 | 3 | 50 | - | 50 | 100 | 3 |
|  | TOTAL | 18 | $\begin{gathered} 6 \\ \mathbf{O r} \\ 7 \end{gathered}$ | 9 | $\begin{aligned} & 33 \\ & \mathrm{Or} \\ & 34 \end{aligned}$ | 425 | 600 | 125 | 1150 |  |

NOTE:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of Calculator and other materials will not be permitted in the examination.

## M.D UNIVERSITY <br> SCHEME OF STUDIES AND EXAMINATION <br> B.Tech II YEAR (ELECTRICAL ENGINEERING) <br> SEMESTER - IV

' F ' Scheme effective from 2010-11

| Course No. | Course Title | Teaching Schedule |  |  |  | Marks of Class Work | Examination |  | Total Marks | Duration of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | $\begin{array}{\|l} \hline \text { Tota } \\ \hline 1 \\ \hline \end{array}$ |  | Theory | Practical |  |  |
| $\begin{aligned} & \text { HUM- } \\ & 201-\mathrm{F} \\ & \text { OR } \\ & \text { MATH- } \\ & \text { 201-F } \end{aligned}$ | $\begin{gathered} \text { ENGG. ECONOMICS } \\ \text { OR } \\ \text { MATHEMATICS - III } \end{gathered}$ | $3$ $3$ | 1 <br> 2 |  | $4$ $5$ | 50 | 100 | - | 150 | 3 |
| EE-212-F | TRANSMISSION AND DISTRIBUTION (EE,EEE) | 3 | - | - | 3 | 50 | 100 | - | 150 | 3 |
| EE-202-F | ANALOG ELECTRONICS (ECE,EI,EE,EEE,IC) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-204-F | DIGITAL ELECTRONICS (ECE,EI,EE,EEE,IC) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-220-F | PRINCIPLES COMMUNICATION SYSTEMS (EE, EEE) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-208-F | ELECTRO MAGNETIC THEORY (ECE,EI,EE,EEE,IC) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-222-E | ANALOG ELECTRONICS LAB (ECE,EI,EE,EEE,IC) | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| EE-224-F | DIGITAL ELECTRONICS <br> LAB <br> (ECE,EI,EE,EEE,IC) | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| EE-230-F | PRINCIPLES OF COMMUNICATION SYSTEMS LAB (EE, EEE) | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| $\begin{aligned} & \text { MATH- } \\ & \text { 204-F } \end{aligned}$ | NUMERICAL METHODS LAB (ECE,EI,EE,EEE,IC) | 1 | 1 | 2 | 4 | 25 | - | 25 | 50 | 3 |
| GP-202-F | GENERAL PROFICIENCY (COMMON FOR ALL BRANCHES) | - | - | 2 | 2 | 50 | - | - | 50 | 3 |
|  | TOTAL | 19 | $\begin{array}{\|l} \hline 6 \\ \text { or } \\ 7 \\ \hline \end{array}$ | 10 | $\begin{aligned} & 35 \\ & \text { Or } \\ & 36 \end{aligned}$ | 450 | 600 | 100 | 1150 |  |

Note:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of Calculator and other materials will not be permitted in the examination.
2. Each student has to undergo practical training of 6 weeks during summer vacation and its evaluation shall be carried out in the $\mathbf{V}$ semester.


## M.D. UNIVERSITY, ROHTAK

## Scheme of studies \& Examination

Bachelor of Technology (Electrical Engg.) SEMESTER V
' $F$ ' Scheme Effective from 2011-2012

\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|}
\hline \multirow[t]{2}{*}{Course No.} \& \multirow[t]{2}{*}{Course Title} \& \multicolumn{4}{|l|}{Teaching Schedule} \& \multirow[t]{2}{*}{Marks of Class Work} \& \multicolumn{2}{|l|}{Examination} \& \multirow[t]{2}{*}{Total Marks} \& \multirow[t]{2}{*}{Duration of Exam} <br>
\hline \& \& L \& T \& P \& Total \& \& Theory \& Practical \& \& <br>
\hline EE-311-F \& Electrical Machines-II (EE, EEE) \& 3 \& 1 \& - \& 4 \& 50 \& 100 \& - \& 150 \& 3 <br>
\hline EE-303-F \& Electronic Measurement And Instrumentation (EE,EEE,ECE,IC) \& 3 \& 1 \& - \& 4 \& 50 \& 100 \& - \& 150 \& 3
3 <br>
\hline EE-305-F \& Analog Electronics Circuits (EE,EEE,ECE,IC) \& 3 \& 1 \& - \& 4 \& 50 \& 100 \& - \& 150 \& 3 <br>
\hline EE-315-F \& Power Systems-I (EE, EEE) \& 3 \& 1 \& - \& 4 \& 50 \& 100 \& - \& 150 \& 3 <br>
\hline EE-317-F \& Power Electronics (EE, EEE, Common with VI sem IC) \& 3 \& 1 \& - \& 4 \& 50 \& 100 \& - \& 150 \& 3 <br>
\hline EE-309-F \& Microprocessors And Interfacing (EE,EEE,ECE) \& 3 \& 1 \& - \& 4 \& 50 \& 100 \& - \& 150 \& 3 <br>
\hline EE-323-F \& Electronic Measurement \& Instrumentation Lab (EE,EEE,ECE,IC) \& - \& - \& 2 \& 2 \& 25 \& - \& 25 \& 50 \& 3

3 <br>
\hline EE-321-F \& Power Electronics Lab. (EE, EEE Common with VI sem, IC) \& - \& - \& 2 \& 2 \& 25 \& - \& 25 \& 50 \& 3 <br>
\hline EE-319-F \& Microprocessor \& Interfacing Lab. (EE,EEE) \& - \& - \& 2 \& 2 \& 25 \& - \& 25 \& 50 \& 3 <br>
\hline EE-327-F \& Electrical Machines-II LAB. (EE, EEE) \& - \& - \& 3 \& 3 \& 25 \& - \& 25 \& 50 \& 3 <br>
\hline EE-333-F \& Practical Training-I \& - \& - \& 2 \& 2 \& \& - \& - \& \& - <br>
\hline \& TOTAL \& 18 \& 6 \& 11 \& 35 \& 400 \& 600 \& 100 \& 1100 \& <br>
\hline
\end{tabular}

Note:

1) Students will be allowed to use non-programmable scientific calculator. However, sharing of calculator will not be permitted in the examination.
2) Assessment of Practical Training-I, undergone at the end of IV semester, will be based on seminar, viva-voce, report and certificate of practical training obtained by the student from the industry. According to performance letter grades A, B, C, F are to be awarded. A student who is awarded ' $F$ ' grade is required to repeat Practical Training.


## M.D UNIVERSITY,ROHTAK

SCHEME OF STUDIES AND EXAMINATION
B.Tech. III YEAR (ELECTRICAL ENGINEERING)

SEMESTER-VI
Modified ' F ' Scheme effective from 2011-12

| $\begin{aligned} & \hline \text { Course } \\ & \text { No. } \end{aligned}$ | Course Title | Teaching Schedule |  |  |  | Marks of <br> Class <br> Work | Examination |  | Total Marks | Duration of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Total |  | Theory | Practical |  |  |
| EE-312-F | $\begin{array}{\|l\|} \hline \begin{array}{l} \text { Power Systems -II } \\ \text { (EE, EEE) } \end{array} \\ \hline \end{array}$ | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-314-F | Computer Added Electric Machines Design (EE, EEE) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-308-F | Micro-Controller And Embeded System(EE,ECE) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-304-F | Control systems engg. (EE, EEE,ECE) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-318-F | $\begin{aligned} & \text { Electric Power Generation (EE, } \\ & \text { EEE) } \end{aligned}$ | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-310-F | $\begin{aligned} & \text { Digital System Design } \\ & \text { (IC,EE,ECE,) } \end{aligned}$ | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-324-F | Control system engg. Lab (EE, EEE, ECE) | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| EE-320-F | Micro-Controller And Embeded System LAB (EE,ECE) | - | - | 2 | 2 | 25 | - | 25 | 50 |  |
| EE-326-F | Computer Added Electric Machines Design Lab (EE, EEE) | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| EE-328-F | Power Systems Lab (EE, EEE) | - | - | 2 | 2 | 25 | - | 25 | 50 |  |
| $\begin{aligned} & \text { GPEE- } \\ & 302-\mathrm{F} \end{aligned}$ | GENERAL PROFICIENCY | - | - | - | - | 50 | - | ${ }^{-}$ | 50 | 3 |
|  | TOTAL | 18 | 6 | 8 | 32 | 450 | 600 | 100 | 1150 |  |

Note:

1. Each student has to undergo practical training of 6 weeks during summer vacation and its evaluation shall be carried out in the VII semester.
2. Students will be allowed to use non-programmable scientific calculator. However, sharing of calculator will not be permitted in the examination.

M.D. UNIVERSITY, ROHTAK

Scheme of studies \& Examination B. Tech. (Electrical Engg.)

SEMESTER VII
F'Scheme
EFFECTIVE FROM THE SESSION 2012-13

| Course No. | Course Title | Teaching Schedule |  |  |  | Marks of Class Work | Examination |  | Total Marks | Duration of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Total |  | Theory | Practical |  |  |
| EE-403-F | Electric Drives And Control | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ECE-409-F | Digital Signal Processing | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-405-F | Power System Operation And Control | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
|  | *Open Elective | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
|  | *Dept Elective | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-409-F | Computer Applications To Power System Analysis | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-413-F | Electric Drives And Control Lab. |  |  | 3 | 3 | 50 | - | 50 | 100 | 3 |
| ECE-429-F | Digital Signal Processing Lab | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| EE-419-F | Computer Applications To Power System Analysis Lab. | - | - | 3 | 3 | 50 | - | 50 | 100 | 3 |
| GFEE-401-F | General Fitness For The Profession | - | - | - | - |  | - | 50 | 50 | 3 |
| EE-401-F | Practical Training - II | - | - | - | 32 | 425 | - | 175 | 1200 | - |
|  | TOTAL | 18 | 6 | 8 | 32 | 425 | 600 | 175 |  |  |

## List of Open Electives

| 1. | HUM-451-F | Language Skills for Engineers |
| :---: | :--- | :--- |
| 2. | HUM-453-F | Human Resource Management |
| 3. | HUM-459-F | Renewable Energy Resources and Technology |
| 4. | ME-451-F | Mechatronics Systems |
| 5. | IC-455-F | Intelligent Instrumentation for Engineers |
| 6. | OR-401-F | Operations Research |

## List of Dept Electives

1. $\mathrm{EHV} \mathrm{AC/DC}$
(EE-432-F)
2. Fuzzy Logic Control
3. Fuzzy Logic Control
(IC-404-F)
(EE-438-F)
4. High Voltage Engineering
5. Electrical Power Quality
(EE-442-F)
(EE-444-F)
6. Power Manastrame
(EE-450-F)

## Note:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of calculator will not be permitted in the examination.
2. *Student will be permitted to opt for any one elective run by the other departments. However, the departments will offer only those electives for which they have expertise. The choice of the students for any elective shall not be a binding for the department to offer, if the department does not have expertise.
3. A team consisting of Principal/Director, HOD of concerned department and external examiner appointed by University shall carry out the evaluation of the student for his/her General Fitness for the Profession.
4. Assessment of Practical Training-II, carried out at the end of VI semester, will be based on seminar, viva-voce and project report of the student from the industry. According to performance, letter Grades $\mathbf{A}, \mathbf{B}, \mathbf{C}, \mathbf{F}$ are to be awarded. A student who is awarded ' F ' grade is required to repeat Practical Training.

M.D. UNIVERSITY, ROHTAK

Scheme of studies \& Examination
B. Tech. (Electrical Engg.)

SEMESTER VIII
F'Scheme

## EFFECTIVE FROM THE SESSION 2012-13

| Sr. No | Course No | Subject | Internal <br> Marks | External Marks | Total Marks |
| :--- | :---: | :---: | :---: | :---: | :---: |
| 1. | EE-402-F | Industrial Training/Institutional Project Work | 150 | 150 | 300 |

## Note:

The students are required to undergo Industrial Training or Institutional Project Work of duration not less than 4 months in a reputed organization or concerned institute. The students who wish to undergo industrial training, the industry chosen for undergoing the training should be at least a private limited company. The students shall submit and present the mid-term progress report at the Institute. The presentation will be attended by a committee. Alternately, the teacher may visit the Industry to get the feedback of the students.

The final viva-voce of the Industrial Training or Institutional Project Work will be conducted by an external examiner and one internal examiner appointed by the Institute. External examiner will be from the panel of examiners submitted by the concerned institute approved by the Board of Studies in Engg. \& Technology. Assessment of Industrial Training or Institutional Project Work will be based on seminar, viva-voce, report and certificate of Industrial Training or Institutional Project Work obtained by the student from the industry or Institute.

The internal marks distributions for the students who have undergone Industrial Training consist of $\mathbf{5 0}$ marks from the industry concern and $\mathbf{1 0 0}$ marks by the committee members consisting of faculty members of concerned department of the parent institute.

The teachers engaged for Institutional Project work shall have a workload of $\mathbf{2}$ hours per group (at least 4 students) per week.


## MAHARSHI DAYANAND UNIVERSITY, ROHTAK

## SCHEME OF STUDIES AND EXAMINATIONS FOR MASTER OF TECHNOLOGY IN <br> ELECTRICAL ENGINEERING

(Specialization: Electrical Power Systems)
SEMESTER-III

| S.No | Course Code | Course Title | Teaching Schedule |  |  | Class <br> Work | Examination |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | Theory | Practical |  |
|  |  |  | L | T | P |  |  | 15 |  |
| 1 | MTEPS301 | Elective - III | 3 | 1 | 0 | 50 | 100 | - | 150 |
| 2 | MTEPS302 | Elective - IV | 3 | 1 | 0 | 50 | 100 | 50 | 100 |
| 3 | MTEPS303 | Seminar |  |  | 2 | 50 | - | - | 150 |
| 4 | MTEPS304 | Dissertation- | 0 | 0 | 4 | 150 | - |  |  |
|  |  | Phase I |  |  |  | 30 | 200 | 50 | 550 |

1. The paper setter shall set each theory paper of $\mathbf{1 0 0}$ marks covering entire syllabus. However the examiner shall evaluate the performance of the student in the theory paper finally by assigning one of the grades out of $A^{+}, A, B, C, D \& E$. The examination of practical courses shall also be evaluated on the basis of these grades.
2. The sessionals of theory, practical and Seminar courses shall also be evaluated in the basis of these grades.
3. The choice of student for any elective shall not be binding on the department to offer it.
4. The grading system is define at the end of scheme of studies \& examinations and will be supplied by the University to the examiner(s).


## MAHARSHI DAYANAND UNIVERSITY, ROHTAK

## SCHEME OF STUDIES AND EXAMINATIONS FOR MASTER OF TECHNOLOGY IN ELECTRICAL ENGINEERING

(Specialization: Electrical Power Systems)
SEMESTER-IV

| S.No. | Course <br> Code | Course Title | Teaching <br> Schedule |  |  | Class <br> Work | Examination |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P |  | Theory | E.VIVA |  |
| 1 | MTEPS401 | Dissertation Final Phase | 0 | 0 | 20 | 200 | - | 400 | 600 |
|  |  |  |  |  | 20 | 200 | - | 400 | 600 |

NOTE:

1. The sessionals of Dissertation shall be evaluated on the basis of grades i.e $\mathbf{A}^{+}$,
$A, B, C, D \& E$.
2. The Dissertation shall be evaluated by an examination committee consisting of the head of the department, Dissertation Supervisor and one External examiner. The evaluation should be based on above grades.
3. The grading system is define at the end of scheme of studies \& examinations and will be supplied by the University to the examiner(s).


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## MAHRASHSI DAYANAND UNIVERSITY, ROHTAK SCHEME OF STUDIES AND EXAMINATIONS <br> B.Tech 2nd YEAR (FIRE TECHNOLOGY AND SAFETY) <br> $3{ }^{\text {rd }}$ SEMESTER

Proposed 'F' Scheme w.e.f 2012-13

| Course | Course Title | Teaching Schedule |  |  |  | Marks for class work | Marks <br> for <br> Examination |  | Total <br> Marks | Duration of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Total |  | Theory | Practical |  |  |
| $\begin{aligned} & \text { MAT 201F } \\ & \text { OR } \\ & \text { HUM } 201 \text { F } \end{aligned}$ | Mathematics-III or Engineering Economics | $\begin{gathered} 3 \\ \text { or } \\ 3 \end{gathered}$ | 2 or | - | $\begin{gathered} 5 \\ \text { or } \\ 4 \end{gathered}$ | $\begin{aligned} & 50 \\ & 50 \end{aligned}$ | 100 | - | 150 | 3 |
| HUM 203F | Fundamentals of <br> Management | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 201 F | Town Planning and Safety in Construction Industry | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 203 F | Fire Engineering | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
|  | First Aid and Emergency | 3 | 1 | 4 | 4 | 50 | 100 |  | 150 | 3 |
| FT 205 F | Procedures |  |  |  |  |  |  |  |  |  |
| FT 207 F | Heavy Vehicle Automobile Engineering and Safety | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 209 F | Machine Drawing and Design | 1 | - | 3 | 4 | 50 | - | $\begin{aligned} & 5 \\ & 0 \\ & \hline \end{aligned}$ | $\begin{aligned} & 1 \\ & 0 \end{aligned}$ | 37 |
| FT 211 F | HeavyVehícle <br> Automobile Engineering <br> and Safety Lab | - | - | 2 | 2 | 25 | - | $\begin{aligned} & 2 \\ & 5 \end{aligned}$ | $\begin{aligned} & 5 \\ & 0 \end{aligned}$ | 3 |
| FT 213 F | Fire Protection Workshop | - | - | 2 | 2 | 25 | - | $5$ | $\begin{aligned} & 5 \\ & 0 \end{aligned}$ | 3 |
| FT 215 F | Fire Fighting and Field Training - I | - | - | 2 | 2 | 25 | - | $\begin{aligned} & 2 \\ & 5 \end{aligned}$ | $\begin{aligned} & 5 \\ & 0 \end{aligned}$ | 3 |
|  | Total | 19 | 6/7 | 9 | 34/35 | 425 | 600 | 125 | 1150 |  |



## MAHRASHSI DAYANAND UNIVERSITY, ROHTAK SCHEME OF STUDIES AND EXAMINATIONS <br> B.Tech. 2nd YEAR (FIRE TECHNOLOGY AND SAFETY) <br> $4^{\text {tin }}$ SEMESTER

Proposed ' $F$ ' Scheme w.e.f 2012-13

| Course | Course Title | Teaching Schedule |  |  |  | Marksforclas$s$$s$ | Marks for Examination |  | Total Marks | Duration of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Total |  | Theory | Practical |  |  |
| MAT 201F or HUM 201 F | Mathematics-III <br> or <br> Engineering Economics | $3$ <br> or $3$ | $\begin{gathered} 2 \\ \text { or } \\ 1 \end{gathered}$ | - | $\begin{gathered} 5 \\ \text { or } \\ 4 \end{gathered}$ | 50 | 100 | - | 150 | 3 |
| FT 202F | Safety Engineering and Management | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 204 F | Energy Environment Ethics and Society | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 206 F | Strength of Material | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 208 F | Electrical Fire Safety | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 210 F | Pumping Machinery and Fluid Mechanics | 3 | 1 | - | 4 | 50 | 100 | ${ }^{-}$ | 150 | 3 |
| FT 212 F | Strength of Material Lab | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| FT 214 F | Electrical Fire Safety <br> Lab | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| FT 216 F | Pumping <br> Machinery and <br> Fluid Mechanics | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| FT 218 F | Fire Fighting and Field Training - II | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| GP 202 F | General Proficiency | - | - | 2 | 2 | 50 | - | - | 50 | - |
|  | Total | 18 | 6/7 | 9 | 34/35 | 450 | 600 | 100 | 1150 |  |



# MAHRASHSI DAYANAND UNIVERSITY, ROHTAK <br> SCHEME OF STUDIES AND EXAMINATIONS <br> B.Tech $3^{\text {rd }}$ YEAR (FIRE TECHNOLOGY AND SAFETY) <br> $5^{\text {th }}$ SEMESTER 

Proposed 'F' Scheme w.e.f 2012-13

| Course | Course Title | Teaching schedule |  |  |  | Mark For class work | Marks for Examination |  | Total <br> Marks | Duration of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Total |  | Theory | Practical |  |  |
| FT 301F | Rescue Equipments and Techniques | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 303 F | Building Design and Drawing | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 305 F | Salvage Evaluation of Fire Situation | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 307 F | Environmental Engineering and Management | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 309 F | Fire Prevention and Protection Measures | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 311 F | Nuclear Safety and Radioactive Materials | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 313 F | Environmental Engineering Lab | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| FT 315 F | Field Training in Fire Rescue | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| FT 317 F | AutoCAD and Fire Software Lab | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| FT 319F | Engineering Workshop Practice | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| FT 319F | Total | 18 | 6 | 8 | 32 | 400 | 600 | 100 | 1100 |  |

Note:-

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of calculator will not be permitted in the examination.
2. Assessment of Practical Training-I, undergone at the end of IV semester, will be based on seminar, viva-voce, report and certificate of practical training obtained by the student from the industry. According to performance letter grades A, B, C, F are to be awarded. A student who is awarded ' F ' grade is required to repeat Practical Training.


# MAHRASHSI DAYANAND UNIVERSITY, ROHTAK <br> SCHEME OF STUDIES AND EXAMINATIONS <br> B.Tech $3^{\text {rd }}$ YEAR (FIRE TECHNOLOGY AND SAFETY) $6^{\text {th }}$ SEMESTER 

Proposed 'F' Scheme w.e.f 2012-13

| Proposed 'F' Scheme w.e.f 2012-13 |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Course | e Course Title | Teaching schedule |  |  |  | Marks <br> For <br> class <br> work | Marks for Examination |  | Total Marks | Duration of Exam |
|  |  | L | T | P | Total |  | Theory | Practical |  |  |
| FT 302F | Legal Aspect of Safety, Health and Environment | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 304F | Fire Safety Codes and Standardization | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 306F | Fire Fighting \& Safety Equipments | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 308F | Identification and Risk Assesmant | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 310F | Applied Numerical Technique and Computing | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 312F | Heat Transfer, Combustion and Explosives | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 314F | Field Training Rescue (Chemical Hazards) | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| FT 316F | Applied Numerical Technique and Computing Lab | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| FT 318F | Heat Transfer, Combustion and Explosives Lab | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| FT 320F | Industrial Hygiene Lab | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| FT 322F | General Proficiency | - | - | 2 | 2 | 50 | - | - | 50 | - |
|  | Total | 18 | 6 | 10 | 34 | 450 | 600 | 100 | 1150 |  |

Note:-

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of Calculator will not be permitted in the examination.
2. Each student has to undergo practical training of 6 weeks during summer vacation and its evaluation shall be carried out in the VII semester


# MAHRASHSI DAYANAND UNIVERSITY, ROHTAK 

SCHEME OF STUDIES \& EXAMINATIONS
B.Tech $4^{\text {th }}$ YEAR FIRE TECHNOLOGY \& SAFETY, $7^{\text {th }}$ SEMESTER

Proposed ' $F$ ' Scheme w.e.f 2012-13

| Course | Proposed 'F' Scheme w.e.f 2012-13 |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Course Title | Teaching schedule |  |  |  | Marks <br> For <br> class <br> work | Marks for Examination |  | Total Marks | Duration of Exam |
|  |  | L | T | P | Total |  | Theory | Practical |  |  |
| FT 401 F | Safety and Risk Management | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 403 F | Industrial Engineering | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 405 F | Operational Research | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 407 F | Disaster Management | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 409 F | Fire Fighting Installation and Automation | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ---- | Dept. Elective | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 411 F | Fire Fighting Installation and Automation Lab | - | - | 2 | 2 | 50 | - | 50 | 100 | 3 |
| FT 413 F | Squad Drill | - | - | 2 | 2 | 50 | - | 50 | 100 | 3 |
|  | Total | 18 | 6 | 4 | 28 | 400 | 600 | 100 | 1100 | - |

## Dept. Elective:

1. FT 417 F Process Instrumentation and Control Engineering
2. FT 419 F Automobile Engineering and Safety.
3. FT 421 F Advanced Safety Engineering and Management.
4. FT 423 F Environmental Protection and Waste Management.
5. FT 425 F Human Factor Engineering.
6. FT 427 F Simulation and Process Modeling
7. FT 429 F Total Quality management
8. FT 431 F Safety in Health Care waste Management
9. FT 433 F Safety in Construction


# MAHRASHSI DAYANAND UNIVERSITY, ROHTAK <br> SCHEME OF STUDIES \& EXAMINATIONS B.Tech $4^{\text {th }}$ YEAR FIRE TECHNOLOGY \& SAFETY, $8^{\text {th }}$ SEMESTER 

Proposed 'F' Scheme w.e.f 2012-13

|  |  | Proposed 'F' Scheme w.e.f 2012-13 |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| SI. No. Course No. | Subject | Internal <br> Marks | External <br> Marks | Total <br> Marks |  |
| 1. | FT- 402-F | Industrial Training/Institutional Project Work | 150 | 150 | 300 |

Note:
The students are required to undergo Industrial Training or Institutional Project Work of duration not less than 4 months in a reputed organization or concerned institute. The students who wish to undergo industrial training, the industry chosen for undergoing the training should be at least a private limited company. The students shall submit and present the mid-term progress report at the Institute. The presentation will be attended by a committee. Alternately, the teacher may visit the Industry to get the feedback of the students.

The final viva-voce of the Industrial Training or Institutional Project Work will be conducted by an external examiner and one internal examiner appointed by the Institute. External examiner will be from the panel of examiners submitted by the concerned institute approved by the Board of Studies in Engineering and Technology. Assessment of Industrial Training or Institutional Project Work will be based on seminar, viva-voce, report and certificate of Industrial Training or Institutional Project Work obtained by the student from the industry or Institute.

The internal marks distributions for the students who have undergone Industrial Training consist of $\mathbf{5 0}$ marks from the industry concern and $\mathbf{1 0 0}$ marks by the committee members consisting of faculty members of concerned department of the parent institute.

The teachers engaged for Institutional Project work shall have a workload of 2 hours per group (at least 4 students) per week.


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MAHRASHSI DAYANAND UNIVERSITY, ROHTAK
SCHEME OF STUDIES \& EXAMINATIONS

## B.Tech 2nd YEAR MECHANICAL ENGINEERING,

$3{ }^{\text {rd }}$ SEMESTER
Proposed 'F' Scheme w.e.f 2010-11

| Course | Course Title | Teaching Schedule |  |  |  | $\begin{gathered} \text { Marks } \\ \text { for } \\ \text { class } \\ \text { work } \\ \hline \end{gathered}$ | Marks for Examination |  | Total Marks | Duration of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { MAT-201-F } \\ & \text { or } \\ & \text { HUM-201-F } \end{aligned}$ | Mathematics-III <br> or Engineering Economics | $\begin{gathered} \mathrm{L} \\ \hline 3 \\ \text { or } \\ 3 \end{gathered}$ | $\begin{gathered} \mathrm{T} \\ \hline 2 \\ \text { or } \\ 1 \end{gathered}$ | P | Total <br> 5 <br> or <br> 4 | 50 | Theory <br> 100 | Practical | 150 | 3 |
| HUM-203-F | Fundamentals of <br> Management | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-201-F | Thermodynamics | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-203-F | Computer Aided Design | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-205-F | Engineering <br> Mechanics | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-207-F | Material Science | 3 | 1 | - | 4 | 50 | 100 |  | 150 | 3 |
| ME-209-F | Machine Drawing | 1 | - | 3 | 4 | 50 | - | 50 | 100 | 4 |
| ME-211-F | Computer Aided | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
|  | Design Lab |  |  |  |  |  |  |  |  |  |
| ME-213-F | Engineering | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
|  | Mechanics Lab |  |  |  |  |  |  |  |  |  |
| ME-215-F | Materials Science | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
|  | Lab |  |  |  |  |  |  |  |  |  |
|  | Total | 19 | 6 | 10 | 34/35 | 425 | 600 | 125 | 1150 |  |



MAHARSHI DAYANAND UNIVERSITY, ROHTAK SCHEME OF STUDIES \& EXAMINATIONS
B.Tech $2^{\text {nd }}$ YEAR MECHANICAL ENGINEERING, $4^{\text {th }}$ SEMESTER
Proposed ' $F$ ' Scheme w.e.f 2010-11

| Course | Course Title | Teaching Schedule |  |  |  | Marks for class work | Marks for Examination |  | Total Marks | $\begin{array}{\|c} \hline \text { Duratio } \\ \mathrm{n} \text { of } \\ \text { Exam } \\ \hline \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Total |  | Theory | Practical |  |  |
| $\begin{aligned} & \text { MAT-201-F } \\ & \text { or } \\ & \text { HUM-201-F } \end{aligned}$ | Mathematics-III <br> or <br> Engineering <br> Economics | $3$ <br> or $3$ | $2$ <br> or $1$ | - | $\begin{gathered} 5 \\ \text { or } \\ 4 \end{gathered}$ | 50 | 100 | - | 150 | 3 |
| ME-202-F | Manufacturing <br> Technology-I | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-204-F | Kinematics of Machine | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-206-F | Strength of Materials-I | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-208-F | Fluid Mechanics | 3 | 1 | - | 4 | 50 | - 100 | - | 150 | 3 |
| ME-210-F | Steam \& Power Generation | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-212-F | Kinematics of | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
|  | Machine Lab | \% |  |  |  |  |  |  |  |  |
| ME-214-F | Strength of | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
|  | Materials Lab |  |  |  |  |  |  |  |  |  |
| ME-216-F | Fluid Mechanics | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
|  | Lab |  |  |  |  |  |  |  |  |  |
| ME-218-F | Steam \& Power Generation Lab | - | - | 2 | 2 | 25 | - | 25 | 50 |  |
| GP-202-F | General Proficiency | - | - | 2 | 2 | 50 | - | - | 50 | - |
|  | Total | 18 | 6 | 9 | 34/35 | 450 | 600 | 100 | 1150 |  |



## MAHARSHI DAYANAND UNIVERSITY, ROHTAK SCHEME OF STUDIES \& EXAMINATIONS B.Tech. $3^{\text {rd }}$ YEAR MECHANICAL ENGINEERING, SEMESTER-V <br> Proposed "F" Scheme effective from 2011-12

| Course | Course Title | Teaching schedule |  |  |  | MarksFor class work | Marks for Examination |  | Total <br> Marks | Duratio n of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Total |  | Theory | Practic <br> al |  |  |
| ME-301-F | Dynamics Of Machines | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-303-F | Mechanical Machine Design-1 | 3 | 2 | - | 5 | 50 | 100 | - | 150 | 4 |
| ME-305-F | Fluid Machine | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-307-F | Internal Combustion Engines \& Gas Turbines | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-309-F | Manufacturing Technology -II | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-311-F | Applied Numerical Technique \& Computing | 3 | - | - | 3 | 50 | 100 | - | 150 | 3 |
| ME-313-F | Dynamics Of Mechanics Lab | - | - | 2 | 2 | 25 |  | 25 | 50 | 3 |
| ME-315-F | Fluid Machine Lab | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| ME-317-F | Internal Combustion Engines \& Gas Turbines Lab | - | - | 2 | 2 | 25 |  | 25 | 50 | 3 |
| ME-319-F | $\begin{aligned} & \text { Manufacturing Technology -II } \\ & \text { Lab } \\ & \hline \end{aligned}$ | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| ME-321-F | Applied Numerical Technique \& Computing Lab | - | - | 2 | 2 | 50 | - | - | 50 |  |
| ME-323-F | Practical Training Viva-Voce |  |  | 2 | 2 | - | - - - | - | - |  |
|  | Total | 18 | 6 | 12 | 36 | 450 | 600 | 100 | 1150 |  |

Note:

1) Students will be allowed to use non-programmable scientific calculator. However, sharing of calculator will not be permitted in the examination.
2) Assessment of Practical Training-I, undergone at the end of IV semester, will be based on seminar, viva-voce, report and certificate of practical training obtained by the student from the industry. According to performance letter grades A, B, C, F are to be awarded. A student who is awarded ' $F$ ' grade is required to repeat Practical Training.


MAHARSHI DAYANAND UNIVERSITY, ROHTAK
SCHEME OF STUDIES \& EXAMINATIONS
B.Tech. $3{ }^{\text {rd }}$ YEAR MECHANICAL ENGINEERING, SEMESTER-VI

Proposed " $F$ " Scheme effective from 2011-12

| Course | Course Title | Teaching schedule |  |  |  | Marks For class work | Marks for Examination |  | Total Marks | Duratio <br> n of <br> Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Total |  | Theory | $\begin{aligned} & \text { Practi } \\ & \text { cal } \end{aligned}$ |  |  |
| ME-302-F | Automobile Engineering | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-304-F | Mechanical Machine Design-II | 3 | 2 | - | 5 | 50 | 100 | - | 150 | 4 |
| ME-306-F | Heat Transfer | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-308-F | Automatic Control | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-310-F | Measurement \& instrumentation | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-312-F | Industrial Engineering | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-314-F | Automobile Engineering Lab | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| ME-316-F | Heat Transfer Lab | - | - | 2 | 2 | 25 | - | 25 | 25 | 3 |
| ME-318-F |  |  | - | 2 | 2 | 25 | - | 25 | 25 | 3 |
|  | Measurement \& instrumentation <br> Lab | - | - | 2 |  |  |  |  |  |  |
| ME-320-F |  | - | - | 2 | 2 | 50 | - | - | 50 | - |
|  | General Proficiency | 18 | 7 | 8 | 33 | 450 | 600 |  | 1050 |  |
|  | Total | 18 | 7 | 8 | 33 | 450 |  | 100 |  |  |

NOTE:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of Calculator will not be permitted in the examination.
2. Each student has to undergo practical training of 6 weeks during summer vacation and its evaluation shall be carried out in the VII semester


MAHARSHI DAYANAND UNIVERSITY, ROHTAK
SCHEME OF STUDIES \& EXAMINATIONS
B.Tech. $4^{\text {th }}$ YEAR MECHANICAL ENGINEERING, SEMESTER- VII
(Scheme-F)
EFFECTIVE FROM THE SESSION 2012-13

| Course | Course Title | Teaching schedule |  |  |  | Marks <br> For <br> class <br> work | Marks for Examination |  | Total Marks | Duration <br> of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Total |  | Theory | Practical |  |  |
| ME-401-F | Strength of Material-II | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-403-F | Refrigeration \& AirConditioning | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-405-F | Operation Research | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-407-F | Power Plant Engineering | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-409-F | Mechanical Vibration | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ------------- | Elective | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-411-F | Refrigeration \& Air- | - | - | 2 | 2 | 50 | - | 50 | 100 | 37 |
|  | Conditioning Lab |  |  |  |  |  |  |  |  |  |
| ME-413-F | Advanced CAD/CAM Lab | - | - | 2 | 2 | 50 | - | 100 | 150 |  |
| ME-415-F | Practical Training-II | - | - | 2 | 2 | - |  | - | - |  |
| $\begin{aligned} & \text { GFME- } \\ & \text { 435-F } \end{aligned}$ | General Fitness for the Profession | - | - | - | ${ }^{-}$ | - | ${ }^{-}$ | 50 | 50 | 3 |
|  | Protal | 18 | 6 | 6 | 30 | 400 | 600 | 200 | 1200 |  |

## LIST OF ELECTIVES

| S.NO. | SUBJECT CODE | DEPTT. ELECTIVE |
| :---: | :---: | :--- |
| 1. | ME-417-F | QUALITY ENGINEERING |
| 2. | ME 419-F | FINITE ELEMENT METHODS |
| 3. | ME-421-F | ENERGY MANAGEMENT PRINCIPLES |
| 4. | ME-425-F | COMPUTER INTEGRATED <br> MANUFACTURING |
| 5. | ME- 429-F | RELIABILITY ENGINEERING |
| 6. | ME-431-F | SOLAR ENERGY ENGINEERING |

# MAHARSHI DAYANAND UNIVERSITY, ROHTAK <br> SCHEME OF STUDIES \& EXAMINATIONS <br> B.Tech. $4^{\text {th }}$ YEAR MECHANICAL ENGINEERING, SEMESTER- VIII <br> (Scheme-F) <br> EFFECTIVE FROM THE SESSION 2012-13 

| SI. No. | Course No. | Subject | Internal <br> Marks | External <br> Marks | Total <br> Marks |
| :--- | :---: | :---: | :---: | :---: | :---: |
| 1. | ME- 402-F | Industrial Training/Institutional Project Work | 150 | 150 | 300 |

## Note:

The students are required to undergo Industrial Training or Institutional Project Work of duration not less than 4 months in a reputed organization or concerned institute. The students who wish to undergo industrial training, the industry chosen for undergoing the training should be at least a private limited company. The students shall submit and present the mid-term progress report at the Institute. The presentation will be attended by a committee. Alternately, the teacher may visit the Industry to get the feedback of the students.
The final viva-voce of the Industrial Training or Institutional Project Work will be conducted by an external examiner and one internal examiner appointed by the Institute. External examiner will be from the panel of examiners submitted by the concerned institute approved by the Board of Studies in Engg. \& Technology. Assessment of Industrial Training or Institutional Project Work will be based on seminar, viva-voce, report and certificate of Industrial Training or Institutional Project Work obtained by the student from the industry or Institute.
The internal marks distributions for the students who have undergone Industrial Training consist of 50 marks from the industry concern and 100 marks by the committee members consisting of faculty members of concerned department of the parent institute.
The teachers engaged for Institutional Project work shall have a workload of 2 hours per group (at least 4 students) per week.


## M.D.UNIVERSITY, ROHTAK <br> SCHEME OF STUDIES AND EXAMINATION M.TECH 1st YEAR (MANUFACTURING \& AUTOMATION) <br> SEMESTER 1

CBCS Scheme effective from 2016-17

| $\begin{aligned} & \text { Sl. } \\ & \text { No } \end{aligned}$ | Course Code | Subject | Credit Pattern |  |  |  | Examination Schedule (Marks) |  |  |  | Dura tion of Exam (Hou rs) | No of <br> Hours /week |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P | Total Credi ts | Mark $s$ of Class work | $\begin{gathered} \text { Theor } \\ \mathrm{y} \\ \hline \end{gathered}$ | Practic al | Total |  |  |
| 1 | $\begin{aligned} & \text { 16MMA21C1 } \\ & \text { 16MMA21C2 } \end{aligned}$ | Metal Forming Analysis | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 2 |  | Mechatronics \& Product Design | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 3 | 16MMA21C3 | Total Quality Management | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 4 | 16MMA21C4 | Welding \& Allied Processes | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 5 | 16MMA21CLI | Mechatronics Lab | - | - | 2 | 2 | 50 |  | 50 | 100 | 3 | 4 |
| 6 | 16MMA21CL2 | Welding Lab | - | - | 2 | 2 | 50 |  | 50 | 100 | 3 | 4 |
| 7 | 16MMA21CL3 | CAD/CAM Lab | - | - | 2 | 2 | 50 |  | 50 | 100 | 3 | 4 |
| 8 | 16MMA21C5 | Seminar | - |  | - | 2 | 50 | - | - | 50 |  | 2 |
| 9 | 16MMA21D1 or <br> 16MMA21D2 or 16MMA21D3 OR <br> 16MMA21D4 | Elective I | 4 | - |  | 4 | 50 | 100 |  | 150 | 3 | 4 |
|  |  |  | 28 |  |  |  |  |  |  |  |  |  |
|  |  | TOTAL |  |  |  |  |  |  |  |  |  |  |

Elective I: Choose any one from the following three papers:
16MMA21D1 - INDUSTRIAL INSPECTION
16MMA21D2 - DESIGN AND METALLURGY OF WELDED
JOINTS 16MMA21D3 - FOUNDARY TECHNOLOGY
16MMA21D4-DESIGN PLANNING CONTORL AND PRODUCTION SYSTEM
NOTE:
Examiner will set nine questions in total. Question One will be compulsory and will comprise short answer type questions from all sections and remaining eight questions to be set by taking two questions from each unit. The students have to attempt five questions in total, first being compulsory and selecting one from each Unit.


## M.D.UNIVERSITY, ROHTAK SCHEME OF STUDIES AND EXAMINATION M.TECH 1st YEAR (MANUFACTURING \& AUTOMATION) <br> SEMESTER 2 <br> CBCS Scheme effective from 2016-17



TOTAL
NOTE: Examiner will set nine questions in total. Question One will be compulsory and will comprise short answer type questions from all sections and remaining eight questions to be set by taking two questions from each unit. The students have to attempt five questions in total, first being compulsory and selecting one from each Unit.
Elective II : Choose any one from the following three papers:
16MMA22D1 - QUALITY CONTROL TECHNIQUES
16MMA22D2 - FINITE ELEMENT METHODS
16MMA22D3 - ARTIFICIAL INTELLEGENCE IN MANUFACTURING
Open Elective: A candidate has to select this paper from the pool of Open Electives provided by the University.
Foundation Elective: A candidate has to select this paper from the pool of Foundation Electives provided by the University-

## M.D UNIVERSITY

SCHEME OF STUDIES AND EXAMINATION
M.TECH 2nd YEAR (MANUFACTURING \& AUTOMATION)

SEMESTER 3rd
CBCS Scheme effective from 2017-18

| $\begin{aligned} & \text { Sl. } \\ & \text { No } \end{aligned}$ | Course No. | Subject | Teaching Schedule |  |  |  | Examination Schedule <br> (Marks) |  |  |  | Durat ion of Exam (Hour s) | No of hours /week |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P | Total credit s | Marks of Class works | Theory | Practic al | Total |  |  |
| 1 | 16MMA23C1 | Advanced metrology and calibration | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 2 | 16MMA23C2 | Manufacturing Automation | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 3 | 16MMA23C3 | Major Project <br> (Dissertation Stage 1) | - | - | 4 | 4 | 100 | - | - | 100 |  | 4 |
| 4 | 16MMA23CL <br> 1 | Metrology \& Automation Lab | - | - | 2 | 2 | 50 | - | 50 | 100 |  | 2 |
| 7 |  | Foundation Elective |  |  |  | 2 |  |  |  |  |  |  |
| 8 |  | Open Elective |  |  |  | 3 |  |  |  |  |  |  |
|  |  | TOTAL | 19 |  |  |  |  |  |  |  |  |  |

NOTE:
Examiner will set nine questions in total. Question One will be compulsory and will comprises of all sections and remaining eight questions to be set by taking two questions from each unit. The students have to attempt five questions in total, first being compulsory and selecting one from each Unit.

## Foundation Elective

A candidate has to select this paper from the pool of ourdation Eleetives provided by the University.

## OPEN ELECTIVE

A candidate has to select this paper from the pool of open electives provided by the University.

## M.D UNIVERSITY

SCHEME OF STUDIES AND EXAMINATION
M.TECH 2nd YEAR (MANUFACTURING \& AUTOMATION)

SEMESTER 4th
CBCS Scheme effective from 2017-18

| $\begin{gathered} \mathrm{Sl} \\ \dot{\mathrm{~N}} \\ \mathrm{o} \end{gathered}$ | Course No. | Subject | Teaching Schedule |  |  |  | Examination Schedule <br> (Marks) |  |  |  | No of Credit S |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P | Total | Marks of Class works | Theory | Practical | Total |  |
| 1. | $\begin{aligned} & \text { 16MMA24C } \\ & 1 \\ & \hline \end{aligned}$ | Major Project (Dissertation Stage 2) | - | - | - | - | 250 | Thery | 500 | 750 | 20 |
|  |  | TOTAL | $750$ |  |  |  | - | 250 | - |  | 500 |

NOTE:

1. Students have to publish a research paper in a journal / conference of the research work done in the semester.


## CURRICULUM AND SCHEME OF EXAMINATIONS OF BBA PROGRAMME FROM THE SESSION 2014-15

## SECOND YEAR

## Third Semester

| Paper No | Title of Paper(s) | External <br> Marks | Internal <br> Assessment/ <br> Work-shop <br> Marks | Practical <br> Marks | Total <br> Marks |
| :--- | :--- | :---: | :---: | :---: | :---: |
| BBAN301 | Cost and Management <br> Accounting | 80 | 20 | - | 100 |
| BBAN302 | Marketing Management | 80 | 20 | - | 100 |
| BBAN303 | Capital Markets | 80 | 20 | - | 100 |
| BBAN304 | Introduction to <br> Information Technology | 50 | - | 50 | 100 |
| BBAN305 | Environment Studies | 80 | 20 | - | 100 |
| BBAN306 | Disaster Management | 80 | 20 | - | 100 |
|  | TOTAL |  |  |  | 600 |

## Fourth Semester

| Paper No | Title of Paper(s) | External <br> Marks | Internal <br> Assessment/ <br> Work-shop <br> Marks | Practical <br> Marks | Total <br> Marks |
| :--- | :--- | :---: | :---: | :---: | :---: |
| BBAN401 | Financial Management | 80 | 20 | - | 100 |
| BBAN402 | Human Resource <br> Management | 80 | 20 | - | 100 |
| BBAN403 | Business Research <br> Methods | 80 | 20 | - | 100 |
| BBAN404 | Business Laws | 80 | 20 | - | 100 |
| BBAN405 | Data Base Management <br> System | 50 | - | 50 | 100 |
| BBAN406 | Human Rights and Values | 80 | 20 | - | 100 |
|  | TOTAL |  |  |  | 600 |



CURRICULUM AND SCHEME OF EXAMINATIONS OF
BBA PROGRAMME FROM THE SESSION 2014-15

## THIRD YEAR

## Fifth Semester

| Paper No | Title of Paper(s) | External <br> Marks | Internal <br> Assessment/ <br> Work-shop <br> Marks | Practical <br> Marks | Total <br> Marks |
| :--- | :--- | :---: | :---: | :---: | :---: |
| BBAN501 | Production and Materials <br> Management | 80 | 20 | - | 100 |
| BBAN502 | Company Law | 80 | 20 | - | 100 |
| BBAN503 | Indian Business <br> Environment | 80 | 20 | - | 100 |
| BBAN504 |  <br> Internet | 50 | - | 50 | 100 |
| BBAN505 | Presentation Skills and <br> Personality Development | 80 | 20 | - | 100 |
| BBAN506 | Cyber Security | 80 | 20 | - | 100 |
| BBAN507 Summer Training Report | 100 | - | - | 100 |  |
|  | TOTAL |  |  |  | 700 |

## Sixth Semester

| Paper No | Title of Paper(s) | External <br> Marks | Internal <br> Assessment/ <br> Work-shop <br> Marks | Practical <br> Marks | Total <br> Marks |
| :--- | :--- | :---: | :---: | :---: | :---: |
| BBAN601 | Income Tax | 80 | 20 | - | 100 |
| BBAN602 |  <br> Design | 80 | 20 | - | 100 |
| BBAN603 | Foundations of <br> International Business | 80 | 20 | - | 100 |
| BBAN604 | Consumer Protection | 80 | 20 | - | 100 |
| BBAN605 | E-Commerce | 50 | - | 50 | 100 |
| BBAN606 | Project Report | 100 | - | - | 100 |
| BBAN607 | Comprehensive Viva- <br> voce | 100 | - | - | 100 |
|  | TOTAL |  |  |  | 700 |

Session 2014-15

## CURRICULUM AND SCHEME OF EXAMINATIONS OF TWO YEAR MBA PROGRAMME

Second Year : $3^{\text {rd }}$ Semester

| Paper No. | Title of the Paper(s) | External Marks | Internal <br> Marks/ <br> Workshop | Practical Marks | Total Marks |
| :---: | :---: | :---: | :---: | :---: | :---: |
| MBA301 | Strategic Management | 80 | 20 | - | 100 |
| MBA302 | Management Information System | 80 | 20 | - | 100 |
| MBA303 | Business Legislation | 80 | 20 | - | 100 |
| MBA304 | Summer Training Report | 100 | - | - | 100 |
| Specialization Area I $\{$ | Optional Paper - I |  |  |  | 100 |
|  | Optional Paper - II |  |  |  | 100 |
|  | Optional Paper - III |  |  |  | 100 |
| Specialization <br> Area II <br> $\{$ | Optional Paper - I |  |  |  | 100 |
|  | Optional Paper - I <br> Optional Paper - II |  |  |  | 100 |
|  | Optional Paper - III |  |  |  | 100 |
|  | TOTAL |  |  |  | 1000 |

## Note:

1 Students are required to choose any three optional papers from each set of specialization areas offered under dual specialization scheme. The specialization area opted in $3^{\text {rd }}$ Semester would remain same in $4^{\text {th }}$ semester also.
2. The duration of the end term examination shall be 3 hours.
3. The following combinations of specializations shall be offered to the students of 2-Year MBA (General):
a.

Finance and Marketing
b.
c.
d.
e.
f. $\quad$ Marketing and IB
g.

Finance and Human Resource Management
c. Human Resource Management and Marketing

Finance and IT

- Marketing



## CURRICULUM AND SCHEME OF EXAMINATIONS FOR <br> TWO YEAR MBA PROGRAMME

Second Year: $4^{\text {th }}$ Semester

| Paper No. | Title of the Paper(s) | External <br> Marks | Internal <br> Marks/ <br> Workshop | Practical Marks | Total Marks |
| :---: | :---: | :---: | :---: | :---: | :---: |
| MBA401 | Entrepreneurship | 80 | 20 | - | 100 |
| MBA402 | E-Commerce | 50 | - | 50 | 100 |
| MBA403 | Project Report | 100 | - | - | 100 |
| MBA404 | Comprehensive Viva-voce | 100 | - | - | 100 |
| Specialization Area I | Optional Paper - I |  |  |  | 100 |
|  | Optional Paper - II |  |  |  | 100 |
|  | Optional Paper - III |  |  |  | 100 |
| Specialization Area II | Optional Paper - I |  |  |  | 100 |
|  | Optional Paper - II |  |  |  | 100 |
|  | Optional Paper - III |  |  |  | 100 |
|  | TOTAL |  |  |  | 1000 |

## Note:

1. Students are required to choose any three optional papers from each set of specialization areas offered under dual specialization scheme. The specialization area opted in $3^{\text {rd }}$ Semester would remain same in $4^{\text {th }}$ semester also.
2. The topic of the Project Report (Code MBA403) shall be finalized in $3^{\text {rd }}$ semester by a Committee of the Faculty Members to be constituted by Director/Principal of the concerned Institute after presentation by the candidate before the Committee.
3. The duration of the end term examination shall be 3 hours.
4. The following combinations of specializations shall be offered to the students of 2-Year MBA (General):

Finance and Marketing
b. Finance and Human Resource Management
c. Human Resource Management and Marketing
d. Finance and IT
e. $\quad$ Finance and IB
f. Marketing and IB
g. Marketing and IT


## CURRICULUM AND SCHEME OF EXAMINATIONS FOR TWO YEAR MBA PROGRAMME

## SPECIALISATIONS OFFERED IN $3{ }^{\text {RD }}$ AND $4^{\text {TH }}$ SEMESTERS

HUMAN RESOURCE MANAGEMENT: Third Semester

| Paper No. | Title of the Paper(s) | External <br> Marks | Internal <br> Marks/ <br> Workshop | Practical <br> Marks | Total <br> Marks |
| :---: | :--- | :--- | :--- | :---: | :---: |
| MBA305 | Performance Management | 80 | 20 | - | 100 |
| MBA307 | Organisational Change and <br> Development | 80 | 20 | - | 100 |
| MBA308 | Compensation Management | 80 | 20 | - | 100 |

## Fourth Semester

| Paper No. | Title of the Paper(s) | External <br> Marks | Internal <br> Marks/ <br> Workshop | Practical <br> Marks | Total Marks |
| :---: | :--- | :--- | :---: | :---: | :---: |
| MBA405 | Talent Management | 80 | 20 | - | 100 |
| MBA406 | Industrial Relations and Labour <br> Legislations | 80 | 20 | - | 100 |
| MBA407 | Strategic Human Resource <br> Management | 80 | 20 | - | 100 |

Note: The duration of the end term examination shall be 3 hours.


2017-18

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## MAHARSHI DAYANAND UNIVERSITY, ROHTAK SCHEME OF STUDIES \& EXAMINATIONS <br> B.Tech 2nd YEAR CIVIL ENGINEERING, $3^{\text {rd }}$ SEMESTER <br> Proposed 'F' Scheme w.e.f 201D

| Subject Code | Subject Name | L | T | P |  | Total | Theory Marks | Class <br> Marks | Practical Marks | Total Marks |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{array}{\|c} \text { MAT-201-F } \\ \text { Or } \\ \text { HUM-201-F } \end{array}$ | Mathematics-III <br> Or <br> Engineering <br> Economics | 3 | 1 | 0 |  | 4 | 100 | 50 | 0 | 150 |
| HUM-203-F | Fundamental of Management | 3 | 1 | 0 |  | 4 | 100 | 50 | 0 | 150 |
| CE-201-F | Structural <br> Analysis-I | 3 | 1 | 0 |  | 4 | 100 | 50 | 0 | 150 |
| CE-203-F | $\begin{gathered} \hline \text { Building } \\ \text { Construction } \\ \text { Materials } \\ \hline \end{gathered}$ | 3 | 1 | 0 |  | 4 | 100 | 50 | 0 | 150 |
| CE-205-F | Fluid Mechanics-I | 3 | 1 | 0 |  | 4 | 100 | 50 | 0 | 150 |
| CE-207-F | Surveying-I | 3 | 1 | 0 |  | 4 | 100 | 50 | 0 | 150 |
| CE-209-F | Building Drawings | 1 | 0 | 3 |  | 4 | 0 | 25 | 25 | 50 |
| CE-211-F | Structural Analysis-I Lab | 0 | 0 | 2 |  | 2 | 0 | 25 | 25 | 50 |
| CE-213-F | Fluid Lab-I Lab | 0 | 0 | 2 |  | 2 | 0 | 25 | 25 | 50 |
| CE-215-F | Surveying-I Lab | 0 | 0 | 2 |  | 2 | 0 | 50 | 50 | 100 |
|  | Total | 19 | 7 | 9 |  | 35 | 600 | 425 | 125 | 1150 |



MAHARSHI DAYANAND UNIVERSITY, ROHTAK SCHEME OF STUDIES \& EXAMINATIONS B.Tech 2nd YEAR CIVIL ENGINEERING, $4^{\text {th }}$ SEMESTER
Proposed 'F' Scheme effective w.e.f 2010

| Subject Code | Subject <br> Name | L | T | P | Total | Theory <br> Marks | Class <br> Marks | Practica <br> IMarks | Total <br> Marks |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| MAT-201-F <br> Or 201-F | Maths III <br> Or <br> Engg. <br> Economics | 3 | 1 | 0 | 4 | 100 | 50 | - | 150 |
| CE-202-F | Structural <br> Analysis-II | 3 | 1 | 0 | 4 | 100 | 50 | 0 | 150 |
| CE-204-F | Fluid <br> Mechanics- <br> II | 3 | 1 | 0 | 4 | 100 | 50 | 0 | 150 |
| CE-206-F | Design of <br> Concrete <br> Structures-I | 3 | 1 | 0 | 4 | 100 | 50 | 0 | 150 |
| CE-208-F | Surveying-II | 3 | 1 | 0 | 4 | 100 | 50 | 0 | 150 |
| CE-210-F | Construction <br> and concrete <br> technology | 3 | 1 | 0 | 4 | 100 | 50 | 0 | 150 |
| CE-214-F | Structural <br> Analysis-II <br> Lab | 0 | 0 | 2 | 2 | 0 | 25 | 25 | 50 |
| CE-216-F | Fluid <br> mechanics <br> Lab | 0 | 0 | 2 | 2 | 0 | 25 | 25 | 50 |
| CE-218-F | Surveying <br> Lab | 0 | 0 | 2 | 2 | 0 | 25 | 25 | 50 |
| GP-202-F | Concrete <br> Lab | 0 | 0 | 2 | 2 | 0 | 25 | 25 | 50 |
| General <br> Proficiency | - | - | 2 | 2 | 50 | - | - | 50 |  |
| Total | 18 | 6 | 10 | 34 | 650 | 400 | 100 | 1150 |  |

## Note:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of Calculator and other materials will not be permitted in the examination.
2. Each student has feundergo practical training of 6 weeks during summer vacation and its evaluation shal pei carried put in the V semester.


# MAHARSHI DAYANAND UNIVERSITY, ROHTAK <br> SCHEME OF STUDIES \& EXAMINATIONS B.Tech. $3^{\text {rd }}$ YEAR CIVIL ENGINEERING, SEMESTER- V <br> Proposed " $F$ " Scheme effective from 2011-12 

| Subject <br> Code | Subject Name | $\mathbf{L}$ | $\mathbf{T}$ | $\mathbf{P}$ | Total | Sessional <br> Marks | Theory <br> Marks | Sem <br> Practical <br> Marks | Total Marks |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| CE-301-F | Design of Steel <br> Structure- I | 3 | 1 | - | 4 | 50 | 100 | 0 | 150 |
| CE-303-F | Transportation Engg--I | 3 | 1 | 0 | 4 | 50 | 100 | 0 | 150 |
| CE-305-F | Water Supply- <br> Treatment | 3 | 1 | 0 | 4 | 50 | 100 | 0 | 150 |
| CE-307-F | Soil Mechanics | 3 | 1 | 0 | 4 | 50 | 100 | 0 | 150 |
| CE-309-F | Numerical Methods And <br> Computing Techniques | 3 | 1 | 0 | 4 | 50 | 100 | 0 | 150 |
| CE-311-F | Hydrology | 3 | 1 | 0 | 4 | 50 | 100 | 0 | 150 |
| CE-313 F | DSS-Drg.Lab | 2 | 0 | 3 | 5 | 25 |  | 25 | 50 |
| CE-315-F | Soil Mechanics Lab | 0 | 0 | 2 | 2 | 25 | 0 | 25 | 50 |
| CE-317 F | Transportation Lab-I | 0 | 0 | 2 | 2 | 25 | 0 | 25 | 50 |
| CE-319-F | Survey Camp | 0 | 0 | 0 | 0 | 50 | 0 | 0 | 50 |
| CE-321-F | Auto Cad Lab | 0 | 0 | 2 | 2 | 25 | 0 | 25 | 50 |
|  | Total | 20 | 6 | 9 | 35 | 450 | 600 | 100 | 1150 |

## Note:

1) Students will be allowed to use non-programmable scientific calculator. However, sharing of calculator will not be permitted in the examination.
2) Assessment of Practical Training-I, undergone at the end of IV semester, will be based on seminar, viva-voce, report and certificate of practical training obtained by the student from the industry. According to performance letter grades A, B, C, F are to be awarded. A student who is awarded ' F ' grade is required to repeat Practical Training.


## MAHARSHI DAYANAND UNIVERSITY, ROHTAK

SCHEME OF STUDIES \& EXAMINATIONS B.Tech. $3^{\text {rd }}$ YEAR CIVIL ENGINEERING, SEMESTER- VI Proposed "F" Scheme effective from 2011-12

| Subject <br> Code | Subject Name | $\mathbf{L}$ | $\mathbf{T}$ | $\mathbf{P}$ | Total | Class <br> Marks | Sem <br> Theory <br> Marks | Sem <br> Practical <br> Marks | Total <br> Marks |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| CE-302-F | Design of Concrete Structures- <br> II | 4 | 2 | 0 | 6 | 50 | 100 | 0 | 150 |
| CE-304-F | Irrigation Engineering-I | 3 | 1 | 0 | 4 | 50 | 100 | 0 | 150 |
| CE-306-F | Geotechnology | 3 | 1 | 0 | 4 | 50 | 100 | 0 | 150 |
| CE-308-F | Sewerage And Sewage <br> Treatment | 3 | 1 | 0 | 4 | 50 | 100 | 0 | 150 |
| CE-310-F | Transportation Engg.-II | 3 | 1 | 0 | 4 | 50 | 100 | 0 | 150 |
| CE-312-F | Engineering Geology | 3 | 1 | 0 | 4 | 50 | 100 | 0 | 150 |
| CE-314-F | Geotechnology Lab | 0 | 0 | 2 | 2 | 25 | 0 | 25 | 50 |
| CE-316-F | Transportation Engg.-II Lab | 0 | 0 | 2 | 2 | 25 | 0 | 25 | 50 |
| CE-318-F | Engineering Geology Lab | 0 | 0 | 2 | 2 | 25 | 0 | 25 | 50 |
| CE-320-F | Environmental Engg. Lab | 0 | 0 | 2 | 2 | 25 | 0 | 25 | 50 |
| GPCE-318-F | General Proficiency | 0 | 0 | 1 | 1 | 0 | 0 | 50 | 50 |
|  | Total | 19 | 7 | 9 | 35 | 400 | 600 | 150 | 1150 |

## NOTE:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of Calculator will not be permitted in the examination.
2. Each student has to undergo practical training of 6 weeks during summer vacation and its evaluation shall be carried out in the VII semester.


# MAHARSHI DAYANAND UNIVERSITY, ROHTAK <br> SCHEME OF STUDIES \& EXAMINATIONS 

B. Tech. $4^{\text {th }}$ YEAR CIVIL ENGINEERING, SEMESTER-VII
(Scheme-F)

## EFFECTIVE FROM THE SESSION 2012-13

| Subject Code | Subject Name | Teaching schedule |  |  |  | Marks <br> For class <br> work | Marks for Examination |  |  Dotal <br> Marks  | Duration of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | $\mathbf{P}$ | Total |  | Theory | Practical |  |  |
| CE-401-F | Design of Steel Structure-II | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| CE-403-F | Disaster Mitigation and Management | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 4 |
| CE-405-F | Estimating and Costing | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| CE-407-F | Irrigation Engg-II | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| - -------- | Elective | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| CE-451-F | Hydro Power Engg. | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| CE-453-F | Ground Water Engg | 3 | 1 | 0 | 4 | 50 | 100 | 0 | 150 | 3 |
| CE-453-F |  | 0 | 0 | 2 | 2 | 50 | 0 | 50 | 100 | 3 |
| CE-455-F | Irrigation Drawing Lab | 0 | 0 | 2 |  |  | - | - | - |  |
| CE-457-F | Practical Training - II | - | - | 2 | - | - |  |  |  |  |
| $\begin{aligned} & \text { GFCE- } \\ & 459-F \end{aligned}$ | General Fitness for the Profession | - | - | - |  | - | ${ }^{-}$ | 50 | 50 |  |
|  | Total | 21 | 7 | 4 | 32 | 400 | 700 | 100 | 1200 |  |

## Note:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of calculator will not be permitted in the examination.
2. Student will be permitted to opt for any one elective run by the department. However, the departments will offer only those electives for which they have expertise. The choice of the students for any elective shall not be a binding for the department to offer, if the department does not have expertise.
3. Assessment of Practical Training-II, carried out at the end of VI semester, will be based on seminar, viva-voce and project report of the student. According to performance letter grades A, B, C, F are to be awarded. A student who is awarded ' $F$ ' grade is required to repeat Practical Training.

## ELECTIVES

1) CE -409-F - Energy planning and management
2) CE-411-F - Environmental pollution and control
3) $\mathrm{CE}-417-\mathrm{F} \quad$ - Finite Element Methods
4) CE-421-F - Environmental impact and management
5) CE-423-F - Elements of Earth Quake Engg.
6) CE-433-F - Hydraulic System Modeling


# MAHARSHI DAYANAND UNIVERSITY, ROHTAK <br> SCHEME OF STUDIES \& EXAMINATIONS 

## B.Tech. $4^{\text {th }}$ YEAR CIVIL ENGINEERING, SEMESTER- VIII <br> (Scheme-F)

## EFFECTIVE FROM THE SESSION 2012-13

|  |  |  | Subject | Internal <br> Marks | External <br> Marks |
| :--- | :--- | :---: | :---: | :---: | :---: |
| 1. | CE-402-F | Industrial Training/Institutional Project Work | 150 | 150 | 300 |

## Note:

The students are required to undergo Industrial Training in State/Central PWD, Railways and other Originations or Institutional Project Work of duration not less than 4 months in a reputed organization or concerned institute. The students who wish to undergo industrial training, the industry chosen for undergoing the training should be at least a private limited company. The students shall submit and present the mid-term progress report at the Institute. The presentation will be attended by a committee. Alternately, the teacher may visit the Industry to get the feedback of the students.

The final viva-voce of the Industrial Training or Institutional Project Work will be conducted by an external examiner and one internal examiner appointed by the Institute. External examiner will be from the panel of examiners submitted by the concerned institute approved by the Board of Studies in Engg. \& Technology. Assessment of Industrial Training or Institutional Project Work will be based on seminar, viva-voce, report and certificate of Industrial Training or Institutional Project Work obtained by the student from the industry or Institute.

The internal marks distributions for the students who have undergone Industrial Training consist of $\mathbf{5 0}$ marks from the industry concern and $\mathbf{1 0 0}$ marks by the committee members consisting of faculty members of concerned department of the parent institute.

The teachers engaged for Institutional Project work shall have a workload of 2 hours per group (at least 4 students) per week.


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## M.D UNIVERSITY <br> SCHEME OF STUDIES AND EXAMINATION B.TECH. II YEAR (COMPUTER SCIENCE \& ENGINEERING) <br> SEMESTER III

' $F$ ' Scheme effective from 2010-11

| $\begin{aligned} & \text { Sl. } \\ & \text { No } \end{aligned}$ | Course No. | Subject | Teaching Schedule |  |  |  | Examination Schedule <br> (Marks) |  |  |  | Duration of Exam (Hours) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P | Total | Mark s of Class work s | Theory | Practi cal | Total |  |
| 1 | $\begin{aligned} & \text { MATH-201-F } \\ & \text { OR } \\ & \text { HUM-201-F } \end{aligned}$ | Mathematics III <br> Common to <br> (CSE,IT,ME,ECE,BM <br> E,EE,EEE,E\&I,I\&C) OR ENGG. ECONOMICS | 3 | 2 | - | 5 | 50 | 100 | - | 150 | 3 |
| 1 | CSE-201 F | Data Structures Using C (CSE,ECE,IT,EI) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 3 | CSE-203 F | Discrete Structures (CSE,IT) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 4 | EE-217-F | Digital \& Analog Communication (CSE,IT) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 5 | EE-204-F | Digital Electronics (Common with $4^{\text {th }}$ Sem. - EE,EL,EI \& IC) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 6 | HUM-203 F | Fundamental of Management (Common for all branches) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 7 | IT-201-F | PC Lab (CSE,IT) | - | - | 3 | 3 | 50 | - | 50 | 100 | 3 |
| 8 |  | Data Structures Using | - | - | 2 | 2 | 25 | - | 25 | 50 | 3. |
|  | CSE-205-F | C Lab (CSE,ECE,IT,EI) |  |  |  |  |  |  |  |  |  |
| 9 |  | Digital Electronics Lab (CSE,IT \& Common with $4^{\text {th }}$ Sem. EE,EL,EI \& IC) | - | - | 3 | 3 | 50 |  | 50 | 100 | 3 |
|  | EE-224-F | EE,EL,EI \& IC) | 18 | 7 | 8 | 33 | 425 | 600 | 125 | 1150 |  |

NOTE: 1. Students will be allowed to use non-programmable scientific calculator. However, sharing of Calculator will not be permitted in the examination.
M.D UNIVERSITY

SCHEME OF STUDIES AND EXAMINATION
B.TECH. II YEAR (COMPUTER SCIENCE
B.TECH. II YEAR (COMPUTER SCIENCE \& ENGINEERING)

SEMESTER - IV
' $F$ ' Scheme effective from 2010-11


Note:

1) Students will be allowed to use non-programmable scientific calculator. However, sharing of
2) Calculator will not be permitted in the examination.
3) Each student has to undergo practical training of 6 weeks during summer vacation and its evaluation shall be carried out in the $V$ semester.

## M. D. UNIVERSITY, ROHTAK

## Scheme of studies \& Examination

## Bachelor of Technology (Computer Science \& Engineering)

Semester - V
' $F$ ' Scheme Effective from 2010-11

| S. No. | Course No. | Subject | Teaching Schedule |  |  |  | $\begin{aligned} & \text { Examination Schedule } \\ & \text { (Marks) } \end{aligned}$ |  |  |  | Duration of Exam (Hours) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P | Total | Marks of Class work | Theory | Practic al | Total |  |
| 1 | CSE-301 F | Principles of Operating System (CSE,IT) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 2 | EE-309-F | Microprocessors and Interfacing (EL,CSE,IT,EI, IC, EEE, AEI) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 3 | CSE-303-F | Computer Graphics (CSE,IT) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 4 | CSE-305-F | Theory of Automata Computation | 3 | 1 |  | 4 | 50 | 100 | - | 150 | 3 |
| 5 | CSE 307-F | Web Development (Common with IT - VI Sem) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 6 | IT-204-F | Multimedia Technologies (Common with IT- IV- Sem) | 3 | - | - | 3 | 50 | 100 | - | 150 | 3 |
| 7 | CSE-309-F | Computer Graphics Lab. (CSE,IT) | - | - | 3 | 3 | 25 | - | 25 | 50 | 3 |
| 8 | CSE-311-F | Web Development \& Core JAVA Lab. (Common with 6 Sem.-IT) | - | - | 2 | 2 | 25 |  | 25 | 50 | 3 |
| 9 | IT-208-F | Multimedia Tech. Lab (Common with IT-IVSem) | - | - | 2 | 2 | 25 | - | 25 | 50 | 3. |
| 10 | EE-329-F | Microprocessors and Interfacing Lab. (EL,CSE,IT,EI, IC, EEE, AED. | - | - | 2 | 2 | 25 | - | 25 | 50 | 37 |
| 11. | CSE-313-F | O.S. Lab. (CSE, IT) | - | - | 2 | 2 | 25 | - | 25 | 50 | - |
| 12 | CSE-315-F | Practical Training-I | - | - | 2 | 2 | - | - | - | - | $-1$ |
|  |  | TOTAL | 18 | 5 | 13 | 36 | 425 | 600 | 125 | 1150 |  |

## Note:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of calculator will not be permitted in the examination.
2. Assessment of Practical Training-I, undergone at the end of IV semester, will be based on seminar, viva-voce, report and certificate of practical training obtained by the student from the industry. According to performance letter grades A, B, C, F are to be awarded. A student who is awarded „F" grade is required to repeat Pradtical Training.


## M.D. UNIVERSITY, ROHTAK

## Scheme of studies \& Examination Bachelor of Technology (Computer Science \& Engineering) <br> Semester - VI <br> ' $F$ ' Scheme Effective from 2010-11

| S. No. | Course No. | Subject | Teaching Schedule |  |  |  | Examination Schedule (Marks) |  |  |  | Duration of Exam (Hours) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P | Marl of Total wor | ss | Theory | Practi cal | Total |  |
| 1 | CSE-302 F | Principles of Software Engineering (CSE,IT) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 2 | CSE-304 F | Intelligent Systems (CSE,IT) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 3 | IT-305 F | $\begin{aligned} & \text { Computer Networks (CSE, } \\ & \text { EL \& Common with 5 Sem. } \\ & \text {-IT, AEI) } \end{aligned}$ | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 4 | IT-303 F | Systems Programming \& System Administration (Common with 5 Sem - IT) | 3 | 1 |  | 4 | 50 | 100 | - | 150 | 3 |
| 5 | CSE-306 F | Analysis \& Design of Algorithms | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 6 | EE-310-F | Digital System Design (EL,EE,CSE,EI, IC, AEI) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 7 | CSE-308 F | $\begin{aligned} & \text { Intelligent Systems Lab. } \\ & \text { (CSE,IT) } \end{aligned}$ | - | - | 3 | 3 | 25 | - | 25 | 50 | 3 |
| 8 | EE-330-F | Digial System Design Lab. (EL,EI, IC,CSE, AEI) | - | - | 3 | 3 | 25 | - | 25 | 50 | 3 |
|  |  | Computer Network lab | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| 9 | $\frac{\text { CSE-310-F }}{\text { CSE-312-F }}$ | Visual Programming Lab. | $\cdots$ | $\square$ | 2 | 2 | $\frac{25}{25}$ | - | 25 | 50 | 3 |
|  | CSE-312-F |  | $\cdots$ | - |  | $\cdots$ | 50 | - | - | 50 | 3 |
| 9 | GP-302-F | General Proficiency |  |  |  |  |  |  |  |  | - |
|  |  | TOTAL | 18 | 6 | 10 | 34 | 450 | 600 | 100 | 1150 |  |

Note:

1. Each student has to undergone practical training of 6 weeks during summer vacation and its evaluation shall be carried out in the VII semester.
2. Students will be allowed to use non-programmable scientific calculator. However, sharing of calculator will not be permitted in the examination.

## M.D.UNIVERSITY, ROHTAK Scheme of Studies / Examination

Bachelor of Technology (Computer Science \& Engineering) SEMESTER VII
'F' Scheme Effective from 2012-13

| Sl. No. | Course No. | Subject | Teaching Schedule |  |  |  | Examination Schedule (Marks) |  |  |  | Duration of Exam <br> (Hours) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P | Total | Marks of Class work | Theory | Practical | Total |  |
| 1 | CSE-401 F | Advanced Computer Architecture | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 2 | CSE-403 F | Software Project Management (CSE.IT) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 3 | CSE-405 F | Compiler Design | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 4 | CSE-407 F | Neural Networks | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 5 | CSE-409 F | Advanced Java (CSE, IT) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 6 |  | Elective | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 7 | CSE-411 F | Compiler Design Lab | - | - | 2 | 2 | 25 | - | 50 | 75 | 3 |
| 8 | CSE-413 F | Neural Networks Using MATLAB | - | - | 2 | 2 | 25 | - | 50 | 75 | 3 |
| 9 | CSE-415 F | Advanced JAVA <br> Lab (CSE, IT) | - | - | 3 | 3 | 50 | -- | 100 | 150 | 3 |
| 10 | CSE-417 F | PRATICAL TRAINING-II | - | - | $-$ | - |  | - | - |  |  |
|  |  | TOTAL | 18 | 6 | 7 | 31 | 400 | 600 | 200 | 1200 |  |

## List of Electives

| 1. | CSE-423 F | Distributed Operating System |
| :--- | :--- | :--- |
| 2. | IT-465F | Network Security \& Management |
| 3. | CSE-421 F | Real Time Systems |
| 4. | CSE-435 F | Advanced Database Management Systems |
| 5. | IT-467 F | Computer Software Testing |
| 6. | TT-473 F | High Speed Networks |

## Note:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of calculator will not be permitted in the examination.
2. Student will be permitted to opt for any one elective run by the department. However, the departments will offer only those electives for which they have expertise. The choice of the students for any elective shall not be a binding for the department to offer, if the department does not have expertise.
3. Assessment of Practical Training-II, carried out at the end of VI semester, will be based on seminar, viva- voce and project report of the student. According to performance letter grades A, B, C, F are to be awarded. A student who is awarded ' $F$ ' grade is required to repeat Practical Training.


## MAHARSHI DAYANAND UNIVERSITY, ROHTAK <br> SCHEME OF STUDIES \& EXAMINATIONS <br> B.Tech. $4^{\text {th }}$ YEAR COMPUTER SC \& ENGINEERING, SEMESTER-VIII

(Scheme-F)

## EFFECTIVE FROM THE SESSION 2012-13

|  |  |  | Internal <br> Marks | External <br> Marks | Total Marks |
| :--- | :---: | :---: | :---: | :---: | :---: |
| 1. | CSE-402-F | Industrial Training/Institutional Project Work | 150 | 150 | 300 |

## Note:

The students are required to undergo Industrial Training or Institutional Project Work of duration not less than 4 months in a reputed organization or concerned institute. The students who wish to undergo industrial training, the industry chosen for undergoing the training should be at least a private limited company. The students shall submit and present the mid-term progress report at the Institute. The presentation will be attended by a committee. Alternately, the teacher may visit the Industry to get the feedback of the students.

The final viva-voce of the Industrial Training or Institutional Project Work will be conducted by an external examiner and one internal examiner appointed by the Institute. External examiner will be from the panel of examiners submitted by the concerned institute approved by the Board of Studies in Engg. \& Technology. Assessment of Industrial Training or Institutional Project Work will be based on seminar, viva-voce, report and certificate of Industrial Training or Institutional Project Work obtained by the student from the industry or Institute.

The internal marks distributions for the students who have undergone Industrial Training consist of 50 marks from the industry concern and 100 marks by the committee members consisting of faculty members of concerned department of the parent institute.

The teachers engaged for Institutional Project work shall have a workload of 2 hours per group (at least 4 students) per week.


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M.D UNIVERSITY

SCHEME OF STUDIES AND EXAMINATION
B.Tech II YEAR (ELECTRICAL ENGINE B.Tech II YEAR (ELECTRICAL ENGINEERING)
' F ' SMESTER III

| Course No. | Course Title |  |  |  |  | 0-11 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Teaching Schedule |  |  |  | Marks of Class Work | Examination |  | Total Mark s | Duration of Exam |
| HUM-201-F |  |  | T | P | $\begin{aligned} & \text { Tot } \\ & \text { al } \\ & \hline \end{aligned}$ |  | Theory | Practica 1 |  |  |
| OR <br> MATH-201- <br> F | $\stackrel{\text { OR }}{\text { MATHEMATICS - III }}$ | $\begin{aligned} & 3 \\ & 3 \end{aligned}$ | $\begin{aligned} & 1 \\ & 2 \end{aligned}$ | - | $4$ <br> 5 | 50 | 100 | 1 | s 150 , | 3 |
| HUM-203-F | FUNDAMENTALS MANAGEMENT (COMMON FOR ALL BRANCHES) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-201-F | ELECTRONIC DEVICES \& CIRCUITS (ECE,EI,EE,EEE,IC) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-203-F | NETWORK THEORY <br> (ECE,EI,EE,EEE,IC) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-207-F | ELECTRICAL MACHINES-I <br> (EE, EEE) | 3 | 1 | - | 4 | , 50 | 100 | - | 150 | 3 |
| EE-209-F | ELECTRICAL MEASUREMENTS \& MEASURING INSTRUMENTS (EE, EEE) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-223-F | NETWORK THEORY LAB. (ECE,EI,EE,EEE,IC) | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| EE-211-F | ELECTRICAL <br> MEASUREMENTS <br> MEASURING INSTRUMENTS <br> LAB. (EE, EEE) | - |  | 2 | 2 | 25 | - | 25 | 50 | 3 |
| EE-213-F | ELECTRICAL WORKSHOP (IC,EE, EEE) | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| EE-215-F | ELECTRICAL MACHINES-I LAB. (EE, EEE) | - | - | 3 | 3 | 50 | - | 50 | 100 | 3 |
|  | TOTAL | 18 | $\begin{gathered} 6 \\ \mathbf{O r} \\ 7 \end{gathered}$ | 9 | $\begin{aligned} & 33 \\ & \mathrm{Or} \\ & 34 \end{aligned}$ | 425 | 600 | 125 | 1150 |  |

NOTE:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of Calculator and other materials will not be permitted in the examination.

## M.D UNIVERSITY <br> SCHEME OF STUDIES AND EXAMINATION <br> B.Tech II YEAR (ELECTRICAL ENGINEERING) <br> SEMESTER - IV

' F ' Scheme effective from 2010-11

| Course No. | Course Title | Teaching Schedule |  |  |  | Marks of Class Work | Examination |  | Total Marks | Duration of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | $\begin{array}{\|l} \hline \text { Tota } \\ \hline 1 \\ \hline \end{array}$ |  | Theory | Practical |  |  |
| $\begin{aligned} & \text { HUM- } \\ & 201-\mathrm{F} \\ & \text { OR } \\ & \text { MATH- } \\ & \text { 201-F } \end{aligned}$ | $\begin{gathered} \text { ENGG. ECONOMICS } \\ \text { OR } \\ \text { MATHEMATICS - III } \end{gathered}$ | $3$ $3$ | 1 <br> 2 |  | $4$ $5$ | 50 | 100 | - | 150 | 3 |
| EE-212-F | TRANSMISSION AND DISTRIBUTION (EE,EEE) | 3 | - | - | 3 | 50 | 100 | - | 150 | 3 |
| EE-202-F | ANALOG ELECTRONICS (ECE,EI,EE,EEE,IC) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-204-F | DIGITAL ELECTRONICS (ECE,EI,EE,EEE,IC) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-220-F | PRINCIPLES COMMUNICATION SYSTEMS (EE, EEE) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-208-F | ELECTRO MAGNETIC THEORY (ECE,EI,EE,EEE,IC) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-222-E | ANALOG ELECTRONICS LAB (ECE,EI,EE,EEE,IC) | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| EE-224-F | DIGITAL ELECTRONICS <br> LAB <br> (ECE,EI,EE,EEE,IC) | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| EE-230-F | PRINCIPLES OF COMMUNICATION SYSTEMS LAB (EE, EEE) | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| $\begin{aligned} & \text { MATH- } \\ & \text { 204-F } \end{aligned}$ | NUMERICAL METHODS LAB (ECE,EI,EE,EEE,IC) | 1 | 1 | 2 | 4 | 25 | - | 25 | 50 | 3 |
| GP-202-F | GENERAL PROFICIENCY (COMMON FOR ALL BRANCHES) | - | - | 2 | 2 | 50 | - | - | 50 | 3 |
|  | TOTAL | 19 | $\begin{array}{\|l} \hline 6 \\ \text { or } \\ 7 \\ \hline \end{array}$ | 10 | $\begin{aligned} & 35 \\ & \text { Or } \\ & 36 \end{aligned}$ | 450 | 600 | 100 | 1150 |  |

Note:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of Calculator and other materials will not be permitted in the examination.
2. Each student has to undergo practical training of 6 weeks during summer vacation and its evaluation shall be carried out in the $\mathbf{V}$ semester.


## M.D. UNIVERSITY, ROHTAK

## Scheme of studies \& Examination

Bachelor of Technology (Electrical Engg.) SEMESTER V
' $F$ ' Scheme Effective from 2011-2012

\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|}
\hline \multirow[t]{2}{*}{Course No.} \& \multirow[t]{2}{*}{Course Title} \& \multicolumn{4}{|l|}{Teaching Schedule} \& \multirow[t]{2}{*}{Marks of Class Work} \& \multicolumn{2}{|l|}{Examination} \& \multirow[t]{2}{*}{Total Marks} \& \multirow[t]{2}{*}{Duration of Exam} <br>
\hline \& \& L \& T \& P \& Total \& \& Theory \& Practical \& \& <br>
\hline EE-311-F \& Electrical Machines-II (EE, EEE) \& 3 \& 1 \& - \& 4 \& 50 \& 100 \& - \& 150 \& 3 <br>
\hline EE-303-F \& Electronic Measurement And Instrumentation (EE,EEE,ECE,IC) \& 3 \& 1 \& - \& 4 \& 50 \& 100 \& - \& 150 \& 3
3 <br>
\hline EE-305-F \& Analog Electronics Circuits (EE,EEE,ECE,IC) \& 3 \& 1 \& - \& 4 \& 50 \& 100 \& - \& 150 \& 3 <br>
\hline EE-315-F \& Power Systems-I (EE, EEE) \& 3 \& 1 \& - \& 4 \& 50 \& 100 \& - \& 150 \& 3 <br>
\hline EE-317-F \& Power Electronics (EE, EEE, Common with VI sem IC) \& 3 \& 1 \& - \& 4 \& 50 \& 100 \& - \& 150 \& 3 <br>
\hline EE-309-F \& Microprocessors And Interfacing (EE,EEE,ECE) \& 3 \& 1 \& - \& 4 \& 50 \& 100 \& - \& 150 \& 3 <br>
\hline EE-323-F \& Electronic Measurement \& Instrumentation Lab (EE,EEE,ECE,IC) \& - \& - \& 2 \& 2 \& 25 \& - \& 25 \& 50 \& 3

3 <br>
\hline EE-321-F \& Power Electronics Lab. (EE, EEE Common with VI sem, IC) \& - \& - \& 2 \& 2 \& 25 \& - \& 25 \& 50 \& 3 <br>
\hline EE-319-F \& Microprocessor \& Interfacing Lab. (EE,EEE) \& - \& - \& 2 \& 2 \& 25 \& - \& 25 \& 50 \& 3 <br>
\hline EE-327-F \& Electrical Machines-II LAB. (EE, EEE) \& - \& - \& 3 \& 3 \& 25 \& - \& 25 \& 50 \& 3 <br>
\hline EE-333-F \& Practical Training-I \& - \& - \& 2 \& 2 \& \& - \& - \& \& - <br>
\hline \& TOTAL \& 18 \& 6 \& 11 \& 35 \& 400 \& 600 \& 100 \& 1100 \& <br>
\hline
\end{tabular}

Note:

1) Students will be allowed to use non-programmable scientific calculator. However, sharing of calculator will not be permitted in the examination.
2) Assessment of Practical Training-I, undergone at the end of IV semester, will be based on seminar, viva-voce, report and certificate of practical training obtained by the student from the industry. According to performance letter grades A, B, C, F are to be awarded. A student who is awarded ' $F$ ' grade is required to repeat Practical Training.


## M.D UNIVERSITY,ROHTAK

SCHEME OF STUDIES AND EXAMINATION
B.Tech. III YEAR (ELECTRICAL ENGINEERING)

SEMESTER-VI
Modified ' F ' Scheme effective from 2011-12

| $\begin{aligned} & \hline \text { Course } \\ & \text { No. } \end{aligned}$ | Course Title | Teaching Schedule |  |  |  | Marks of <br> Class <br> Work | Examination |  | Total Marks | Duration of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Total |  | Theory | Practical |  |  |
| EE-312-F | $\begin{array}{\|l\|} \hline \begin{array}{l} \text { Power Systems -II } \\ \text { (EE, EEE) } \end{array} \\ \hline \end{array}$ | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-314-F | Computer Added Electric Machines Design (EE, EEE) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-308-F | Micro-Controller And Embeded System(EE,ECE) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-304-F | Control systems engg. (EE, EEE,ECE) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-318-F | $\begin{aligned} & \text { Electric Power Generation (EE, } \\ & \text { EEE) } \end{aligned}$ | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-310-F | $\begin{aligned} & \text { Digital System Design } \\ & \text { (IC,EE,ECE,) } \end{aligned}$ | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-324-F | Control system engg. Lab (EE, EEE, ECE) | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| EE-320-F | Micro-Controller And Embeded System LAB (EE,ECE) | - | - | 2 | 2 | 25 | - | 25 | 50 |  |
| EE-326-F | Computer Added Electric Machines Design Lab (EE, EEE) | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| EE-328-F | Power Systems Lab (EE, EEE) | - | - | 2 | 2 | 25 | - | 25 | 50 |  |
| $\begin{aligned} & \text { GPEE- } \\ & 302-\mathrm{F} \end{aligned}$ | GENERAL PROFICIENCY | - | - | - | - | 50 | - | ${ }^{-}$ | 50 | 3 |
|  | TOTAL | 18 | 6 | 8 | 32 | 450 | 600 | 100 | 1150 |  |

Note:

1. Each student has to undergo practical training of 6 weeks during summer vacation and its evaluation shall be carried out in the VII semester.
2. Students will be allowed to use non-programmable scientific calculator. However, sharing of calculator will not be permitted in the examination.

M.D. UNIVERSITY, ROHTAK

Scheme of studies \& Examination B. Tech. (Electrical Engg.)

SEMESTER VII
F'Scheme
EFFECTIVE FROM THE SESSION 2012-13

| Course No. | Course Title | Teaching Schedule |  |  |  | Marks of Class Work | Examination |  | Total Marks | Duration of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Total |  | Theory | Practical |  |  |
| EE-403-F | Electric Drives And Control | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ECE-409-F | Digital Signal Processing | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-405-F | Power System Operation And Control | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
|  | *Open Elective | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
|  | *Dept Elective | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-409-F | Computer Applications To Power System Analysis | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-413-F | Electric Drives And Control Lab. |  |  | 3 | 3 | 50 | - | 50 | 100 | 3 |
| ECE-429-F | Digital Signal Processing Lab | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| EE-419-F | Computer Applications To Power System Analysis Lab. | - | - | 3 | 3 | 50 | - | 50 | 100 | 3 |
| GFEE-401-F | General Fitness For The Profession | - | - | - | - |  | - | 50 | 50 | 3 |
| EE-401-F | Practical Training - II | - | - | - | 32 | 425 | - | 175 | 1200 | - |
|  | TOTAL | 18 | 6 | 8 | 32 | 425 | 600 | 175 |  |  |

## List of Open Electives

| 1. | HUM-451-F | Language Skills for Engineers |
| :---: | :--- | :--- |
| 2. | HUM-453-F | Human Resource Management |
| 3. | HUM-459-F | Renewable Energy Resources and Technology |
| 4. | ME-451-F | Mechatronics Systems |
| 5. | IC-455-F | Intelligent Instrumentation for Engineers |
| 6. | OR-401-F | Operations Research |

## List of Dept Electives

1. $\mathrm{EHV} \mathrm{AC/DC}$
(EE-432-F)
2. Fuzzy Logic Control
3. Fuzzy Logic Control
(IC-404-F)
(EE-438-F)
4. High Voltage Engineering
5. Electrical Power Quality
(EE-442-F)
(EE-444-F)
6. Power Manastrame
(EE-450-F)

## Note:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of calculator will not be permitted in the examination.
2. *Student will be permitted to opt for any one elective run by the other departments. However, the departments will offer only those electives for which they have expertise. The choice of the students for any elective shall not be a binding for the department to offer, if the department does not have expertise.
3. A team consisting of Principal/Director, HOD of concerned department and external examiner appointed by University shall carry out the evaluation of the student for his/her General Fitness for the Profession.
4. Assessment of Practical Training-II, carried out at the end of VI semester, will be based on seminar, viva-voce and project report of the student from the industry. According to performance, letter Grades $\mathbf{A}, \mathbf{B}, \mathbf{C}, \mathbf{F}$ are to be awarded. A student who is awarded ' F ' grade is required to repeat Practical Training.

M.D. UNIVERSITY, ROHTAK

Scheme of studies \& Examination
B. Tech. (Electrical Engg.)

SEMESTER VIII
F'Scheme

## EFFECTIVE FROM THE SESSION 2012-13

| Sr. No | Course No | Subject | Internal <br> Marks | External Marks | Total Marks |
| :--- | :---: | :---: | :---: | :---: | :---: |
| 1. | EE-402-F | Industrial Training/Institutional Project Work | 150 | 150 | 300 |

## Note:

The students are required to undergo Industrial Training or Institutional Project Work of duration not less than 4 months in a reputed organization or concerned institute. The students who wish to undergo industrial training, the industry chosen for undergoing the training should be at least a private limited company. The students shall submit and present the mid-term progress report at the Institute. The presentation will be attended by a committee. Alternately, the teacher may visit the Industry to get the feedback of the students.

The final viva-voce of the Industrial Training or Institutional Project Work will be conducted by an external examiner and one internal examiner appointed by the Institute. External examiner will be from the panel of examiners submitted by the concerned institute approved by the Board of Studies in Engg. \& Technology. Assessment of Industrial Training or Institutional Project Work will be based on seminar, viva-voce, report and certificate of Industrial Training or Institutional Project Work obtained by the student from the industry or Institute.

The internal marks distributions for the students who have undergone Industrial Training consist of $\mathbf{5 0}$ marks from the industry concern and $\mathbf{1 0 0}$ marks by the committee members consisting of faculty members of concerned department of the parent institute.

The teachers engaged for Institutional Project work shall have a workload of $\mathbf{2}$ hours per group (at least 4 students) per week.


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# M.D UNIVERSITY <br> SCHEME OF STUDIES AND EXAMINATION <br> B.Tech II YEAR (ELECTRONICS \& COMMUNICATION ENGINEERING) <br> SEMESTER III 

' $F$ ' Scheme effective from 2010-11

| Sr No | Course Title | Teaching Schedule |  |  |  | Marks <br> of <br> Class <br> Work | Examination |  | Total Marks | Duration of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Total |  | Theory | Practical |  |  |
| HUM-201-F OR <br> MATH-201-F | ENGG. ECONOMICS OR MATHEMATICS - III | $\begin{array}{\|l\|} \hline 3 \\ 3 \\ \hline \end{array}$ | 1 | - | $4$ | 50 | 100 | - | 150 | 3 |
| HUM-203-F | FUNDAMENTALS OF MANAGEMENT (COMMON FOR ALL BRANCHES) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-201-F | ELECTRONICS DEVICES \& CIRCUITS(ECE,EL,EE,EEE,I C) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-203-F | NETWORK THEORY (ECE,EI,EE,EEE,IC) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-205-F | $\begin{aligned} & \text { ELECTROMECHANICAL } \\ & \text { ENERGY } \\ & \text { CONVERSION(ECE,EL,IC) } \end{aligned}$ | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| CSE-201-F | DATA STRUCTURE USING <br> ' C' (ECE,EI,CSE,IT) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-221-F | ELECTRONIC WORKSHOP, PCB DESIGN \& CIRCUIT LAB(ECE,EI) | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| EE-223-F | NETWORK THEORY LAB(ECE,EI,EE,EEE,IC) | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| EE-225-F | ELETRICAL WORKSHOP \& MACHINE LAB (ECE,EI) | - | - | 3 | 3 | 50 | - | 50 | 100 | 3 |
| CSE-205-F | DATA STRUCTURE USING 'C' Lab (ECE,EI,CSE,IT) |  | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
|  | TOTAL | 18 | 7 | 9 | $\begin{aligned} & \hline 33 \\ & \mathrm{Or} \\ & 34 \\ & \hline \end{aligned}$ | 425 | 600 | 125 | 1150 |  |

NOTE:

1. Students will be allowed to use non-programmable scientific calculator. However, Sharing of Calculator and other material will not be permitted in the examination.


SCHEME OF STUDIES AND EXAMINATION
BE. II YEAR (ELECTRONICS \& COMMUNICATION ENGINEERING)
SEMESTER - IV
' F ' Scheme effective from 2010-11

| Course No. | Course Title | Teaching Schedule |  |  |  | Marks <br> of <br> Class <br> Work | Examination |  | Total Marks | Duration of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Tota 1 |  | Theory | Practical |  |  |
| HUM-201-F <br> OR <br> MATH- <br> 201-F | ENGG. ECONOMICS OR MATHEMATICS - III | $\begin{aligned} & 3 \\ & 3 \end{aligned}$ | $\begin{aligned} & 1 \\ & 2 \end{aligned}$ |  | $\begin{aligned} & 4 \\ & 5 \end{aligned}$ | 50 | 100 | - | 150 | 3 |
| EE-228-F | SIGNALS SYSTEMS(ECE,EI) \& | 3 | - | - | 3 | 50 | 100 | - | 150 | 3 |
| EE-202-F | ANALOG ELECTRONICS (ECE,EL,EE,EEE,IC) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-204-F | DIGITAL ELECTRONICS (ECE,EI,EE,EEE,IC) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-206-F | $\begin{aligned} & \text { COMMUNICATION } \\ & \text { SYSTEMS(ECE) } \\ & \hline \end{aligned}$ | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-208-F | ELECTRO MAGNETIC THEORY (ECE,EI,EE,EEE,IC) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-222-F | ANALOG ELECTRONICS LAB(ECE,EL,EE,EEE,IC) | - | - | 2 | 2 | 25 |  | 25 | 50 | 3 |
| EE-224-F | DIGITAL ELECTRONICS <br> LAB(ECE,EI,EE,EEE,IC) | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| EE-226-F | COMMUNICATION SYSTEMS LAB (ECE) | - | - | 2 | 2 | 25 | - | 25 | 50 | $3 \quad 4$ |
| $\begin{aligned} & \text { MATH-204 } \\ & -\mathrm{F} \end{aligned}$ | NUMERICAL METHODS OF COMPUTATIONAL <br> PROGRAMMING LAB(ECE,EI,EE,EEE,IC) | 1 | 1 | 2 | 4 | 25 | - | 25 | 50 | 3 |
| GP-202-F | GENERAL PROFICIENCY <br> (COMMON FOR ALL <br> BRANCHES) | ${ }^{-}$ | - | 2 | 2 | 50 | O00 | 100 | 1150 | 3 |
|  | TOTAL | 19 | $\begin{aligned} & \hline 6 \\ & \text { Or } \\ & 7 \\ & \hline \end{aligned}$ | 10 | $\begin{aligned} & \mathbf{3 5} \\ & \text { Or } \\ & \mathbf{3 6} \end{aligned}$ | 450 | 600 | 100 | 1150 |  |

## Note:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of Calculator and other materials will not be permitted in the examination.
2.Each student has to undergo practical training of 6 weeks during summer vacation and its evaluation shall be carried out in the $V$ semester.


## M.D UNIVERSITY <br> SCHEME OF STUDIES AND EXAMINATION <br> BTech. III YEAR (ELECTRONICS \& COMMUNICATION ENGINEERING) SEMESTER V

Modified ' $F$ ' Scheme effective from 2011-12

| Course No. | Course Title | Teaching Schedule |  |  |  | Marks of Class Work | Examination |  | Total <br> Marks | Duration of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  | L | T | P | Total |  | Theory | Practical |  |  |
| EE-301-F | COMMUNICATION Engg. | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-303-F | ELECTRONIC MEASUREMENT \& INSTRUMENTATION (EL,EL,IC,EE,EEE,AEI) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-305-F | ANALOG ELECTRONIC CIRCUITS <br> (EL,EL,IC,EE,EEE,AEI) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-307-F | ANTENNAS,WAVE PROPAGATION\& TV Engg. | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| $\begin{array}{\|l} \hline \text { CSE-210- } \\ \mathrm{F} \end{array}$ | COMPUTER ARCHITECTURE AND ORGANISATION (EL, EI, IC, Common with IV sem. CSE, IT ) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-309-F | MICROPROCESSORS AND INTERFACING (EL,EL,IC,CSE,IT,EEE,AEI) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-323-F | ELECTRONIC MEASUREMENT \& INSTRUMENTATION LAB (EL,EL,IC,EE) | - | - | 2 | 2 | 25 | - | 25 | 50 |  |
| EE-325-F | ANALOG ELECTRONIC CIRCUITS LAB (EL,EL,IC) | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| EE-329-F | MICROPROCESSORS AND INTERFACING LAB (EL,EL,IC,CSE,IT,EEE,AEI) | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| EE-335-F | PRACTICAL TRAINING |  | - | 2 | 2 |  | - |  |  |  |
| $\begin{aligned} & \text { GPECE30 } \\ & \text { 1-F } \end{aligned}$ | GERNERAL PROFICIENCY |  |  |  |  | 50 |  |  | 50 | 3 |
|  | TOTAL | 18 | 6 | 8 | 32 | 425 | 600 | 75 | 1100 |  |

## Note:

1) Students will be allowed to use non-programmable scientific calculator. However, sharing of calculator will not be permitted in the examination.
2) Assessment of Practical Training-I, undergone at the end of IV semester, will be based on seminar, viva-voce, report and certificate of practical training obtained by the student from the industry. According to performance letter grades A, B, C, F are to be awarded. A student who is awarded ' $F$ ' grade is required to repeat Practical Training.


# M.D UNIVERSITY,ROHTAK <br> SCHEME OF STUDIES AND EXAMINATION B.Tech. III YEAR (ELECTRONICS \& COMMUNICATION ENGINEERING) SEMESTER - VI 

Modified ' $F$ ' Scheme effective from 2011-12

| Course No. | Course Title |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Teaching Schedule |  |  |  | Marks of Class Work | Examination |  | Total Marks | Duration of Exam |
|  |  | L | T | P | Total |  | Theory | Practical |  |  |
| EE-302-F | MICROWAVE AND RADAR ENGINEERING | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| $\begin{aligned} & \text { EE-304- } \\ & \mathrm{F} \\ & \hline \end{aligned}$ | CONTROL SYTEMS ENGG. (EL,EE, EEE) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-306-F | VLSI Design | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| IT-305-F | COMPUTER NETWORKS | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-310-F | DIGITAL SYSTEM DESIGN (EL,EI, IC,EE,CSE, AEI) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-308-F | MICROCONTROLLER \& EMBEDDED SYSTEM | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| $\begin{array}{\|l\|} \hline \text { EE-328- } \\ \mathbf{F} \\ \hline \end{array}$ | MICROCONTROLLER \& EMBEDDED SYSTEM LAB | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| $\begin{array}{\|l} \hline \text { EE-326- } \\ \mathrm{F} \\ \hline \end{array}$ | DIGITAL SYSTEM DESIGN LAB (EL,EI, IC,EE,CSE, AEI) | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| $\begin{array}{\|l\|} \hline \text { EE-322- } \\ \mathrm{F} \\ \hline \end{array}$ | MICROWAVE AND RADAR LAB | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| EE-324- | CONTROL SYTEMS ENGG. |  | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| F | LAB <br> (EL,EE, EEE,AEI) |  |  |  |  |  |  |  |  |  |
|  | TOTAL | 18 | 6 | 8 | 32 | 400 | 600 | 100 | 1100 |  |

## NOTE:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of Calculator will not be permitted in the examination.
2. Each student has to undergo practical training of 6 weeks during summer vacation and its evaluation shall be carried out in the VII semester.


## M.D. UNIVERSITY, ROHTAK

## Scheme of studies \& Examination

 B. Tech. (Electronics and Communication Engg.)SEMESTER VII

F'Scheme Effective from 2012-2013

| Course No. | Course Title | Teaching Schedule |  |  |  | Marks <br> of <br> Class <br> Work | Examination |  | Total Marks | Duration of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Total |  | Theory | Practical |  |  |
| ECE-405-F | WIRELESS COMMUNICATION | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ECE-403-F | SATELITE COMMUNICATION ENGINEERING | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ECE-407-F | DATA COMMUNICATION | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ECE-415-F | OPTICAL COMMUNICATION SYSTEMS | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
|  | *Dept Elective-I | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ECE-409-F | Digital Signal Processing | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ECE-423-F | Wireless \& Satellite |  |  | 3 | 3 | 50 | - | 50 | 100 | 3 |
|  | Communication Lab |  |  |  |  |  |  |  |  |  |
| ECE-427-F | Digital Signal Processing Lab | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| ECE-429-F | Data Communication | - | - | 3 | 3 | 50 | - | 50 | 100 | 3 |
|  | Lab |  |  |  |  |  |  |  |  |  |
| GFEE-401-F | General Fitness For The Profession | - | - | - | - |  | - | 50 | 50 | 3 |
| ECE-404-F | Practical Training II |  |  |  |  |  |  |  |  |  |
|  | TOTAL | 18 | 6 | 8 | 32 | 425 | 600 | 175 | 1200 |  |



## List of Dept Electives-I

| ECE-419-F | Mobile Communication |
| :--- | :--- |
| ECE-461-F | Genetic Algorithms \& Applications |
| ECE-453-F | Radar and Sonar Engg. |
| ECE-411-F | Wireless Sensor Network |
|  |  |
|  |  |

## Note:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of calculator will not be permitted in the examination.
2. *Student will be permitted to opt for any one elective run by the other departments. However, the departments will offer only those electives for which they have expertise. The choice of the students for any elective shall not be a binding for the department to offer, if the department does not have expertise.
3. A team consisting of Principal/Director, HOD of concerned department and external examiner appointed by University shall carry out the evaluation of the student for his/her General Fitness for the Profession.

NOTE:-

1. Assessment of Practical Training-II, ( ECE-404F) carried out at the end of VI semester, will be based on seminar, viva-voce and project report of the student from the industry. According to performance letter Grades A, B, C, F are to be awarded. A student who is awarded ' $F$ ' grade is required to repeat Practical Training.


## M.D. UNIVERSITY, ROHTAK

## Scheme of studies \& Examination

 B. Tech. (Electronics and Communication Engg.)
## SEMESTER VIII

F ' Scheme Effective from 2012-2013

Training of Six Months

| Course No. | Course Title | Teaching Schedule |  |  |  | Marks of Class Work | Examination |  | Total Marks | Duration of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Total |  | Theory P | ctical |  |  |
| ECE-402-F | Industrial Training /Institutional Project work | - | - | 8 | 8 | 150 | $\pm$ | 150 | 300 | - |
|  | Total |  |  | 8 | 8 |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |

## Note:

1. The students are required to undergo Industrial Training or Institutional Project work of duration not less than 4 months in a reputed organization or concerned institute. The student who wish to undergo industrial training, the industry chosen for should be a private limited company. The final Viva-voca of the industrial training or Institutional Project work will be conducted by the
2. external examiner and one internal examiner appointed by the institute. External examiner will be from penal of examiner.
Assessment of traing or project will be based on Seminar, viva-voca, report and certificate of Industrial Training or Institutional project work.
3. The internal marks distribution for students who have undergone Industrial training consist of $\mathbf{5 0}$ marks from the Industry concern and $\mathbf{1 0 0}$ Marks by the committee members consisting of faculty members of concerned department of the present institute.
4. The teacher engaged for institutional project work shall have a workload of $\mathbf{2}$ hours per group ( at least 4 students per work)


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## MAHRASHSI DAYANAND UNIVERSITY, ROHTAK SCHEME OF STUDIES AND EXAMINATIONS <br> B.Tech 2nd YEAR (FIRE TECHNOLOGY AND SAFETY) <br> $3{ }^{\text {rd }}$ SEMESTER

Proposed 'F' Scheme w.e.f 2012-13

| Course | Course Title | Teaching Schedule |  |  |  | Marks for class work | Marks <br> for <br> Examination |  | Total <br> Marks | Duration of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Total |  | Theory | Practical |  |  |
| $\begin{aligned} & \text { MAT 201F } \\ & \text { OR } \\ & \text { HUM } 201 \text { F } \end{aligned}$ | Mathematics-III or Engineering Economics | $\begin{gathered} 3 \\ \text { or } \\ 3 \end{gathered}$ | 2 or | - | $\begin{gathered} 5 \\ \text { or } \\ 4 \end{gathered}$ | $\begin{aligned} & 50 \\ & 50 \end{aligned}$ | 100 | - | 150 | 3 |
| HUM 203F | Fundamentals of <br> Management | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 201 F | Town Planning and Safety in Construction Industry | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 203 F | Fire Engineering | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
|  | First Aid and Emergency | 3 | 1 | 4 | 4 | 50 | 100 |  | 150 | 3 |
| FT 205 F | Procedures |  |  |  |  |  |  |  |  |  |
| FT 207 F | Heavy Vehicle Automobile Engineering and Safety | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 209 F | Machine Drawing and Design | 1 | - | 3 | 4 | 50 | - | $\begin{aligned} & 5 \\ & 0 \\ & \hline \end{aligned}$ | $\begin{aligned} & 1 \\ & 0 \end{aligned}$ | 37 |
| FT 211 F | HeavyVehícle <br> Automobile Engineering <br> and Safety Lab | - | - | 2 | 2 | 25 | - | $\begin{aligned} & 2 \\ & 5 \end{aligned}$ | $\begin{aligned} & 5 \\ & 0 \end{aligned}$ | 3 |
| FT 213 F | Fire Protection Workshop | - | - | 2 | 2 | 25 | - | $5$ | $\begin{aligned} & 5 \\ & 0 \end{aligned}$ | 3 |
| FT 215 F | Fire Fighting and Field Training - I | - | - | 2 | 2 | 25 | - | $\begin{aligned} & 2 \\ & 5 \end{aligned}$ | $\begin{aligned} & 5 \\ & 0 \end{aligned}$ | 3 |
|  | Total | 19 | 6/7 | 9 | 34/35 | 425 | 600 | 125 | 1150 |  |



## MAHRASHSI DAYANAND UNIVERSITY, ROHTAK SCHEME OF STUDIES AND EXAMINATIONS <br> B.Tech. 2nd YEAR (FIRE TECHNOLOGY AND SAFETY) <br> $4^{\text {tin }}$ SEMESTER

Proposed ' $F$ ' Scheme w.e.f 2012-13

| Course | Course Title | Teaching Schedule |  |  |  | Marksforclas$s$$s$ | Marks for Examination |  | Total Marks | Duration of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Total |  | Theory | Practical |  |  |
| MAT 201F or HUM 201 F | Mathematics-III <br> or <br> Engineering Economics | $3$ <br> or $3$ | $\begin{gathered} 2 \\ \text { or } \\ 1 \end{gathered}$ | - | $\begin{gathered} 5 \\ \text { or } \\ 4 \end{gathered}$ | 50 | 100 | - | 150 | 3 |
| FT 202F | Safety Engineering and Management | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 204 F | Energy Environment Ethics and Society | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 206 F | Strength of Material | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 208 F | Electrical Fire Safety | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 210 F | Pumping Machinery and Fluid Mechanics | 3 | 1 | - | 4 | 50 | 100 | ${ }^{-}$ | 150 | 3 |
| FT 212 F | Strength of Material Lab | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| FT 214 F | Electrical Fire Safety <br> Lab | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| FT 216 F | Pumping <br> Machinery and <br> Fluid Mechanics | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| FT 218 F | Fire Fighting and Field Training - II | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| GP 202 F | General Proficiency | - | - | 2 | 2 | 50 | - | - | 50 | - |
|  | Total | 18 | 6/7 | 9 | 34/35 | 450 | 600 | 100 | 1150 |  |



# MAHRASHSI DAYANAND UNIVERSITY, ROHTAK <br> SCHEME OF STUDIES AND EXAMINATIONS <br> B.Tech $3^{\text {rd }}$ YEAR (FIRE TECHNOLOGY AND SAFETY) <br> $5^{\text {th }}$ SEMESTER 

Proposed 'F' Scheme w.e.f 2012-13

| Course | Course Title | Teaching schedule |  |  |  | Mark For class work | Marks for Examination |  | Total <br> Marks | Duration of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Total |  | Theory | Practical |  |  |
| FT 301F | Rescue Equipments and Techniques | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 303 F | Building Design and Drawing | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 305 F | Salvage Evaluation of Fire Situation | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 307 F | Environmental Engineering and Management | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 309 F | Fire Prevention and Protection Measures | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 311 F | Nuclear Safety and Radioactive Materials | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 313 F | Environmental Engineering Lab | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| FT 315 F | Field Training in Fire Rescue | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| FT 317 F | AutoCAD and Fire Software Lab | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| FT 319F | Engineering Workshop Practice | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| FT 319F | Total | 18 | 6 | 8 | 32 | 400 | 600 | 100 | 1100 |  |

Note:-

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of calculator will not be permitted in the examination.
2. Assessment of Practical Training-I, undergone at the end of IV semester, will be based on seminar, viva-voce, report and certificate of practical training obtained by the student from the industry. According to performance letter grades A, B, C, F are to be awarded. A student who is awarded ' F ' grade is required to repeat Practical Training.


# MAHRASHSI DAYANAND UNIVERSITY, ROHTAK <br> SCHEME OF STUDIES AND EXAMINATIONS <br> B.Tech $3^{\text {rd }}$ YEAR (FIRE TECHNOLOGY AND SAFETY) $6^{\text {th }}$ SEMESTER 

Proposed 'F' Scheme w.e.f 2012-13

| Proposed 'F' Scheme w.e.f 2012-13 |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Course | e Course Title | Teaching schedule |  |  |  | Marks <br> For <br> class <br> work | Marks for Examination |  | Total Marks | Duration of Exam |
|  |  | L | T | P | Total |  | Theory | Practical |  |  |
| FT 302F | Legal Aspect of Safety, Health and Environment | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 304F | Fire Safety Codes and Standardization | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 306F | Fire Fighting \& Safety Equipments | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 308F | Identification and Risk Assesmant | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 310F | Applied Numerical Technique and Computing | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 312F | Heat Transfer, Combustion and Explosives | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 314F | Field Training Rescue (Chemical Hazards) | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| FT 316F | Applied Numerical Technique and Computing Lab | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| FT 318F | Heat Transfer, Combustion and Explosives Lab | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| FT 320F | Industrial Hygiene Lab | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| FT 322F | General Proficiency | - | - | 2 | 2 | 50 | - | - | 50 | - |
|  | Total | 18 | 6 | 10 | 34 | 450 | 600 | 100 | 1150 |  |

Note:-

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of Calculator will not be permitted in the examination.
2. Each student has to undergo practical training of 6 weeks during summer vacation and its evaluation shall be carried out in the VII semester


# MAHRASHSI DAYANAND UNIVERSITY, ROHTAK 

SCHEME OF STUDIES \& EXAMINATIONS
B.Tech $4^{\text {th }}$ YEAR FIRE TECHNOLOGY \& SAFETY, $7^{\text {th }}$ SEMESTER

Proposed ' $F$ ' Scheme w.e.f 2012-13

| Course | Proposed 'F' Scheme w.e.f 2012-13 |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Course Title | Teaching schedule |  |  |  | Marks <br> For <br> class <br> work | Marks for Examination |  | Total Marks | Duration of Exam |
|  |  | L | T | P | Total |  | Theory | Practical |  |  |
| FT 401 F | Safety and Risk Management | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 403 F | Industrial Engineering | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 405 F | Operational Research | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 407 F | Disaster Management | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 409 F | Fire Fighting Installation and Automation | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ---- | Dept. Elective | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 411 F | Fire Fighting Installation and Automation Lab | - | - | 2 | 2 | 50 | - | 50 | 100 | 3 |
| FT 413 F | Squad Drill | - | - | 2 | 2 | 50 | - | 50 | 100 | 3 |
|  | Total | 18 | 6 | 4 | 28 | 400 | 600 | 100 | 1100 | - |

## Dept. Elective:

1. FT 417 F Process Instrumentation and Control Engineering
2. FT 419 F Automobile Engineering and Safety.
3. FT 421 F Advanced Safety Engineering and Management.
4. FT 423 F Environmental Protection and Waste Management.
5. FT 425 F Human Factor Engineering.
6. FT 427 F Simulation and Process Modeling
7. FT 429 F Total Quality management
8. FT 431 F Safety in Health Care waste Management
9. FT 433 F Safety in Construction


# MAHRASHSI DAYANAND UNIVERSITY, ROHTAK <br> SCHEME OF STUDIES \& EXAMINATIONS B.Tech $4^{\text {th }}$ YEAR FIRE TECHNOLOGY \& SAFETY, $8^{\text {th }}$ SEMESTER 

Proposed 'F' Scheme w.e.f 2012-13

|  |  | Proposed 'F' Scheme w.e.f 2012-13 |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| SI. No. Course No. | Subject | Internal <br> Marks | External <br> Marks | Total <br> Marks |  |
| 1. | FT- 402-F | Industrial Training/Institutional Project Work | 150 | 150 | 300 |

Note:
The students are required to undergo Industrial Training or Institutional Project Work of duration not less than 4 months in a reputed organization or concerned institute. The students who wish to undergo industrial training, the industry chosen for undergoing the training should be at least a private limited company. The students shall submit and present the mid-term progress report at the Institute. The presentation will be attended by a committee. Alternately, the teacher may visit the Industry to get the feedback of the students.

The final viva-voce of the Industrial Training or Institutional Project Work will be conducted by an external examiner and one internal examiner appointed by the Institute. External examiner will be from the panel of examiners submitted by the concerned institute approved by the Board of Studies in Engineering and Technology. Assessment of Industrial Training or Institutional Project Work will be based on seminar, viva-voce, report and certificate of Industrial Training or Institutional Project Work obtained by the student from the industry or Institute.

The internal marks distributions for the students who have undergone Industrial Training consist of $\mathbf{5 0}$ marks from the industry concern and $\mathbf{1 0 0}$ marks by the committee members consisting of faculty members of concerned department of the parent institute.

The teachers engaged for Institutional Project work shall have a workload of 2 hours per group (at least 4 students) per week.


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MAHRASHSI DAYANAND UNIVERSITY, ROHTAK
SCHEME OF STUDIES \& EXAMINATIONS

## B.Tech 2nd YEAR MECHANICAL ENGINEERING,

$3{ }^{\text {rd }}$ SEMESTER
Proposed 'F' Scheme w.e.f 2010-11

| Course | Course Title | Teaching Schedule |  |  |  | $\begin{gathered} \text { Marks } \\ \text { for } \\ \text { class } \\ \text { work } \\ \hline \end{gathered}$ | Marks for Examination |  | Total Marks | Duration of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { MAT-201-F } \\ & \text { or } \\ & \text { HUM-201-F } \end{aligned}$ | Mathematics-III <br> or Engineering Economics | $\begin{gathered} \mathrm{L} \\ \hline 3 \\ \text { or } \\ 3 \end{gathered}$ | $\begin{gathered} \mathrm{T} \\ \hline 2 \\ \text { or } \\ 1 \end{gathered}$ | P | Total <br> 5 <br> or <br> 4 | 50 | Theory <br> 100 | Practical | 150 | 3 |
| HUM-203-F | Fundamentals of <br> Management | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-201-F | Thermodynamics | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-203-F | Computer Aided Design | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-205-F | Engineering <br> Mechanics | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-207-F | Material Science | 3 | 1 | - | 4 | 50 | 100 |  | 150 | 3 |
| ME-209-F | Machine Drawing | 1 | - | 3 | 4 | 50 | - | 50 | 100 | 4 |
| ME-211-F | Computer Aided | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
|  | Design Lab |  |  |  |  |  |  |  |  |  |
| ME-213-F | Engineering | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
|  | Mechanics Lab |  |  |  |  |  |  |  |  |  |
| ME-215-F | Materials Science | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
|  | Lab |  |  |  |  |  |  |  |  |  |
|  | Total | 19 | 6 | 10 | 34/35 | 425 | 600 | 125 | 1150 |  |



MAHARSHI DAYANAND UNIVERSITY, ROHTAK SCHEME OF STUDIES \& EXAMINATIONS
B.Tech $2^{\text {nd }}$ YEAR MECHANICAL ENGINEERING, $4^{\text {th }}$ SEMESTER
Proposed ' $F$ ' Scheme w.e.f 2010-11

| Course | Course Title | Teaching Schedule |  |  |  | Marks for class work | Marks for Examination |  | Total Marks | $\begin{array}{\|c} \hline \text { Duratio } \\ \mathrm{n} \text { of } \\ \text { Exam } \\ \hline \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Total |  | Theory | Practical |  |  |
| $\begin{aligned} & \text { MAT-201-F } \\ & \text { or } \\ & \text { HUM-201-F } \end{aligned}$ | Mathematics-III <br> or <br> Engineering <br> Economics | $3$ <br> or $3$ | $2$ <br> or $1$ | - | $\begin{gathered} 5 \\ \text { or } \\ 4 \end{gathered}$ | 50 | 100 | - | 150 | 3 |
| ME-202-F | Manufacturing <br> Technology-I | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-204-F | Kinematics of Machine | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-206-F | Strength of Materials-I | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-208-F | Fluid Mechanics | 3 | 1 | - | 4 | 50 | - 100 | - | 150 | 3 |
| ME-210-F | Steam \& Power Generation | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-212-F | Kinematics of | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
|  | Machine Lab | \% |  |  |  |  |  |  |  |  |
| ME-214-F | Strength of | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
|  | Materials Lab |  |  |  |  |  |  |  |  |  |
| ME-216-F | Fluid Mechanics | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
|  | Lab |  |  |  |  |  |  |  |  |  |
| ME-218-F | Steam \& Power Generation Lab | - | - | 2 | 2 | 25 | - | 25 | 50 |  |
| GP-202-F | General Proficiency | - | - | 2 | 2 | 50 | - | - | 50 | - |
|  | Total | 18 | 6 | 9 | 34/35 | 450 | 600 | 100 | 1150 |  |



## MAHARSHI DAYANAND UNIVERSITY, ROHTAK SCHEME OF STUDIES \& EXAMINATIONS B.Tech. $3^{\text {rd }}$ YEAR MECHANICAL ENGINEERING, SEMESTER-V <br> Proposed "F" Scheme effective from 2011-12

| Course | Course Title | Teaching schedule |  |  |  | MarksFor class work | Marks for Examination |  | Total <br> Marks | Duratio n of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Total |  | Theory | Practic <br> al |  |  |
| ME-301-F | Dynamics Of Machines | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-303-F | Mechanical Machine Design-1 | 3 | 2 | - | 5 | 50 | 100 | - | 150 | 4 |
| ME-305-F | Fluid Machine | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-307-F | Internal Combustion Engines \& Gas Turbines | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-309-F | Manufacturing Technology -II | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-311-F | Applied Numerical Technique \& Computing | 3 | - | - | 3 | 50 | 100 | - | 150 | 3 |
| ME-313-F | Dynamics Of Mechanics Lab | - | - | 2 | 2 | 25 |  | 25 | 50 | 3 |
| ME-315-F | Fluid Machine Lab | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| ME-317-F | Internal Combustion Engines \& Gas Turbines Lab | - | - | 2 | 2 | 25 |  | 25 | 50 | 3 |
| ME-319-F | $\begin{aligned} & \text { Manufacturing Technology -II } \\ & \text { Lab } \\ & \hline \end{aligned}$ | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| ME-321-F | Applied Numerical Technique \& Computing Lab | - | - | 2 | 2 | 50 | - | - | 50 |  |
| ME-323-F | Practical Training Viva-Voce |  |  | 2 | 2 | - | - - - | - | - |  |
|  | Total | 18 | 6 | 12 | 36 | 450 | 600 | 100 | 1150 |  |

Note:

1) Students will be allowed to use non-programmable scientific calculator. However, sharing of calculator will not be permitted in the examination.
2) Assessment of Practical Training-I, undergone at the end of IV semester, will be based on seminar, viva-voce, report and certificate of practical training obtained by the student from the industry. According to performance letter grades A, B, C, F are to be awarded. A student who is awarded ' $F$ ' grade is required to repeat Practical Training.


MAHARSHI DAYANAND UNIVERSITY, ROHTAK
SCHEME OF STUDIES \& EXAMINATIONS
B.Tech. $3{ }^{\text {rd }}$ YEAR MECHANICAL ENGINEERING, SEMESTER-VI

Proposed " $F$ " Scheme effective from 2011-12

| Course | Course Title | Teaching schedule |  |  |  | Marks For class work | Marks for Examination |  | Total Marks | Duratio <br> n of <br> Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Total |  | Theory | $\begin{aligned} & \text { Practi } \\ & \text { cal } \end{aligned}$ |  |  |
| ME-302-F | Automobile Engineering | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-304-F | Mechanical Machine Design-II | 3 | 2 | - | 5 | 50 | 100 | - | 150 | 4 |
| ME-306-F | Heat Transfer | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-308-F | Automatic Control | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-310-F | Measurement \& instrumentation | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-312-F | Industrial Engineering | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-314-F | Automobile Engineering Lab | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| ME-316-F | Heat Transfer Lab | - | - | 2 | 2 | 25 | - | 25 | 25 | 3 |
| ME-318-F |  |  | - | 2 | 2 | 25 | - | 25 | 25 | 3 |
|  | Measurement \& instrumentation <br> Lab | - | - | 2 |  |  |  |  |  |  |
| ME-320-F |  | - | - | 2 | 2 | 50 | - | - | 50 | - |
|  | General Proficiency | 18 | 7 | 8 | 33 | 450 | 600 |  | 1050 |  |
|  | Total | 18 | 7 | 8 | 33 | 450 |  | 100 |  |  |

NOTE:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of Calculator will not be permitted in the examination.
2. Each student has to undergo practical training of 6 weeks during summer vacation and its evaluation shall be carried out in the VII semester


MAHARSHI DAYANAND UNIVERSITY, ROHTAK
SCHEME OF STUDIES \& EXAMINATIONS
B.Tech. $4^{\text {th }}$ YEAR MECHANICAL ENGINEERING, SEMESTER- VII
(Scheme-F)
EFFECTIVE FROM THE SESSION 2012-13

| Course | Course Title | Teaching schedule |  |  |  | Marks <br> For <br> class <br> work | Marks for Examination |  | Total Marks | Duration <br> of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Total |  | Theory | Practical |  |  |
| ME-401-F | Strength of Material-II | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-403-F | Refrigeration \& AirConditioning | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-405-F | Operation Research | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-407-F | Power Plant Engineering | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-409-F | Mechanical Vibration | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ------------- | Elective | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-411-F | Refrigeration \& Air- | - | - | 2 | 2 | 50 | - | 50 | 100 | 37 |
|  | Conditioning Lab |  |  |  |  |  |  |  |  |  |
| ME-413-F | Advanced CAD/CAM Lab | - | - | 2 | 2 | 50 | - | 100 | 150 |  |
| ME-415-F | Practical Training-II | - | - | 2 | 2 | - |  | - | - |  |
| $\begin{aligned} & \text { GFME- } \\ & \text { 435-F } \end{aligned}$ | General Fitness for the Profession | - | - | - | ${ }^{-}$ | - | ${ }^{-}$ | 50 | 50 | 3 |
|  | Protal | 18 | 6 | 6 | 30 | 400 | 600 | 200 | 1200 |  |

## LIST OF ELECTIVES

| S.NO. | SUBJECT CODE | DEPTT. ELECTIVE |
| :---: | :---: | :--- |
| 1. | ME-417-F | QUALITY ENGINEERING |
| 2. | ME 419-F | FINITE ELEMENT METHODS |
| 3. | ME-421-F | ENERGY MANAGEMENT PRINCIPLES |
| 4. | ME-425-F | COMPUTER INTEGRATED <br> MANUFACTURING |
| 5. | ME- 429-F | RELIABILITY ENGINEERING |
| 6. | ME-431-F | SOLAR ENERGY ENGINEERING |

# MAHARSHI DAYANAND UNIVERSITY, ROHTAK <br> SCHEME OF STUDIES \& EXAMINATIONS <br> B.Tech. $4^{\text {th }}$ YEAR MECHANICAL ENGINEERING, SEMESTER- VIII <br> (Scheme-F) <br> EFFECTIVE FROM THE SESSION 2012-13 

| SI. No. | Course No. | Subject | Internal <br> Marks | External <br> Marks | Total <br> Marks |
| :--- | :---: | :---: | :---: | :---: | :---: |
| 1. | ME- 402-F | Industrial Training/Institutional Project Work | 150 | 150 | 300 |

## Note:

The students are required to undergo Industrial Training or Institutional Project Work of duration not less than 4 months in a reputed organization or concerned institute. The students who wish to undergo industrial training, the industry chosen for undergoing the training should be at least a private limited company. The students shall submit and present the mid-term progress report at the Institute. The presentation will be attended by a committee. Alternately, the teacher may visit the Industry to get the feedback of the students.
The final viva-voce of the Industrial Training or Institutional Project Work will be conducted by an external examiner and one internal examiner appointed by the Institute. External examiner will be from the panel of examiners submitted by the concerned institute approved by the Board of Studies in Engg. \& Technology. Assessment of Industrial Training or Institutional Project Work will be based on seminar, viva-voce, report and certificate of Industrial Training or Institutional Project Work obtained by the student from the industry or Institute.
The internal marks distributions for the students who have undergone Industrial Training consist of 50 marks from the industry concern and 100 marks by the committee members consisting of faculty members of concerned department of the parent institute.
The teachers engaged for Institutional Project work shall have a workload of 2 hours per group (at least 4 students) per week.


## M.D. UNIVERSITY <br> SCHEME OF STUDIES AND EXAMINATION <br> M.TECH 1st YEAR (COMPUTER SCIENCE \& ENGINEERING) <br> SEMESTER 1st <br> CBCS Scheme effective from 2016-17

| $\begin{aligned} & \text { Sr. } \\ & \text { No } \end{aligned}$ | Course No. | Subject | Teaching Schedule |  |  |  | Examination Schedule (Marks) |  |  |  | Duratio <br> n of Exam (Hours) | No of hours/ week |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P | Total Credi ts | Marks of Class works | Theor <br> y | Practi cal | Total |  |  |
| 1 | 16CSE21C1 | Data Communication and Computer Networks | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 2 | 16CSE21C2 | Advanced Operating Systems | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 3 | 16CSE21C3 | Advanced Database <br> Management System | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 4 | 16CSE21C4 | Data Warehouse and Mining | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 5 | 16CSE21C5 |  | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 6 | 16CSE21C6 | Seminar | - |  | - | 2 | 50 | - | - | 50 |  | 2 |
| 7 | 16CSE21CL1 | Advanced Operating Systems Lab | - | - | 2 | 2 | 50 | - | 50 | 100 | 3 | 2 |
| 8 | 16CSE21CL2 | Advanced Database Management System Lab | - | - | 2 | 2 | 50 | - | 50 | 100 | 3 | 2 |
|  |  | TOTAL | 26 |  |  |  |  |  |  |  |  |  |

## NOTE:

Examiner will set nine question in total. Question one will be compulsory and will comprises of all section and remaining eight questions to be set by taking two questions from each unit. The students have to attempt five questions in total, first being compulsory and selecting one from each Unit.


## M.D. UNIVERSITY <br> SCHEME OF STUDIES AND EXAMINATION M.TECH 1st YEAR (COMPUTER SCIENCE \& ENGINEERING) <br> SEMESTER 2nd CBCS Scheme effective from 2016-17

| $\begin{aligned} & \text { Sr. } \\ & \text { No } \end{aligned}$ | Course No. | Subject | Teaching Schedule |  |  |  | Examination Schedule (Marks) |  |  |  | Durat ion of Exam (Hour s) | No of hours /wee k |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P | $\begin{gathered} \text { Tota } \\ \text { I } \\ \text { Cred } \\ \text { its } \end{gathered}$ | Marks of Class works | Theor y | Practi cal | Total |  |  |
| 1 | 16CSE22C1 | Soft Computing | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 2 | 16CSE22C2 | Algorithm Design | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 3 | 16CSE22C3 | Seminar | - |  | 2 | 2 | 50 | - | - | 50 | - | 2 |
| 4 | 16CSE22CL1 | Soft Computing Lab | - | - | 2 | 2 | 50 | - | 50 | 100 | 3 | 2 |
| 5 | 16CSE22CL2 | Algorithm Design Lab | - | - | 2 | 2 | 50 | - | 50 | 100 | 3 | 2 |
| 6 | $\begin{aligned} & \text { 16CSE22D1 or } \\ & \text { 16CSE22D2 or } \\ & \text { 16CSE22D3 or } \\ & \text { 16CSE22D4 } \end{aligned}$ | Elective-1 | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 7 |  | Open Elective |  |  |  | 3 |  |  |  |  |  | 3 |
| 8 |  | Foundation Elective |  |  |  | 2 |  |  |  |  |  | 2 |
|  |  |  | 23 |  |  |  |  |  |  |  |  |  |

NOTE:Examiner will set nine question in total. Question One will be compulsory and will comprises af all section and remaining eight questions to be set by taking two questions from each unit. The students have to attempt five questions in total, first being compulsory and selecting one from each Unit.

Elective 1: Choose any one from the following papers

| 16CSE22D1 | Mobile and Wireless Communicat |
| :--- | :--- |
| 16CSE22D2 | Optimization Techniques |
| 16CSE22D3 | Discrete Mathematics |
| 16CSE22D4 | Internet and Web Development |

Elective 2
A candidate has to select this paper from the pool of Open Electives provided by the University
Elective 3
A candidate has to select this aser from the of of Foundation Electives provided by the University.


## M.D UNIVERSITY <br> SCHEME OF STUDIES AND EXAMINATION <br> M.TECH 2nd YEAR (COMPUTER SCIENCE \& ENGINEERING) <br> SEMESTER 3rd

CBCS Scheme effective from 2017-18


NOTE:
Examiner will set nine questions in total. Question One will be compulsory and will comprises of all sections and remaining eight questions to be set by taking two questions from each unit. The students have to attempt five questions in total, first being compulsory and selecting one from each Unit.

## OPEN ELECTIVE

A candidate has to select this paper from the pool of open electives provided by the University.


# M.D UNIVERSITY <br> SCHEME OF STUDIES AND EXAMINATION <br> M.TECH 2nd YEAR (COMPUTER SCIENCE \& ENGINEERING) <br> SEMESTER 4th <br> CBCS Scheme effective from 2017-18 

| SI. <br> No | Course No. | Subject | Teaching Schedule |  |  |  | Examination Schedule (Marks) |  |  |  | No of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P | Total | Marks of Class works | Theory | Practical | Total |  |
| 1. | 17CSE24C1 | Dissertation and viva (Dissertation Stage 2) | - | - | - | - | 250 | - | 500 | 750 | 20 |
|  |  | TOTAL | . . - - |  |  |  | - |  |  |  |  |

NOTE:

1. Students have to publish a research paper in a journal / conference of the research work done in the semester.


## Maharshi Dayanand University, Rohtak

## SCHEME OF STUDIES \& EXAMINATION <br> MASTER OF TECHNOLOGY <br> (CYBER FORENSICS AND INFORMATION SECURITY) <br> SEMESTER-III <br> EFFECTIVE FROM 2013-14

| Course No. | Course Title |  | Teaching <br> Schedule |  | Marks |  | Total | Duration <br> of Exam <br> (Hrs) |
| :--- | :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L T | P | Sessional | Exam. |  |  |  |
| MTCF 301 | Preserving \& Recovering <br> Digital Evidence | 4 | - | - | 50 | 100 | 150 | 3 |
| MTCF 302 | Cyber Laws \& Security <br> Policy | 4 | - | - | 50 | 100 | 150 | 3 |
|  | Elective-III | 4 | - | - | 50 | 100 | 150 | 3 |
| MTCF 307 | Dissertation Phase 1 | - | - | 8 | 100 | - | 100 | 3 |
| MTCF 308 | Seminar \& Technical Writing | - | - | 2 | 50 | - | 50 | - |
| TOTAL |  | 12 | - | 10 | 300 | 300 | 600 |  |

Elective- III

MTCF 303- Biometric Security
MTCF 304- Applied Cryptography
MTCF 305-Distributed Systems Security
MTCF 306- Secure Software Engineering


# Maharshi Dayanand University, Rohtak 

SCHEME OF STUDIES \& EXAMINATION MASTER OF TECHNOLOGY (CYBER FORENSICS AND INFORMATION SECURITY)

## SEMESTER-IV

## EFFECTIVE FROM 2013-14

| Course No. | Course Title | Teaching <br> Schedule |  | Marks |  | Total |  |
| :--- | :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Sessional | Exam. |  |
| MTCF 401 | Dissertation Phase-II | - | - | 24 | 200 | 400 | 600 |
|  |  |  |  |  |  |  |  |
|  | Total |  | - | 24 | 200 | 400 | 600 |



## M.D.UNIVERSITY, ROHTAK <br> SEMESTER 1 EAR (ELECTRONICS \& COMMUNICATION)

CBCS Scheme effective from 2016-17

| $\begin{aligned} & \text { Sl. } \\ & \text { No } \end{aligned}$ | Course Code | Subject | Credit Pattern |  |  |  | Examination Schedule (Marks) |  |  |  | Dura tion of Exam (Hou rs) | No of Hours /week |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P | Total Credi ts | Mark $\mathbf{s}$ of Class work | $\begin{gathered} \text { Theor } \\ y \\ \hline \end{gathered}$ | $\begin{gathered} \text { Practic } \\ \text { al } \\ \hline \end{gathered}$ | Total |  |  |
| 1 | 16ECE21Cl | Advance Microprocessor \& Microcontroller | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 2 | 16ECE21C2 | Satellite and Space Communication | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 3 | 16ECE21C3 | Information and Communication Theory | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 4 | 16ECE21C4 | Advanced Digital Signal Processing | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 5 | 16ECE21C5 | Data Communication Networks | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 6 | 16ECE21C6 | Seminar | - |  | - | 2 | 50 | - | - | 50 |  | 2 |
|  | 16ECE21CL1 | Satellite Lab | - | - | 2 | 2 | 50 | - |  | 100 | 3 | 4 |
| 7 |  |  |  |  |  |  |  | - | 50 |  |  |  |
| 8 | 16ECE21CL2 | Advance Microprocessor \& Microcontroller Lab | - | - | 2 | 2 | 50 | - | 50 | 100 | 3 | 4 |
|  |  | TOTAL | 26 |  |  |  |  |  |  |  |  |  |

NOTE:
Examiner will set nine question in total. Question One will be compulsory and will comprise short answer type questions from all sections and remaining eight questions to be set by taking two questions from each unit. The students have to attempt five questions in total, first being compulsory and selecting one from each Unit.


## SCHEME OF STUDIES AND M.D.UNIVERSITY, ROHTAK \& COMMUNATION M.TECH 1st YEAR (ELECTRONICS CBCS Scheme effective from 2016-17

| $\begin{gathered} \mathbf{S I} \\ \dot{\mathbf{N}} \end{gathered}$ | Course No. | Subject | Credit Pattern |  |  | Examination Schedule (Marks) |  |  |  | Duration of Exam (Hours) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 1 T | P | Total Credi ts | Marks of Class works | Theory | Practical |  |  |
| 1 | 16ECE22C1 | Wireless Mobile Communication | 40 | - | , | 50 | 100 | Practical | 150 | 3 |
| 2 | 16ECE22C2 | Optical <br> Communication | 40 | - | 4 | 50 | 100 | - | 150 | 3 |
| 3 | 16ECE22C3 | Seminar | ven | - | 2 | 50 | - | - | 50 |  |
| 4 | 16ECE22CL1 |  | - | 2 | 2 | 50 | - | 50 | 100 | 3 |
|  |  |  | - | 2 | 2 | 50 | - | 50 | 100 | 3 |
|  |  |  |  |  |  |  |  |  |  |  |
| 6 | 16ECE22D1 <br> or <br> 16ECE22D2 <br> or <br> 16ECE22D3 <br> or <br> 16ECE22D4 | Elective-1 | 40 | - | 4 | 50 | 100 | - | $150$ | 3 |
|  |  | Open Elective |  |  | 3 |  |  |  |  |  |
| 8 |  | Foundation Elective |  |  | 2 |  |  |  |  |  |
|  |  | TOTAL |  |  | 23 |  |  |  |  |  |

NOTE: Examiner will set nine questions in total. Question One will be compulsory and will comprise short answer type questions from all sections and remaining eight questions to be set by taking two questions from each unit. The students have to attempt five questions in total, first being compulsory and selecting one from each Unit.

Elective 1: Choose any one from the following four papers:

> 16ECE22D1 - Electronic System Design
> 16ECE22D2 - Image Processing
> 16ECE22D3 - ADVANCED MATHEMATICS FOR ENGINEERS 16ECE22D4 - VLSI Design

Open Elective: A candidate has to select this paper from the pool of Open Electives provided by the University. Foundation Elective: A candidate has to select this paper from the pool of Foundating flectives provided by the University.


## M.DUNIVERSITY <br> SCHEME OF STUDIES AND EXAMINATION M.TECH 2nd YEAR (ELECTRONICS \& COMMUNICATION) SEMESTER 3rd <br> CBCS Scheme effective from 2017-18

| $\begin{aligned} & \text { Sl. } \\ & \text { No } \end{aligned}$ | Course No. | Subject | Teaching Schedule |  |  |  | Examination Schedule (Marks) |  |  |  | DurationofExam(Hours) | No of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P | Total | Marks of Class works | Theory | Practica | Total |  |  |
| 1 | 17ECE23C1 | Neural Networks \& Fuzzy Logics | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 2 | 17ECE23C2 | CDMA | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
|  |  | DISSERTATIO | - | - | - | 4 | 100 | - | - | 100 |  | 2 |
| 3 | 17ECE23C3 | N (PHASE-I) |  |  |  |  |  |  |  |  |  |  |
| 4 | 17ECE23C4 | Seminar | - | - | - | 2 | 50 | - | - | 50 |  | 2 |
|  |  | Project | - | - | 2 | 2 | 50 | - | 50 | 100 |  | 2 |
| 5 | 17ECE23CLl | MATLAB Lab | - | - | 2 | 2 | 50 | - | 50 | 100 |  | 2 |
| 6 | 17ECE23CL2 |  |  |  |  |  |  |  |  |  |  |  |
| 7 |  | OPEN ELECTIVE |  |  |  |  |  |  |  |  |  | 3 |
| 7 |  |  |  |  |  |  |  |  |  |  |  | 21 |

NOTE:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of Calculator will not be permitted in the examination.
2. Students have to publish a research paper in a journal / conference on the basis of literature survey done in the semester.

OPEN ELECTIVE: A candidate has to select this paper from the pool of open electives provided by the University.


## M.D UNIVERSITY <br> SCHEME OF STUDIES AND EXAMINATION M.TECH 2nd YEAR (ELECTRONICS \& COMMUNICATION) <br> SEMESTER 4th

CBCS Scheme effective from 2017-18


NOTE:

1. Students have to publish a research paper in a journal / conference of the research work done in the semester.


## M. TECH. MECHANICAL ENGINEERING (MACHINE DESIGN) COURSE SCHEME and DETAILED SYLLABUS

Semesterwise Course Scheme

| FIRST SEMESTER |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Subject <br> Code | Subject | Credit | L-T-P | Marks Weightage |  | Grand total |
|  |  |  |  | Theory | Sessional |  |
| 1. M 801 A | Numerical Analysis and Optimization | 3 | $3-0-0$ | 100 | 50 |  |
| 2. M803A | Instrumentation and Measurement | 3 | $3-0-0$ | 100 | 50 |  |
| 3. M805A | Experimental Stress Analysis | 3 | $3-0-0$ | 100 | 50 |  |
| 4. M807A | Metal Forming Analysis | 3 | $3-0-0$ | 100 | 50 |  |
| 5. M809A | Mechatronics and Product Design | 3 | 3-0-0 | $\begin{aligned} & 100 \\ & \text { Ext. } \end{aligned}$ | $\begin{aligned} & 50 \\ & \text { Int. } \end{aligned}$ |  |
| 6. M811A | Experimental Stress Analysis Lab | 1 | 0-0-2 | 25 | 25 |  |
| 7. M813A | Mechanical Measurement Lab | 1 | 0-0-2 | 25 | 25 |  |
| 8. M815A | Computational Lab | 1 | 0-0-2 | 25 | 25 |  |
|  | Total | 18 | 15-0-6 | 575 | 325 | 900 |
| SECOND SEMESTER |  |  |  |  |  |  |
| 9. M 802 A | Theory of Elasticity | 3 | $3-0-0$ | 100 | 50 |  |
| 10. M804A | Design of Mechanisms | 3 | 3-0-0 | 100 | 50 |  |
| 11. M806A | Principles of Machine Design | 3 | $3-0-0$ | 100 | 50 |  |
| 12. | General Elective - I | 3 | $3-0-0$ | 100 | 50 |  |
| 13. | General Elective - II | 3 | $3-0-0$ | 100 | 50 |  |
|  |  |  |  | Ext. | Int. |  |
| 14. M812A | Seminar | 1 | 0-0-2 | 25 | 25 |  |
| 15. M814A | CAD/CAM Lab | 1 | 0-0-2 | 25 | 25 |  |
| 16. M816A | Design Practice Lab-I | 1 | 0-0-2 | 25 | 25 |  |
|  | Total | 18 | 15-0-6 | 575 | 325 | 900 |
| THIRD SEMESTER |  |  |  |  |  |  |
| 17. M821A | Mechanical Behavior of Materials | 3 | 3-0-0 | 100 | 50 |  |
| 18. M823A | Mechanical Vibrations | 3 | 3-0-0 | 100 | 50 |  |
| 19. M825A | General Elective III | 3 | 3-0-0 | 100 | 50 |  |
|  |  |  |  | Ext. | Int. |  |
| 20. M827A | Design Practice Lab II | 1 | 0-0-2 | 25 | 25 |  |
| 21. M829A | Materials Behavior and Vibration Lab | 1 | 0-0-2 | 25 | 25 |  |
| 22. M831A | Minor Project | 5 | 0-0-10 | 150 | 100 |  |
|  | Total | 16 | 9-0-14 | 500 | 300 | 800 |


| $\begin{array}{l}\text { Subject } \\ \text { Code }\end{array}$ | Subject |  | Credit | L-T-P | Marks Weightage |  |
| :---: | :--- | :--- | :--- | :--- | :--- | :--- |
| Ext. | Int. |  |  |  |  |  |$]$

## ELECTIVES I

1. M837 Design of Bearings and Shaft
2. M838 Computer Aided Design
3. M839 Design of Pollution Control Equipments
4. M840 Design of Pressure Vessels

## ELECTIVES II

1. M845 Fracture Mechanics
2. M846 Design and Metallurgy of Welded Joints
3. M847 Finite Element Methods
4. M848 Materials Management

## ELECTIVE III

1. M 849

Total Quality Management
2. M850 Robotic Engineering
3. M851 Computer Aided Vehicle Design
4. M852 Tribology


## MAHARSHI DAYANAND UNIVERSITY, ROHTAK

## SCHEME OF STUDIES AND EXAMINATIONS FOR MASTER OF TECHNOLOGY IN <br> ELECTRICAL ENGINEERING

(Specialization: Electrical Power Systems)
SEMESTER-III

| S.No | Course Code | Course Title | Teaching Schedule |  |  | Class <br> Work | Examination |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | Theory | Practical |  |
|  |  |  | L | T | P |  |  | 15 |  |
| 1 | MTEPS301 | Elective - III | 3 | 1 | 0 | 50 | 100 | - | 150 |
| 2 | MTEPS302 | Elective - IV | 3 | 1 | 0 | 50 | 100 | 50 | 100 |
| 3 | MTEPS303 | Seminar |  |  | 2 | 50 | - | - | 150 |
| 4 | MTEPS304 | Dissertation- | 0 | 0 | 4 | 150 | - |  |  |
|  |  | Phase I |  |  |  | 30 | 200 | 50 | 550 |

1. The paper setter shall set each theory paper of $\mathbf{1 0 0}$ marks covering entire syllabus. However the examiner shall evaluate the performance of the student in the theory paper finally by assigning one of the grades out of $A^{+}, A, B, C, D \& E$. The examination of practical courses shall also be evaluated on the basis of these grades.
2. The sessionals of theory, practical and Seminar courses shall also be evaluated in the basis of these grades.
3. The choice of student for any elective shall not be binding on the department to offer it.
4. The grading system is define at the end of scheme of studies \& examinations and will be supplied by the University to the examiner(s).


## MAHARSHI DAYANAND UNIVERSITY, ROHTAK

## SCHEME OF STUDIES AND EXAMINATIONS FOR MASTER OF TECHNOLOGY IN ELECTRICAL ENGINEERING

(Specialization: Electrical Power Systems)
SEMESTER-IV

| S.No. | Course <br> Code | Course Title | Teaching <br> Schedule |  |  | Class <br> Work | Examination |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P |  | Theory | E.VIVA |  |
| 1 | MTEPS401 | Dissertation Final Phase | 0 | 0 | 20 | 200 | - | 400 | 600 |
|  |  |  |  |  | 20 | 200 | - | 400 | 600 |

NOTE:

1. The sessionals of Dissertation shall be evaluated on the basis of grades i.e $\mathbf{A}^{+}$,
$A, B, C, D \& E$.
2. The Dissertation shall be evaluated by an examination committee consisting of the head of the department, Dissertation Supervisor and one External examiner. The evaluation should be based on above grades.
3. The grading system is define at the end of scheme of studies \& examinations and will be supplied by the University to the examiner(s).


# Maharshi Dayanand University, Rohtak 

## SCHEME OF STUDIES \& EXAMINATION

 MASTER OF TECHNOLOGY (STRUCTURAL DESIGN)
## SEMESTER-III

EFFECTIVE FROM 2012-13

| Course No. | Course Title | Teaching Schedule |  |  | Marks |  | Total | Duration of Exam (Hrs) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Sessional | Exam. |  |  |
| MTSD 301 | Design of Structures- III | 4 | - | - | 50 | 100 | 150 | 3 |
|  |  |  |  |  |  | 100 | 150 | 3 |
| MTSD 302 | Professional Practices | 4 | - | - | 50 | 100 | 150 | 3 |
|  | Elective-III | 4 | - | - | 50 | 50 | 100 | 3 |
| MTSD 303 | Computational Laboratory-III | - | - | 3 | 50 | 50 | 50 |  |
| MTSD 304 | Seminar \& Technical Writing | - |  | 2 | 100 | - | 100 |  |
| MTSD 305 | Dissertation Phase-I | - |  | 4 | 100 |  |  |  |
|  |  | 12 | - | 9 | 350 | 350 | 700 |  |
| TOTAL |  |  |  |  |  |  |  |  |

1. The paper setter shall set each theory paper of 100 marks covering entire syllabus. However the Examiner shall evaluate the performance of the student in the theory paper finally by assigning one of the grades out of $A+A, B, C, D \& E$. The examination of practical courses shall also be evaluated on the basis of these grades.
2. The sessionals of theory and practical courses shall also be evaluated in the basis of these grades.
3. The choice of student for any elective shall not be binding on the department to offer it.
4. The grading system is define at the end of scheme of studies \& examinations and will be supplied by the University to the examiner(s).


## Maharshi Dayanand University, Rohtak

 SCHEME OF STUDIES \& EXAMINATION MASTER OF TECHNOLOGY (STRUCTURAL DESIGN) SEMESTER-IVEFFECTIVE FROM 2012-13

| Course No. | Course Title | Teaching <br> Schedule |  | Marks |  | Total <br>  | L | Duration <br> of Exam <br> (Hrs) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| MTSD 401 | Dissertation | - | - | 24 | Sessional | Exam. |  |  |
| TOTAL |  |  |  |  |  | 400 | 600 | 3 |

NOTE:

1. The sessionals of Dissertation shall be evaluated on the basis of grades i.e $A+, A, B, C, D \& E$.
2. The Dissertation shall be evaluated by an examination committee consisting of the head of the department, Dissertation Supervisor and one External examiner. The evaluation should be based on above grades.
3. The grading system is define at the end of scheme of studies \& examinations and will be supplied by the University to the examiner(s)


## List of Electives:

## Elective- I

MTSD 107 - Composite Structures
MTSD 108 - Analysis and Design of Plates \& Shells
MTSD 109 - Advanced Foundation Design and Geotechnics
MTSD 110 - Material Science

## Elective- II

MTSD 207- Advanced Steel Design
MTSD 208 - Advanced Reinforced Concrete Design

MTSD 209-Earth Retaining Structures
MTSD 210-Construction Failures

## Elective- III

MTSD 306- High Rise Structures
MTSD 307- Design of Hydraulic Systems
MTSD 308- Design Of Bridges


## M.D.UNIVERSITY, ROHTAK <br> SCHEME OF STUDIES AND EXAMINATION M.TECH 1st YEAR (MANUFACTURING \& AUTOMATION) <br> SEMESTER 1

CBCS Scheme effective from 2016-17

| $\begin{aligned} & \text { Sl. } \\ & \text { No } \end{aligned}$ | Course Code | Subject | Credit Pattern |  |  |  | Examination Schedule (Marks) |  |  |  | Dura tion of Exam (Hou rs) | No of <br> Hours /week |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P | Total Credi ts | Mark $s$ of Class work | $\begin{gathered} \text { Theor } \\ \mathrm{y} \\ \hline \end{gathered}$ | Practic al | Total |  |  |
| 1 | $\begin{aligned} & \text { 16MMA21C1 } \\ & \text { 16MMA21C2 } \end{aligned}$ | Metal Forming Analysis | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 2 |  | Mechatronics \& Product Design | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 3 | 16MMA21C3 | Total Quality Management | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 4 | 16MMA21C4 | Welding \& Allied Processes | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 5 | 16MMA21CLI | Mechatronics Lab | - | - | 2 | 2 | 50 |  | 50 | 100 | 3 | 4 |
| 6 | 16MMA21CL2 | Welding Lab | - | - | 2 | 2 | 50 |  | 50 | 100 | 3 | 4 |
| 7 | 16MMA21CL3 | CAD/CAM Lab | - | - | 2 | 2 | 50 |  | 50 | 100 | 3 | 4 |
| 8 | 16MMA21C5 | Seminar | - |  | - | 2 | 50 | - | - | 50 |  | 2 |
| 9 | 16MMA21D1 or <br> 16MMA21D2 or 16MMA21D3 OR <br> 16MMA21D4 | Elective I | 4 | - |  | 4 | 50 | 100 |  | 150 | 3 | 4 |
|  |  |  | 28 |  |  |  |  |  |  |  |  |  |
|  |  | TOTAL |  |  |  |  |  |  |  |  |  |  |

Elective I: Choose any one from the following three papers:
16MMA21D1 - INDUSTRIAL INSPECTION
16MMA21D2 - DESIGN AND METALLURGY OF WELDED
JOINTS 16MMA21D3 - FOUNDARY TECHNOLOGY
16MMA21D4-DESIGN PLANNING CONTORL AND PRODUCTION SYSTEM
NOTE:
Examiner will set nine questions in total. Question One will be compulsory and will comprise short answer type questions from all sections and remaining eight questions to be set by taking two questions from each unit. The students have to attempt five questions in total, first being compulsory and selecting one from each Unit.


## M.D.UNIVERSITY, ROHTAK SCHEME OF STUDIES AND EXAMINATION M.TECH 1st YEAR (MANUFACTURING \& AUTOMATION) <br> SEMESTER 2 <br> CBCS Scheme effective from 2016-17



TOTAL
NOTE: Examiner will set nine questions in total. Question One will be compulsory and will comprise short answer type questions from all sections and remaining eight questions to be set by taking two questions from each unit. The students have to attempt five questions in total, first being compulsory and selecting one from each Unit.
Elective II : Choose any one from the following three papers:
16MMA22D1 - QUALITY CONTROL TECHNIQUES
16MMA22D2 - FINITE ELEMENT METHODS
16MMA22D3 - ARTIFICIAL INTELLEGENCE IN MANUFACTURING
Open Elective: A candidate has to select this paper from the pool of Open Electives provided by the University.
Foundation Elective: A candidate has to select this paper from the pool of Foundation Electives provided by the University-

Semester-III

| Paper Code | Course | University Exams | Internal Assessment | Total Marks | $\begin{aligned} & \text { Credits } \\ & \text { (L:T:P) } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 17MCA33Cl | Computer Graphics | 80 | 20 | 100 | 4:0:0 |
| 17MCA33C2 | Operating Systems | 80 | 20 | 100 | 4:0:0 |
| 17MCA33C3 | Advance Database Systems | 80 | 20 | 100 | 4:0:0 |
| 17MCA33C4 | Data Communication and Computer Networks | 80 | 20 | 100 | 4:0:0 |
| 17MCA33C5 | Object Technology | 80 | 20 | 100 | 4:0:0 |
| 17MCA33CLI | SoftwareLab-5 <br> i) Graphics Programming <br> Using C/C++. <br> ii) UNIX / Shell Programming. | 100 | ---- | 100 | 0:0:3 |
| 17MCA33CL2 | SoftwareLab-6 <br> i) Java Programming <br> ii)ADBMS (PLSQL \& MYSQL) | $100{ }^{*}$ | --- | 100 | 0:0:3 |
|  |  |  |  |  | 26 Credits |

Semester-IV

| Paper Code | Course | University Exams | Internal Assessment | Total Marks | $\begin{aligned} & \text { Credits } \\ & \text { (L:T:P) } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 17MCA34Cl | Advanced Java Programming | 80 | 20 | 100 | 4:0:0 |
| 17MCA34C2 | Object Oriented Analysis and Design using UML | 80 | 20 | 100 | 4:0:0 |
| 17MCA34DAI/ <br> 17MCA34DA2/ <br> 17MCA34DA3 | i) Theory of Computation or <br> ii) Software Engineering or <br> iii) Multimedia and Its <br> Applications | 80 | 20 | 100 | 4:0:0 |
| 17MCA34DB1/ 17MCA34DB2/ 17MCA34DB3 | i) Analysis and Design of Algorithms or <br> ii) Computer Security or iii)Digital Image Processing | 80 | 20 | 100 | 4:0:0 |
| 17MCA34C3 | Artificial Intelligence and Expert System | 80 | 20 | 100 | 4:0:0 |
| 17MCA34CLI | SoftwareLab-7 <br> Advance Java Programming | 100 | --- | 100 | 0:0:3 |
| 17MCA34CL2 | Software Lab-8 <br> i) Object Oriented Analysis and Design using UML <br> ii) PROLOG | $10{ }^{*}$ | --- | 100 | 0:0:3 |
| 17MCA34C4 | Minor Project-I | - | 100 | 100 | 0:2:0 |
|  | Total |  |  |  | 28 Credits |



Total Credits= $\mathbf{3 1}$ Credits

* 20 marks out of 100 will be based on the evaluation/assessment of the candidate in Test(s) and Assignment(s) during the semester, which will be forwarded by the Head of Dept./Director to the Examiner(s). Further, both practical exams of a semester may be conducted on the same day in 2 sittings each maximum of 3 hours.



## MCA Third Year

| Semester-V |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Paper Code | Course | University Exams | Internal Assessment | Total Marks | $\begin{aligned} & \text { Credits } \\ & \text { (L:T:P) } \end{aligned}$ |
| 18MCA3SCI | Advanced Technology | 80 | 20 | 100 | 4:0:0 |
| 18MCA35C2 | Soft Computing | 80 | 20 | 100 | 4:0:0 |
| 18MCA35C3 | Data Warehousing and Data Mining | 80 | 20 | 100 | 4:0:0 |
| 18MCA35DA1/ 18MCA35DA $2 /$ 18MCA35DA3 | (i) Cloud Computing or <br> (ii) Big Data Analytics or <br> (iii) Software Testing and Quality Assurance | 80 | 20 | 100 | 4:0:0 |
| 18MCA35DB1/ 18MCA35DB2/ 18MCA35DB3 | (i) Internet of Things or <br> (ii) Mobile Computing or <br> (iii) Embedded Systems | 80 | 20 | 100 | 4:0:0 |
| 18MCA35CLl | Software Lab-9 <br> .NET Programming Using C\# | $10{ }^{*}$ | --- | 100 | 0:0:3 |
| 18MCA35CL2 | Software Lab-10 <br> Soft Computing | 100 | ---- | 100 | 0:0:3 |
| 18MCA35C6 | Minor Project-II | - | 100 | 100 | 0:2:0 |
|  | Total |  |  |  | 28 Credits |
| Open Elective (0) |  |  |  |  |  |
| To be Chosen from the pool of Open Electives provided by the University (excluding the open elective prepared by the Department of Comp Sc. \& Appls.) |  |  |  |  | 3 |

Total Credits= 31 Credits
20 marks out of 100 will be based on the evaluation/assessment of the candidate in Test(s) and Assignment(s) during the semester, which will be forwarded by the Head of Dept./Director to the Examiner(s). Further, both practical exams of a semester may be conducted on the same day in 2 sittings each maximum of 3 hours.

## Semester-VI

| Paper Code | Course | University <br> Exams | Internal <br> Assessment | Total <br> Marks | Credits |
| :--- | :--- | :---: | :---: | :---: | :---: |
| 18MCA36C1 | Major Project | 400 | 100 | 500 | 20 Credits |
|  | Grand Total of 3 Years/Credits |  |  |  |  |



## CURRICULUM AND SCHEME OF EXAMINATIONS OF BBA PROGRAMME FROM THE SESSION 2014-15

## SECOND YEAR

## Third Semester

| Paper No | Title of Paper(s) | External <br> Marks | Internal <br> Assessment/ <br> Work-shop <br> Marks | Practical <br> Marks | Total <br> Marks |
| :--- | :--- | :---: | :---: | :---: | :---: |
| BBAN301 | Cost and Management <br> Accounting | 80 | 20 | - | 100 |
| BBAN302 | Marketing Management | 80 | 20 | - | 100 |
| BBAN303 | Capital Markets | 80 | 20 | - | 100 |
| BBAN304 | Introduction to <br> Information Technology | 50 | - | 50 | 100 |
| BBAN305 | Environment Studies | 80 | 20 | - | 100 |
| BBAN306 | Disaster Management | 80 | 20 | - | 100 |
|  | TOTAL |  |  |  | 600 |

## Fourth Semester

| Paper No | Title of Paper(s) | External <br> Marks | Internal <br> Assessment/ <br> Work-shop <br> Marks | Practical <br> Marks | Total <br> Marks |
| :--- | :--- | :---: | :---: | :---: | :---: |
| BBAN401 | Financial Management | 80 | 20 | - | 100 |
| BBAN402 | Human Resource <br> Management | 80 | 20 | - | 100 |
| BBAN403 | Business Research <br> Methods | 80 | 20 | - | 100 |
| BBAN404 | Business Laws | 80 | 20 | - | 100 |
| BBAN405 | Data Base Management <br> System | 50 | - | 50 | 100 |
| BBAN406 | Human Rights and Values | 80 | 20 | - | 100 |
|  | TOTAL |  |  |  | 600 |



CURRICULUM AND SCHEME OF EXAMINATIONS OF
BBA PROGRAMME FROM THE SESSION 2014-15

## THIRD YEAR

## Fifth Semester

| Paper No | Title of Paper(s) | External <br> Marks | Internal <br> Assessment/ <br> Work-shop <br> Marks | Practical <br> Marks | Total <br> Marks |
| :--- | :--- | :---: | :---: | :---: | :---: |
| BBAN501 | Production and Materials <br> Management | 80 | 20 | - | 100 |
| BBAN502 | Company Law | 80 | 20 | - | 100 |
| BBAN503 | Indian Business <br> Environment | 80 | 20 | - | 100 |
| BBAN504 |  <br> Internet | 50 | - | 50 | 100 |
| BBAN505 | Presentation Skills and <br> Personality Development | 80 | 20 | - | 100 |
| BBAN506 | Cyber Security | 80 | 20 | - | 100 |
| BBAN507 Summer Training Report | 100 | - | - | 100 |  |
|  | TOTAL |  |  |  | 700 |

## Sixth Semester

| Paper No | Title of Paper(s) | External <br> Marks | Internal <br> Assessment/ <br> Work-shop <br> Marks | Practical <br> Marks | Total <br> Marks |
| :--- | :--- | :---: | :---: | :---: | :---: |
| BBAN601 | Income Tax | 80 | 20 | - | 100 |
| BBAN602 |  <br> Design | 80 | 20 | - | 100 |
| BBAN603 | Foundations of <br> International Business | 80 | 20 | - | 100 |
| BBAN604 | Consumer Protection | 80 | 20 | - | 100 |
| BBAN605 | E-Commerce | 50 | - | 50 | 100 |
| BBAN606 | Project Report | 100 | - | - | 100 |
| BBAN607 | Comprehensive Viva- <br> voce | 100 | - | - | 100 |
|  | TOTAL |  |  |  | 700 |

Session 2014-15

## CURRICULUM AND SCHEME OF EXAMINATIONS OF TWO YEAR MBA PROGRAMME

Second Year : $3^{\text {rd }}$ Semester

| Paper No. | Title of the Paper(s) | External Marks | Internal <br> Marks/ <br> Workshop | Practical Marks | Total Marks |
| :---: | :---: | :---: | :---: | :---: | :---: |
| MBA301 | Strategic Management | 80 | 20 | - | 100 |
| MBA302 | Management Information System | 80 | 20 | - | 100 |
| MBA303 | Business Legislation | 80 | 20 | - | 100 |
| MBA304 | Summer Training Report | 100 | - | - | 100 |
| Specialization Area I $\{$ | Optional Paper - I |  |  |  | 100 |
|  | Optional Paper - II |  |  |  | 100 |
|  | Optional Paper - III |  |  |  | 100 |
| Specialization <br> Area II <br> $\{$ | Optional Paper - I |  |  |  | 100 |
|  | Optional Paper - I <br> Optional Paper - II |  |  |  | 100 |
|  | Optional Paper - III |  |  |  | 100 |
|  | TOTAL |  |  |  | 1000 |

## Note:

1 Students are required to choose any three optional papers from each set of specialization areas offered under dual specialization scheme. The specialization area opted in $3^{\text {rd }}$ Semester would remain same in $4^{\text {th }}$ semester also.
2. The duration of the end term examination shall be 3 hours.
3. The following combinations of specializations shall be offered to the students of 2-Year MBA (General):
a.

Finance and Marketing
b.
c.
d.
e.
f. $\quad$ Marketing and IB
g.

Finance and Human Resource Management
c. Human Resource Management and Marketing

Finance and IT

- Marketing



## CURRICULUM AND SCHEME OF EXAMINATIONS FOR <br> TWO YEAR MBA PROGRAMME

Second Year: $4^{\text {th }}$ Semester

| Paper No. | Title of the Paper(s) | External <br> Marks | Internal <br> Marks/ <br> Workshop | Practical Marks | Total Marks |
| :---: | :---: | :---: | :---: | :---: | :---: |
| MBA401 | Entrepreneurship | 80 | 20 | - | 100 |
| MBA402 | E-Commerce | 50 | - | 50 | 100 |
| MBA403 | Project Report | 100 | - | - | 100 |
| MBA404 | Comprehensive Viva-voce | 100 | - | - | 100 |
| Specialization Area I | Optional Paper - I |  |  |  | 100 |
|  | Optional Paper - II |  |  |  | 100 |
|  | Optional Paper - III |  |  |  | 100 |
| Specialization Area II | Optional Paper - I |  |  |  | 100 |
|  | Optional Paper - II |  |  |  | 100 |
|  | Optional Paper - III |  |  |  | 100 |
|  | TOTAL |  |  |  | 1000 |

## Note:

1. Students are required to choose any three optional papers from each set of specialization areas offered under dual specialization scheme. The specialization area opted in $3^{\text {rd }}$ Semester would remain same in $4^{\text {th }}$ semester also.
2. The topic of the Project Report (Code MBA403) shall be finalized in $3^{\text {rd }}$ semester by a Committee of the Faculty Members to be constituted by Director/Principal of the concerned Institute after presentation by the candidate before the Committee.
3. The duration of the end term examination shall be 3 hours.
4. The following combinations of specializations shall be offered to the students of 2-Year MBA (General):

Finance and Marketing
b. Finance and Human Resource Management
c. Human Resource Management and Marketing
d. Finance and IT
e. $\quad$ Finance and IB
f. Marketing and IB
g. Marketing and IT


## CURRICULUM AND SCHEME OF EXAMINATIONS FOR TWO YEAR MBA PROGRAMME

## SPECIALISATIONS OFFERED IN $3{ }^{\text {RD }}$ AND $4^{\text {TH }}$ SEMESTERS

HUMAN RESOURCE MANAGEMENT: Third Semester

| Paper No. | Title of the Paper(s) | External <br> Marks | Internal <br> Marks/ <br> Workshop | Practical <br> Marks | Total <br> Marks |
| :---: | :--- | :--- | :--- | :---: | :---: |
| MBA305 | Performance Management | 80 | 20 | - | 100 |
| MBA307 | Organisational Change and <br> Development | 80 | 20 | - | 100 |
| MBA308 | Compensation Management | 80 | 20 | - | 100 |

## Fourth Semester

| Paper No. | Title of the Paper(s) | External <br> Marks | Internal <br> Marks/ <br> Workshop | Practical <br> Marks | Total Marks |
| :---: | :--- | :--- | :---: | :---: | :---: |
| MBA405 | Talent Management | 80 | 20 | - | 100 |
| MBA406 | Industrial Relations and Labour <br> Legislations | 80 | 20 | - | 100 |
| MBA407 | Strategic Human Resource <br> Management | 80 | 20 | - | 100 |

Note: The duration of the end term examination shall be 3 hours.


2018-19

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## MAHARSHI DAYANAND UNIVERSITY, ROHTAK SCHEME OF STUDIES \& EXAMINATIONS <br> B.Tech 2nd YEAR CIVIL ENGINEERING, $3^{\text {rd }}$ SEMESTER <br> Proposed 'F' Scheme w.e.f 201D

| Subject Code | Subject Name | L | T | P |  | Total | Theory Marks | Class <br> Marks | Practical Marks | Total Marks |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{array}{\|c} \text { MAT-201-F } \\ \text { Or } \\ \text { HUM-201-F } \end{array}$ | Mathematics-III <br> Or <br> Engineering <br> Economics | 3 | 1 | 0 |  | 4 | 100 | 50 | 0 | 150 |
| HUM-203-F | Fundamental of Management | 3 | 1 | 0 |  | 4 | 100 | 50 | 0 | 150 |
| CE-201-F | Structural <br> Analysis-I | 3 | 1 | 0 |  | 4 | 100 | 50 | 0 | 150 |
| CE-203-F | $\begin{gathered} \hline \text { Building } \\ \text { Construction } \\ \text { Materials } \\ \hline \end{gathered}$ | 3 | 1 | 0 |  | 4 | 100 | 50 | 0 | 150 |
| CE-205-F | Fluid Mechanics-I | 3 | 1 | 0 |  | 4 | 100 | 50 | 0 | 150 |
| CE-207-F | Surveying-I | 3 | 1 | 0 |  | 4 | 100 | 50 | 0 | 150 |
| CE-209-F | Building Drawings | 1 | 0 | 3 |  | 4 | 0 | 25 | 25 | 50 |
| CE-211-F | Structural Analysis-I Lab | 0 | 0 | 2 |  | 2 | 0 | 25 | 25 | 50 |
| CE-213-F | Fluid Lab-I Lab | 0 | 0 | 2 |  | 2 | 0 | 25 | 25 | 50 |
| CE-215-F | Surveying-I Lab | 0 | 0 | 2 |  | 2 | 0 | 50 | 50 | 100 |
|  | Total | 19 | 7 | 9 |  | 35 | 600 | 425 | 125 | 1150 |



MAHARSHI DAYANAND UNIVERSITY, ROHTAK SCHEME OF STUDIES \& EXAMINATIONS B.Tech 2nd YEAR CIVIL ENGINEERING, $4^{\text {th }}$ SEMESTER
Proposed 'F' Scheme effective w.e.f 2010

| Subject Code | Subject <br> Name | L | T | P | Total | Theory <br> Marks | Class <br> Marks | Practica <br> IMarks | Total <br> Marks |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| MAT-201-F <br> Or 201-F | Maths III <br> Or <br> Engg. <br> Economics | 3 | 1 | 0 | 4 | 100 | 50 | - | 150 |
| CE-202-F | Structural <br> Analysis-II | 3 | 1 | 0 | 4 | 100 | 50 | 0 | 150 |
| CE-204-F | Fluid <br> Mechanics- <br> II | 3 | 1 | 0 | 4 | 100 | 50 | 0 | 150 |
| CE-206-F | Design of <br> Concrete <br> Structures-I | 3 | 1 | 0 | 4 | 100 | 50 | 0 | 150 |
| CE-208-F | Surveying-II | 3 | 1 | 0 | 4 | 100 | 50 | 0 | 150 |
| CE-210-F | Construction <br> and concrete <br> technology | 3 | 1 | 0 | 4 | 100 | 50 | 0 | 150 |
| CE-214-F | Structural <br> Analysis-II <br> Lab | 0 | 0 | 2 | 2 | 0 | 25 | 25 | 50 |
| CE-216-F | Fluid <br> mechanics <br> Lab | 0 | 0 | 2 | 2 | 0 | 25 | 25 | 50 |
| CE-218-F | Surveying <br> Lab | 0 | 0 | 2 | 2 | 0 | 25 | 25 | 50 |
| GP-202-F | Concrete <br> Lab | 0 | 0 | 2 | 2 | 0 | 25 | 25 | 50 |
| General <br> Proficiency | - | - | 2 | 2 | 50 | - | - | 50 |  |
| Total | 18 | 6 | 10 | 34 | 650 | 400 | 100 | 1150 |  |

## Note:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of Calculator and other materials will not be permitted in the examination.
2. Each student has feundergo practical training of 6 weeks during summer vacation and its evaluation shal pei carried put in the V semester.


# MAHARSHI DAYANAND UNIVERSITY, ROHTAK <br> SCHEME OF STUDIES \& EXAMINATIONS B.Tech. $3^{\text {rd }}$ YEAR CIVIL ENGINEERING, SEMESTER- V <br> Proposed " $F$ " Scheme effective from 2011-12 

| Subject <br> Code | Subject Name | $\mathbf{L}$ | $\mathbf{T}$ | $\mathbf{P}$ | Total | Sessional <br> Marks | Theory <br> Marks | Sem <br> Practical <br> Marks | Total Marks |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| CE-301-F | Design of Steel <br> Structure- I | 3 | 1 | - | 4 | 50 | 100 | 0 | 150 |
| CE-303-F | Transportation Engg--I | 3 | 1 | 0 | 4 | 50 | 100 | 0 | 150 |
| CE-305-F | Water Supply- <br> Treatment | 3 | 1 | 0 | 4 | 50 | 100 | 0 | 150 |
| CE-307-F | Soil Mechanics | 3 | 1 | 0 | 4 | 50 | 100 | 0 | 150 |
| CE-309-F | Numerical Methods And <br> Computing Techniques | 3 | 1 | 0 | 4 | 50 | 100 | 0 | 150 |
| CE-311-F | Hydrology | 3 | 1 | 0 | 4 | 50 | 100 | 0 | 150 |
| CE-313 F | DSS-Drg.Lab | 2 | 0 | 3 | 5 | 25 |  | 25 | 50 |
| CE-315-F | Soil Mechanics Lab | 0 | 0 | 2 | 2 | 25 | 0 | 25 | 50 |
| CE-317 F | Transportation Lab-I | 0 | 0 | 2 | 2 | 25 | 0 | 25 | 50 |
| CE-319-F | Survey Camp | 0 | 0 | 0 | 0 | 50 | 0 | 0 | 50 |
| CE-321-F | Auto Cad Lab | 0 | 0 | 2 | 2 | 25 | 0 | 25 | 50 |
|  | Total | 20 | 6 | 9 | 35 | 450 | 600 | 100 | 1150 |

## Note:

1) Students will be allowed to use non-programmable scientific calculator. However, sharing of calculator will not be permitted in the examination.
2) Assessment of Practical Training-I, undergone at the end of IV semester, will be based on seminar, viva-voce, report and certificate of practical training obtained by the student from the industry. According to performance letter grades A, B, C, F are to be awarded. A student who is awarded ' F ' grade is required to repeat Practical Training.


## MAHARSHI DAYANAND UNIVERSITY, ROHTAK

SCHEME OF STUDIES \& EXAMINATIONS B.Tech. $3^{\text {rd }}$ YEAR CIVIL ENGINEERING, SEMESTER- VI Proposed "F" Scheme effective from 2011-12

| Subject <br> Code | Subject Name | $\mathbf{L}$ | $\mathbf{T}$ | $\mathbf{P}$ | Total | Class <br> Marks | Sem <br> Theory <br> Marks | Sem <br> Practical <br> Marks | Total <br> Marks |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| CE-302-F | Design of Concrete Structures- <br> II | 4 | 2 | 0 | 6 | 50 | 100 | 0 | 150 |
| CE-304-F | Irrigation Engineering-I | 3 | 1 | 0 | 4 | 50 | 100 | 0 | 150 |
| CE-306-F | Geotechnology | 3 | 1 | 0 | 4 | 50 | 100 | 0 | 150 |
| CE-308-F | Sewerage And Sewage <br> Treatment | 3 | 1 | 0 | 4 | 50 | 100 | 0 | 150 |
| CE-310-F | Transportation Engg.-II | 3 | 1 | 0 | 4 | 50 | 100 | 0 | 150 |
| CE-312-F | Engineering Geology | 3 | 1 | 0 | 4 | 50 | 100 | 0 | 150 |
| CE-314-F | Geotechnology Lab | 0 | 0 | 2 | 2 | 25 | 0 | 25 | 50 |
| CE-316-F | Transportation Engg.-II Lab | 0 | 0 | 2 | 2 | 25 | 0 | 25 | 50 |
| CE-318-F | Engineering Geology Lab | 0 | 0 | 2 | 2 | 25 | 0 | 25 | 50 |
| CE-320-F | Environmental Engg. Lab | 0 | 0 | 2 | 2 | 25 | 0 | 25 | 50 |
| GPCE-318-F | General Proficiency | 0 | 0 | 1 | 1 | 0 | 0 | 50 | 50 |
|  | Total | 19 | 7 | 9 | 35 | 400 | 600 | 150 | 1150 |

## NOTE:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of Calculator will not be permitted in the examination.
2. Each student has to undergo practical training of 6 weeks during summer vacation and its evaluation shall be carried out in the VII semester.


# MAHARSHI DAYANAND UNIVERSITY, ROHTAK <br> SCHEME OF STUDIES \& EXAMINATIONS 

B. Tech. $4^{\text {th }}$ YEAR CIVIL ENGINEERING, SEMESTER-VII
(Scheme-F)

## EFFECTIVE FROM THE SESSION 2012-13

| Subject Code | Subject Name | Teaching schedule |  |  |  | Marks <br> For class <br> work | Marks for Examination |  |  Dotal <br> Marks  | Duration of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | $\mathbf{P}$ | Total |  | Theory | Practical |  |  |
| CE-401-F | Design of Steel Structure-II | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| CE-403-F | Disaster Mitigation and Management | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 4 |
| CE-405-F | Estimating and Costing | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| CE-407-F | Irrigation Engg-II | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| - -------- | Elective | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| CE-451-F | Hydro Power Engg. | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| CE-453-F | Ground Water Engg | 3 | 1 | 0 | 4 | 50 | 100 | 0 | 150 | 3 |
| CE-453-F |  | 0 | 0 | 2 | 2 | 50 | 0 | 50 | 100 | 3 |
| CE-455-F | Irrigation Drawing Lab | 0 | 0 | 2 |  |  | - | - | - |  |
| CE-457-F | Practical Training - II | - | - | 2 | - | - |  |  |  |  |
| $\begin{aligned} & \text { GFCE- } \\ & 459-F \end{aligned}$ | General Fitness for the Profession | - | - | - |  | - | ${ }^{-}$ | 50 | 50 |  |
|  | Total | 21 | 7 | 4 | 32 | 400 | 700 | 100 | 1200 |  |

## Note:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of calculator will not be permitted in the examination.
2. Student will be permitted to opt for any one elective run by the department. However, the departments will offer only those electives for which they have expertise. The choice of the students for any elective shall not be a binding for the department to offer, if the department does not have expertise.
3. Assessment of Practical Training-II, carried out at the end of VI semester, will be based on seminar, viva-voce and project report of the student. According to performance letter grades A, B, C, F are to be awarded. A student who is awarded ' $F$ ' grade is required to repeat Practical Training.

## ELECTIVES

1) CE -409-F - Energy planning and management
2) CE-411-F - Environmental pollution and control
3) $\mathrm{CE}-417-\mathrm{F} \quad$ - Finite Element Methods
4) CE-421-F - Environmental impact and management
5) CE-423-F - Elements of Earth Quake Engg.
6) CE-433-F - Hydraulic System Modeling


# MAHARSHI DAYANAND UNIVERSITY, ROHTAK <br> SCHEME OF STUDIES \& EXAMINATIONS 

## B.Tech. $4^{\text {th }}$ YEAR CIVIL ENGINEERING, SEMESTER- VIII <br> (Scheme-F)

## EFFECTIVE FROM THE SESSION 2012-13

|  |  |  | Subject | Internal <br> Marks | External <br> Marks |
| :--- | :--- | :---: | :---: | :---: | :---: |
| 1. | CE-402-F | Industrial Training/Institutional Project Work | 150 | 150 | 300 |

## Note:

The students are required to undergo Industrial Training in State/Central PWD, Railways and other Originations or Institutional Project Work of duration not less than 4 months in a reputed organization or concerned institute. The students who wish to undergo industrial training, the industry chosen for undergoing the training should be at least a private limited company. The students shall submit and present the mid-term progress report at the Institute. The presentation will be attended by a committee. Alternately, the teacher may visit the Industry to get the feedback of the students.

The final viva-voce of the Industrial Training or Institutional Project Work will be conducted by an external examiner and one internal examiner appointed by the Institute. External examiner will be from the panel of examiners submitted by the concerned institute approved by the Board of Studies in Engg. \& Technology. Assessment of Industrial Training or Institutional Project Work will be based on seminar, viva-voce, report and certificate of Industrial Training or Institutional Project Work obtained by the student from the industry or Institute.

The internal marks distributions for the students who have undergone Industrial Training consist of $\mathbf{5 0}$ marks from the industry concern and $\mathbf{1 0 0}$ marks by the committee members consisting of faculty members of concerned department of the parent institute.

The teachers engaged for Institutional Project work shall have a workload of 2 hours per group (at least 4 students) per week.


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## M.D UNIVERSITY <br> SCHEME OF STUDIES AND EXAMINATION B.TECH. II YEAR (COMPUTER SCIENCE \& ENGINEERING) <br> SEMESTER III

' $F$ ' Scheme effective from 2010-11

| $\begin{aligned} & \text { Sl. } \\ & \text { No } \end{aligned}$ | Course No. | Subject | Teaching Schedule |  |  |  | Examination Schedule <br> (Marks) |  |  |  | Duration of Exam (Hours) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P | Total | Mark s of Class work s | Theory | Practi cal | Total |  |
| 1 | $\begin{aligned} & \text { MATH-201-F } \\ & \text { OR } \\ & \text { HUM-201-F } \end{aligned}$ | Mathematics III <br> Common to <br> (CSE,IT,ME,ECE,BM <br> E,EE,EEE,E\&I,I\&C) OR ENGG. ECONOMICS | 3 | 2 | - | 5 | 50 | 100 | - | 150 | 3 |
| 1 | CSE-201 F | Data Structures Using C (CSE,ECE,IT,EI) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 3 | CSE-203 F | Discrete Structures (CSE,IT) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 4 | EE-217-F | Digital \& Analog Communication (CSE,IT) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 5 | EE-204-F | Digital Electronics (Common with $4^{\text {th }}$ Sem. - EE,EL,EI \& IC) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 6 | HUM-203 F | Fundamental of Management (Common for all branches) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 7 | IT-201-F | PC Lab (CSE,IT) | - | - | 3 | 3 | 50 | - | 50 | 100 | 3 |
| 8 |  | Data Structures Using | - | - | 2 | 2 | 25 | - | 25 | 50 | 3. |
|  | CSE-205-F | C Lab (CSE,ECE,IT,EI) |  |  |  |  |  |  |  |  |  |
| 9 |  | Digital Electronics Lab (CSE,IT \& Common with $4^{\text {th }}$ Sem. EE,EL,EI \& IC) | - | - | 3 | 3 | 50 |  | 50 | 100 | 3 |
|  | EE-224-F | EE,EL,EI \& IC) | 18 | 7 | 8 | 33 | 425 | 600 | 125 | 1150 |  |

NOTE: 1. Students will be allowed to use non-programmable scientific calculator. However, sharing of Calculator will not be permitted in the examination.
M.D UNIVERSITY

SCHEME OF STUDIES AND EXAMINATION
B.TECH. II YEAR (COMPUTER SCIENCE
B.TECH. II YEAR (COMPUTER SCIENCE \& ENGINEERING)

SEMESTER - IV
' $F$ ' Scheme effective from 2010-11


Note:

1) Students will be allowed to use non-programmable scientific calculator. However, sharing of
2) Calculator will not be permitted in the examination.
3) Each student has to undergo practical training of 6 weeks during summer vacation and its evaluation shall be carried out in the $V$ semester.

## M. D. UNIVERSITY, ROHTAK

## Scheme of studies \& Examination

## Bachelor of Technology (Computer Science \& Engineering)

Semester - V
' $F$ ' Scheme Effective from 2010-11

| S. No. | Course No. | Subject | Teaching Schedule |  |  |  | $\begin{aligned} & \text { Examination Schedule } \\ & \text { (Marks) } \end{aligned}$ |  |  |  | Duration of Exam (Hours) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P | Total | Marks of Class work | Theory | Practic al | Total |  |
| 1 | CSE-301 F | Principles of Operating System (CSE,IT) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 2 | EE-309-F | Microprocessors and Interfacing (EL,CSE,IT,EI, IC, EEE, AEI) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 3 | CSE-303-F | Computer Graphics (CSE,IT) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 4 | CSE-305-F | Theory of Automata Computation | 3 | 1 |  | 4 | 50 | 100 | - | 150 | 3 |
| 5 | CSE 307-F | Web Development (Common with IT - VI Sem) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 6 | IT-204-F | Multimedia Technologies (Common with IT- IV- Sem) | 3 | - | - | 3 | 50 | 100 | - | 150 | 3 |
| 7 | CSE-309-F | Computer Graphics Lab. (CSE,IT) | - | - | 3 | 3 | 25 | - | 25 | 50 | 3 |
| 8 | CSE-311-F | Web Development \& Core JAVA Lab. (Common with 6 Sem.-IT) | - | - | 2 | 2 | 25 |  | 25 | 50 | 3 |
| 9 | IT-208-F | Multimedia Tech. Lab (Common with IT-IVSem) | - | - | 2 | 2 | 25 | - | 25 | 50 | 3. |
| 10 | EE-329-F | Microprocessors and Interfacing Lab. (EL,CSE,IT,EI, IC, EEE, AED. | - | - | 2 | 2 | 25 | - | 25 | 50 | 37 |
| 11. | CSE-313-F | O.S. Lab. (CSE, IT) | - | - | 2 | 2 | 25 | - | 25 | 50 | - |
| 12 | CSE-315-F | Practical Training-I | - | - | 2 | 2 | - | - | - | - | $-1$ |
|  |  | TOTAL | 18 | 5 | 13 | 36 | 425 | 600 | 125 | 1150 |  |

## Note:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of calculator will not be permitted in the examination.
2. Assessment of Practical Training-I, undergone at the end of IV semester, will be based on seminar, viva-voce, report and certificate of practical training obtained by the student from the industry. According to performance letter grades A, B, C, F are to be awarded. A student who is awarded „F" grade is required to repeat Pradtical Training.


## M.D. UNIVERSITY, ROHTAK

## Scheme of studies \& Examination Bachelor of Technology (Computer Science \& Engineering) <br> Semester - VI <br> ' $F$ ' Scheme Effective from 2010-11

| S. No. | Course No. | Subject | Teaching Schedule |  |  |  | Examination Schedule (Marks) |  |  |  | Duration of Exam (Hours) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P | Marl of Total wor | ss | Theory | Practi cal | Total |  |
| 1 | CSE-302 F | Principles of Software Engineering (CSE,IT) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 2 | CSE-304 F | Intelligent Systems (CSE,IT) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 3 | IT-305 F | $\begin{aligned} & \text { Computer Networks (CSE, } \\ & \text { EL \& Common with 5 Sem. } \\ & \text {-IT, AEI) } \end{aligned}$ | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 4 | IT-303 F | Systems Programming \& System Administration (Common with 5 Sem - IT) | 3 | 1 |  | 4 | 50 | 100 | - | 150 | 3 |
| 5 | CSE-306 F | Analysis \& Design of Algorithms | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 6 | EE-310-F | Digital System Design (EL,EE,CSE,EI, IC, AEI) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 7 | CSE-308 F | $\begin{aligned} & \text { Intelligent Systems Lab. } \\ & \text { (CSE,IT) } \end{aligned}$ | - | - | 3 | 3 | 25 | - | 25 | 50 | 3 |
| 8 | EE-330-F | Digial System Design Lab. (EL,EI, IC,CSE, AEI) | - | - | 3 | 3 | 25 | - | 25 | 50 | 3 |
|  |  | Computer Network lab | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| 9 | $\frac{\text { CSE-310-F }}{\text { CSE-312-F }}$ | Visual Programming Lab. | $\cdots$ | $\square$ | 2 | 2 | $\frac{25}{25}$ | - | 25 | 50 | 3 |
|  | CSE-312-F |  | $\cdots$ | - |  | $\cdots$ | 50 | - | - | 50 | 3 |
| 9 | GP-302-F | General Proficiency |  |  |  |  |  |  |  |  | - |
|  |  | TOTAL | 18 | 6 | 10 | 34 | 450 | 600 | 100 | 1150 |  |

Note:

1. Each student has to undergone practical training of 6 weeks during summer vacation and its evaluation shall be carried out in the VII semester.
2. Students will be allowed to use non-programmable scientific calculator. However, sharing of calculator will not be permitted in the examination.

## M.D.UNIVERSITY, ROHTAK Scheme of Studies / Examination

Bachelor of Technology (Computer Science \& Engineering) SEMESTER VII
'F' Scheme Effective from 2012-13

| Sl. No. | Course No. | Subject | Teaching Schedule |  |  |  | Examination Schedule (Marks) |  |  |  | Duration of Exam <br> (Hours) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P | Total | Marks of Class work | Theory | Practical | Total |  |
| 1 | CSE-401 F | Advanced Computer Architecture | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 2 | CSE-403 F | Software Project Management (CSE.IT) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 3 | CSE-405 F | Compiler Design | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 4 | CSE-407 F | Neural Networks | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 5 | CSE-409 F | Advanced Java (CSE, IT) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 6 |  | Elective | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 7 | CSE-411 F | Compiler Design Lab | - | - | 2 | 2 | 25 | - | 50 | 75 | 3 |
| 8 | CSE-413 F | Neural Networks Using MATLAB | - | - | 2 | 2 | 25 | - | 50 | 75 | 3 |
| 9 | CSE-415 F | Advanced JAVA <br> Lab (CSE, IT) | - | - | 3 | 3 | 50 | -- | 100 | 150 | 3 |
| 10 | CSE-417 F | PRATICAL TRAINING-II | - | - | $-$ | - |  | - | - |  |  |
|  |  | TOTAL | 18 | 6 | 7 | 31 | 400 | 600 | 200 | 1200 |  |

## List of Electives

| 1. | CSE-423 F | Distributed Operating System |
| :--- | :--- | :--- |
| 2. | IT-465F | Network Security \& Management |
| 3. | CSE-421 F | Real Time Systems |
| 4. | CSE-435 F | Advanced Database Management Systems |
| 5. | IT-467 F | Computer Software Testing |
| 6. | TT-473 F | High Speed Networks |

## Note:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of calculator will not be permitted in the examination.
2. Student will be permitted to opt for any one elective run by the department. However, the departments will offer only those electives for which they have expertise. The choice of the students for any elective shall not be a binding for the department to offer, if the department does not have expertise.
3. Assessment of Practical Training-II, carried out at the end of VI semester, will be based on seminar, viva- voce and project report of the student. According to performance letter grades A, B, C, F are to be awarded. A student who is awarded ' $F$ ' grade is required to repeat Practical Training.


## MAHARSHI DAYANAND UNIVERSITY, ROHTAK <br> SCHEME OF STUDIES \& EXAMINATIONS <br> B.Tech. $4^{\text {th }}$ YEAR COMPUTER SC \& ENGINEERING, SEMESTER-VIII

(Scheme-F)

## EFFECTIVE FROM THE SESSION 2012-13

|  |  |  | Internal <br> Marks | External <br> Marks | Total Marks |
| :--- | :---: | :---: | :---: | :---: | :---: |
| 1. | CSE-402-F | Industrial Training/Institutional Project Work | 150 | 150 | 300 |

## Note:

The students are required to undergo Industrial Training or Institutional Project Work of duration not less than 4 months in a reputed organization or concerned institute. The students who wish to undergo industrial training, the industry chosen for undergoing the training should be at least a private limited company. The students shall submit and present the mid-term progress report at the Institute. The presentation will be attended by a committee. Alternately, the teacher may visit the Industry to get the feedback of the students.

The final viva-voce of the Industrial Training or Institutional Project Work will be conducted by an external examiner and one internal examiner appointed by the Institute. External examiner will be from the panel of examiners submitted by the concerned institute approved by the Board of Studies in Engg. \& Technology. Assessment of Industrial Training or Institutional Project Work will be based on seminar, viva-voce, report and certificate of Industrial Training or Institutional Project Work obtained by the student from the industry or Institute.

The internal marks distributions for the students who have undergone Industrial Training consist of 50 marks from the industry concern and 100 marks by the committee members consisting of faculty members of concerned department of the parent institute.

The teachers engaged for Institutional Project work shall have a workload of 2 hours per group (at least 4 students) per week.


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M.D UNIVERSITY

SCHEME OF STUDIES AND EXAMINATION
B.Tech II YEAR (ELECTRICAL ENGINE B.Tech II YEAR (ELECTRICAL ENGINEERING)
' F ' SMESTER III

| Course No. | Course Title |  |  |  |  | 0-11 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Teaching Schedule |  |  |  | Marks of Class Work | Examination |  | Total Mark s | Duration of Exam |
| HUM-201-F |  |  | T | P | $\begin{aligned} & \text { Tot } \\ & \text { al } \\ & \hline \end{aligned}$ |  | Theory | Practica 1 |  |  |
| OR <br> MATH-201- <br> F | $\stackrel{\text { OR }}{\text { MATHEMATICS - III }}$ | $\begin{aligned} & 3 \\ & 3 \end{aligned}$ | $\begin{aligned} & 1 \\ & 2 \end{aligned}$ | - | $4$ <br> 5 | 50 | 100 | 1 | s 150 , | 3 |
| HUM-203-F | FUNDAMENTALS MANAGEMENT (COMMON FOR ALL BRANCHES) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-201-F | ELECTRONIC DEVICES \& CIRCUITS (ECE,EI,EE,EEE,IC) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-203-F | NETWORK THEORY <br> (ECE,EI,EE,EEE,IC) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-207-F | ELECTRICAL MACHINES-I <br> (EE, EEE) | 3 | 1 | - | 4 | , 50 | 100 | - | 150 | 3 |
| EE-209-F | ELECTRICAL MEASUREMENTS \& MEASURING INSTRUMENTS (EE, EEE) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-223-F | NETWORK THEORY LAB. (ECE,EI,EE,EEE,IC) | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| EE-211-F | ELECTRICAL <br> MEASUREMENTS <br> MEASURING INSTRUMENTS <br> LAB. (EE, EEE) | - |  | 2 | 2 | 25 | - | 25 | 50 | 3 |
| EE-213-F | ELECTRICAL WORKSHOP (IC,EE, EEE) | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| EE-215-F | ELECTRICAL MACHINES-I LAB. (EE, EEE) | - | - | 3 | 3 | 50 | - | 50 | 100 | 3 |
|  | TOTAL | 18 | $\begin{gathered} 6 \\ \mathbf{O r} \\ 7 \end{gathered}$ | 9 | $\begin{aligned} & 33 \\ & \mathrm{Or} \\ & 34 \end{aligned}$ | 425 | 600 | 125 | 1150 |  |

NOTE:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of Calculator and other materials will not be permitted in the examination.

## M.D UNIVERSITY <br> SCHEME OF STUDIES AND EXAMINATION <br> B.Tech II YEAR (ELECTRICAL ENGINEERING) <br> SEMESTER - IV

' F ' Scheme effective from 2010-11

| Course No. | Course Title | Teaching Schedule |  |  |  | Marks of Class Work | Examination |  | Total Marks | Duration of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | $\begin{array}{\|l} \hline \text { Tota } \\ \hline 1 \\ \hline \end{array}$ |  | Theory | Practical |  |  |
| $\begin{aligned} & \text { HUM- } \\ & 201-\mathrm{F} \\ & \text { OR } \\ & \text { MATH- } \\ & \text { 201-F } \end{aligned}$ | $\begin{gathered} \text { ENGG. ECONOMICS } \\ \text { OR } \\ \text { MATHEMATICS - III } \end{gathered}$ | $3$ $3$ | 1 <br> 2 |  | $4$ $5$ | 50 | 100 | - | 150 | 3 |
| EE-212-F | TRANSMISSION AND DISTRIBUTION (EE,EEE) | 3 | - | - | 3 | 50 | 100 | - | 150 | 3 |
| EE-202-F | ANALOG ELECTRONICS (ECE,EI,EE,EEE,IC) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-204-F | DIGITAL ELECTRONICS (ECE,EI,EE,EEE,IC) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-220-F | PRINCIPLES COMMUNICATION SYSTEMS (EE, EEE) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-208-F | ELECTRO MAGNETIC THEORY (ECE,EI,EE,EEE,IC) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-222-E | ANALOG ELECTRONICS LAB (ECE,EI,EE,EEE,IC) | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| EE-224-F | DIGITAL ELECTRONICS <br> LAB <br> (ECE,EI,EE,EEE,IC) | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| EE-230-F | PRINCIPLES OF COMMUNICATION SYSTEMS LAB (EE, EEE) | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| $\begin{aligned} & \text { MATH- } \\ & \text { 204-F } \end{aligned}$ | NUMERICAL METHODS LAB (ECE,EI,EE,EEE,IC) | 1 | 1 | 2 | 4 | 25 | - | 25 | 50 | 3 |
| GP-202-F | GENERAL PROFICIENCY (COMMON FOR ALL BRANCHES) | - | - | 2 | 2 | 50 | - | - | 50 | 3 |
|  | TOTAL | 19 | $\begin{array}{\|l} \hline 6 \\ \text { or } \\ 7 \\ \hline \end{array}$ | 10 | $\begin{aligned} & 35 \\ & \text { Or } \\ & 36 \end{aligned}$ | 450 | 600 | 100 | 1150 |  |

Note:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of Calculator and other materials will not be permitted in the examination.
2. Each student has to undergo practical training of 6 weeks during summer vacation and its evaluation shall be carried out in the $\mathbf{V}$ semester.


## M.D. UNIVERSITY, ROHTAK

## Scheme of studies \& Examination

Bachelor of Technology (Electrical Engg.) SEMESTER V
' $F$ ' Scheme Effective from 2011-2012

\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|}
\hline \multirow[t]{2}{*}{Course No.} \& \multirow[t]{2}{*}{Course Title} \& \multicolumn{4}{|l|}{Teaching Schedule} \& \multirow[t]{2}{*}{Marks of Class Work} \& \multicolumn{2}{|l|}{Examination} \& \multirow[t]{2}{*}{Total Marks} \& \multirow[t]{2}{*}{Duration of Exam} <br>
\hline \& \& L \& T \& P \& Total \& \& Theory \& Practical \& \& <br>
\hline EE-311-F \& Electrical Machines-II (EE, EEE) \& 3 \& 1 \& - \& 4 \& 50 \& 100 \& - \& 150 \& 3 <br>
\hline EE-303-F \& Electronic Measurement And Instrumentation (EE,EEE,ECE,IC) \& 3 \& 1 \& - \& 4 \& 50 \& 100 \& - \& 150 \& 3
3 <br>
\hline EE-305-F \& Analog Electronics Circuits (EE,EEE,ECE,IC) \& 3 \& 1 \& - \& 4 \& 50 \& 100 \& - \& 150 \& 3 <br>
\hline EE-315-F \& Power Systems-I (EE, EEE) \& 3 \& 1 \& - \& 4 \& 50 \& 100 \& - \& 150 \& 3 <br>
\hline EE-317-F \& Power Electronics (EE, EEE, Common with VI sem IC) \& 3 \& 1 \& - \& 4 \& 50 \& 100 \& - \& 150 \& 3 <br>
\hline EE-309-F \& Microprocessors And Interfacing (EE,EEE,ECE) \& 3 \& 1 \& - \& 4 \& 50 \& 100 \& - \& 150 \& 3 <br>
\hline EE-323-F \& Electronic Measurement \& Instrumentation Lab (EE,EEE,ECE,IC) \& - \& - \& 2 \& 2 \& 25 \& - \& 25 \& 50 \& 3

3 <br>
\hline EE-321-F \& Power Electronics Lab. (EE, EEE Common with VI sem, IC) \& - \& - \& 2 \& 2 \& 25 \& - \& 25 \& 50 \& 3 <br>
\hline EE-319-F \& Microprocessor \& Interfacing Lab. (EE,EEE) \& - \& - \& 2 \& 2 \& 25 \& - \& 25 \& 50 \& 3 <br>
\hline EE-327-F \& Electrical Machines-II LAB. (EE, EEE) \& - \& - \& 3 \& 3 \& 25 \& - \& 25 \& 50 \& 3 <br>
\hline EE-333-F \& Practical Training-I \& - \& - \& 2 \& 2 \& \& - \& - \& \& - <br>
\hline \& TOTAL \& 18 \& 6 \& 11 \& 35 \& 400 \& 600 \& 100 \& 1100 \& <br>
\hline
\end{tabular}

Note:

1) Students will be allowed to use non-programmable scientific calculator. However, sharing of calculator will not be permitted in the examination.
2) Assessment of Practical Training-I, undergone at the end of IV semester, will be based on seminar, viva-voce, report and certificate of practical training obtained by the student from the industry. According to performance letter grades A, B, C, F are to be awarded. A student who is awarded ' $F$ ' grade is required to repeat Practical Training.


## M.D UNIVERSITY,ROHTAK

SCHEME OF STUDIES AND EXAMINATION
B.Tech. III YEAR (ELECTRICAL ENGINEERING)

SEMESTER-VI
Modified ' F ' Scheme effective from 2011-12

| $\begin{aligned} & \hline \text { Course } \\ & \text { No. } \end{aligned}$ | Course Title | Teaching Schedule |  |  |  | Marks of <br> Class <br> Work | Examination |  | Total Marks | Duration of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Total |  | Theory | Practical |  |  |
| EE-312-F | $\begin{array}{\|l\|} \hline \begin{array}{l} \text { Power Systems -II } \\ \text { (EE, EEE) } \end{array} \\ \hline \end{array}$ | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-314-F | Computer Added Electric Machines Design (EE, EEE) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-308-F | Micro-Controller And Embeded System(EE,ECE) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-304-F | Control systems engg. (EE, EEE,ECE) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-318-F | $\begin{aligned} & \text { Electric Power Generation (EE, } \\ & \text { EEE) } \end{aligned}$ | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-310-F | $\begin{aligned} & \text { Digital System Design } \\ & \text { (IC,EE,ECE,) } \end{aligned}$ | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-324-F | Control system engg. Lab (EE, EEE, ECE) | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| EE-320-F | Micro-Controller And Embeded System LAB (EE,ECE) | - | - | 2 | 2 | 25 | - | 25 | 50 |  |
| EE-326-F | Computer Added Electric Machines Design Lab (EE, EEE) | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| EE-328-F | Power Systems Lab (EE, EEE) | - | - | 2 | 2 | 25 | - | 25 | 50 |  |
| $\begin{aligned} & \text { GPEE- } \\ & 302-\mathrm{F} \end{aligned}$ | GENERAL PROFICIENCY | - | - | - | - | 50 | - | ${ }^{-}$ | 50 | 3 |
|  | TOTAL | 18 | 6 | 8 | 32 | 450 | 600 | 100 | 1150 |  |

Note:

1. Each student has to undergo practical training of 6 weeks during summer vacation and its evaluation shall be carried out in the VII semester.
2. Students will be allowed to use non-programmable scientific calculator. However, sharing of calculator will not be permitted in the examination.

M.D. UNIVERSITY, ROHTAK

Scheme of studies \& Examination B. Tech. (Electrical Engg.)

SEMESTER VII
F'Scheme
EFFECTIVE FROM THE SESSION 2012-13

| Course No. | Course Title | Teaching Schedule |  |  |  | Marks of Class Work | Examination |  | Total Marks | Duration of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Total |  | Theory | Practical |  |  |
| EE-403-F | Electric Drives And Control | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ECE-409-F | Digital Signal Processing | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-405-F | Power System Operation And Control | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
|  | *Open Elective | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
|  | *Dept Elective | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-409-F | Computer Applications To Power System Analysis | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-413-F | Electric Drives And Control Lab. |  |  | 3 | 3 | 50 | - | 50 | 100 | 3 |
| ECE-429-F | Digital Signal Processing Lab | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| EE-419-F | Computer Applications To Power System Analysis Lab. | - | - | 3 | 3 | 50 | - | 50 | 100 | 3 |
| GFEE-401-F | General Fitness For The Profession | - | - | - | - |  | - | 50 | 50 | 3 |
| EE-401-F | Practical Training - II | - | - | - | 32 | 425 | - | 175 | 1200 | - |
|  | TOTAL | 18 | 6 | 8 | 32 | 425 | 600 | 175 |  |  |

## List of Open Electives

| 1. | HUM-451-F | Language Skills for Engineers |
| :---: | :--- | :--- |
| 2. | HUM-453-F | Human Resource Management |
| 3. | HUM-459-F | Renewable Energy Resources and Technology |
| 4. | ME-451-F | Mechatronics Systems |
| 5. | IC-455-F | Intelligent Instrumentation for Engineers |
| 6. | OR-401-F | Operations Research |

## List of Dept Electives

1. $\mathrm{EHV} \mathrm{AC/DC}$
(EE-432-F)
2. Fuzzy Logic Control
3. Fuzzy Logic Control
(IC-404-F)
(EE-438-F)
4. High Voltage Engineering
5. Electrical Power Quality
(EE-442-F)
(EE-444-F)
6. Power Manastrame
(EE-450-F)

## Note:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of calculator will not be permitted in the examination.
2. *Student will be permitted to opt for any one elective run by the other departments. However, the departments will offer only those electives for which they have expertise. The choice of the students for any elective shall not be a binding for the department to offer, if the department does not have expertise.
3. A team consisting of Principal/Director, HOD of concerned department and external examiner appointed by University shall carry out the evaluation of the student for his/her General Fitness for the Profession.
4. Assessment of Practical Training-II, carried out at the end of VI semester, will be based on seminar, viva-voce and project report of the student from the industry. According to performance, letter Grades $\mathbf{A}, \mathbf{B}, \mathbf{C}, \mathbf{F}$ are to be awarded. A student who is awarded ' F ' grade is required to repeat Practical Training.

M.D. UNIVERSITY, ROHTAK

Scheme of studies \& Examination
B. Tech. (Electrical Engg.)

SEMESTER VIII
F'Scheme

## EFFECTIVE FROM THE SESSION 2012-13

| Sr. No | Course No | Subject | Internal <br> Marks | External Marks | Total Marks |
| :--- | :---: | :---: | :---: | :---: | :---: |
| 1. | EE-402-F | Industrial Training/Institutional Project Work | 150 | 150 | 300 |

## Note:

The students are required to undergo Industrial Training or Institutional Project Work of duration not less than 4 months in a reputed organization or concerned institute. The students who wish to undergo industrial training, the industry chosen for undergoing the training should be at least a private limited company. The students shall submit and present the mid-term progress report at the Institute. The presentation will be attended by a committee. Alternately, the teacher may visit the Industry to get the feedback of the students.

The final viva-voce of the Industrial Training or Institutional Project Work will be conducted by an external examiner and one internal examiner appointed by the Institute. External examiner will be from the panel of examiners submitted by the concerned institute approved by the Board of Studies in Engg. \& Technology. Assessment of Industrial Training or Institutional Project Work will be based on seminar, viva-voce, report and certificate of Industrial Training or Institutional Project Work obtained by the student from the industry or Institute.

The internal marks distributions for the students who have undergone Industrial Training consist of $\mathbf{5 0}$ marks from the industry concern and $\mathbf{1 0 0}$ marks by the committee members consisting of faculty members of concerned department of the parent institute.

The teachers engaged for Institutional Project work shall have a workload of $\mathbf{2}$ hours per group (at least 4 students) per week.


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# M.D UNIVERSITY <br> SCHEME OF STUDIES AND EXAMINATION <br> B.Tech II YEAR (ELECTRONICS \& COMMUNICATION ENGINEERING) <br> SEMESTER III 

' $F$ ' Scheme effective from 2010-11

| Sr No | Course Title | Teaching Schedule |  |  |  | Marks <br> of <br> Class <br> Work | Examination |  | Total Marks | Duration of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Total |  | Theory | Practical |  |  |
| HUM-201-F OR <br> MATH-201-F | ENGG. ECONOMICS OR MATHEMATICS - III | $\begin{array}{\|l\|} \hline 3 \\ 3 \\ \hline \end{array}$ | 1 | - | $4$ | 50 | 100 | - | 150 | 3 |
| HUM-203-F | FUNDAMENTALS OF MANAGEMENT (COMMON FOR ALL BRANCHES) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-201-F | ELECTRONICS DEVICES \& CIRCUITS(ECE,EL,EE,EEE,I C) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-203-F | NETWORK THEORY (ECE,EI,EE,EEE,IC) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-205-F | $\begin{aligned} & \text { ELECTROMECHANICAL } \\ & \text { ENERGY } \\ & \text { CONVERSION(ECE,EL,IC) } \end{aligned}$ | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| CSE-201-F | DATA STRUCTURE USING <br> ' C' (ECE,EI,CSE,IT) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-221-F | ELECTRONIC WORKSHOP, PCB DESIGN \& CIRCUIT LAB(ECE,EI) | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| EE-223-F | NETWORK THEORY LAB(ECE,EI,EE,EEE,IC) | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| EE-225-F | ELETRICAL WORKSHOP \& MACHINE LAB (ECE,EI) | - | - | 3 | 3 | 50 | - | 50 | 100 | 3 |
| CSE-205-F | DATA STRUCTURE USING 'C' Lab (ECE,EI,CSE,IT) |  | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
|  | TOTAL | 18 | 7 | 9 | $\begin{aligned} & \hline 33 \\ & \mathrm{Or} \\ & 34 \\ & \hline \end{aligned}$ | 425 | 600 | 125 | 1150 |  |

NOTE:

1. Students will be allowed to use non-programmable scientific calculator. However, Sharing of Calculator and other material will not be permitted in the examination.


SCHEME OF STUDIES AND EXAMINATION
BE. II YEAR (ELECTRONICS \& COMMUNICATION ENGINEERING)
SEMESTER - IV
' F ' Scheme effective from 2010-11

| Course No. | Course Title | Teaching Schedule |  |  |  | Marks <br> of <br> Class <br> Work | Examination |  | Total Marks | Duration of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Tota 1 |  | Theory | Practical |  |  |
| HUM-201-F <br> OR <br> MATH- <br> 201-F | ENGG. ECONOMICS OR MATHEMATICS - III | $\begin{aligned} & 3 \\ & 3 \end{aligned}$ | $\begin{aligned} & 1 \\ & 2 \end{aligned}$ |  | $\begin{aligned} & 4 \\ & 5 \end{aligned}$ | 50 | 100 | - | 150 | 3 |
| EE-228-F | SIGNALS SYSTEMS(ECE,EI) \& | 3 | - | - | 3 | 50 | 100 | - | 150 | 3 |
| EE-202-F | ANALOG ELECTRONICS (ECE,EL,EE,EEE,IC) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-204-F | DIGITAL ELECTRONICS (ECE,EI,EE,EEE,IC) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-206-F | $\begin{aligned} & \text { COMMUNICATION } \\ & \text { SYSTEMS(ECE) } \\ & \hline \end{aligned}$ | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-208-F | ELECTRO MAGNETIC THEORY (ECE,EI,EE,EEE,IC) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-222-F | ANALOG ELECTRONICS LAB(ECE,EL,EE,EEE,IC) | - | - | 2 | 2 | 25 |  | 25 | 50 | 3 |
| EE-224-F | DIGITAL ELECTRONICS <br> LAB(ECE,EI,EE,EEE,IC) | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| EE-226-F | COMMUNICATION SYSTEMS LAB (ECE) | - | - | 2 | 2 | 25 | - | 25 | 50 | $3 \quad 4$ |
| $\begin{aligned} & \text { MATH-204 } \\ & -\mathrm{F} \end{aligned}$ | NUMERICAL METHODS OF COMPUTATIONAL <br> PROGRAMMING LAB(ECE,EI,EE,EEE,IC) | 1 | 1 | 2 | 4 | 25 | - | 25 | 50 | 3 |
| GP-202-F | GENERAL PROFICIENCY <br> (COMMON FOR ALL <br> BRANCHES) | ${ }^{-}$ | - | 2 | 2 | 50 | O00 | 100 | 1150 | 3 |
|  | TOTAL | 19 | $\begin{aligned} & \hline 6 \\ & \text { Or } \\ & 7 \\ & \hline \end{aligned}$ | 10 | $\begin{aligned} & \mathbf{3 5} \\ & \text { Or } \\ & \mathbf{3 6} \end{aligned}$ | 450 | 600 | 100 | 1150 |  |

## Note:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of Calculator and other materials will not be permitted in the examination.
2.Each student has to undergo practical training of 6 weeks during summer vacation and its evaluation shall be carried out in the $V$ semester.


## M.D UNIVERSITY <br> SCHEME OF STUDIES AND EXAMINATION <br> BTech. III YEAR (ELECTRONICS \& COMMUNICATION ENGINEERING) SEMESTER V

Modified ' $F$ ' Scheme effective from 2011-12

| Course No. | Course Title | Teaching Schedule |  |  |  | Marks of Class Work | Examination |  | Total <br> Marks | Duration of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  | L | T | P | Total |  | Theory | Practical |  |  |
| EE-301-F | COMMUNICATION Engg. | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-303-F | ELECTRONIC MEASUREMENT \& INSTRUMENTATION (EL,EL,IC,EE,EEE,AEI) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-305-F | ANALOG ELECTRONIC CIRCUITS <br> (EL,EL,IC,EE,EEE,AEI) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-307-F | ANTENNAS,WAVE PROPAGATION\& TV Engg. | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| $\begin{array}{\|l} \hline \text { CSE-210- } \\ \mathrm{F} \end{array}$ | COMPUTER ARCHITECTURE AND ORGANISATION (EL, EI, IC, Common with IV sem. CSE, IT ) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-309-F | MICROPROCESSORS AND INTERFACING (EL,EL,IC,CSE,IT,EEE,AEI) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-323-F | ELECTRONIC MEASUREMENT \& INSTRUMENTATION LAB (EL,EL,IC,EE) | - | - | 2 | 2 | 25 | - | 25 | 50 |  |
| EE-325-F | ANALOG ELECTRONIC CIRCUITS LAB (EL,EL,IC) | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| EE-329-F | MICROPROCESSORS AND INTERFACING LAB (EL,EL,IC,CSE,IT,EEE,AEI) | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| EE-335-F | PRACTICAL TRAINING |  | - | 2 | 2 |  | - |  |  |  |
| $\begin{aligned} & \text { GPECE30 } \\ & \text { 1-F } \end{aligned}$ | GERNERAL PROFICIENCY |  |  |  |  | 50 |  |  | 50 | 3 |
|  | TOTAL | 18 | 6 | 8 | 32 | 425 | 600 | 75 | 1100 |  |

## Note:

1) Students will be allowed to use non-programmable scientific calculator. However, sharing of calculator will not be permitted in the examination.
2) Assessment of Practical Training-I, undergone at the end of IV semester, will be based on seminar, viva-voce, report and certificate of practical training obtained by the student from the industry. According to performance letter grades A, B, C, F are to be awarded. A student who is awarded ' $F$ ' grade is required to repeat Practical Training.


# M.D UNIVERSITY,ROHTAK <br> SCHEME OF STUDIES AND EXAMINATION B.Tech. III YEAR (ELECTRONICS \& COMMUNICATION ENGINEERING) SEMESTER - VI 

Modified ' $F$ ' Scheme effective from 2011-12

| Course No. | Course Title |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Teaching Schedule |  |  |  | Marks of Class Work | Examination |  | Total Marks | Duration of Exam |
|  |  | L | T | P | Total |  | Theory | Practical |  |  |
| EE-302-F | MICROWAVE AND RADAR ENGINEERING | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| $\begin{aligned} & \text { EE-304- } \\ & \mathrm{F} \\ & \hline \end{aligned}$ | CONTROL SYTEMS ENGG. (EL,EE, EEE) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-306-F | VLSI Design | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| IT-305-F | COMPUTER NETWORKS | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-310-F | DIGITAL SYSTEM DESIGN (EL,EI, IC,EE,CSE, AEI) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-308-F | MICROCONTROLLER \& EMBEDDED SYSTEM | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| $\begin{array}{\|l\|} \hline \text { EE-328- } \\ \mathbf{F} \\ \hline \end{array}$ | MICROCONTROLLER \& EMBEDDED SYSTEM LAB | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| $\begin{array}{\|l} \hline \text { EE-326- } \\ \mathrm{F} \\ \hline \end{array}$ | DIGITAL SYSTEM DESIGN LAB (EL,EI, IC,EE,CSE, AEI) | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| $\begin{array}{\|l\|} \hline \text { EE-322- } \\ \mathrm{F} \\ \hline \end{array}$ | MICROWAVE AND RADAR LAB | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| EE-324- | CONTROL SYTEMS ENGG. |  | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| F | LAB <br> (EL,EE, EEE,AEI) |  |  |  |  |  |  |  |  |  |
|  | TOTAL | 18 | 6 | 8 | 32 | 400 | 600 | 100 | 1100 |  |

## NOTE:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of Calculator will not be permitted in the examination.
2. Each student has to undergo practical training of 6 weeks during summer vacation and its evaluation shall be carried out in the VII semester.


## M.D. UNIVERSITY, ROHTAK

## Scheme of studies \& Examination

 B. Tech. (Electronics and Communication Engg.)SEMESTER VII

F'Scheme Effective from 2012-2013

| Course No. | Course Title | Teaching Schedule |  |  |  | Marks <br> of <br> Class <br> Work | Examination |  | Total Marks | Duration of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Total |  | Theory | Practical |  |  |
| ECE-405-F | WIRELESS COMMUNICATION | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ECE-403-F | SATELITE COMMUNICATION ENGINEERING | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ECE-407-F | DATA COMMUNICATION | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ECE-415-F | OPTICAL COMMUNICATION SYSTEMS | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
|  | *Dept Elective-I | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ECE-409-F | Digital Signal Processing | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ECE-423-F | Wireless \& Satellite |  |  | 3 | 3 | 50 | - | 50 | 100 | 3 |
|  | Communication Lab |  |  |  |  |  |  |  |  |  |
| ECE-427-F | Digital Signal Processing Lab | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| ECE-429-F | Data Communication | - | - | 3 | 3 | 50 | - | 50 | 100 | 3 |
|  | Lab |  |  |  |  |  |  |  |  |  |
| GFEE-401-F | General Fitness For The Profession | - | - | - | - |  | - | 50 | 50 | 3 |
| ECE-404-F | Practical Training II |  |  |  |  |  |  |  |  |  |
|  | TOTAL | 18 | 6 | 8 | 32 | 425 | 600 | 175 | 1200 |  |



## List of Dept Electives-I

| ECE-419-F | Mobile Communication |
| :--- | :--- |
| ECE-461-F | Genetic Algorithms \& Applications |
| ECE-453-F | Radar and Sonar Engg. |
| ECE-411-F | Wireless Sensor Network |
|  |  |
|  |  |

## Note:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of calculator will not be permitted in the examination.
2. *Student will be permitted to opt for any one elective run by the other departments. However, the departments will offer only those electives for which they have expertise. The choice of the students for any elective shall not be a binding for the department to offer, if the department does not have expertise.
3. A team consisting of Principal/Director, HOD of concerned department and external examiner appointed by University shall carry out the evaluation of the student for his/her General Fitness for the Profession.

NOTE:-

1. Assessment of Practical Training-II, ( ECE-404F) carried out at the end of VI semester, will be based on seminar, viva-voce and project report of the student from the industry. According to performance letter Grades A, B, C, F are to be awarded. A student who is awarded ' $F$ ' grade is required to repeat Practical Training.


## M.D. UNIVERSITY, ROHTAK

## Scheme of studies \& Examination

 B. Tech. (Electronics and Communication Engg.)
## SEMESTER VIII

F ' Scheme Effective from 2012-2013

Training of Six Months

| Course No. | Course Title | Teaching Schedule |  |  |  | Marks of Class Work | Examination |  | Total Marks | Duration of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Total |  | Theory P | ctical |  |  |
| ECE-402-F | Industrial Training /Institutional Project work | - | - | 8 | 8 | 150 | $\pm$ | 150 | 300 | - |
|  | Total |  |  | 8 | 8 |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |

## Note:

1. The students are required to undergo Industrial Training or Institutional Project work of duration not less than 4 months in a reputed organization or concerned institute. The student who wish to undergo industrial training, the industry chosen for should be a private limited company. The final Viva-voca of the industrial training or Institutional Project work will be conducted by the
2. external examiner and one internal examiner appointed by the institute. External examiner will be from penal of examiner.
Assessment of traing or project will be based on Seminar, viva-voca, report and certificate of Industrial Training or Institutional project work.
3. The internal marks distribution for students who have undergone Industrial training consist of $\mathbf{5 0}$ marks from the Industry concern and $\mathbf{1 0 0}$ Marks by the committee members consisting of faculty members of concerned department of the present institute.
4. The teacher engaged for institutional project work shall have a workload of $\mathbf{2}$ hours per group ( at least 4 students per work)


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## MAHRASHSI DAYANAND UNIVERSITY, ROHTAK SCHEME OF STUDIES AND EXAMINATIONS <br> B.Tech 2nd YEAR (FIRE TECHNOLOGY AND SAFETY) <br> $3{ }^{\text {rd }}$ SEMESTER

Proposed 'F' Scheme w.e.f 2012-13

| Course | Course Title | Teaching Schedule |  |  |  | Marks for class work | Marks <br> for <br> Examination |  | Total <br> Marks | Duration of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Total |  | Theory | Practical |  |  |
| $\begin{aligned} & \text { MAT 201F } \\ & \text { OR } \\ & \text { HUM } 201 \text { F } \end{aligned}$ | Mathematics-III or Engineering Economics | $\begin{gathered} 3 \\ \text { or } \\ 3 \end{gathered}$ | 2 or | - | $\begin{gathered} 5 \\ \text { or } \\ 4 \end{gathered}$ | $\begin{aligned} & 50 \\ & 50 \end{aligned}$ | 100 | - | 150 | 3 |
| HUM 203F | Fundamentals of <br> Management | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 201 F | Town Planning and Safety in Construction Industry | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 203 F | Fire Engineering | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
|  | First Aid and Emergency | 3 | 1 | 4 | 4 | 50 | 100 |  | 150 | 3 |
| FT 205 F | Procedures |  |  |  |  |  |  |  |  |  |
| FT 207 F | Heavy Vehicle Automobile Engineering and Safety | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 209 F | Machine Drawing and Design | 1 | - | 3 | 4 | 50 | - | $\begin{aligned} & 5 \\ & 0 \\ & \hline \end{aligned}$ | $\begin{aligned} & 1 \\ & 0 \end{aligned}$ | 37 |
| FT 211 F | HeavyVehícle <br> Automobile Engineering <br> and Safety Lab | - | - | 2 | 2 | 25 | - | $\begin{aligned} & 2 \\ & 5 \end{aligned}$ | $\begin{aligned} & 5 \\ & 0 \end{aligned}$ | 3 |
| FT 213 F | Fire Protection Workshop | - | - | 2 | 2 | 25 | - | $5$ | $\begin{aligned} & 5 \\ & 0 \end{aligned}$ | 3 |
| FT 215 F | Fire Fighting and Field Training - I | - | - | 2 | 2 | 25 | - | $\begin{aligned} & 2 \\ & 5 \end{aligned}$ | $\begin{aligned} & 5 \\ & 0 \end{aligned}$ | 3 |
|  | Total | 19 | 6/7 | 9 | 34/35 | 425 | 600 | 125 | 1150 |  |



## MAHRASHSI DAYANAND UNIVERSITY, ROHTAK SCHEME OF STUDIES AND EXAMINATIONS <br> B.Tech. 2nd YEAR (FIRE TECHNOLOGY AND SAFETY) <br> $4^{\text {tin }}$ SEMESTER

Proposed ' $F$ ' Scheme w.e.f 2012-13

| Course | Course Title | Teaching Schedule |  |  |  | Marksforclas$s$$s$ | Marks for Examination |  | Total Marks | Duration of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Total |  | Theory | Practical |  |  |
| MAT 201F or HUM 201 F | Mathematics-III <br> or <br> Engineering Economics | $3$ <br> or $3$ | $\begin{gathered} 2 \\ \text { or } \\ 1 \end{gathered}$ | - | $\begin{gathered} 5 \\ \text { or } \\ 4 \end{gathered}$ | 50 | 100 | - | 150 | 3 |
| FT 202F | Safety Engineering and Management | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 204 F | Energy Environment Ethics and Society | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 206 F | Strength of Material | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 208 F | Electrical Fire Safety | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 210 F | Pumping Machinery and Fluid Mechanics | 3 | 1 | - | 4 | 50 | 100 | ${ }^{-}$ | 150 | 3 |
| FT 212 F | Strength of Material Lab | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| FT 214 F | Electrical Fire Safety <br> Lab | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| FT 216 F | Pumping <br> Machinery and <br> Fluid Mechanics | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| FT 218 F | Fire Fighting and Field Training - II | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| GP 202 F | General Proficiency | - | - | 2 | 2 | 50 | - | - | 50 | - |
|  | Total | 18 | 6/7 | 9 | 34/35 | 450 | 600 | 100 | 1150 |  |



# MAHRASHSI DAYANAND UNIVERSITY, ROHTAK <br> SCHEME OF STUDIES AND EXAMINATIONS <br> B.Tech $3^{\text {rd }}$ YEAR (FIRE TECHNOLOGY AND SAFETY) <br> $5^{\text {th }}$ SEMESTER 

Proposed 'F' Scheme w.e.f 2012-13

| Course | Course Title | Teaching schedule |  |  |  | Mark For class work | Marks for Examination |  | Total <br> Marks | Duration of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Total |  | Theory | Practical |  |  |
| FT 301F | Rescue Equipments and Techniques | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 303 F | Building Design and Drawing | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 305 F | Salvage Evaluation of Fire Situation | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 307 F | Environmental Engineering and Management | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 309 F | Fire Prevention and Protection Measures | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 311 F | Nuclear Safety and Radioactive Materials | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 313 F | Environmental Engineering Lab | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| FT 315 F | Field Training in Fire Rescue | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| FT 317 F | AutoCAD and Fire Software Lab | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| FT 319F | Engineering Workshop Practice | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| FT 319F | Total | 18 | 6 | 8 | 32 | 400 | 600 | 100 | 1100 |  |

Note:-

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of calculator will not be permitted in the examination.
2. Assessment of Practical Training-I, undergone at the end of IV semester, will be based on seminar, viva-voce, report and certificate of practical training obtained by the student from the industry. According to performance letter grades A, B, C, F are to be awarded. A student who is awarded ' F ' grade is required to repeat Practical Training.


# MAHRASHSI DAYANAND UNIVERSITY, ROHTAK <br> SCHEME OF STUDIES AND EXAMINATIONS <br> B.Tech $3^{\text {rd }}$ YEAR (FIRE TECHNOLOGY AND SAFETY) $6^{\text {th }}$ SEMESTER 

Proposed 'F' Scheme w.e.f 2012-13

| Proposed 'F' Scheme w.e.f 2012-13 |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Course | e Course Title | Teaching schedule |  |  |  | Marks <br> For <br> class <br> work | Marks for Examination |  | Total Marks | Duration of Exam |
|  |  | L | T | P | Total |  | Theory | Practical |  |  |
| FT 302F | Legal Aspect of Safety, Health and Environment | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 304F | Fire Safety Codes and Standardization | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 306F | Fire Fighting \& Safety Equipments | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 308F | Identification and Risk Assesmant | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 310F | Applied Numerical Technique and Computing | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 312F | Heat Transfer, Combustion and Explosives | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 314F | Field Training Rescue (Chemical Hazards) | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| FT 316F | Applied Numerical Technique and Computing Lab | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| FT 318F | Heat Transfer, Combustion and Explosives Lab | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| FT 320F | Industrial Hygiene Lab | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| FT 322F | General Proficiency | - | - | 2 | 2 | 50 | - | - | 50 | - |
|  | Total | 18 | 6 | 10 | 34 | 450 | 600 | 100 | 1150 |  |

Note:-

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of Calculator will not be permitted in the examination.
2. Each student has to undergo practical training of 6 weeks during summer vacation and its evaluation shall be carried out in the VII semester


# MAHRASHSI DAYANAND UNIVERSITY, ROHTAK 

SCHEME OF STUDIES \& EXAMINATIONS
B.Tech $4^{\text {th }}$ YEAR FIRE TECHNOLOGY \& SAFETY, $7^{\text {th }}$ SEMESTER

Proposed ' $F$ ' Scheme w.e.f 2012-13

| Course | Proposed 'F' Scheme w.e.f 2012-13 |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Course Title | Teaching schedule |  |  |  | Marks <br> For <br> class <br> work | Marks for Examination |  | Total Marks | Duration of Exam |
|  |  | L | T | P | Total |  | Theory | Practical |  |  |
| FT 401 F | Safety and Risk Management | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 403 F | Industrial Engineering | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 405 F | Operational Research | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 407 F | Disaster Management | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 409 F | Fire Fighting Installation and Automation | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ---- | Dept. Elective | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 411 F | Fire Fighting Installation and Automation Lab | - | - | 2 | 2 | 50 | - | 50 | 100 | 3 |
| FT 413 F | Squad Drill | - | - | 2 | 2 | 50 | - | 50 | 100 | 3 |
|  | Total | 18 | 6 | 4 | 28 | 400 | 600 | 100 | 1100 | - |

## Dept. Elective:

1. FT 417 F Process Instrumentation and Control Engineering
2. FT 419 F Automobile Engineering and Safety.
3. FT 421 F Advanced Safety Engineering and Management.
4. FT 423 F Environmental Protection and Waste Management.
5. FT 425 F Human Factor Engineering.
6. FT 427 F Simulation and Process Modeling
7. FT 429 F Total Quality management
8. FT 431 F Safety in Health Care waste Management
9. FT 433 F Safety in Construction


# MAHRASHSI DAYANAND UNIVERSITY, ROHTAK <br> SCHEME OF STUDIES \& EXAMINATIONS B.Tech $4^{\text {th }}$ YEAR FIRE TECHNOLOGY \& SAFETY, $8^{\text {th }}$ SEMESTER 

Proposed 'F' Scheme w.e.f 2012-13

|  |  | Proposed 'F' Scheme w.e.f 2012-13 |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| SI. No. Course No. | Subject | Internal <br> Marks | External <br> Marks | Total <br> Marks |  |
| 1. | FT- 402-F | Industrial Training/Institutional Project Work | 150 | 150 | 300 |

Note:
The students are required to undergo Industrial Training or Institutional Project Work of duration not less than 4 months in a reputed organization or concerned institute. The students who wish to undergo industrial training, the industry chosen for undergoing the training should be at least a private limited company. The students shall submit and present the mid-term progress report at the Institute. The presentation will be attended by a committee. Alternately, the teacher may visit the Industry to get the feedback of the students.

The final viva-voce of the Industrial Training or Institutional Project Work will be conducted by an external examiner and one internal examiner appointed by the Institute. External examiner will be from the panel of examiners submitted by the concerned institute approved by the Board of Studies in Engineering and Technology. Assessment of Industrial Training or Institutional Project Work will be based on seminar, viva-voce, report and certificate of Industrial Training or Institutional Project Work obtained by the student from the industry or Institute.

The internal marks distributions for the students who have undergone Industrial Training consist of $\mathbf{5 0}$ marks from the industry concern and $\mathbf{1 0 0}$ marks by the committee members consisting of faculty members of concerned department of the parent institute.

The teachers engaged for Institutional Project work shall have a workload of 2 hours per group (at least 4 students) per week.


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MAHRASHSI DAYANAND UNIVERSITY, ROHTAK
SCHEME OF STUDIES \& EXAMINATIONS

## B.Tech 2nd YEAR MECHANICAL ENGINEERING,

$3{ }^{\text {rd }}$ SEMESTER
Proposed 'F' Scheme w.e.f 2010-11

| Course | Course Title | Teaching Schedule |  |  |  | $\begin{gathered} \text { Marks } \\ \text { for } \\ \text { class } \\ \text { work } \\ \hline \end{gathered}$ | Marks for Examination |  | Total Marks | Duration of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { MAT-201-F } \\ & \text { or } \\ & \text { HUM-201-F } \end{aligned}$ | Mathematics-III <br> or Engineering Economics | $\begin{gathered} \mathrm{L} \\ \hline 3 \\ \text { or } \\ 3 \end{gathered}$ | $\begin{gathered} \mathrm{T} \\ \hline 2 \\ \text { or } \\ 1 \end{gathered}$ | P | Total <br> 5 <br> or <br> 4 | 50 | Theory <br> 100 | Practical | 150 | 3 |
| HUM-203-F | Fundamentals of <br> Management | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-201-F | Thermodynamics | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-203-F | Computer Aided Design | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-205-F | Engineering <br> Mechanics | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-207-F | Material Science | 3 | 1 | - | 4 | 50 | 100 |  | 150 | 3 |
| ME-209-F | Machine Drawing | 1 | - | 3 | 4 | 50 | - | 50 | 100 | 4 |
| ME-211-F | Computer Aided | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
|  | Design Lab |  |  |  |  |  |  |  |  |  |
| ME-213-F | Engineering | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
|  | Mechanics Lab |  |  |  |  |  |  |  |  |  |
| ME-215-F | Materials Science | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
|  | Lab |  |  |  |  |  |  |  |  |  |
|  | Total | 19 | 6 | 10 | 34/35 | 425 | 600 | 125 | 1150 |  |



MAHARSHI DAYANAND UNIVERSITY, ROHTAK SCHEME OF STUDIES \& EXAMINATIONS
B.Tech $2^{\text {nd }}$ YEAR MECHANICAL ENGINEERING, $4^{\text {th }}$ SEMESTER
Proposed ' $F$ ' Scheme w.e.f 2010-11

| Course | Course Title | Teaching Schedule |  |  |  | Marks for class work | Marks for Examination |  | Total Marks | $\begin{array}{\|c} \hline \text { Duratio } \\ \mathrm{n} \text { of } \\ \text { Exam } \\ \hline \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Total |  | Theory | Practical |  |  |
| $\begin{aligned} & \text { MAT-201-F } \\ & \text { or } \\ & \text { HUM-201-F } \end{aligned}$ | Mathematics-III <br> or <br> Engineering <br> Economics | $3$ <br> or $3$ | $2$ <br> or $1$ | - | $\begin{gathered} 5 \\ \text { or } \\ 4 \end{gathered}$ | 50 | 100 | - | 150 | 3 |
| ME-202-F | Manufacturing <br> Technology-I | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-204-F | Kinematics of Machine | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-206-F | Strength of Materials-I | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-208-F | Fluid Mechanics | 3 | 1 | - | 4 | 50 | - 100 | - | 150 | 3 |
| ME-210-F | Steam \& Power Generation | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-212-F | Kinematics of | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
|  | Machine Lab | \% |  |  |  |  |  |  |  |  |
| ME-214-F | Strength of | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
|  | Materials Lab |  |  |  |  |  |  |  |  |  |
| ME-216-F | Fluid Mechanics | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
|  | Lab |  |  |  |  |  |  |  |  |  |
| ME-218-F | Steam \& Power Generation Lab | - | - | 2 | 2 | 25 | - | 25 | 50 |  |
| GP-202-F | General Proficiency | - | - | 2 | 2 | 50 | - | - | 50 | - |
|  | Total | 18 | 6 | 9 | 34/35 | 450 | 600 | 100 | 1150 |  |



## MAHARSHI DAYANAND UNIVERSITY, ROHTAK SCHEME OF STUDIES \& EXAMINATIONS B.Tech. $3^{\text {rd }}$ YEAR MECHANICAL ENGINEERING, SEMESTER-V <br> Proposed "F" Scheme effective from 2011-12

| Course | Course Title | Teaching schedule |  |  |  | MarksFor class work | Marks for Examination |  | Total <br> Marks | Duratio n of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Total |  | Theory | Practic <br> al |  |  |
| ME-301-F | Dynamics Of Machines | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-303-F | Mechanical Machine Design-1 | 3 | 2 | - | 5 | 50 | 100 | - | 150 | 4 |
| ME-305-F | Fluid Machine | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-307-F | Internal Combustion Engines \& Gas Turbines | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-309-F | Manufacturing Technology -II | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-311-F | Applied Numerical Technique \& Computing | 3 | - | - | 3 | 50 | 100 | - | 150 | 3 |
| ME-313-F | Dynamics Of Mechanics Lab | - | - | 2 | 2 | 25 |  | 25 | 50 | 3 |
| ME-315-F | Fluid Machine Lab | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| ME-317-F | Internal Combustion Engines \& Gas Turbines Lab | - | - | 2 | 2 | 25 |  | 25 | 50 | 3 |
| ME-319-F | $\begin{aligned} & \text { Manufacturing Technology -II } \\ & \text { Lab } \\ & \hline \end{aligned}$ | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| ME-321-F | Applied Numerical Technique \& Computing Lab | - | - | 2 | 2 | 50 | - | - | 50 |  |
| ME-323-F | Practical Training Viva-Voce |  |  | 2 | 2 | - | - - - | - | - |  |
|  | Total | 18 | 6 | 12 | 36 | 450 | 600 | 100 | 1150 |  |

Note:

1) Students will be allowed to use non-programmable scientific calculator. However, sharing of calculator will not be permitted in the examination.
2) Assessment of Practical Training-I, undergone at the end of IV semester, will be based on seminar, viva-voce, report and certificate of practical training obtained by the student from the industry. According to performance letter grades A, B, C, F are to be awarded. A student who is awarded ' $F$ ' grade is required to repeat Practical Training.


MAHARSHI DAYANAND UNIVERSITY, ROHTAK
SCHEME OF STUDIES \& EXAMINATIONS
B.Tech. $3{ }^{\text {rd }}$ YEAR MECHANICAL ENGINEERING, SEMESTER-VI

Proposed " $F$ " Scheme effective from 2011-12

| Course | Course Title | Teaching schedule |  |  |  | Marks For class work | Marks for Examination |  | Total Marks | Duratio <br> n of <br> Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Total |  | Theory | $\begin{aligned} & \text { Practi } \\ & \text { cal } \end{aligned}$ |  |  |
| ME-302-F | Automobile Engineering | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-304-F | Mechanical Machine Design-II | 3 | 2 | - | 5 | 50 | 100 | - | 150 | 4 |
| ME-306-F | Heat Transfer | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-308-F | Automatic Control | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-310-F | Measurement \& instrumentation | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-312-F | Industrial Engineering | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-314-F | Automobile Engineering Lab | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| ME-316-F | Heat Transfer Lab | - | - | 2 | 2 | 25 | - | 25 | 25 | 3 |
| ME-318-F |  |  | - | 2 | 2 | 25 | - | 25 | 25 | 3 |
|  | Measurement \& instrumentation <br> Lab | - | - | 2 |  |  |  |  |  |  |
| ME-320-F |  | - | - | 2 | 2 | 50 | - | - | 50 | - |
|  | General Proficiency | 18 | 7 | 8 | 33 | 450 | 600 |  | 1050 |  |
|  | Total | 18 | 7 | 8 | 33 | 450 |  | 100 |  |  |

NOTE:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of Calculator will not be permitted in the examination.
2. Each student has to undergo practical training of 6 weeks during summer vacation and its evaluation shall be carried out in the VII semester


MAHARSHI DAYANAND UNIVERSITY, ROHTAK
SCHEME OF STUDIES \& EXAMINATIONS
B.Tech. $4^{\text {th }}$ YEAR MECHANICAL ENGINEERING, SEMESTER- VII
(Scheme-F)
EFFECTIVE FROM THE SESSION 2012-13

| Course | Course Title | Teaching schedule |  |  |  | Marks <br> For <br> class <br> work | Marks for Examination |  | Total Marks | Duration <br> of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Total |  | Theory | Practical |  |  |
| ME-401-F | Strength of Material-II | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-403-F | Refrigeration \& AirConditioning | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-405-F | Operation Research | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-407-F | Power Plant Engineering | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-409-F | Mechanical Vibration | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ------------- | Elective | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-411-F | Refrigeration \& Air- | - | - | 2 | 2 | 50 | - | 50 | 100 | 37 |
|  | Conditioning Lab |  |  |  |  |  |  |  |  |  |
| ME-413-F | Advanced CAD/CAM Lab | - | - | 2 | 2 | 50 | - | 100 | 150 |  |
| ME-415-F | Practical Training-II | - | - | 2 | 2 | - |  | - | - |  |
| $\begin{aligned} & \text { GFME- } \\ & \text { 435-F } \end{aligned}$ | General Fitness for the Profession | - | - | - | ${ }^{-}$ | - | ${ }^{-}$ | 50 | 50 | 3 |
|  | Protal | 18 | 6 | 6 | 30 | 400 | 600 | 200 | 1200 |  |

## LIST OF ELECTIVES

| S.NO. | SUBJECT CODE | DEPTT. ELECTIVE |
| :---: | :---: | :--- |
| 1. | ME-417-F | QUALITY ENGINEERING |
| 2. | ME 419-F | FINITE ELEMENT METHODS |
| 3. | ME-421-F | ENERGY MANAGEMENT PRINCIPLES |
| 4. | ME-425-F | COMPUTER INTEGRATED <br> MANUFACTURING |
| 5. | ME- 429-F | RELIABILITY ENGINEERING |
| 6. | ME-431-F | SOLAR ENERGY ENGINEERING |

# MAHARSHI DAYANAND UNIVERSITY, ROHTAK <br> SCHEME OF STUDIES \& EXAMINATIONS <br> B.Tech. $4^{\text {th }}$ YEAR MECHANICAL ENGINEERING, SEMESTER- VIII <br> (Scheme-F) <br> EFFECTIVE FROM THE SESSION 2012-13 

| SI. No. | Course No. | Subject | Internal <br> Marks | External <br> Marks | Total <br> Marks |
| :--- | :---: | :---: | :---: | :---: | :---: |
| 1. | ME- 402-F | Industrial Training/Institutional Project Work | 150 | 150 | 300 |

## Note:

The students are required to undergo Industrial Training or Institutional Project Work of duration not less than 4 months in a reputed organization or concerned institute. The students who wish to undergo industrial training, the industry chosen for undergoing the training should be at least a private limited company. The students shall submit and present the mid-term progress report at the Institute. The presentation will be attended by a committee. Alternately, the teacher may visit the Industry to get the feedback of the students.
The final viva-voce of the Industrial Training or Institutional Project Work will be conducted by an external examiner and one internal examiner appointed by the Institute. External examiner will be from the panel of examiners submitted by the concerned institute approved by the Board of Studies in Engg. \& Technology. Assessment of Industrial Training or Institutional Project Work will be based on seminar, viva-voce, report and certificate of Industrial Training or Institutional Project Work obtained by the student from the industry or Institute.
The internal marks distributions for the students who have undergone Industrial Training consist of 50 marks from the industry concern and 100 marks by the committee members consisting of faculty members of concerned department of the parent institute.
The teachers engaged for Institutional Project work shall have a workload of 2 hours per group (at least 4 students) per week.


## CURRICULUM AND SCHEME OF EXAMINATIONS OF BBA PROGRAMME FROM THE SESSION 2014-15

## SECOND YEAR

## Third Semester

| Paper No | Title of Paper(s) | External <br> Marks | Internal <br> Assessment/ <br> Work-shop <br> Marks | Practical <br> Marks | Total <br> Marks |
| :--- | :--- | :---: | :---: | :---: | :---: |
| BBAN301 | Cost and Management <br> Accounting | 80 | 20 | - | 100 |
| BBAN302 | Marketing Management | 80 | 20 | - | 100 |
| BBAN303 | Capital Markets | 80 | 20 | - | 100 |
| BBAN304 | Introduction to <br> Information Technology | 50 | - | 50 | 100 |
| BBAN305 | Environment Studies | 80 | 20 | - | 100 |
| BBAN306 | Disaster Management | 80 | 20 | - | 100 |
|  | TOTAL |  |  |  | 600 |

## Fourth Semester

| Paper No | Title of Paper(s) | External <br> Marks | Internal <br> Assessment/ <br> Work-shop <br> Marks | Practical <br> Marks | Total <br> Marks |
| :--- | :--- | :---: | :---: | :---: | :---: |
| BBAN401 | Financial Management | 80 | 20 | - | 100 |
| BBAN402 | Human Resource <br> Management | 80 | 20 | - | 100 |
| BBAN403 | Business Research <br> Methods | 80 | 20 | - | 100 |
| BBAN404 | Business Laws | 80 | 20 | - | 100 |
| BBAN405 | Data Base Management <br> System | 50 | - | 50 | 100 |
| BBAN406 | Human Rights and Values | 80 | 20 | - | 100 |
|  | TOTAL |  |  |  | 600 |



CURRICULUM AND SCHEME OF EXAMINATIONS OF
BBA PROGRAMME FROM THE SESSION 2014-15

## THIRD YEAR

## Fifth Semester

| Paper No | Title of Paper(s) | External <br> Marks | Internal <br> Assessment/ <br> Work-shop <br> Marks | Practical <br> Marks | Total <br> Marks |
| :--- | :--- | :---: | :---: | :---: | :---: |
| BBAN501 | Production and Materials <br> Management | 80 | 20 | - | 100 |
| BBAN502 | Company Law | 80 | 20 | - | 100 |
| BBAN503 | Indian Business <br> Environment | 80 | 20 | - | 100 |
| BBAN504 |  <br> Internet | 50 | - | 50 | 100 |
| BBAN505 | Presentation Skills and <br> Personality Development | 80 | 20 | - | 100 |
| BBAN506 | Cyber Security | 80 | 20 | - | 100 |
| BBAN507 Summer Training Report | 100 | - | - | 100 |  |
|  | TOTAL |  |  |  | 700 |

## Sixth Semester

| Paper No | Title of Paper(s) | External <br> Marks | Internal <br> Assessment/ <br> Work-shop <br> Marks | Practical <br> Marks | Total <br> Marks |
| :--- | :--- | :---: | :---: | :---: | :---: |
| BBAN601 | Income Tax | 80 | 20 | - | 100 |
| BBAN602 |  <br> Design | 80 | 20 | - | 100 |
| BBAN603 | Foundations of <br> International Business | 80 | 20 | - | 100 |
| BBAN604 | Consumer Protection | 80 | 20 | - | 100 |
| BBAN605 | E-Commerce | 50 | - | 50 | 100 |
| BBAN606 | Project Report | 100 | - | - | 100 |
| BBAN607 | Comprehensive Viva- <br> voce | 100 | - | - | 100 |
|  | TOTAL |  |  |  | 700 |

Session 2014-15

## Maharshi Dayanand University, Rohtak

## SCHEME OF STUDIES \& EXAMINATION <br> MASTER OF TECHNOLOGY <br> (CYBER FORENSICS AND INFORMATION SECURITY) <br> SEMESTER-III <br> EFFECTIVE FROM 2013-14

| Course No. | Course Title |  | Teaching <br> Schedule |  | Marks |  | Total | Duration <br> of Exam <br> (Hrs) |
| :--- | :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L T | P | Sessional | Exam. |  |  |  |
| MTCF 301 | Preserving \& Recovering <br> Digital Evidence | 4 | - | - | 50 | 100 | 150 | 3 |
| MTCF 302 | Cyber Laws \& Security <br> Policy | 4 | - | - | 50 | 100 | 150 | 3 |
|  | Elective-III | 4 | - | - | 50 | 100 | 150 | 3 |
| MTCF 307 | Dissertation Phase 1 | - | - | 8 | 100 | - | 100 | 3 |
| MTCF 308 | Seminar \& Technical Writing | - | - | 2 | 50 | - | 50 | - |
| TOTAL |  | 12 | - | 10 | 300 | 300 | 600 |  |

Elective- III

MTCF 303- Biometric Security
MTCF 304- Applied Cryptography
MTCF 305-Distributed Systems Security
MTCF 306- Secure Software Engineering


# Maharshi Dayanand University, Rohtak 

SCHEME OF STUDIES \& EXAMINATION MASTER OF TECHNOLOGY (CYBER FORENSICS AND INFORMATION SECURITY)

## SEMESTER-IV

## EFFECTIVE FROM 2013-14

| Course No. | Course Title | Teaching <br> Schedule |  | Marks |  | Total |  |
| :--- | :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Sessional | Exam. |  |
| MTCF 401 | Dissertation Phase-II | - | - | 24 | 200 | 400 | 600 |
|  |  |  |  |  |  |  |  |
|  | Total |  | - | 24 | 200 | 400 | 600 |



## M.D. UNIVERSITY <br> SCHEME OF STUDIES AND EXAMINATION <br> M.TECH 1st YEAR (COMPUTER SCIENCE \& ENGINEERING) <br> SEMESTER 1st <br> CBCS Scheme effective from 2016-17

| $\begin{aligned} & \text { Sr. } \\ & \text { No } \end{aligned}$ | Course No. | Subject | Teaching Schedule |  |  |  | Examination Schedule (Marks) |  |  |  | Duratio <br> n of Exam (Hours) | No of hours/ week |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P | Total Credi ts | Marks of Class works | Theor <br> y | Practi cal | Total |  |  |
| 1 | 16CSE21C1 | Data Communication and Computer Networks | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 2 | 16CSE21C2 | Advanced Operating Systems | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 3 | 16CSE21C3 | Advanced Database <br> Management System | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 4 | 16CSE21C4 | Data Warehouse and Mining | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 5 | 16CSE21C5 |  | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 6 | 16CSE21C6 | Seminar | - |  | - | 2 | 50 | - | - | 50 |  | 2 |
| 7 | 16CSE21CL1 | Advanced Operating Systems Lab | - | - | 2 | 2 | 50 | - | 50 | 100 | 3 | 2 |
| 8 | 16CSE21CL2 | Advanced Database Management System Lab | - | - | 2 | 2 | 50 | - | 50 | 100 | 3 | 2 |
|  |  | TOTAL | 26 |  |  |  |  |  |  |  |  |  |

## NOTE:

Examiner will set nine question in total. Question one will be compulsory and will comprises of all section and remaining eight questions to be set by taking two questions from each unit. The students have to attempt five questions in total, first being compulsory and selecting one from each Unit.


## M.D. UNIVERSITY <br> SCHEME OF STUDIES AND EXAMINATION M.TECH 1st YEAR (COMPUTER SCIENCE \& ENGINEERING) <br> SEMESTER 2nd CBCS Scheme effective from 2016-17

| $\begin{aligned} & \text { Sr. } \\ & \text { No } \end{aligned}$ | Course No. | Subject | Teaching Schedule |  |  |  | Examination Schedule (Marks) |  |  |  | Durat ion of Exam (Hour s) | No of hours /wee k |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P | $\begin{gathered} \text { Tota } \\ \text { I } \\ \text { Cred } \\ \text { its } \end{gathered}$ | Marks of Class works | Theor y | Practi cal | Total |  |  |
| 1 | 16CSE22C1 | Soft Computing | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 2 | 16CSE22C2 | Algorithm Design | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 3 | 16CSE22C3 | Seminar | - |  | 2 | 2 | 50 | - | - | 50 | - | 2 |
| 4 | 16CSE22CL1 | Soft Computing Lab | - | - | 2 | 2 | 50 | - | 50 | 100 | 3 | 2 |
| 5 | 16CSE22CL2 | Algorithm Design Lab | - | - | 2 | 2 | 50 | - | 50 | 100 | 3 | 2 |
| 6 | $\begin{aligned} & \text { 16CSE22D1 or } \\ & \text { 16CSE22D2 or } \\ & \text { 16CSE22D3 or } \\ & \text { 16CSE22D4 } \end{aligned}$ | Elective-1 | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 7 |  | Open Elective |  |  |  | 3 |  |  |  |  |  | 3 |
| 8 |  | Foundation Elective |  |  |  | 2 |  |  |  |  |  | 2 |
|  |  |  | 23 |  |  |  |  |  |  |  |  |  |

NOTE:Examiner will set nine question in total. Question One will be compulsory and will comprises af all section and remaining eight questions to be set by taking two questions from each unit. The students have to attempt five questions in total, first being compulsory and selecting one from each Unit.

Elective 1: Choose any one from the following papers

| 16CSE22D1 | Mobile and Wireless Communicat |
| :--- | :--- |
| 16CSE22D2 | Optimization Techniques |
| 16CSE22D3 | Discrete Mathematics |
| 16CSE22D4 | Internet and Web Development |

Elective 2
A candidate has to select this paper from the pool of Open Electives provided by the University
Elective 3
A candidate has to select this aser from the of of Foundation Electives provided by the University.


## M.D UNIVERSITY <br> SCHEME OF STUDIES AND EXAMINATION <br> M.TECH 2nd YEAR (COMPUTER SCIENCE \& ENGINEERING) <br> SEMESTER 3rd

CBCS Scheme effective from 2017-18


NOTE:
Examiner will set nine questions in total. Question One will be compulsory and will comprises of all sections and remaining eight questions to be set by taking two questions from each unit. The students have to attempt five questions in total, first being compulsory and selecting one from each Unit.

## OPEN ELECTIVE

A candidate has to select this paper from the pool of open electives provided by the University.


# M.D UNIVERSITY <br> SCHEME OF STUDIES AND EXAMINATION <br> M.TECH 2nd YEAR (COMPUTER SCIENCE \& ENGINEERING) <br> SEMESTER 4th <br> CBCS Scheme effective from 2017-18 

| SI. <br> No | Course No. | Subject | Teaching Schedule |  |  |  | Examination Schedule (Marks) |  |  |  | No of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P | Total | Marks of Class works | Theory | Practical | Total |  |
| 1. | 17CSE24C1 | Dissertation and viva (Dissertation Stage 2) | - | - | - | - | 250 | - | 500 | 750 | 20 |
|  |  | TOTAL | . . - - |  |  |  | - |  |  |  |  |

NOTE:

1. Students have to publish a research paper in a journal / conference of the research work done in the semester.


## MAHARSHI DAYANAND UNIVERSITY, ROHTAK

## SCHEME OF STUDIES AND EXAMINATIONS FOR MASTER OF TECHNOLOGY IN <br> ELECTRICAL ENGINEERING

(Specialization: Electrical Power Systems)
SEMESTER-III

| S.No | Course Code | Course Title | Teaching Schedule |  |  | Class <br> Work | Examination |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | Theory | Practical |  |
|  |  |  | L | T | P |  |  | 15 |  |
| 1 | MTEPS301 | Elective - III | 3 | 1 | 0 | 50 | 100 | - | 150 |
| 2 | MTEPS302 | Elective - IV | 3 | 1 | 0 | 50 | 100 | 50 | 100 |
| 3 | MTEPS303 | Seminar |  |  | 2 | 50 | - | - | 150 |
| 4 | MTEPS304 | Dissertation- | 0 | 0 | 4 | 150 | - |  |  |
|  |  | Phase I |  |  |  | 30 | 200 | 50 | 550 |

1. The paper setter shall set each theory paper of $\mathbf{1 0 0}$ marks covering entire syllabus. However the examiner shall evaluate the performance of the student in the theory paper finally by assigning one of the grades out of $A^{+}, A, B, C, D \& E$. The examination of practical courses shall also be evaluated on the basis of these grades.
2. The sessionals of theory, practical and Seminar courses shall also be evaluated in the basis of these grades.
3. The choice of student for any elective shall not be binding on the department to offer it.
4. The grading system is define at the end of scheme of studies \& examinations and will be supplied by the University to the examiner(s).


## MAHARSHI DAYANAND UNIVERSITY, ROHTAK

## SCHEME OF STUDIES AND EXAMINATIONS FOR MASTER OF TECHNOLOGY IN ELECTRICAL ENGINEERING

(Specialization: Electrical Power Systems)
SEMESTER-IV

| S.No. | Course <br> Code | Course Title | Teaching <br> Schedule |  |  | Class <br> Work | Examination |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P |  | Theory | E.VIVA |  |
| 1 | MTEPS401 | Dissertation Final Phase | 0 | 0 | 20 | 200 | - | 400 | 600 |
|  |  |  |  |  | 20 | 200 | - | 400 | 600 |

NOTE:

1. The sessionals of Dissertation shall be evaluated on the basis of grades i.e $\mathbf{A}^{+}$,
$A, B, C, D \& E$.
2. The Dissertation shall be evaluated by an examination committee consisting of the head of the department, Dissertation Supervisor and one External examiner. The evaluation should be based on above grades.
3. The grading system is define at the end of scheme of studies \& examinations and will be supplied by the University to the examiner(s).


## M.D.UNIVERSITY, ROHTAK <br> SEMESTER 1 EAR (ELECTRONICS \& COMMUNICATION)

CBCS Scheme effective from 2016-17

| $\begin{aligned} & \text { Sl. } \\ & \text { No } \end{aligned}$ | Course Code | Subject | Credit Pattern |  |  |  | Examination Schedule (Marks) |  |  |  | Dura tion of Exam (Hou rs) | No of Hours /week |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P | Total Credi ts | Mark $\mathbf{s}$ of Class work | $\begin{gathered} \text { Theor } \\ y \\ \hline \end{gathered}$ | $\begin{gathered} \text { Practic } \\ \text { al } \\ \hline \end{gathered}$ | Total |  |  |
| 1 | 16ECE21Cl | Advance Microprocessor \& Microcontroller | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 2 | 16ECE21C2 | Satellite and Space Communication | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 3 | 16ECE21C3 | Information and Communication Theory | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 4 | 16ECE21C4 | Advanced Digital Signal Processing | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 5 | 16ECE21C5 | Data Communication Networks | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 6 | 16ECE21C6 | Seminar | - |  | - | 2 | 50 | - | - | 50 |  | 2 |
|  | 16ECE21CL1 | Satellite Lab | - | - | 2 | 2 | 50 | - |  | 100 | 3 | 4 |
| 7 |  |  |  |  |  |  |  | - | 50 |  |  |  |
| 8 | 16ECE21CL2 | Advance Microprocessor \& Microcontroller Lab | - | - | 2 | 2 | 50 | - | 50 | 100 | 3 | 4 |
|  |  | TOTAL | 26 |  |  |  |  |  |  |  |  |  |

NOTE:
Examiner will set nine question in total. Question One will be compulsory and will comprise short answer type questions from all sections and remaining eight questions to be set by taking two questions from each unit. The students have to attempt five questions in total, first being compulsory and selecting one from each Unit.


## SCHEME OF STUDIES AND M.D.UNIVERSITY, ROHTAK \& COMMUNATION M.TECH 1st YEAR (ELECTRONICS CBCS Scheme effective from 2016-17

| $\begin{gathered} \mathbf{S I} \\ \dot{\mathbf{N}} \end{gathered}$ | Course No. | Subject | Credit Pattern |  |  | Examination Schedule (Marks) |  |  |  | Duration of Exam (Hours) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 1 T | P | Total Credi ts | Marks of Class works | Theory | Practical |  |  |
| 1 | 16ECE22C1 | Wireless Mobile Communication | 40 | - | , | 50 | 100 | Practical | 150 | 3 |
| 2 | 16ECE22C2 | Optical <br> Communication | 40 | - | 4 | 50 | 100 | - | 150 | 3 |
| 3 | 16ECE22C3 | Seminar | ven | - | 2 | 50 | - | - | 50 |  |
| 4 | 16ECE22CL1 |  | - | 2 | 2 | 50 | - | 50 | 100 | 3 |
|  |  |  | - | 2 | 2 | 50 | - | 50 | 100 | 3 |
|  |  |  |  |  |  |  |  |  |  |  |
| 6 | 16ECE22D1 <br> or <br> 16ECE22D2 <br> or <br> 16ECE22D3 <br> or <br> 16ECE22D4 | Elective-1 | 40 | - | 4 | 50 | 100 | - | $150$ | 3 |
|  |  | Open Elective |  |  | 3 |  |  |  |  |  |
| 8 |  | Foundation Elective |  |  | 2 |  |  |  |  |  |
|  |  | TOTAL |  |  | 23 |  |  |  |  |  |

NOTE: Examiner will set nine questions in total. Question One will be compulsory and will comprise short answer type questions from all sections and remaining eight questions to be set by taking two questions from each unit. The students have to attempt five questions in total, first being compulsory and selecting one from each Unit.

Elective 1: Choose any one from the following four papers:

> 16ECE22D1 - Electronic System Design
> 16ECE22D2 - Image Processing
> 16ECE22D3 - ADVANCED MATHEMATICS FOR ENGINEERS 16ECE22D4 - VLSI Design

Open Elective: A candidate has to select this paper from the pool of Open Electives provided by the University. Foundation Elective: A candidate has to select this paper from the pool of Foundating flectives provided by the University.


## M.DUNIVERSITY <br> SCHEME OF STUDIES AND EXAMINATION M.TECH 2nd YEAR (ELECTRONICS \& COMMUNICATION) SEMESTER 3rd <br> CBCS Scheme effective from 2017-18

| $\begin{aligned} & \text { Sl. } \\ & \text { No } \end{aligned}$ | Course No. | Subject | Teaching Schedule |  |  |  | Examination Schedule (Marks) |  |  |  | DurationofExam(Hours) | No of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P | Total | Marks of Class works | Theory | Practica | Total |  |  |
| 1 | 17ECE23C1 | Neural Networks \& Fuzzy Logics | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 2 | 17ECE23C2 | CDMA | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
|  |  | DISSERTATIO | - | - | - | 4 | 100 | - | - | 100 |  | 2 |
| 3 | 17ECE23C3 | N (PHASE-I) |  |  |  |  |  |  |  |  |  |  |
| 4 | 17ECE23C4 | Seminar | - | - | - | 2 | 50 | - | - | 50 |  | 2 |
|  |  | Project | - | - | 2 | 2 | 50 | - | 50 | 100 |  | 2 |
| 5 | 17ECE23CLl | MATLAB Lab | - | - | 2 | 2 | 50 | - | 50 | 100 |  | 2 |
| 6 | 17ECE23CL2 |  |  |  |  |  |  |  |  |  |  |  |
| 7 |  | OPEN ELECTIVE |  |  |  |  |  |  |  |  |  | 3 |
| 7 |  |  |  |  |  |  |  |  |  |  |  | 21 |

NOTE:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of Calculator will not be permitted in the examination.
2. Students have to publish a research paper in a journal / conference on the basis of literature survey done in the semester.

OPEN ELECTIVE: A candidate has to select this paper from the pool of open electives provided by the University.


## M.D UNIVERSITY <br> SCHEME OF STUDIES AND EXAMINATION M.TECH 2nd YEAR (ELECTRONICS \& COMMUNICATION) <br> SEMESTER 4th

CBCS Scheme effective from 2017-18


NOTE:

1. Students have to publish a research paper in a journal / conference of the research work done in the semester.


## M. TECH. MECHANICAL ENGINEERING (MACHINE DESIGN) COURSE SCHEME and DETAILED SYLLABUS

Semesterwise Course Scheme

| FIRST SEMESTER |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Subject <br> Code | Subject | Credit | L-T-P | Marks Weightage |  | Grand total |
|  |  |  |  | Theory | Sessional |  |
| 1. M 801 A | Numerical Analysis and Optimization | 3 | $3-0-0$ | 100 | 50 |  |
| 2. M803A | Instrumentation and Measurement | 3 | $3-0-0$ | 100 | 50 |  |
| 3. M805A | Experimental Stress Analysis | 3 | $3-0-0$ | 100 | 50 |  |
| 4. M807A | Metal Forming Analysis | 3 | $3-0-0$ | 100 | 50 |  |
| 5. M809A | Mechatronics and Product Design | 3 | 3-0-0 | $\begin{aligned} & 100 \\ & \text { Ext. } \end{aligned}$ | $\begin{aligned} & 50 \\ & \text { Int. } \end{aligned}$ |  |
| 6. M811A | Experimental Stress Analysis Lab | 1 | 0-0-2 | 25 | 25 |  |
| 7. M813A | Mechanical Measurement Lab | 1 | 0-0-2 | 25 | 25 |  |
| 8. M815A | Computational Lab | 1 | 0-0-2 | 25 | 25 |  |
|  | Total | 18 | 15-0-6 | 575 | 325 | 900 |
| SECOND SEMESTER |  |  |  |  |  |  |
| 9. M 802 A | Theory of Elasticity | 3 | $3-0-0$ | 100 | 50 |  |
| 10. M804A | Design of Mechanisms | 3 | 3-0-0 | 100 | 50 |  |
| 11. M806A | Principles of Machine Design | 3 | $3-0-0$ | 100 | 50 |  |
| 12. | General Elective - I | 3 | $3-0-0$ | 100 | 50 |  |
| 13. | General Elective - II | 3 | $3-0-0$ | 100 | 50 |  |
|  |  |  |  | Ext. | Int. |  |
| 14. M812A | Seminar | 1 | 0-0-2 | 25 | 25 |  |
| 15. M814A | CAD/CAM Lab | 1 | 0-0-2 | 25 | 25 |  |
| 16. M816A | Design Practice Lab-I | 1 | 0-0-2 | 25 | 25 |  |
|  | Total | 18 | 15-0-6 | 575 | 325 | 900 |
| THIRD SEMESTER |  |  |  |  |  |  |
| 17. M821A | Mechanical Behavior of Materials | 3 | 3-0-0 | 100 | 50 |  |
| 18. M823A | Mechanical Vibrations | 3 | 3-0-0 | 100 | 50 |  |
| 19. M825A | General Elective III | 3 | 3-0-0 | 100 | 50 |  |
|  |  |  |  | Ext. | Int. |  |
| 20. M827A | Design Practice Lab II | 1 | 0-0-2 | 25 | 25 |  |
| 21. M829A | Materials Behavior and Vibration Lab | 1 | 0-0-2 | 25 | 25 |  |
| 22. M831A | Minor Project | 5 | 0-0-10 | 150 | 100 |  |
|  | Total | 16 | 9-0-14 | 500 | 300 | 800 |


| $\begin{array}{l}\text { Subject } \\ \text { Code }\end{array}$ | Subject |  | Credit | L-T-P | Marks Weightage |  |
| :---: | :--- | :--- | :--- | :--- | :--- | :--- |
| Ext. | Int. |  |  |  |  |  |$]$

## ELECTIVES I

1. M837 Design of Bearings and Shaft
2. M838 Computer Aided Design
3. M839 Design of Pollution Control Equipments
4. M840 Design of Pressure Vessels

## ELECTIVES II

1. M845 Fracture Mechanics
2. M846 Design and Metallurgy of Welded Joints
3. M847 Finite Element Methods
4. M848 Materials Management

## ELECTIVE III

1. M 849

Total Quality Management
2. M850 Robotic Engineering
3. M851 Computer Aided Vehicle Design
4. M852 Tribology


## M.D.UNIVERSITY, ROHTAK <br> SCHEME OF STUDIES AND EXAMINATION M.TECH 1st YEAR (MANUFACTURING \& AUTOMATION) <br> SEMESTER 1

CBCS Scheme effective from 2016-17

| $\begin{aligned} & \text { Sl. } \\ & \text { No } \end{aligned}$ | Course Code | Subject | Credit Pattern |  |  |  | Examination Schedule (Marks) |  |  |  | Dura tion of Exam (Hou rs) | No of <br> Hours /week |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P | Total Credi ts | Mark $s$ of Class work | $\begin{gathered} \text { Theor } \\ \mathrm{y} \\ \hline \end{gathered}$ | Practic al | Total |  |  |
| 1 | $\begin{aligned} & \text { 16MMA21C1 } \\ & \text { 16MMA21C2 } \end{aligned}$ | Metal Forming Analysis | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 2 |  | Mechatronics \& Product Design | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 3 | 16MMA21C3 | Total Quality Management | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 4 | 16MMA21C4 | Welding \& Allied Processes | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 5 | 16MMA21CLI | Mechatronics Lab | - | - | 2 | 2 | 50 |  | 50 | 100 | 3 | 4 |
| 6 | 16MMA21CL2 | Welding Lab | - | - | 2 | 2 | 50 |  | 50 | 100 | 3 | 4 |
| 7 | 16MMA21CL3 | CAD/CAM Lab | - | - | 2 | 2 | 50 |  | 50 | 100 | 3 | 4 |
| 8 | 16MMA21C5 | Seminar | - |  | - | 2 | 50 | - | - | 50 |  | 2 |
| 9 | 16MMA21D1 or <br> 16MMA21D2 or 16MMA21D3 OR <br> 16MMA21D4 | Elective I | 4 | - |  | 4 | 50 | 100 |  | 150 | 3 | 4 |
|  |  |  | 28 |  |  |  |  |  |  |  |  |  |
|  |  | TOTAL |  |  |  |  |  |  |  |  |  |  |

Elective I: Choose any one from the following three papers:
16MMA21D1 - INDUSTRIAL INSPECTION
16MMA21D2 - DESIGN AND METALLURGY OF WELDED
JOINTS 16MMA21D3 - FOUNDARY TECHNOLOGY
16MMA21D4-DESIGN PLANNING CONTORL AND PRODUCTION SYSTEM
NOTE:
Examiner will set nine questions in total. Question One will be compulsory and will comprise short answer type questions from all sections and remaining eight questions to be set by taking two questions from each unit. The students have to attempt five questions in total, first being compulsory and selecting one from each Unit.


## M.D.UNIVERSITY, ROHTAK SCHEME OF STUDIES AND EXAMINATION M.TECH 1st YEAR (MANUFACTURING \& AUTOMATION) <br> SEMESTER 2 <br> CBCS Scheme effective from 2016-17



TOTAL
NOTE: Examiner will set nine questions in total. Question One will be compulsory and will comprise short answer type questions from all sections and remaining eight questions to be set by taking two questions from each unit. The students have to attempt five questions in total, first being compulsory and selecting one from each Unit.
Elective II : Choose any one from the following three papers:
16MMA22D1 - QUALITY CONTROL TECHNIQUES
16MMA22D2 - FINITE ELEMENT METHODS
16MMA22D3 - ARTIFICIAL INTELLEGENCE IN MANUFACTURING
Open Elective: A candidate has to select this paper from the pool of Open Electives provided by the University.
Foundation Elective: A candidate has to select this paper from the pool of Foundation Electives provided by the University-

# Maharshi Dayanand University, Rohtak 

## SCHEME OF STUDIES \& EXAMINATION

 MASTER OF TECHNOLOGY (STRUCTURAL DESIGN)
## SEMESTER-III

EFFECTIVE FROM 2012-13

| Course No. | Course Title | Teaching Schedule |  |  | Marks |  | Total | Duration of Exam (Hrs) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Sessional | Exam. |  |  |
| MTSD 301 | Design of Structures- III | 4 | - | - | 50 | 100 | 150 | 3 |
|  |  |  |  |  |  | 100 | 150 | 3 |
| MTSD 302 | Professional Practices | 4 | - | - | 50 | 100 | 150 | 3 |
|  | Elective-III | 4 | - | - | 50 | 50 | 100 | 3 |
| MTSD 303 | Computational Laboratory-III | - | - | 3 | 50 | 50 | 50 |  |
| MTSD 304 | Seminar \& Technical Writing | - |  | 2 | 100 | - | 100 |  |
| MTSD 305 | Dissertation Phase-I | - |  | 4 | 100 |  |  |  |
|  |  | 12 | - | 9 | 350 | 350 | 700 |  |
| TOTAL |  |  |  |  |  |  |  |  |

1. The paper setter shall set each theory paper of 100 marks covering entire syllabus. However the Examiner shall evaluate the performance of the student in the theory paper finally by assigning one of the grades out of $A+A, B, C, D \& E$. The examination of practical courses shall also be evaluated on the basis of these grades.
2. The sessionals of theory and practical courses shall also be evaluated in the basis of these grades.
3. The choice of student for any elective shall not be binding on the department to offer it.
4. The grading system is define at the end of scheme of studies \& examinations and will be supplied by the University to the examiner(s).


## Maharshi Dayanand University, Rohtak

 SCHEME OF STUDIES \& EXAMINATION MASTER OF TECHNOLOGY (STRUCTURAL DESIGN) SEMESTER-IVEFFECTIVE FROM 2012-13

| Course No. | Course Title | Teaching <br> Schedule |  | Marks |  | Total <br>  | L | Duration <br> of Exam <br> (Hrs) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| MTSD 401 | Dissertation | - | - | 24 | Sessional | Exam. |  |  |
| TOTAL |  |  |  |  |  | 400 | 600 | 3 |

NOTE:

1. The sessionals of Dissertation shall be evaluated on the basis of grades i.e $A+, A, B, C, D \& E$.
2. The Dissertation shall be evaluated by an examination committee consisting of the head of the department, Dissertation Supervisor and one External examiner. The evaluation should be based on above grades.
3. The grading system is define at the end of scheme of studies \& examinations and will be supplied by the University to the examiner(s)


## List of Electives:

## Elective- I

MTSD 107 - Composite Structures
MTSD 108 - Analysis and Design of Plates \& Shells
MTSD 109 - Advanced Foundation Design and Geotechnics
MTSD 110 - Material Science

## Elective- II

MTSD 207- Advanced Steel Design
MTSD 208 - Advanced Reinforced Concrete Design

MTSD 209-Earth Retaining Structures
MTSD 210-Construction Failures

## Elective- III

MTSD 306- High Rise Structures
MTSD 307- Design of Hydraulic Systems
MTSD 308- Design Of Bridges


## CURRICULUM AND SCHEME OF EXAMINATIONS OF TWO YEAR MBA PROGRAMME

Second Year : $3^{\text {rd }}$ Semester

| Paper No. | Title of the Paper(s) | External Marks | Internal <br> Marks/ <br> Workshop | Practical Marks | Total Marks |
| :---: | :---: | :---: | :---: | :---: | :---: |
| MBA301 | Strategic Management | 80 | 20 | - | 100 |
| MBA302 | Management Information System | 80 | 20 | - | 100 |
| MBA303 | Business Legislation | 80 | 20 | - | 100 |
| MBA304 | Summer Training Report | 100 | - | - | 100 |
| Specialization Area I $\{$ | Optional Paper - I |  |  |  | 100 |
|  | Optional Paper - II |  |  |  | 100 |
|  | Optional Paper - III |  |  |  | 100 |
| Specialization <br> Area II <br> $\{$ | Optional Paper - I |  |  |  | 100 |
|  | Optional Paper - I <br> Optional Paper - II |  |  |  | 100 |
|  | Optional Paper - III |  |  |  | 100 |
|  | TOTAL |  |  |  | 1000 |

## Note:

1 Students are required to choose any three optional papers from each set of specialization areas offered under dual specialization scheme. The specialization area opted in $3^{\text {rd }}$ Semester would remain same in $4^{\text {th }}$ semester also.
2. The duration of the end term examination shall be 3 hours.
3. The following combinations of specializations shall be offered to the students of 2-Year MBA (General):
a.

Finance and Marketing
b.
c.
d.
e.
f. $\quad$ Marketing and IB
g.

Finance and Human Resource Management
c. Human Resource Management and Marketing

Finance and IT

- Marketing



## CURRICULUM AND SCHEME OF EXAMINATIONS FOR <br> TWO YEAR MBA PROGRAMME

Second Year: $4^{\text {th }}$ Semester

| Paper No. | Title of the Paper(s) | External <br> Marks | Internal <br> Marks/ <br> Workshop | Practical Marks | Total Marks |
| :---: | :---: | :---: | :---: | :---: | :---: |
| MBA401 | Entrepreneurship | 80 | 20 | - | 100 |
| MBA402 | E-Commerce | 50 | - | 50 | 100 |
| MBA403 | Project Report | 100 | - | - | 100 |
| MBA404 | Comprehensive Viva-voce | 100 | - | - | 100 |
| Specialization Area I | Optional Paper - I |  |  |  | 100 |
|  | Optional Paper - II |  |  |  | 100 |
|  | Optional Paper - III |  |  |  | 100 |
| Specialization Area II | Optional Paper - I |  |  |  | 100 |
|  | Optional Paper - II |  |  |  | 100 |
|  | Optional Paper - III |  |  |  | 100 |
|  | TOTAL |  |  |  | 1000 |

## Note:

1. Students are required to choose any three optional papers from each set of specialization areas offered under dual specialization scheme. The specialization area opted in $3^{\text {rd }}$ Semester would remain same in $4^{\text {th }}$ semester also.
2. The topic of the Project Report (Code MBA403) shall be finalized in $3^{\text {rd }}$ semester by a Committee of the Faculty Members to be constituted by Director/Principal of the concerned Institute after presentation by the candidate before the Committee.
3. The duration of the end term examination shall be 3 hours.
4. The following combinations of specializations shall be offered to the students of 2-Year MBA (General):

Finance and Marketing
b. Finance and Human Resource Management
c. Human Resource Management and Marketing
d. Finance and IT
e. $\quad$ Finance and IB
f. Marketing and IB
g. Marketing and IT


## CURRICULUM AND SCHEME OF EXAMINATIONS FOR TWO YEAR MBA PROGRAMME

## SPECIALISATIONS OFFERED IN $3{ }^{\text {RD }}$ AND $4^{\text {TH }}$ SEMESTERS

HUMAN RESOURCE MANAGEMENT: Third Semester

| Paper No. | Title of the Paper(s) | External <br> Marks | Internal <br> Marks/ <br> Workshop | Practical <br> Marks | Total <br> Marks |
| :---: | :--- | :--- | :--- | :---: | :---: |
| MBA305 | Performance Management | 80 | 20 | - | 100 |
| MBA307 | Organisational Change and <br> Development | 80 | 20 | - | 100 |
| MBA308 | Compensation Management | 80 | 20 | - | 100 |

## Fourth Semester

| Paper No. | Title of the Paper(s) | External <br> Marks | Internal <br> Marks/ <br> Workshop | Practical <br> Marks | Total Marks |
| :---: | :--- | :--- | :---: | :---: | :---: |
| MBA405 | Talent Management | 80 | 20 | - | 100 |
| MBA406 | Industrial Relations and Labour <br> Legislations | 80 | 20 | - | 100 |
| MBA407 | Strategic Human Resource <br> Management | 80 | 20 | - | 100 |

Note: The duration of the end term examination shall be 3 hours.


Semester-III

| Paper Code | Course | University Exams | Internal Assessment | Total Marks | $\begin{aligned} & \text { Credits } \\ & \text { (L:T:P) } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 17MCA33Cl | Computer Graphics | 80 | 20 | 100 | 4:0:0 |
| 17MCA33C2 | Operating Systems | 80 | 20 | 100 | 4:0:0 |
| 17MCA33C3 | Advance Database Systems | 80 | 20 | 100 | 4:0:0 |
| 17MCA33C4 | Data Communication and Computer Networks | 80 | 20 | 100 | 4:0:0 |
| 17MCA33C5 | Object Technology | 80 | 20 | 100 | 4:0:0 |
| 17MCA33CLI | SoftwareLab-5 <br> i) Graphics Programming <br> Using C/C++. <br> ii) UNIX / Shell Programming. | 100 | ---- | 100 | 0:0:3 |
| 17MCA33CL2 | SoftwareLab-6 <br> i) Java Programming <br> ii)ADBMS (PLSQL \& MYSQL) | $100{ }^{*}$ | --- | 100 | 0:0:3 |
|  |  |  |  |  | 26 Credits |

Semester-IV

| Paper Code | Course | University Exams | Internal Assessment | Total Marks | $\begin{aligned} & \text { Credits } \\ & \text { (L:T:P) } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 17MCA34Cl | Advanced Java Programming | 80 | 20 | 100 | 4:0:0 |
| 17MCA34C2 | Object Oriented Analysis and Design using UML | 80 | 20 | 100 | 4:0:0 |
| 17MCA34DAI/ <br> 17MCA34DA2/ <br> 17MCA34DA3 | i) Theory of Computation or <br> ii) Software Engineering or <br> iii) Multimedia and Its <br> Applications | 80 | 20 | 100 | 4:0:0 |
| 17MCA34DB1/ 17MCA34DB2/ 17MCA34DB3 | i) Analysis and Design of Algorithms or <br> ii) Computer Security or iii)Digital Image Processing | 80 | 20 | 100 | 4:0:0 |
| 17MCA34C3 | Artificial Intelligence and Expert System | 80 | 20 | 100 | 4:0:0 |
| 17MCA34CLI | SoftwareLab-7 <br> Advance Java Programming | 100 | --- | 100 | 0:0:3 |
| 17MCA34CL2 | Software Lab-8 <br> i) Object Oriented Analysis and Design using UML <br> ii) PROLOG | $10{ }^{*}$ | --- | 100 | 0:0:3 |
| 17MCA34C4 | Minor Project-I | - | 100 | 100 | 0:2:0 |
|  | Total |  |  |  | 28 Credits |



Total Credits= $\mathbf{3 1}$ Credits

* 20 marks out of 100 will be based on the evaluation/assessment of the candidate in Test(s) and Assignment(s) during the semester, which will be forwarded by the Head of Dept./Director to the Examiner(s). Further, both practical exams of a semester may be conducted on the same day in 2 sittings each maximum of 3 hours.



## MCA Third Year

| Semester-V |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Paper Code | Course | University Exams | Internal Assessment | Total Marks | $\begin{aligned} & \text { Credits } \\ & \text { (L:T:P) } \end{aligned}$ |
| 18MCA3SCI | Advanced Technology | 80 | 20 | 100 | 4:0:0 |
| 18MCA35C2 | Soft Computing | 80 | 20 | 100 | 4:0:0 |
| 18MCA35C3 | Data Warehousing and Data Mining | 80 | 20 | 100 | 4:0:0 |
| 18MCA35DA1/ 18MCA35DA $2 /$ 18MCA35DA3 | (i) Cloud Computing or <br> (ii) Big Data Analytics or <br> (iii) Software Testing and Quality Assurance | 80 | 20 | 100 | 4:0:0 |
| 18MCA35DB1/ 18MCA35DB2/ 18MCA35DB3 | (i) Internet of Things or <br> (ii) Mobile Computing or <br> (iii) Embedded Systems | 80 | 20 | 100 | 4:0:0 |
| 18MCA35CLl | Software Lab-9 <br> .NET Programming Using C\# | $10{ }^{*}$ | --- | 100 | 0:0:3 |
| 18MCA35CL2 | Software Lab-10 <br> Soft Computing | 100 | ---- | 100 | 0:0:3 |
| 18MCA35C6 | Minor Project-II | - | 100 | 100 | 0:2:0 |
|  | Total |  |  |  | 28 Credits |
| Open Elective (0) |  |  |  |  |  |
| To be Chosen from the pool of Open Electives provided by the University (excluding the open elective prepared by the Department of Comp Sc. \& Appls.) |  |  |  |  | 3 |

Total Credits= 31 Credits
20 marks out of 100 will be based on the evaluation/assessment of the candidate in Test(s) and Assignment(s) during the semester, which will be forwarded by the Head of Dept./Director to the Examiner(s). Further, both practical exams of a semester may be conducted on the same day in 2 sittings each maximum of 3 hours.

## Semester-VI

| Paper Code | Course | University <br> Exams | Internal <br> Assessment | Total <br> Marks | Credits |
| :--- | :--- | :---: | :---: | :---: | :---: |
| 18MCA36C1 | Major Project | 400 | 100 | 500 | 20 Credits |
|  | Grand Total of 3 Years/Credits |  |  |  |  |



2019-20

MAHARSHI DAYANAND UNIVERSITY, ROHTAK SCHEME OF STUDIES AND EXAMINATION
Bachelor of Technology (Civil Engineering) Scheme effective from 2019-20 SEMESTER $3^{\text {rd }}$

| Sr. <br> No | Course Code | Course Title | Hours <br> per <br> week <br> L-T- <br> P | Cont act hours per week | $\begin{array}{r} \text { Cre } \\ \mathrm{d} \end{array}$ | Examination Schedule (Marks) |  |  |  | Duration of Exam (Hours) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | Class <br> work | Theory | Practical | Total |  |
| 1. | HSMC-201-G | Economics For Engineers | 2-0-0 | 2 | 2 | 25 | 75 | - | 100 | 3 |
| 2. | PCC-201-G | Introduction to Civil Engineering | 2-0-0 | 2 | 2 | 25 | 75 | - | 100 | 3 |
| 3. | BSC-Math-205-G | Mathematics III | 2-1-0 | 3 | 3 | 25 | 75 | - | 100 | 3 |
| 4. | PCC-203-G | Engineering Mechanics | 3-1-0 | 4 | 4 | 25 | 75 | - | 100 | 3 |
| 5. | *MC-106-G | Environmental Science | 3-0-1 | 4 | 0 | 25 | 75 | - | -- | 3 |
| 6. | PCC-CE-205-G | Fluid Mechanics | 2-1-0 | 3 | 3 | 25 | 75 | - | 100 | 3 |
| 7. | PCC-CE-207-G | Surveying | 2-1-0 | 3 | 3 | 25 | 75 | - | 100 | 3 |
| 8. | LC-CE-209-G | Building Drawing lab | 0-0-2 | 2 | 1 | 25 | - | 25 | 50 | 3 |
| 9. | LC-CE-211-G | Engineering Mechanics Lab. | 0-0-2 | 2 | 1 | 25 | - | 25 | 50 | 3 |
| 10. | LC-CE-213-G | Fluid Mechanics Lab. | 0-0-2 | 2 | 1 | 25 | - | 25 | 50 | 3 |
| 11. | LC-CE-215-G | Surveying Lab. | 0-0-2 | 2 | 1 | 25 | - | 25 | 50 | 3 |
| TOTAL |  |  |  |  | 21 |  |  |  |  |  |

MC-106Gis a mandatory non -credit course in which the students will be required passing marks in theory.


## MAHARSHI DAYANAND UNIVERSITY, ROHTAK <br> SCHEME OF STUDIES AND EXAMINATION

## Bachelor of Technology (Civil Engineering) Scheme effective from 2019-20

SEMESTER $\mathbf{4}^{\text {th }}$

| Sr. <br> No. | Course Code | Course Title | Hours per | Contact hours per week | Credit | Examination Schedule (Marks) |  |  |  | Duration of Exam (Hours) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $\begin{gathered} \text { L-T- } \\ \text { P } \end{gathered}$ |  |  | Class work | Theory | Practical | Total |  |
| 1. | $\begin{aligned} & \text { HSMC- } \\ & \text { 202-G } \end{aligned}$ | Organization Behavior | 3-0-0 | 3 | 3 | 25 | 75 | - | 100 | 3 |
| 2. | $\begin{aligned} & \text { PCC-CE- } \\ & 202-G \end{aligned}$ | Hydraulic engineering | 3-1-0 | 4 | 4 | 25 | 75 | - | 100 | 3 |
| 3. | $\begin{aligned} & \text { PCC-CE- } \\ & \text { 204-G } \end{aligned}$ | Design of concrete structure | 3-1-0 | 4 | 4 | 25 | 75 | - | 100 | 3 |
| 4. | $\begin{aligned} & \text { PCC-CE- } \\ & 206-G \end{aligned}$ | Structural Analysis | 2-1-0 | 3 | 3 | 25 | 75 | - | 100 | 3 |
| 5. | $\begin{aligned} & \text { PCC-CE- } \\ & 208-G \end{aligned}$ | Geomatics \& Aerial surveying | 3-1-0 | 4 | 4 | 25 | 75 | - | 100 | 3 |
| 6. | $\begin{aligned} & \text { PCC-CE- } \\ & 210-G \end{aligned}$ | Material Testing \& Evaluation | 3-0-0 | 3 | 3 | 25 | 75 | - | 100 | 3 |
| 7. | $\begin{aligned} & \text { LC-CE- } \\ & 212-G \end{aligned}$ | Hydraulic engineering lab | 0-0-2 | 2 | 1 | 25 | - | 25 | 50 | 3 |
| 8. | $\begin{aligned} & \text { LC-CE- } \\ & \text { 214-G } \end{aligned}$ | Structural Analysis Lab | 0-0-2 | 2 | 1 | 25 | - | 25 | 50 | 3 |
| 9. | $\begin{aligned} & \text { LC-CE- } \\ & \text { 216-G } \end{aligned}$ | Geomatics \& Arial surveying Lab. | $0-0-2$ | 2 | 1 | 25 | - | 25 | 50 | 3 |
| 10. | $\begin{aligned} & \text { LC-CE- } \\ & \text { 218-G } \end{aligned}$ | Material Testing \& Evaluation Lab. | 0-0-2 | 2 | 1 | 25 | - | 25 | 50 | 3 |
| TOTAL |  |  |  |  | 25 |  |  |  |  |  |

## Note:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of Calculator and other materials will not be permitted in the examination.
2. (A) each student has to undergo practical training of $4 / 6$ weeks in an Industry/ Institute/ Professional Organization/ Research Laboratory/ training centre etc and its evaluation shall be carried out in the V semester on the basis of seminar, viva-voce, report and certificate of practical training obtained by the student.


# MAHARSHI DAYANAND UNIVERSITY, ROHTAK <br> SCHEME OF STUDIES \& EXAMINATIONS B.Tech. $3^{\text {rd }}$ YEAR CIVIL ENGINEERING, SEMESTER- V <br> Proposed " $F$ " Scheme effective from 2011-12 

| Subject <br> Code | Subject Name | $\mathbf{L}$ | $\mathbf{T}$ | $\mathbf{P}$ | Total | Sessional <br> Marks | Theory <br> Marks | Sem <br> Practical <br> Marks | Total Marks |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| CE-301-F | Design of Steel <br> Structure- I | 3 | 1 | - | 4 | 50 | 100 | 0 | 150 |
| CE-303-F | Transportation Engg--I | 3 | 1 | 0 | 4 | 50 | 100 | 0 | 150 |
| CE-305-F | Water Supply- <br> Treatment | 3 | 1 | 0 | 4 | 50 | 100 | 0 | 150 |
| CE-307-F | Soil Mechanics | 3 | 1 | 0 | 4 | 50 | 100 | 0 | 150 |
| CE-309-F | Numerical Methods And <br> Computing Techniques | 3 | 1 | 0 | 4 | 50 | 100 | 0 | 150 |
| CE-311-F | Hydrology | 3 | 1 | 0 | 4 | 50 | 100 | 0 | 150 |
| CE-313 F | DSS-Drg.Lab | 2 | 0 | 3 | 5 | 25 |  | 25 | 50 |
| CE-315-F | Soil Mechanics Lab | 0 | 0 | 2 | 2 | 25 | 0 | 25 | 50 |
| CE-317 F | Transportation Lab-I | 0 | 0 | 2 | 2 | 25 | 0 | 25 | 50 |
| CE-319-F | Survey Camp | 0 | 0 | 0 | 0 | 50 | 0 | 0 | 50 |
| CE-321-F | Auto Cad Lab | 0 | 0 | 2 | 2 | 25 | 0 | 25 | 50 |
|  | Total | 20 | 6 | 9 | 35 | 450 | 600 | 100 | 1150 |

## Note:

1) Students will be allowed to use non-programmable scientific calculator. However, sharing of calculator will not be permitted in the examination.
2) Assessment of Practical Training-I, undergone at the end of IV semester, will be based on seminar, viva-voce, report and certificate of practical training obtained by the student from the industry. According to performance letter grades A, B, C, F are to be awarded. A student who is awarded ' F ' grade is required to repeat Practical Training.


## MAHARSHI DAYANAND UNIVERSITY, ROHTAK

SCHEME OF STUDIES \& EXAMINATIONS B.Tech. $3^{\text {rd }}$ YEAR CIVIL ENGINEERING, SEMESTER- VI Proposed "F" Scheme effective from 2011-12

| Subject <br> Code | Subject Name | $\mathbf{L}$ | $\mathbf{T}$ | $\mathbf{P}$ | Total | Class <br> Marks | Sem <br> Theory <br> Marks | Sem <br> Practical <br> Marks | Total <br> Marks |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| CE-302-F | Design of Concrete Structures- <br> II | 4 | 2 | 0 | 6 | 50 | 100 | 0 | 150 |
| CE-304-F | Irrigation Engineering-I | 3 | 1 | 0 | 4 | 50 | 100 | 0 | 150 |
| CE-306-F | Geotechnology | 3 | 1 | 0 | 4 | 50 | 100 | 0 | 150 |
| CE-308-F | Sewerage And Sewage <br> Treatment | 3 | 1 | 0 | 4 | 50 | 100 | 0 | 150 |
| CE-310-F | Transportation Engg.-II | 3 | 1 | 0 | 4 | 50 | 100 | 0 | 150 |
| CE-312-F | Engineering Geology | 3 | 1 | 0 | 4 | 50 | 100 | 0 | 150 |
| CE-314-F | Geotechnology Lab | 0 | 0 | 2 | 2 | 25 | 0 | 25 | 50 |
| CE-316-F | Transportation Engg.-II Lab | 0 | 0 | 2 | 2 | 25 | 0 | 25 | 50 |
| CE-318-F | Engineering Geology Lab | 0 | 0 | 2 | 2 | 25 | 0 | 25 | 50 |
| CE-320-F | Environmental Engg. Lab | 0 | 0 | 2 | 2 | 25 | 0 | 25 | 50 |
| GPCE-318-F | General Proficiency | 0 | 0 | 1 | 1 | 0 | 0 | 50 | 50 |
|  | Total | 19 | 7 | 9 | 35 | 400 | 600 | 150 | 1150 |

## NOTE:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of Calculator will not be permitted in the examination.
2. Each student has to undergo practical training of 6 weeks during summer vacation and its evaluation shall be carried out in the VII semester.


# MAHARSHI DAYANAND UNIVERSITY, ROHTAK <br> SCHEME OF STUDIES \& EXAMINATIONS 

B. Tech. $4^{\text {th }}$ YEAR CIVIL ENGINEERING, SEMESTER-VII
(Scheme-F)

## EFFECTIVE FROM THE SESSION 2012-13

| Subject Code | Subject Name | Teaching schedule |  |  |  | Marks <br> For class <br> work | Marks for Examination |  |  Dotal <br> Marks  | Duration of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | $\mathbf{P}$ | Total |  | Theory | Practical |  |  |
| CE-401-F | Design of Steel Structure-II | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| CE-403-F | Disaster Mitigation and Management | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 4 |
| CE-405-F | Estimating and Costing | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| CE-407-F | Irrigation Engg-II | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| - -------- | Elective | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| CE-451-F | Hydro Power Engg. | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| CE-453-F | Ground Water Engg | 3 | 1 | 0 | 4 | 50 | 100 | 0 | 150 | 3 |
| CE-453-F |  | 0 | 0 | 2 | 2 | 50 | 0 | 50 | 100 | 3 |
| CE-455-F | Irrigation Drawing Lab | 0 | 0 | 2 |  |  | - | - | - |  |
| CE-457-F | Practical Training - II | - | - | 2 | - | - |  |  |  |  |
| $\begin{aligned} & \text { GFCE- } \\ & 459-F \end{aligned}$ | General Fitness for the Profession | - | - | - |  | - | ${ }^{-}$ | 50 | 50 |  |
|  | Total | 21 | 7 | 4 | 32 | 400 | 700 | 100 | 1200 |  |

## Note:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of calculator will not be permitted in the examination.
2. Student will be permitted to opt for any one elective run by the department. However, the departments will offer only those electives for which they have expertise. The choice of the students for any elective shall not be a binding for the department to offer, if the department does not have expertise.
3. Assessment of Practical Training-II, carried out at the end of VI semester, will be based on seminar, viva-voce and project report of the student. According to performance letter grades A, B, C, F are to be awarded. A student who is awarded ' $F$ ' grade is required to repeat Practical Training.

## ELECTIVES

1) CE -409-F - Energy planning and management
2) CE-411-F - Environmental pollution and control
3) $\mathrm{CE}-417-\mathrm{F} \quad$ - Finite Element Methods
4) CE-421-F - Environmental impact and management
5) CE-423-F - Elements of Earth Quake Engg.
6) CE-433-F - Hydraulic System Modeling


# MAHARSHI DAYANAND UNIVERSITY, ROHTAK <br> SCHEME OF STUDIES \& EXAMINATIONS 

## B.Tech. $4^{\text {th }}$ YEAR CIVIL ENGINEERING, SEMESTER- VIII <br> (Scheme-F)

## EFFECTIVE FROM THE SESSION 2012-13

|  |  |  | Subject | Internal <br> Marks | External <br> Marks |
| :--- | :--- | :---: | :---: | :---: | :---: |
| 1. | CE-402-F | Industrial Training/Institutional Project Work | 150 | 150 | 300 |

## Note:

The students are required to undergo Industrial Training in State/Central PWD, Railways and other Originations or Institutional Project Work of duration not less than 4 months in a reputed organization or concerned institute. The students who wish to undergo industrial training, the industry chosen for undergoing the training should be at least a private limited company. The students shall submit and present the mid-term progress report at the Institute. The presentation will be attended by a committee. Alternately, the teacher may visit the Industry to get the feedback of the students.

The final viva-voce of the Industrial Training or Institutional Project Work will be conducted by an external examiner and one internal examiner appointed by the Institute. External examiner will be from the panel of examiners submitted by the concerned institute approved by the Board of Studies in Engg. \& Technology. Assessment of Industrial Training or Institutional Project Work will be based on seminar, viva-voce, report and certificate of Industrial Training or Institutional Project Work obtained by the student from the industry or Institute.

The internal marks distributions for the students who have undergone Industrial Training consist of $\mathbf{5 0}$ marks from the industry concern and $\mathbf{1 0 0}$ marks by the committee members consisting of faculty members of concerned department of the parent institute.

The teachers engaged for Institutional Project work shall have a workload of 2 hours per group (at least 4 students) per week.


## B.Tech. (Computer Science and Engineering)

Common with B.Tech. (Information Technology) \&
B.Tech. (Computer Science and Information Technology)

Scheme ofStudies/Examination w.e.f. 2019-20

## Semester-3

| Sr. No. | Course Code | Course Title | Hours per week |  |  | Tot <br> al <br> Con <br> tact <br> Hrs. <br> per <br> wee <br> k | Cre dit | Examination Schedule <br> (Marks) |  |  |  | Dur <br> atio <br> n of <br> Exa <br> m <br> (Ho <br> urs) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P |  |  | Mar k of Clas s wor k | The ory | Pra ctic al | Tot al |  |
| 1 | PCC-CSE-201G | Database <br> Management Systems | 3 | 0 | 0 | 3 | 3 | 25 | 75 |  | 100 | 3 |
| 2 | PCC-CSE-203G | Data Structures \& Algorithms | 3 | 0 | 0 | 3 | 3 | 25 | 75 |  | 100 | 3 |
| 3 | PCC-CSE-205G | Digital Electronics | 3 | 0 | 0 | 3 | 3 | 25 | 75 |  | 100 | 3 |
| 4 | PCC-CSE-207G | Python Programming | 2 | 0 | 0 | 2 | 2 | 25 | 75 |  | 100 | 3 |
| 5 | $\begin{aligned} & \text { BSC-MATH- } \\ & \text { 203G } \end{aligned}$ | Mathematics - III <br> (Multivariable <br> Calculus and <br> Differential <br> Equations) | 2 | 0 | 0 | 2 | 2 | 25 | 75 |  | 100 | 3 |
| 6 | HSMC-01G | Economics for Engineers | 3 | 0 | 0 | 3 | 3 | 25 | 75 |  | 100 | 3 |
| 7 | LC-CSE-209G | Database Management Systems LAB | 0 | 0 | 4 | 4 | 2 | 25 |  | 25 | 50 | 3 |
| 8 | LC-CSE-211G | Digital Electronics LAB | 0 | 0 | 4 | 4 | 2 | 25 |  | 25 | 50 | 3 |
| 9 | LC-CSE-213G | Data Structures \& Algorithms LAB Using C | 0 | 0 | 4 | 4 | 2 | 25 |  | 25 | 50 | 3 |
| 10 | LC-CSE-215G | Python Programming LAB | 0 | 0 | 2 | 2 | 1 | 25 |  | 25 | 50 | 3 |
| Total |  |  |  |  |  |  | 23 |  |  |  | 800 |  |

## B.Tech. (Computer Science and Engineering)

## Common with B.Tech. (Information Technology) \&

## B.Tech. (Computer Science and Information Technology)

Scheme ofStudies/Examination w.e.f. 2019-20
Semester-4

*MC-106Gis a mandatory non -credit course in mbick the students will be required passing marks in theory.
NOTE: At the end of 4th semester each sudent has to undergo Practical Training of 4/6 weeks in an Industry/ Institute/ Professional Organization/ Research Laboratory/ training centre etc. and submit typed report alongwith a certificate from the organization \& its evaluation shall be carried out in the 5th Semester

## M. D. UNIVERSITY, ROHTAK

## Scheme of studies \& Examination

## Bachelor of Technology (Computer Science \& Engineering)

Semester - V
' $F$ ' Scheme Effective from 2010-11

| S. No. | Course No. | Subject | Teaching Schedule |  |  |  | $\begin{aligned} & \text { Examination Schedule } \\ & \text { (Marks) } \end{aligned}$ |  |  |  | Duration of Exam (Hours) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P | Total | Marks of Class work | Theory | Practic al | Total |  |
| 1 | CSE-301 F | Principles of Operating System (CSE,IT) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 2 | EE-309-F | Microprocessors and Interfacing (EL,CSE,IT,EI, IC, EEE, AEI) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 3 | CSE-303-F | Computer Graphics (CSE,IT) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 4 | CSE-305-F | Theory of Automata Computation | 3 | 1 |  | 4 | 50 | 100 | - | 150 | 3 |
| 5 | CSE 307-F | Web Development (Common with IT - VI Sem) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 6 | IT-204-F | Multimedia Technologies (Common with IT- IV- Sem) | 3 | - | - | 3 | 50 | 100 | - | 150 | 3 |
| 7 | CSE-309-F | Computer Graphics Lab. (CSE,IT) | - | - | 3 | 3 | 25 | - | 25 | 50 | 3 |
| 8 | CSE-311-F | Web Development \& Core JAVA Lab. (Common with 6 Sem.-IT) | - | - | 2 | 2 | 25 |  | 25 | 50 | 3 |
| 9 | IT-208-F | Multimedia Tech. Lab (Common with IT-IVSem) | - | - | 2 | 2 | 25 | - | 25 | 50 | 3. |
| 10 | EE-329-F | Microprocessors and Interfacing Lab. (EL,CSE,IT,EI, IC, EEE, AED. | - | - | 2 | 2 | 25 | - | 25 | 50 | 37 |
| 11. | CSE-313-F | O.S. Lab. (CSE, IT) | - | - | 2 | 2 | 25 | - | 25 | 50 | - |
| 12 | CSE-315-F | Practical Training-I | - | - | 2 | 2 | - | - | - | - | $-1$ |
|  |  | TOTAL | 18 | 5 | 13 | 36 | 425 | 600 | 125 | 1150 |  |

## Note:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of calculator will not be permitted in the examination.
2. Assessment of Practical Training-I, undergone at the end of IV semester, will be based on seminar, viva-voce, report and certificate of practical training obtained by the student from the industry. According to performance letter grades A, B, C, F are to be awarded. A student who is awarded „F" grade is required to repeat Pradtical Training.


## M.D. UNIVERSITY, ROHTAK

## Scheme of studies \& Examination Bachelor of Technology (Computer Science \& Engineering) <br> Semester - VI <br> ' $F$ ' Scheme Effective from 2010-11

| S. No. | Course No. | Subject | Teaching Schedule |  |  |  | Examination Schedule (Marks) |  |  |  | Duration of Exam (Hours) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P | Marl of Total wor | ss | Theory | Practi cal | Total |  |
| 1 | CSE-302 F | Principles of Software Engineering (CSE,IT) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 2 | CSE-304 F | Intelligent Systems (CSE,IT) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 3 | IT-305 F | $\begin{aligned} & \text { Computer Networks (CSE, } \\ & \text { EL \& Common with 5 Sem. } \\ & \text {-IT, AEI) } \end{aligned}$ | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 4 | IT-303 F | Systems Programming \& System Administration (Common with 5 Sem - IT) | 3 | 1 |  | 4 | 50 | 100 | - | 150 | 3 |
| 5 | CSE-306 F | Analysis \& Design of Algorithms | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 6 | EE-310-F | Digital System Design (EL,EE,CSE,EI, IC, AEI) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 7 | CSE-308 F | $\begin{aligned} & \text { Intelligent Systems Lab. } \\ & \text { (CSE,IT) } \end{aligned}$ | - | - | 3 | 3 | 25 | - | 25 | 50 | 3 |
| 8 | EE-330-F | Digial System Design Lab. (EL,EI, IC,CSE, AEI) | - | - | 3 | 3 | 25 | - | 25 | 50 | 3 |
|  |  | Computer Network lab | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| 9 | $\frac{\text { CSE-310-F }}{\text { CSE-312-F }}$ | Visual Programming Lab. | $\cdots$ | $\square$ | 2 | 2 | $\frac{25}{25}$ | - | 25 | 50 | 3 |
|  | CSE-312-F |  | $\cdots$ | - |  | $\cdots$ | 50 | - | - | 50 | 3 |
| 9 | GP-302-F | General Proficiency |  |  |  |  |  |  |  |  | - |
|  |  | TOTAL | 18 | 6 | 10 | 34 | 450 | 600 | 100 | 1150 |  |

Note:

1. Each student has to undergone practical training of 6 weeks during summer vacation and its evaluation shall be carried out in the VII semester.
2. Students will be allowed to use non-programmable scientific calculator. However, sharing of calculator will not be permitted in the examination.

## M.D.UNIVERSITY, ROHTAK Scheme of Studies / Examination

Bachelor of Technology (Computer Science \& Engineering) SEMESTER VII
'F' Scheme Effective from 2012-13

| Sl. No. | Course No. | Subject | Teaching Schedule |  |  |  | Examination Schedule (Marks) |  |  |  | Duration of Exam <br> (Hours) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P | Total | Marks of Class work | Theory | Practical | Total |  |
| 1 | CSE-401 F | Advanced Computer Architecture | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 2 | CSE-403 F | Software Project Management (CSE.IT) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 3 | CSE-405 F | Compiler Design | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 4 | CSE-407 F | Neural Networks | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 5 | CSE-409 F | Advanced Java (CSE, IT) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 6 |  | Elective | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 7 | CSE-411 F | Compiler Design Lab | - | - | 2 | 2 | 25 | - | 50 | 75 | 3 |
| 8 | CSE-413 F | Neural Networks Using MATLAB | - | - | 2 | 2 | 25 | - | 50 | 75 | 3 |
| 9 | CSE-415 F | Advanced JAVA <br> Lab (CSE, IT) | - | - | 3 | 3 | 50 | -- | 100 | 150 | 3 |
| 10 | CSE-417 F | PRATICAL TRAINING-II | - | - | $-$ | - |  | - | - |  |  |
|  |  | TOTAL | 18 | 6 | 7 | 31 | 400 | 600 | 200 | 1200 |  |

## List of Electives

| 1. | CSE-423 F | Distributed Operating System |
| :--- | :--- | :--- |
| 2. | IT-465F | Network Security \& Management |
| 3. | CSE-421 F | Real Time Systems |
| 4. | CSE-435 F | Advanced Database Management Systems |
| 5. | IT-467 F | Computer Software Testing |
| 6. | TT-473 F | High Speed Networks |

## Note:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of calculator will not be permitted in the examination.
2. Student will be permitted to opt for any one elective run by the department. However, the departments will offer only those electives for which they have expertise. The choice of the students for any elective shall not be a binding for the department to offer, if the department does not have expertise.
3. Assessment of Practical Training-II, carried out at the end of VI semester, will be based on seminar, viva- voce and project report of the student. According to performance letter grades A, B, C, F are to be awarded. A student who is awarded ' $F$ ' grade is required to repeat Practical Training.


## MAHARSHI DAYANAND UNIVERSITY, ROHTAK <br> SCHEME OF STUDIES \& EXAMINATIONS <br> B.Tech. $4^{\text {th }}$ YEAR COMPUTER SC \& ENGINEERING, SEMESTER-VIII

(Scheme-F)

## EFFECTIVE FROM THE SESSION 2012-13

|  |  |  | Internal <br> Marks | External <br> Marks | Total Marks |
| :--- | :---: | :---: | :---: | :---: | :---: |
| 1. | CSE-402-F | Industrial Training/Institutional Project Work | 150 | 150 | 300 |

## Note:

The students are required to undergo Industrial Training or Institutional Project Work of duration not less than 4 months in a reputed organization or concerned institute. The students who wish to undergo industrial training, the industry chosen for undergoing the training should be at least a private limited company. The students shall submit and present the mid-term progress report at the Institute. The presentation will be attended by a committee. Alternately, the teacher may visit the Industry to get the feedback of the students.

The final viva-voce of the Industrial Training or Institutional Project Work will be conducted by an external examiner and one internal examiner appointed by the Institute. External examiner will be from the panel of examiners submitted by the concerned institute approved by the Board of Studies in Engg. \& Technology. Assessment of Industrial Training or Institutional Project Work will be based on seminar, viva-voce, report and certificate of Industrial Training or Institutional Project Work obtained by the student from the industry or Institute.

The internal marks distributions for the students who have undergone Industrial Training consist of 50 marks from the industry concern and 100 marks by the committee members consisting of faculty members of concerned department of the parent institute.

The teachers engaged for Institutional Project work shall have a workload of 2 hours per group (at least 4 students) per week.


## MAHARSHI DAYANAND UNIVERSITY, ROHTAK ELETRICAL ENGINEERING

B. Tech, $\mathbf{2}^{\text {nd }}$ year (III ${ }^{\text {rd }}$ semester) w.e.f 2019-20

| S. No. | Course Code | Course Title | Teaching Schedule |  |  | Marks of Class Work | Examination Marks |  | Total Marks | Credits | Duration of Examination (in hours) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P |  | Theory | Practical |  |  |  |
| 1. | $\begin{aligned} & \text { PCC- } \\ & \text { EE- } \\ & 201 \mathrm{a} \end{aligned}$ | Electric Circuit Analysis | 3 | 1 | 0 | 25 | 75 | 0 | 100 | 4 | 3 |
| 2. | $\begin{aligned} & \text { PCC- } \\ & \text { EE- } \\ & 203 \mathrm{G} \\ & \hline \end{aligned}$ | Electric Circuit <br> Analysis <br> Laboratory | 0 | 0 | 2 | 25 | 0 | 25 | 50 | 1 | - |
| 3. | $\begin{gathered} \text { PCC- } \\ \text { EE- } \\ 205 \mathrm{~g} \end{gathered}$ | Analog Electronics | 3 | 0 | 0 | 25 | 75 | 0 | 100 | 3 | 3 |
| 4. | $\begin{aligned} & \text { PCC- } \\ & \text { EE- } \\ & 207 \mathrm{G} \\ & \hline \end{aligned}$ | Analog Electronics <br> Laboratory | 10 | 0 | 2 | 25 | 0 | 25 | 50 | 1 |  |
| $5 .$ | $\begin{gathered} \text { PCC- } \\ \text { EE- } \\ 209 \mathrm{G} \\ \hline \end{gathered}$ | Electrical Machines-I | 3 | 1 | 0 | 25 | 75 | 0 | 100 | 4 | 3 |
| 6. | $\begin{gathered} \hline \text { PCC- } \\ \text { EE- } \\ 211 \mathrm{G} \\ \hline \end{gathered}$ | Electrical <br> Machines-I <br> Laboratory | 0 | 0 | 2 | 25 | 0 | 25 | 50 | 1 |  |
| 7. | $\begin{gathered} \text { PCC- } \\ \text { EE- } \\ 210 G \end{gathered}$ | ```Measurement and Instrumentation``` | 3 | 0 | 0 | 25 | 75 | 0 | 100 | 3 | 3 |
| 8. | $\begin{gathered} \text { PCC- } \\ \text { EE- } \\ 212 G \end{gathered}$ | Measurement and Instrumentation Laboratory | 0 | 0 | 2 | 25 | 0 | 25 | 50 | 1 | - |
| 9. | $\begin{gathered} \hline \text { ESC- } \\ 202-G \end{gathered}$ | Engineering Mechanics | 3 | 1 | 0 | 25 | 75 | 0 | 100 | 4 | 3 |
| 10. | MC- <br> GES- <br> 106-G | Environmental Studies | 3 | 0 | 1 | 25 | 75 | 0 | 100 | 0 | 3 |
| Total |  |  |  |  |  |  |  |  | 800 | 22 |  |

L-Lecture, T-Tutorial, P-Practical

Note: The use of programmable devices such as programmable calculators etc. is not allowed duning the exanissharing of materials will not be permitted during examination.

# MAHARSHI DAYANAND UNIVERSITY, ROHTAK ELECTRICAL ENGINEERING 

B. Tech, $\mathbf{2}^{\text {nd }}$ year (IV ${ }^{\text {th }}$ semester) w.e.f 2019-20

| $\begin{gathered} \hline \text { S. } \\ \text { No. } \end{gathered}$ | Course Code | Course Title | Teaching Schedule |  |  | Marks of Class Work | Examination Marks |  | Total Marks | Credits | Duration of Examination (in hours) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P |  | Theory | Practical |  |  |  |
| 1. | $\begin{gathered} \hline \text { PCC- } \\ \text { EE- } \\ 202 \mathrm{G} \end{gathered}$ | Digital Electronics | 3 | 0 | 0 | 25 | 75 | 0 | 100 | 3 | 3 |
| 2. | $\begin{gathered} \hline \text { PCC- } \\ \text { EE- } \\ 204 \mathrm{G} \\ \hline \end{gathered}$ | Digital Electronics Laboratory | 0 | 0 | 2 | 25 | 0 | 25 | 50 | 1 | - $\quad 3$ |
| 3. | $\begin{gathered} \text { PCC- } \\ \text { EE- } \\ 206 \mathrm{G} \end{gathered}$ | Electrical Machines-II | 3 | 1 | 0 | 25 | 75 | 0 | 100 | 4 | 3 |
| 4. | $\begin{gathered} \hline \text { PCC- } \\ \text { EE- } \\ 208 \mathrm{G} \\ \hline \end{gathered}$ | Electrical Machines-II Laboratory | 0 | 0 | 2 | 25 | 0 | 25 | 50 | 1 | - |
| 5. | $\begin{gathered} \text { PCC- } \\ \text { EE- } \\ 210 G \end{gathered}$ | Transmission and Distribution | 3 | 0 | 0 | 25 | 75 | 0 | 100 | 3 | 3 |
| 6. | $\begin{gathered} \text { PCC- } \\ \text { EE- } \\ 212 \mathrm{G} \\ \hline \end{gathered}$ | Transmission and Distribution Laboratory | 0 | 0 | 2 | 25 | 0 | 25 | 50 | 1 | - |
| 7. | $\begin{gathered} \hline \text { PCC- } \\ \text { EE- } \\ 214 \mathrm{G} \end{gathered}$ | Signals and Systems | 3 | 0 | 0 | 25 | 75 | 0 | 100 | 3 | 3 |
| 8. | $\begin{aligned} & \text { PCC- } \\ & \text { EE- } \\ & 216 G \end{aligned}$ | Electromagnetic Fields | 3 | 1 | 0 | 25 | 75 | 0 | 100 | 4 | 3 |
| 9. | $\begin{array}{c\|} \hline \text { BSC- } \\ \text { MATH- } \\ 204 \mathrm{G} \\ \hline \end{array}$ | Mathematics-III (Probability and Statistics) | 3 | 1 | 0 | 25 | 75 | 0 | 100 | 4 | 3 |
| 10. |  | Indian Constitution | 3 | 0 | 0 | 25 | 75 | 0 | 100 | 0 | 3 |
| 11. | $\begin{aligned} & \text { BSC- } \\ & \text { BIO- } \\ & 201 \mathrm{~g} \end{aligned}$ | Biology-I | 2 | 1 | 0 | 25 | 75 | 0 | 100 | 3 | 3 |
|  |  |  |  |  |  |  |  |  | 850 | 27 |  |
|  | TOTAL |  |  |  |  |  |  |  | 850 | 27 |  |

L-Lecture, T-Tutorial, P-Practical

| Mandatory Course | Course Code | Course Title |
| :---: | :---: | :---: |
|  |  | Indian Constitution |
|  |  | Essence of Indian Traditional <br> Knowledge |



## M.D. UNIVERSITY, ROHTAK

## Scheme of studies \& Examination

Bachelor of Technology (Electrical Engg.) SEMESTER V
' $F$ ' Scheme Effective from 2011-2012

\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|}
\hline \multirow[t]{2}{*}{Course No.} \& \multirow[t]{2}{*}{Course Title} \& \multicolumn{4}{|l|}{Teaching Schedule} \& \multirow[t]{2}{*}{Marks of Class Work} \& \multicolumn{2}{|l|}{Examination} \& \multirow[t]{2}{*}{Total Marks} \& \multirow[t]{2}{*}{Duration of Exam} <br>
\hline \& \& L \& T \& P \& Total \& \& Theory \& Practical \& \& <br>
\hline EE-311-F \& Electrical Machines-II (EE, EEE) \& 3 \& 1 \& - \& 4 \& 50 \& 100 \& - \& 150 \& 3 <br>
\hline EE-303-F \& Electronic Measurement And Instrumentation (EE,EEE,ECE,IC) \& 3 \& 1 \& - \& 4 \& 50 \& 100 \& - \& 150 \& 3
3 <br>
\hline EE-305-F \& Analog Electronics Circuits (EE,EEE,ECE,IC) \& 3 \& 1 \& - \& 4 \& 50 \& 100 \& - \& 150 \& 3 <br>
\hline EE-315-F \& Power Systems-I (EE, EEE) \& 3 \& 1 \& - \& 4 \& 50 \& 100 \& - \& 150 \& 3 <br>
\hline EE-317-F \& Power Electronics (EE, EEE, Common with VI sem IC) \& 3 \& 1 \& - \& 4 \& 50 \& 100 \& - \& 150 \& 3 <br>
\hline EE-309-F \& Microprocessors And Interfacing (EE,EEE,ECE) \& 3 \& 1 \& - \& 4 \& 50 \& 100 \& - \& 150 \& 3 <br>
\hline EE-323-F \& Electronic Measurement \& Instrumentation Lab (EE,EEE,ECE,IC) \& - \& - \& 2 \& 2 \& 25 \& - \& 25 \& 50 \& 3

3 <br>
\hline EE-321-F \& Power Electronics Lab. (EE, EEE Common with VI sem, IC) \& - \& - \& 2 \& 2 \& 25 \& - \& 25 \& 50 \& 3 <br>
\hline EE-319-F \& Microprocessor \& Interfacing Lab. (EE,EEE) \& - \& - \& 2 \& 2 \& 25 \& - \& 25 \& 50 \& 3 <br>
\hline EE-327-F \& Electrical Machines-II LAB. (EE, EEE) \& - \& - \& 3 \& 3 \& 25 \& - \& 25 \& 50 \& 3 <br>
\hline EE-333-F \& Practical Training-I \& - \& - \& 2 \& 2 \& \& - \& - \& \& - <br>
\hline \& TOTAL \& 18 \& 6 \& 11 \& 35 \& 400 \& 600 \& 100 \& 1100 \& <br>
\hline
\end{tabular}

Note:

1) Students will be allowed to use non-programmable scientific calculator. However, sharing of calculator will not be permitted in the examination.
2) Assessment of Practical Training-I, undergone at the end of IV semester, will be based on seminar, viva-voce, report and certificate of practical training obtained by the student from the industry. According to performance letter grades A, B, C, F are to be awarded. A student who is awarded ' $F$ ' grade is required to repeat Practical Training.


## M.D UNIVERSITY,ROHTAK

SCHEME OF STUDIES AND EXAMINATION
B.Tech. III YEAR (ELECTRICAL ENGINEERING)

SEMESTER-VI
Modified ' F ' Scheme effective from 2011-12

| $\begin{aligned} & \hline \text { Course } \\ & \text { No. } \end{aligned}$ | Course Title | Teaching Schedule |  |  |  | Marks of <br> Class <br> Work | Examination |  | Total Marks | Duration of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Total |  | Theory | Practical |  |  |
| EE-312-F | $\begin{array}{\|l\|} \hline \begin{array}{l} \text { Power Systems -II } \\ \text { (EE, EEE) } \end{array} \\ \hline \end{array}$ | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-314-F | Computer Added Electric Machines Design (EE, EEE) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-308-F | Micro-Controller And Embeded System(EE,ECE) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-304-F | Control systems engg. (EE, EEE,ECE) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-318-F | $\begin{aligned} & \text { Electric Power Generation (EE, } \\ & \text { EEE) } \end{aligned}$ | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-310-F | $\begin{aligned} & \text { Digital System Design } \\ & \text { (IC,EE,ECE,) } \end{aligned}$ | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-324-F | Control system engg. Lab (EE, EEE, ECE) | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| EE-320-F | Micro-Controller And Embeded System LAB (EE,ECE) | - | - | 2 | 2 | 25 | - | 25 | 50 |  |
| EE-326-F | Computer Added Electric Machines Design Lab (EE, EEE) | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| EE-328-F | Power Systems Lab (EE, EEE) | - | - | 2 | 2 | 25 | - | 25 | 50 |  |
| $\begin{aligned} & \text { GPEE- } \\ & 302-\mathrm{F} \end{aligned}$ | GENERAL PROFICIENCY | - | - | - | - | 50 | - | ${ }^{-}$ | 50 | 3 |
|  | TOTAL | 18 | 6 | 8 | 32 | 450 | 600 | 100 | 1150 |  |

Note:

1. Each student has to undergo practical training of 6 weeks during summer vacation and its evaluation shall be carried out in the VII semester.
2. Students will be allowed to use non-programmable scientific calculator. However, sharing of calculator will not be permitted in the examination.

M.D. UNIVERSITY, ROHTAK

Scheme of studies \& Examination B. Tech. (Electrical Engg.)

SEMESTER VII
F'Scheme
EFFECTIVE FROM THE SESSION 2012-13

| Course No. | Course Title | Teaching Schedule |  |  |  | Marks of Class Work | Examination |  | Total Marks | Duration of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Total |  | Theory | Practical |  |  |
| EE-403-F | Electric Drives And Control | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ECE-409-F | Digital Signal Processing | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-405-F | Power System Operation And Control | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
|  | *Open Elective | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
|  | *Dept Elective | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-409-F | Computer Applications To Power System Analysis | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-413-F | Electric Drives And Control Lab. |  |  | 3 | 3 | 50 | - | 50 | 100 | 3 |
| ECE-429-F | Digital Signal Processing Lab | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| EE-419-F | Computer Applications To Power System Analysis Lab. | - | - | 3 | 3 | 50 | - | 50 | 100 | 3 |
| GFEE-401-F | General Fitness For The Profession | - | - | - | - |  | - | 50 | 50 | 3 |
| EE-401-F | Practical Training - II | - | - | - | 32 | 425 | - | 175 | 1200 | - |
|  | TOTAL | 18 | 6 | 8 | 32 | 425 | 600 | 175 |  |  |

## List of Open Electives

| 1. | HUM-451-F | Language Skills for Engineers |
| :---: | :--- | :--- |
| 2. | HUM-453-F | Human Resource Management |
| 3. | HUM-459-F | Renewable Energy Resources and Technology |
| 4. | ME-451-F | Mechatronics Systems |
| 5. | IC-455-F | Intelligent Instrumentation for Engineers |
| 6. | OR-401-F | Operations Research |

## List of Dept Electives

1. $\mathrm{EHV} \mathrm{AC/DC}$
(EE-432-F)
2. Fuzzy Logic Control
3. Fuzzy Logic Control
(IC-404-F)
(EE-438-F)
4. High Voltage Engineering
5. Electrical Power Quality
(EE-442-F)
(EE-444-F)
6. Power Manastrame
(EE-450-F)

## Note:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of calculator will not be permitted in the examination.
2. *Student will be permitted to opt for any one elective run by the other departments. However, the departments will offer only those electives for which they have expertise. The choice of the students for any elective shall not be a binding for the department to offer, if the department does not have expertise.
3. A team consisting of Principal/Director, HOD of concerned department and external examiner appointed by University shall carry out the evaluation of the student for his/her General Fitness for the Profession.
4. Assessment of Practical Training-II, carried out at the end of VI semester, will be based on seminar, viva-voce and project report of the student from the industry. According to performance, letter Grades $\mathbf{A}, \mathbf{B}, \mathbf{C}, \mathbf{F}$ are to be awarded. A student who is awarded ' F ' grade is required to repeat Practical Training.

M.D. UNIVERSITY, ROHTAK

Scheme of studies \& Examination
B. Tech. (Electrical Engg.)

SEMESTER VIII
F'Scheme

## EFFECTIVE FROM THE SESSION 2012-13

| Sr. No | Course No | Subject | Internal <br> Marks | External Marks | Total Marks |
| :--- | :---: | :---: | :---: | :---: | :---: |
| 1. | EE-402-F | Industrial Training/Institutional Project Work | 150 | 150 | 300 |

## Note:

The students are required to undergo Industrial Training or Institutional Project Work of duration not less than 4 months in a reputed organization or concerned institute. The students who wish to undergo industrial training, the industry chosen for undergoing the training should be at least a private limited company. The students shall submit and present the mid-term progress report at the Institute. The presentation will be attended by a committee. Alternately, the teacher may visit the Industry to get the feedback of the students.

The final viva-voce of the Industrial Training or Institutional Project Work will be conducted by an external examiner and one internal examiner appointed by the Institute. External examiner will be from the panel of examiners submitted by the concerned institute approved by the Board of Studies in Engg. \& Technology. Assessment of Industrial Training or Institutional Project Work will be based on seminar, viva-voce, report and certificate of Industrial Training or Institutional Project Work obtained by the student from the industry or Institute.

The internal marks distributions for the students who have undergone Industrial Training consist of $\mathbf{5 0}$ marks from the industry concern and $\mathbf{1 0 0}$ marks by the committee members consisting of faculty members of concerned department of the parent institute.

The teachers engaged for Institutional Project work shall have a workload of $\mathbf{2}$ hours per group (at least 4 students) per week.


## MAHARSHI DAYANAND UNIVERSITY, ROHTAK

## SCHEME OF STUDIES AND EXAMINATIONS FOR MASTER OF TECHNOLOGY IN <br> ELECTRICAL ENGINEERING

(Specialization: Electrical Power Systems)
SEMESTER-III

| S.No | Course Code | Course Title | Teaching Schedule |  |  | Class <br> Work | Examination |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | Theory | Practical |  |
|  |  |  | L | T | P |  |  | 15 |  |
| 1 | MTEPS301 | Elective - III | 3 | 1 | 0 | 50 | 100 | - | 150 |
| 2 | MTEPS302 | Elective - IV | 3 | 1 | 0 | 50 | 100 | 50 | 100 |
| 3 | MTEPS303 | Seminar |  |  | 2 | 50 | - | - | 150 |
| 4 | MTEPS304 | Dissertation- | 0 | 0 | 4 | 150 | - |  |  |
|  |  | Phase I |  |  |  | 30 | 200 | 50 | 550 |

1. The paper setter shall set each theory paper of $\mathbf{1 0 0}$ marks covering entire syllabus. However the examiner shall evaluate the performance of the student in the theory paper finally by assigning one of the grades out of $A^{+}, A, B, C, D \& E$. The examination of practical courses shall also be evaluated on the basis of these grades.
2. The sessionals of theory, practical and Seminar courses shall also be evaluated in the basis of these grades.
3. The choice of student for any elective shall not be binding on the department to offer it.
4. The grading system is define at the end of scheme of studies \& examinations and will be supplied by the University to the examiner(s).


## MAHARSHI DAYANAND UNIVERSITY, ROHTAK

## SCHEME OF STUDIES AND EXAMINATIONS FOR MASTER OF TECHNOLOGY IN ELECTRICAL ENGINEERING

(Specialization: Electrical Power Systems)
SEMESTER-IV

| S.No. | Course <br> Code | Course Title | Teaching <br> Schedule |  |  | Class <br> Work | Examination |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P |  | Theory | E.VIVA |  |
| 1 | MTEPS401 | Dissertation Final Phase | 0 | 0 | 20 | 200 | - | 400 | 600 |
|  |  |  |  |  | 20 | 200 | - | 400 | 600 |

NOTE:

1. The sessionals of Dissertation shall be evaluated on the basis of grades i.e $\mathbf{A}^{+}$,
$A, B, C, D \& E$.
2. The Dissertation shall be evaluated by an examination committee consisting of the head of the department, Dissertation Supervisor and one External examiner. The evaluation should be based on above grades.
3. The grading system is define at the end of scheme of studies \& examinations and will be supplied by the University to the examiner(s).


## MAHARSHI DAYANAND UNIVERSITY, ROHTAK <br> SCHEME OF STUDIES \& EXAMINATIONS <br> B.TECH (Electronics and Communication Engineering) Common with <br> B.Tech (Electronics and Tele Communication) <br> SEMESTER -3 ${ }^{\text {rd }}$ w.e.f. 2019-20

| S. No. | Course No. | Course Title | Teaching Schedule |  |  | Marks <br> of Class work | Examination Marks |  | Tota I | Credit | Duratio $n$ of Exam | Contact Hrs./wk |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P |  | Theor y | Practic al |  |  |  |  |
| 1 | PCC- <br> ECE201G | Electronic Devices | 3 | 0 | - | 25 | 75 | - | 100 | 3 | 3 | 3 |
|  | LC- | Electronic Devices |  |  |  |  |  |  |  |  |  |  |
| 2 | ECE203G | lab | 0 | 0 | 2 | 25 |  | 25 | 50 | 1 | 3 | 2 |
| 3 | $\begin{array}{\|l\|} \hline \text { PCC- } \\ \text { ECE206G } \end{array}$ | Analog Circuits | 3 | 0 | - | 25 | 75 | - | 100 | 3 | 3 | 3 |
| 4 | LC- ECE208G | Analog Circuits lab | 0 | 0 | 2 | 25 | - | 25 | 50 | 1 | 3 | 2 |
| 5 | PCC- <br> ECE209G | Signals and Systems | 3 | 0 | - | 25 | 75 | - | 100 | 3 | 3 | 3 |
| 6 | PCC- <br> ECE211G | Network Theory | 3 | 1 | - | 25 | 75 | - | 100 | 3 | 3 | 3 |
| 7 | $\begin{aligned} & \text { LC-ECE- } \\ & 212 \mathrm{G} \end{aligned}$ | Network Theory Lab | 0 | 0 | 2 | 25 | - | 25 | 50 | 1 | 3 | 2 |
| 8 | LC-ECE-213G | PCB \& ELECTRONIC WORKSHOP LAB | 0 | 0 | 2 | 25 | - | 25 | 50 | 1 | 3 | $2$ |
| 9 | HSMC-01G | Economics for Engineers (Common with CSE) | 3 | 0 | 0 | 25 | 75 | - | 100 | 3 | 3 | 3 |
| 10 | *MC-106G | Environmental Science | 3 | 0 | 1 | 25 | 75 | - | - | - | 3 | 4 |
| Total |  |  |  |  |  |  |  |  | 700 | 19 |  | 27 |

"MC-106G is a mandatory non-credit course in which the students will be required passing marks in theory.


## MAHARSHI DAYANAND UNIVERSITY, ROHTAK

## SCHEME OF STUDIES \& EXAMINATIONS <br> B.TECH (Electronics and Communication Engineering) <br> Common with <br> B.Tech (Electronics and Tele Communication) <br> SEMESTER -4th w.e.f. 2019-20

| S. No. | Course No. | Course Title | Teaching Schedule |  |  | Marks of Class work | Examination Marks |  | Tota I | $\begin{array}{\|c} \text { Cred } \\ \text { it } \end{array}$ | $\begin{array}{\|c} \text { Duratio } \\ \mathrm{n} \text { of } \\ \text { Exam } \end{array}$ | $\begin{array}{\|c\|} \text { Conta } \\ \text { ct } \\ \text { Hrs./w } \\ \text { k. } \\ \hline \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P |  | Theor y | Practic al |  |  |  |  |
| 1 | PCC- <br> ECE202G | Communication System | 3 | 0 | - | 25 | 75 | - | 100 | 3 | 3 | 3 |
| 2 | LCECE204G | Communication System lab | 0 | 0 | 2 | 25 | - | 25 | 50 | 1 | 3 | 2 |
| 3 | $\begin{aligned} & \text { PCC- } \\ & \text { ECE205G } \end{aligned}$ | Digital Electronics | 3 | 1 | - | 25 | 75 | - | 100 | 3 | 3 | 4 |
|  | LC- | Digital Electronics lab | 0 | 0 | 2 | 25 |  | 25 | 50 | 1 | 3 | 2 |
| 5 | PCC- <br> ECE210G | Microcontrollers | 3 | 1 | - | 25 | 75 | - | 100 | 3 | 3 | 4 |
| 6 | $\begin{aligned} & \text { LC-ECE- } \\ & 214 \mathrm{G} \end{aligned}$ | Microcontrollers Lab | 0 | 0 | 2 | 25 | - | 25 | 50 | 1 | 3 | 2 |
| 7 | HSMC-02G | Organizational Behavior | 3 | 0 | 0 | 25 | 75 | - | 100 | 3 | 3 | 3 |
| 8 | $\begin{aligned} & \text { BSC-MATH- } \\ & 202 \mathrm{G} \end{aligned}$ | Mathematics-III (Partial differential equations and Numerical methods) | 3 | 1 | - | 25 | 75 | - | 100 | 4 | 3 | 4 |
| 9 | $\begin{aligned} & \text { PCC-CSE- } \\ & 221 \mathrm{G} \end{aligned}$ | Data Structures | 3 | 0 | 0 | 25 | 75 | - | 100 | 3 | 3 | 3 |
| Total |  |  |  |  |  |  |  |  | 750 | 22 |  |  |

NOTE: At the end of 4th semester each student has to undergo Practical Training of $4 / 6$ weeks in an Industry/ Institute/ Professional Organization/Research Laboratory/ training centre etc. and submit typed report along with a certificate frombtho gganization \& its evaluation shall be carried out in the 5th Semester.

## M.D UNIVERSITY <br> SCHEME OF STUDIES AND EXAMINATION <br> BTech. III YEAR (ELECTRONICS \& COMMUNICATION ENGINEERING) SEMESTER V

Modified ' $F$ ' Scheme effective from 2011-12

| Course No. | Course Title | Teaching Schedule |  |  |  | Marks of Class Work | Examination |  | Total <br> Marks | Duration of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  | L | T | P | Total |  | Theory | Practical |  |  |
| EE-301-F | COMMUNICATION Engg. | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-303-F | ELECTRONIC MEASUREMENT \& INSTRUMENTATION (EL,EL,IC,EE,EEE,AEI) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-305-F | ANALOG ELECTRONIC CIRCUITS <br> (EL,EL,IC,EE,EEE,AEI) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-307-F | ANTENNAS,WAVE PROPAGATION\& TV Engg. | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| $\begin{array}{\|l} \hline \text { CSE-210- } \\ \mathrm{F} \end{array}$ | COMPUTER ARCHITECTURE AND ORGANISATION (EL, EI, IC, Common with IV sem. CSE, IT ) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-309-F | MICROPROCESSORS AND INTERFACING (EL,EL,IC,CSE,IT,EEE,AEI) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-323-F | ELECTRONIC MEASUREMENT \& INSTRUMENTATION LAB (EL,EL,IC,EE) | - | - | 2 | 2 | 25 | - | 25 | 50 |  |
| EE-325-F | ANALOG ELECTRONIC CIRCUITS LAB (EL,EL,IC) | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| EE-329-F | MICROPROCESSORS AND INTERFACING LAB (EL,EL,IC,CSE,IT,EEE,AEI) | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| EE-335-F | PRACTICAL TRAINING |  | - | 2 | 2 |  | - |  |  |  |
| $\begin{aligned} & \text { GPECE30 } \\ & \text { 1-F } \end{aligned}$ | GERNERAL PROFICIENCY |  |  |  |  | 50 |  |  | 50 | 3 |
|  | TOTAL | 18 | 6 | 8 | 32 | 425 | 600 | 75 | 1100 |  |

## Note:

1) Students will be allowed to use non-programmable scientific calculator. However, sharing of calculator will not be permitted in the examination.
2) Assessment of Practical Training-I, undergone at the end of IV semester, will be based on seminar, viva-voce, report and certificate of practical training obtained by the student from the industry. According to performance letter grades A, B, C, F are to be awarded. A student who is awarded ' $F$ ' grade is required to repeat Practical Training.


# M.D UNIVERSITY,ROHTAK <br> SCHEME OF STUDIES AND EXAMINATION B.Tech. III YEAR (ELECTRONICS \& COMMUNICATION ENGINEERING) SEMESTER - VI 

Modified ' $F$ ' Scheme effective from 2011-12

| Course No. | Course Title |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Teaching Schedule |  |  |  | Marks of Class Work | Examination |  | Total Marks | Duration of Exam |
|  |  | L | T | P | Total |  | Theory | Practical |  |  |
| EE-302-F | MICROWAVE AND RADAR ENGINEERING | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| $\begin{aligned} & \text { EE-304- } \\ & \mathrm{F} \\ & \hline \end{aligned}$ | CONTROL SYTEMS ENGG. (EL,EE, EEE) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-306-F | VLSI Design | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| IT-305-F | COMPUTER NETWORKS | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-310-F | DIGITAL SYSTEM DESIGN (EL,EI, IC,EE,CSE, AEI) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-308-F | MICROCONTROLLER \& EMBEDDED SYSTEM | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| $\begin{array}{\|l\|} \hline \text { EE-328- } \\ \mathbf{F} \\ \hline \end{array}$ | MICROCONTROLLER \& EMBEDDED SYSTEM LAB | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| $\begin{array}{\|l} \hline \text { EE-326- } \\ \mathrm{F} \\ \hline \end{array}$ | DIGITAL SYSTEM DESIGN LAB (EL,EI, IC,EE,CSE, AEI) | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| $\begin{array}{\|l\|} \hline \text { EE-322- } \\ \mathrm{F} \\ \hline \end{array}$ | MICROWAVE AND RADAR LAB | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| EE-324- | CONTROL SYTEMS ENGG. |  | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| F | LAB <br> (EL,EE, EEE,AEI) |  |  |  |  |  |  |  |  |  |
|  | TOTAL | 18 | 6 | 8 | 32 | 400 | 600 | 100 | 1100 |  |

## NOTE:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of Calculator will not be permitted in the examination.
2. Each student has to undergo practical training of 6 weeks during summer vacation and its evaluation shall be carried out in the VII semester.


## M.D. UNIVERSITY, ROHTAK

## Scheme of studies \& Examination

 B. Tech. (Electronics and Communication Engg.)SEMESTER VII

F'Scheme Effective from 2012-2013

| Course No. | Course Title | Teaching Schedule |  |  |  | Marks <br> of <br> Class <br> Work | Examination |  | Total Marks | Duration of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Total |  | Theory | Practical |  |  |
| ECE-405-F | WIRELESS COMMUNICATION | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ECE-403-F | SATELITE COMMUNICATION ENGINEERING | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ECE-407-F | DATA COMMUNICATION | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ECE-415-F | OPTICAL COMMUNICATION SYSTEMS | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
|  | *Dept Elective-I | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ECE-409-F | Digital Signal Processing | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ECE-423-F | Wireless \& Satellite |  |  | 3 | 3 | 50 | - | 50 | 100 | 3 |
|  | Communication Lab |  |  |  |  |  |  |  |  |  |
| ECE-427-F | Digital Signal Processing Lab | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| ECE-429-F | Data Communication | - | - | 3 | 3 | 50 | - | 50 | 100 | 3 |
|  | Lab |  |  |  |  |  |  |  |  |  |
| GFEE-401-F | General Fitness For The Profession | - | - | - | - |  | - | 50 | 50 | 3 |
| ECE-404-F | Practical Training II |  |  |  |  |  |  |  |  |  |
|  | TOTAL | 18 | 6 | 8 | 32 | 425 | 600 | 175 | 1200 |  |



## List of Dept Electives-I

| ECE-419-F | Mobile Communication |
| :--- | :--- |
| ECE-461-F | Genetic Algorithms \& Applications |
| ECE-453-F | Radar and Sonar Engg. |
| ECE-411-F | Wireless Sensor Network |
|  |  |
|  |  |

## Note:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of calculator will not be permitted in the examination.
2. *Student will be permitted to opt for any one elective run by the other departments. However, the departments will offer only those electives for which they have expertise. The choice of the students for any elective shall not be a binding for the department to offer, if the department does not have expertise.
3. A team consisting of Principal/Director, HOD of concerned department and external examiner appointed by University shall carry out the evaluation of the student for his/her General Fitness for the Profession.

NOTE:-

1. Assessment of Practical Training-II, ( ECE-404F) carried out at the end of VI semester, will be based on seminar, viva-voce and project report of the student from the industry. According to performance letter Grades A, B, C, F are to be awarded. A student who is awarded ' $F$ ' grade is required to repeat Practical Training.


## M.D. UNIVERSITY, ROHTAK

## Scheme of studies \& Examination

 B. Tech. (Electronics and Communication Engg.)
## SEMESTER VIII

F ' Scheme Effective from 2012-2013

Training of Six Months

| Course No. | Course Title | Teaching Schedule |  |  |  | Marks of Class Work | Examination |  | Total Marks | Duration of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Total |  | Theory P | ctical |  |  |
| ECE-402-F | Industrial Training /Institutional Project work | - | - | 8 | 8 | 150 | $\pm$ | 150 | 300 | - |
|  | Total |  |  | 8 | 8 |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |

## Note:

1. The students are required to undergo Industrial Training or Institutional Project work of duration not less than 4 months in a reputed organization or concerned institute. The student who wish to undergo industrial training, the industry chosen for should be a private limited company. The final Viva-voca of the industrial training or Institutional Project work will be conducted by the
2. external examiner and one internal examiner appointed by the institute. External examiner will be from penal of examiner.
Assessment of traing or project will be based on Seminar, viva-voca, report and certificate of Industrial Training or Institutional project work.
3. The internal marks distribution for students who have undergone Industrial training consist of $\mathbf{5 0}$ marks from the Industry concern and $\mathbf{1 0 0}$ Marks by the committee members consisting of faculty members of concerned department of the present institute.
4. The teacher engaged for institutional project work shall have a workload of $\mathbf{2}$ hours per group ( at least 4 students per work)


## MAHARSHI DAYANAND UNIVERSITY, ROHTAK

## Scheme of Examination for Semester III (Second Year)

## B.TECH (FIRE TECHNOLOGY AND SAFETY) w.e.f. 2019-20

| $\begin{gathered} \mathrm{S} \\ \mathrm{~N} \end{gathered}$ | Category | Course Code | Course Title | Hours per week |  |  | Total Contact hrs/week | Credit | Examination Schedule (Marks) |  |  |  | Duration of Exam (Hours) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | L | T | P |  |  | Mark of Class work | TH | Pr | Tot al |  |
| 1 | Basic Science Course | $\begin{aligned} & \text { BSC-FT- } \\ & 201 G \end{aligned}$ | Mathematics-III | 3 | 1 | 0 | 4 | 4 | 25 | 75 |  | 100 | 3 |
| 2 | Professional Core Courses | $\begin{aligned} & \text { PCC-FT- } \\ & 203 \mathrm{G} \end{aligned}$ | Basics of Fire Science | 3 | 0 | 0 | 3 | 3 | 25 | 75 |  | 100 | 3 |
| 3 | Professional Core Courses | $\begin{gathered} \text { PCC-FT- } \\ 205 G \end{gathered}$ | Fire Service Hydraulics-I | 3 | 1 | 0 | 4 | 4 | 25 | 75 |  | 100 | 3 |
| 4 | Engineering Science Course | $\begin{aligned} & \text { ESC-FT- } \\ & \text { 207G } \end{aligned}$ | Basics of Thermal Engineering | 3 | 1 | 0 | 4 | 4 | 25 | 75 |  | 100 | 3 |
| 5 | Professional Core Courses | $\begin{aligned} & \text { PCC-FT- } \\ & 209 \mathrm{G} \end{aligned}$ | Automobile Safety | 3 | 1 | 0 | 4 | 4 | 25 | 75 |  | 100 | 3 |
| 6 | Professional Core Courses | $\begin{aligned} & \text { PCC-FT- } \\ & 211 \mathrm{G} \end{aligned}$ | Fire Protection Workshop | 0 | 0 | 2 | 2 | 1 | 25 |  | 25 | 50 | 3 |
| 7 | Professional Core Courses | $\begin{gathered} \text { PCC-FT- } \\ 213 G \end{gathered}$ | Automobile Safety Lab | 0 | 0 | 2 | 2 | 1 | 25 |  | 25 | 50 | 3 |
| 8 | Engineering Science Course | $\begin{aligned} & \text { ESC-FT- } \\ & 215 G \end{aligned}$ | Basics Thermal Engineering Lab | 0 | 0 | 2 | 2 | 1 | 25 |  | 25 | 50 | 3 |
| 9 | Training | $\begin{gathered} \text { PT-FT- } \\ 217 \text { G } \end{gathered}$ | Fire Ground Operation-I | 0 | 0 | 2 | 2 | 1 | 25 |  | 25 | 50 | 3 |
| TOTAL CREDIT |  |  |  |  |  |  |  | 23 |  |  |  | 700 |  |



## MAHARSHI DAYANAND UNIVERSITY, ROHTAK

## Scheme of Examination for Semester IV (Second Year)

## B.TECH (FIRE TECHNOLOGY AND SAFETY) w.e.f. 2019-20

| SN | Category | Course Code | Course Title | Hours per week |  |  | Total Contact hrs/week | Credit | Examination Schedule (Marks) |  |  |  | Duration of Exam (Hours) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | L | T | P |  |  | Marks of Class work | TH | Pr | Total |  |
| 1 | Humanities and Social science including Management courses | $\begin{aligned} & \text { HSMC- } \\ & \text { FT-202G } \end{aligned}$ | Principles of <br>  <br> Organisation <br> Behaviour | 3 | 0 | 0 | 3 | 3 | 25 | 75 |  | 100 | 3 |
| 2 | Engineering Science Course | $\begin{aligned} & \text { ESC-FT- } \\ & 204 \mathrm{G} \end{aligned}$ | Basics of Safety Engineering | 3 | 0 | 0 | 3 | 3 | 25 | 75 |  | 100 | 3 |
| 3 | Professional Core Courses | $\begin{aligned} & \text { PCC-FT- } \\ & 206 \mathrm{G} \end{aligned}$ |  <br> Paramedics | 3 | 1 | 0 | 4 | 4 | 25 | 75 |  | 100 | 3 |
| 4 | Professional Core Courses | $\begin{aligned} & \text { PCC-FT- } \\ & 208 G \end{aligned}$ | Fire Service Hydraulics-II | 3 | 1 | 0 | 4 | 4 | 25 | 75 |  | 100 | 3 |
| 5 | Professional Core Courses | $\begin{aligned} & \text { PCC-FT- } \\ & 210 G \end{aligned}$ | Safety in Construction | 3 | 1 | 0 | 4 | 4 | 25 | 75 |  | 100 | 3 |
| 6 | Professional Core Courses | $\begin{aligned} & \text { PCC-FT- } \\ & 212 G \end{aligned}$ | First Aid \& Paramedics Lab | 0 | 0 | 2 | 2 | 1 | 25 |  | 25 | 50 | 3 |
| 7 | Professional Core Courses | $\begin{aligned} & \text { PCC-FT- } \\ & 214 \mathrm{G} \end{aligned}$ | Fire Service Hydraulics Lab | 0 | 0 | 2 | 2 | 1 | 25 |  | 25 | 50 | 3 |
| 8 | Training | $\begin{gathered} \hline \text { PT -FT- } \\ 216 \mathrm{G} \end{gathered}$ | Fire Ground Operation-II | 0 | 0 | 2 | 2 | 1 | 25 |  | 25 | 50 | 3 |
| 9 | Mandatory Course | $\begin{aligned} & \text { "MC- } \\ & 106 \mathrm{G} \end{aligned}$ | Environmental Science | 3 | 0 | 1 |  |  | 25 | 75 |  |  | 4 |
| TOTAL CREDIT |  |  |  |  |  |  |  | 21 |  |  |  | 650 |  |

## Abbreviations: TH- Theory , PR- Practical

MC-106 G is a mandatory non-credit course in which the students will be required passing marks in theory.
NOTE: At the end of 4th semester each student has to undergo Practical Training of $4 / 6$ weeks in an Industry/ Institute/ Professional Jrganization/Research Laboratory/ training centre etc. and submit typed report along with a certificate from the organization \& its :valuation shall be carried out in the 5 th Semester.

# MAHRASHSI DAYANAND UNIVERSITY, ROHTAK <br> SCHEME OF STUDIES AND EXAMINATIONS <br> B.Tech $3^{\text {rd }}$ YEAR (FIRE TECHNOLOGY AND SAFETY) <br> $5^{\text {th }}$ SEMESTER 

Proposed 'F' Scheme w.e.f 2012-13

| Course | Course Title | Teaching schedule |  |  |  | Mark For class work | Marks for Examination |  | Total <br> Marks | Duration of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Total |  | Theory | Practical |  |  |
| FT 301F | Rescue Equipments and Techniques | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 303 F | Building Design and Drawing | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 305 F | Salvage Evaluation of Fire Situation | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 307 F | Environmental Engineering and Management | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 309 F | Fire Prevention and Protection Measures | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 311 F | Nuclear Safety and Radioactive Materials | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 313 F | Environmental Engineering Lab | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| FT 315 F | Field Training in Fire Rescue | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| FT 317 F | AutoCAD and Fire Software Lab | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| FT 319F | Engineering Workshop Practice | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| FT 319F | Total | 18 | 6 | 8 | 32 | 400 | 600 | 100 | 1100 |  |

Note:-

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of calculator will not be permitted in the examination.
2. Assessment of Practical Training-I, undergone at the end of IV semester, will be based on seminar, viva-voce, report and certificate of practical training obtained by the student from the industry. According to performance letter grades A, B, C, F are to be awarded. A student who is awarded ' F ' grade is required to repeat Practical Training.


# MAHRASHSI DAYANAND UNIVERSITY, ROHTAK <br> SCHEME OF STUDIES AND EXAMINATIONS <br> B.Tech $3^{\text {rd }}$ YEAR (FIRE TECHNOLOGY AND SAFETY) $6^{\text {th }}$ SEMESTER 

Proposed 'F' Scheme w.e.f 2012-13

| Proposed 'F' Scheme w.e.f 2012-13 |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Course | e Course Title | Teaching schedule |  |  |  | Marks <br> For <br> class <br> work | Marks for Examination |  | Total Marks | Duration of Exam |
|  |  | L | T | P | Total |  | Theory | Practical |  |  |
| FT 302F | Legal Aspect of Safety, Health and Environment | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 304F | Fire Safety Codes and Standardization | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 306F | Fire Fighting \& Safety Equipments | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 308F | Identification and Risk Assesmant | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 310F | Applied Numerical Technique and Computing | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 312F | Heat Transfer, Combustion and Explosives | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 314F | Field Training Rescue (Chemical Hazards) | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| FT 316F | Applied Numerical Technique and Computing Lab | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| FT 318F | Heat Transfer, Combustion and Explosives Lab | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| FT 320F | Industrial Hygiene Lab | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| FT 322F | General Proficiency | - | - | 2 | 2 | 50 | - | - | 50 | - |
|  | Total | 18 | 6 | 10 | 34 | 450 | 600 | 100 | 1150 |  |

Note:-

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of Calculator will not be permitted in the examination.
2. Each student has to undergo practical training of 6 weeks during summer vacation and its evaluation shall be carried out in the VII semester


# MAHRASHSI DAYANAND UNIVERSITY, ROHTAK 

SCHEME OF STUDIES \& EXAMINATIONS
B.Tech $4^{\text {th }}$ YEAR FIRE TECHNOLOGY \& SAFETY, $7^{\text {th }}$ SEMESTER

Proposed ' $F$ ' Scheme w.e.f 2012-13

| Course | Proposed 'F' Scheme w.e.f 2012-13 |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Course Title | Teaching schedule |  |  |  | Marks <br> For <br> class <br> work | Marks for Examination |  | Total Marks | Duration of Exam |
|  |  | L | T | P | Total |  | Theory | Practical |  |  |
| FT 401 F | Safety and Risk Management | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 403 F | Industrial Engineering | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 405 F | Operational Research | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 407 F | Disaster Management | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 409 F | Fire Fighting Installation and Automation | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ---- | Dept. Elective | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 411 F | Fire Fighting Installation and Automation Lab | - | - | 2 | 2 | 50 | - | 50 | 100 | 3 |
| FT 413 F | Squad Drill | - | - | 2 | 2 | 50 | - | 50 | 100 | 3 |
|  | Total | 18 | 6 | 4 | 28 | 400 | 600 | 100 | 1100 | - |

## Dept. Elective:

1. FT 417 F Process Instrumentation and Control Engineering
2. FT 419 F Automobile Engineering and Safety.
3. FT 421 F Advanced Safety Engineering and Management.
4. FT 423 F Environmental Protection and Waste Management.
5. FT 425 F Human Factor Engineering.
6. FT 427 F Simulation and Process Modeling
7. FT 429 F Total Quality management
8. FT 431 F Safety in Health Care waste Management
9. FT 433 F Safety in Construction


# MAHRASHSI DAYANAND UNIVERSITY, ROHTAK <br> SCHEME OF STUDIES \& EXAMINATIONS B.Tech $4^{\text {th }}$ YEAR FIRE TECHNOLOGY \& SAFETY, $8^{\text {th }}$ SEMESTER 

Proposed 'F' Scheme w.e.f 2012-13

|  |  | Proposed 'F' Scheme w.e.f 2012-13 |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| SI. No. Course No. | Subject | Internal <br> Marks | External <br> Marks | Total <br> Marks |  |
| 1. | FT- 402-F | Industrial Training/Institutional Project Work | 150 | 150 | 300 |

Note:
The students are required to undergo Industrial Training or Institutional Project Work of duration not less than 4 months in a reputed organization or concerned institute. The students who wish to undergo industrial training, the industry chosen for undergoing the training should be at least a private limited company. The students shall submit and present the mid-term progress report at the Institute. The presentation will be attended by a committee. Alternately, the teacher may visit the Industry to get the feedback of the students.

The final viva-voce of the Industrial Training or Institutional Project Work will be conducted by an external examiner and one internal examiner appointed by the Institute. External examiner will be from the panel of examiners submitted by the concerned institute approved by the Board of Studies in Engineering and Technology. Assessment of Industrial Training or Institutional Project Work will be based on seminar, viva-voce, report and certificate of Industrial Training or Institutional Project Work obtained by the student from the industry or Institute.

The internal marks distributions for the students who have undergone Industrial Training consist of $\mathbf{5 0}$ marks from the industry concern and $\mathbf{1 0 0}$ marks by the committee members consisting of faculty members of concerned department of the parent institute.

The teachers engaged for Institutional Project work shall have a workload of 2 hours per group (at least 4 students) per week.


MAHARSHI DAYANAND UNIVERSITY, ROHTAK
Scheme of Examination for Semester III (Second Year)
B.Tech ( MECHANICAL ENGINEERING)w.e.f. 2019-20

| Sr . <br> No. | Category Course Notation | Course Code | Course Title | Hours per week |  | Total <br> Conta <br> ct <br> hrs/w <br> eek | Cre dit | Examination Schedule (Marks) |  |  |  | Durati on of Exam (Hour s) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | L | T P |  |  | Mark of Class work | The ory | Pra ctic al | $\begin{gathered} \text { Tota } \\ 1 \end{gathered}$ |  |
| 1 | Basic Science course | $\begin{gathered} \text { BSC-ME- } \\ 201 G \end{gathered}$ | Physics II(Optics \& Waves) | 3 | 00 | 3 | 3 | 25 | 75 |  | 100 | 3 |
| 2 | Basic Science course | $\begin{gathered} \text { BSC-ME- } \\ 203 G \end{gathered}$ | Mathematics-III | 3 | 10 | 4 | 4 | 25 | 75 |  | 100 | 3 |
| 3. | Basic Science course | $\begin{gathered} \hline \text { BSC-BIO- } \\ 205 \mathrm{G} \end{gathered}$ | Biology | 2 | 10 | 3. | 3 | 25 | 75 |  | 100 | 3 |
| 4. | Engineering Science course | $\begin{gathered} \text { ESC-ECE- } \\ 207 \mathrm{G} \end{gathered}$ | Basics of Electronics Eng. | 2 | 00 | 2 | 2 | 25 | 75 |  | 100 | 3 |
| 5. | Engineering Science course | $\begin{aligned} & \text { ESC-ME- } \\ & 209 \mathrm{G} \end{aligned}$ | Engineering Mechanics | 3 | 00 | 3 | 3 | 25 | 75 |  | 100 | 3 |
| 6. | Engineering Science course | $\begin{aligned} & \text { ESC-ME- } \\ & 211 \mathrm{G} \end{aligned}$ | Basics of Mechanical Eng. | 2 | 00 | 2 | 2 | 25 | 75 |  | 100 | 3 |
| 7. | Professional Core courses | $\begin{gathered} \text { PCC-ME- } \\ 213 \mathrm{G} \end{gathered}$ | Thermodynamics | 3 | 10 | 4 | 4 | 25 | 75 |  | 100 | 3 |
|  | - |  | Basics of |  |  |  | \% |  |  |  |  |  |
| 8. | Engineering Science course | $\begin{gathered} \text { LC-ME- } \\ 215 \mathrm{G} \end{gathered}$ | MechanicalEngg. lab | 0 | 02 | 2 | 1 | 25 |  | 25 | 50 | 3 |
| TOTAL CREDIT |  |  |  |  |  |  | 22 |  |  |  | 750 |  |

MAHARSHI DAYANAND UNIVERSITY, ROHTAK
Scheme of Examination for Semester IV (Second Year)
B.Tech.( MECHANICAL ENGINEERING)w.e.f. 2019-20

| Sr . <br> No. | Category Course Notation | Course Code | Course Title | Hours per week |  | Total Conta ct hrs/w eek | $\begin{aligned} & \text { Cre } \\ & \text { dit } \end{aligned}$ | Examination Schedule (Marks) |  |  |  | Durati on of Exam (Hour s) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | L T | T P |  |  | Mark of Class work | The ory | Pr act ica 1 | Total |  |
| 1 | Professional Core courses | $\begin{array}{\|l} \hline \text { PCC-ME- } \\ \text { 202G } \end{array}$ | Applied <br> Thermodynamics | 31 | 10 | 4 | 4 | 25 | 75 |  | 100 | 3 |
| 2 | Professional Core courses | $\begin{aligned} & \text { PCC- ME- } \\ & \text { 204G } \end{aligned}$ | Fluid Mechanics | 31 | 10 | 4 | 4 | 25 | 75 |  | 100 | 3 |
| 3 | Professional Core courses | $\begin{aligned} & \text { PCC- ME- } \\ & \text { 206G } \end{aligned}$ | Strength of materials | 311 | 10 | 4 | 4 | 25 | 75 |  | 100 | 3 |
| 4 | Professional Core courses | $\begin{aligned} & \text { PCC- ME- } \\ & \text { 208G } \end{aligned}$ | Materials Engineering | 30 | 00 | 3 | 3 | 25 | 75 |  | 100 | 3 |
| 5 | Professional Core courses | $\begin{aligned} & \text { PCC- ME- } \\ & \text { 210G } \end{aligned}$ | Instrumentation \& Control | 30 | 00 | 3 | 3 | 25 | 75 |  | 100 | 3 |
| 6 | Professional Core courses | $\begin{aligned} & \text { LC- ME- } \\ & 212 \mathrm{G} \end{aligned}$ | Applied <br> Thermodynamics <br> Lab | 00 | 02 | 2 | 1 | 25 |  | 25 | 50 | 37 |
| 7 | Professional Core courses | $\begin{aligned} & \text { LC-ME- } \\ & 214 \mathrm{G} \end{aligned}$ | SOM Lab | 00 | 02 | 2 | 1 | 25 |  | 25 | 50 | 3 |
| 8 | Professional Core courses | $\begin{aligned} & \text { LC-ME- } \\ & 216 \mathrm{G} \end{aligned}$ | Fluid Mechanics Lab | 00 | 02 | 2 | 1 | 25 |  | 25 | 50 | 3 |
| 9 | Professional Core courses | $\begin{aligned} & \text { LC-ME- } \\ & 218 G \end{aligned}$ | Materials Lab | 00 | 02 | 2 | 1 | 25 |  | 25 | 50 | 3 |
| 10 | Professional Core courses | $\begin{aligned} & \text { LC- ME- } \\ & 220 \mathrm{G} \end{aligned}$ | Instrumentation Lab |  | 02 | 2 | 1 | 25 |  | 25 | 50 | 3 |
| 11 | Mandatory course | ${ }^{\circ} \mathrm{MC-106G}$ | Environment Science | 30 | 01 | - |  | 25 | 75 |  | - | 4 |
| TOTAL CREDIT |  |  |  |  |  |  | 23 |  |  |  | 750 |  |

*MC-106Gis a mandatory non -credit course in which the students will be required passing marks in theory.
NOTE: At the end of 4th semester each student has to undergo Practical Training of $4 / 6$ weeks in an Industry/ Institute/ Professional Organization/ Research Laboratory/ training centre etc. and submit typed report along with a certificate from the organization \& its evaluation shall be carried out in the 5th Semester.


## MAHARSHI DAYANAND UNIVERSITY, ROHTAK SCHEME OF STUDIES \& EXAMINATIONS B.Tech. $3^{\text {rd }}$ YEAR MECHANICAL ENGINEERING, SEMESTER-V <br> Proposed "F" Scheme effective from 2011-12

| Course | Course Title | Teaching schedule |  |  |  | MarksFor class work | Marks for Examination |  | Total <br> Marks | Duratio n of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Total |  | Theory | Practic <br> al |  |  |
| ME-301-F | Dynamics Of Machines | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-303-F | Mechanical Machine Design-1 | 3 | 2 | - | 5 | 50 | 100 | - | 150 | 4 |
| ME-305-F | Fluid Machine | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-307-F | Internal Combustion Engines \& Gas Turbines | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-309-F | Manufacturing Technology -II | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-311-F | Applied Numerical Technique \& Computing | 3 | - | - | 3 | 50 | 100 | - | 150 | 3 |
| ME-313-F | Dynamics Of Mechanics Lab | - | - | 2 | 2 | 25 |  | 25 | 50 | 3 |
| ME-315-F | Fluid Machine Lab | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| ME-317-F | Internal Combustion Engines \& Gas Turbines Lab | - | - | 2 | 2 | 25 |  | 25 | 50 | 3 |
| ME-319-F | $\begin{aligned} & \text { Manufacturing Technology -II } \\ & \text { Lab } \\ & \hline \end{aligned}$ | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| ME-321-F | Applied Numerical Technique \& Computing Lab | - | - | 2 | 2 | 50 | - | - | 50 |  |
| ME-323-F | Practical Training Viva-Voce |  |  | 2 | 2 | - | - - - | - | - |  |
|  | Total | 18 | 6 | 12 | 36 | 450 | 600 | 100 | 1150 |  |

Note:

1) Students will be allowed to use non-programmable scientific calculator. However, sharing of calculator will not be permitted in the examination.
2) Assessment of Practical Training-I, undergone at the end of IV semester, will be based on seminar, viva-voce, report and certificate of practical training obtained by the student from the industry. According to performance letter grades A, B, C, F are to be awarded. A student who is awarded ' $F$ ' grade is required to repeat Practical Training.


MAHARSHI DAYANAND UNIVERSITY, ROHTAK
SCHEME OF STUDIES \& EXAMINATIONS
B.Tech. $3{ }^{\text {rd }}$ YEAR MECHANICAL ENGINEERING, SEMESTER-VI

Proposed " $F$ " Scheme effective from 2011-12

| Course | Course Title | Teaching schedule |  |  |  | Marks For class work | Marks for Examination |  | Total Marks | Duratio <br> n of <br> Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Total |  | Theory | $\begin{aligned} & \text { Practi } \\ & \text { cal } \end{aligned}$ |  |  |
| ME-302-F | Automobile Engineering | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-304-F | Mechanical Machine Design-II | 3 | 2 | - | 5 | 50 | 100 | - | 150 | 4 |
| ME-306-F | Heat Transfer | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-308-F | Automatic Control | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-310-F | Measurement \& instrumentation | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-312-F | Industrial Engineering | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-314-F | Automobile Engineering Lab | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| ME-316-F | Heat Transfer Lab | - | - | 2 | 2 | 25 | - | 25 | 25 | 3 |
| ME-318-F |  |  | - | 2 | 2 | 25 | - | 25 | 25 | 3 |
|  | Measurement \& instrumentation <br> Lab | - | - | 2 |  |  |  |  |  |  |
| ME-320-F |  | - | - | 2 | 2 | 50 | - | - | 50 | - |
|  | General Proficiency | 18 | 7 | 8 | 33 | 450 | 600 |  | 1050 |  |
|  | Total | 18 | 7 | 8 | 33 | 450 |  | 100 |  |  |

NOTE:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of Calculator will not be permitted in the examination.
2. Each student has to undergo practical training of 6 weeks during summer vacation and its evaluation shall be carried out in the VII semester


MAHARSHI DAYANAND UNIVERSITY, ROHTAK
SCHEME OF STUDIES \& EXAMINATIONS
B.Tech. $4^{\text {th }}$ YEAR MECHANICAL ENGINEERING, SEMESTER- VII
(Scheme-F)
EFFECTIVE FROM THE SESSION 2012-13

| Course | Course Title | Teaching schedule |  |  |  | Marks <br> For <br> class <br> work | Marks for Examination |  | Total Marks | Duration <br> of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Total |  | Theory | Practical |  |  |
| ME-401-F | Strength of Material-II | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-403-F | Refrigeration \& AirConditioning | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-405-F | Operation Research | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-407-F | Power Plant Engineering | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-409-F | Mechanical Vibration | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ------------- | Elective | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-411-F | Refrigeration \& Air- | - | - | 2 | 2 | 50 | - | 50 | 100 | 37 |
|  | Conditioning Lab |  |  |  |  |  |  |  |  |  |
| ME-413-F | Advanced CAD/CAM Lab | - | - | 2 | 2 | 50 | - | 100 | 150 |  |
| ME-415-F | Practical Training-II | - | - | 2 | 2 | - |  | - | - |  |
| $\begin{aligned} & \text { GFME- } \\ & \text { 435-F } \end{aligned}$ | General Fitness for the Profession | - | - | - | ${ }^{-}$ | - | ${ }^{-}$ | 50 | 50 | 3 |
|  | Protal | 18 | 6 | 6 | 30 | 400 | 600 | 200 | 1200 |  |

## LIST OF ELECTIVES

| S.NO. | SUBJECT CODE | DEPTT. ELECTIVE |
| :---: | :---: | :--- |
| 1. | ME-417-F | QUALITY ENGINEERING |
| 2. | ME 419-F | FINITE ELEMENT METHODS |
| 3. | ME-421-F | ENERGY MANAGEMENT PRINCIPLES |
| 4. | ME-425-F | COMPUTER INTEGRATED <br> MANUFACTURING |
| 5. | ME- 429-F | RELIABILITY ENGINEERING |
| 6. | ME-431-F | SOLAR ENERGY ENGINEERING |

# MAHARSHI DAYANAND UNIVERSITY, ROHTAK <br> SCHEME OF STUDIES \& EXAMINATIONS <br> B.Tech. $4^{\text {th }}$ YEAR MECHANICAL ENGINEERING, SEMESTER- VIII <br> (Scheme-F) <br> EFFECTIVE FROM THE SESSION 2012-13 

| SI. No. | Course No. | Subject | Internal <br> Marks | External <br> Marks | Total <br> Marks |
| :--- | :---: | :---: | :---: | :---: | :---: |
| 1. | ME- 402-F | Industrial Training/Institutional Project Work | 150 | 150 | 300 |

## Note:

The students are required to undergo Industrial Training or Institutional Project Work of duration not less than 4 months in a reputed organization or concerned institute. The students who wish to undergo industrial training, the industry chosen for undergoing the training should be at least a private limited company. The students shall submit and present the mid-term progress report at the Institute. The presentation will be attended by a committee. Alternately, the teacher may visit the Industry to get the feedback of the students.
The final viva-voce of the Industrial Training or Institutional Project Work will be conducted by an external examiner and one internal examiner appointed by the Institute. External examiner will be from the panel of examiners submitted by the concerned institute approved by the Board of Studies in Engg. \& Technology. Assessment of Industrial Training or Institutional Project Work will be based on seminar, viva-voce, report and certificate of Industrial Training or Institutional Project Work obtained by the student from the industry or Institute.
The internal marks distributions for the students who have undergone Industrial Training consist of 50 marks from the industry concern and 100 marks by the committee members consisting of faculty members of concerned department of the parent institute.
The teachers engaged for Institutional Project work shall have a workload of 2 hours per group (at least 4 students) per week.


## CURRICULUM AND SCHEME OF EXAMINATIONS OF BBA PROGRAMME FROM THE SESSION 2014-15

## SECOND YEAR

## Third Semester

| Paper No | Title of Paper(s) | External <br> Marks | Internal <br> Assessment/ <br> Work-shop <br> Marks | Practical <br> Marks | Total <br> Marks |
| :--- | :--- | :---: | :---: | :---: | :---: |
| BBAN301 | Cost and Management <br> Accounting | 80 | 20 | - | 100 |
| BBAN302 | Marketing Management | 80 | 20 | - | 100 |
| BBAN303 | Capital Markets | 80 | 20 | - | 100 |
| BBAN304 | Introduction to <br> Information Technology | 50 | - | 50 | 100 |
| BBAN305 | Environment Studies | 80 | 20 | - | 100 |
| BBAN306 | Disaster Management | 80 | 20 | - | 100 |
|  | TOTAL |  |  |  | 600 |

## Fourth Semester

| Paper No | Title of Paper(s) | External <br> Marks | Internal <br> Assessment/ <br> Work-shop <br> Marks | Practical <br> Marks | Total <br> Marks |
| :--- | :--- | :---: | :---: | :---: | :---: |
| BBAN401 | Financial Management | 80 | 20 | - | 100 |
| BBAN402 | Human Resource <br> Management | 80 | 20 | - | 100 |
| BBAN403 | Business Research <br> Methods | 80 | 20 | - | 100 |
| BBAN404 | Business Laws | 80 | 20 | - | 100 |
| BBAN405 | Data Base Management <br> System | 50 | - | 50 | 100 |
| BBAN406 | Human Rights and Values | 80 | 20 | - | 100 |
|  | TOTAL |  |  |  | 600 |



CURRICULUM AND SCHEME OF EXAMINATIONS OF
BBA PROGRAMME FROM THE SESSION 2014-15

## THIRD YEAR

## Fifth Semester

| Paper No | Title of Paper(s) | External <br> Marks | Internal <br> Assessment/ <br> Work-shop <br> Marks | Practical <br> Marks | Total <br> Marks |
| :--- | :--- | :---: | :---: | :---: | :---: |
| BBAN501 | Production and Materials <br> Management | 80 | 20 | - | 100 |
| BBAN502 | Company Law | 80 | 20 | - | 100 |
| BBAN503 | Indian Business <br> Environment | 80 | 20 | - | 100 |
| BBAN504 |  <br> Internet | 50 | - | 50 | 100 |
| BBAN505 | Presentation Skills and <br> Personality Development | 80 | 20 | - | 100 |
| BBAN506 | Cyber Security | 80 | 20 | - | 100 |
| BBAN507 Summer Training Report | 100 | - | - | 100 |  |
|  | TOTAL |  |  |  | 700 |

## Sixth Semester

| Paper No | Title of Paper(s) | External <br> Marks | Internal <br> Assessment/ <br> Work-shop <br> Marks | Practical <br> Marks | Total <br> Marks |
| :--- | :--- | :---: | :---: | :---: | :---: |
| BBAN601 | Income Tax | 80 | 20 | - | 100 |
| BBAN602 |  <br> Design | 80 | 20 | - | 100 |
| BBAN603 | Foundations of <br> International Business | 80 | 20 | - | 100 |
| BBAN604 | Consumer Protection | 80 | 20 | - | 100 |
| BBAN605 | E-Commerce | 50 | - | 50 | 100 |
| BBAN606 | Project Report | 100 | - | - | 100 |
| BBAN607 | Comprehensive Viva- <br> voce | 100 | - | - | 100 |
|  | TOTAL |  |  |  | 700 |

Session 2014-15

## M.D. UNIVERSITY <br> SCHEME OF STUDIES AND EXAMINATION <br> M.TECH 1st YEAR (COMPUTER SCIENCE \& ENGINEERING) <br> SEMESTER 1st <br> CBCS Scheme effective from 2016-17

| $\begin{aligned} & \text { Sr. } \\ & \text { No } \end{aligned}$ | Course No. | Subject | Teaching Schedule |  |  |  | Examination Schedule (Marks) |  |  |  | Duratio <br> n of Exam (Hours) | No of hours/ week |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P | Total Credi ts | Marks of Class works | Theor <br> y | Practi cal | Total |  |  |
| 1 | 16CSE21C1 | Data Communication and Computer Networks | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 2 | 16CSE21C2 | Advanced Operating Systems | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 3 | 16CSE21C3 | Advanced Database <br> Management System | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 4 | 16CSE21C4 | Data Warehouse and Mining | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 5 | 16CSE21C5 |  | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 6 | 16CSE21C6 | Seminar | - |  | - | 2 | 50 | - | - | 50 |  | 2 |
| 7 | 16CSE21CL1 | Advanced Operating Systems Lab | - | - | 2 | 2 | 50 | - | 50 | 100 | 3 | 2 |
| 8 | 16CSE21CL2 | Advanced Database Management System Lab | - | - | 2 | 2 | 50 | - | 50 | 100 | 3 | 2 |
|  |  | TOTAL | 26 |  |  |  |  |  |  |  |  |  |

## NOTE:

Examiner will set nine question in total. Question one will be compulsory and will comprises of all section and remaining eight questions to be set by taking two questions from each unit. The students have to attempt five questions in total, first being compulsory and selecting one from each Unit.


## M.D. UNIVERSITY <br> SCHEME OF STUDIES AND EXAMINATION M.TECH 1st YEAR (COMPUTER SCIENCE \& ENGINEERING) <br> SEMESTER 2nd CBCS Scheme effective from 2016-17

| $\begin{aligned} & \text { Sr. } \\ & \text { No } \end{aligned}$ | Course No. | Subject | Teaching Schedule |  |  |  | Examination Schedule (Marks) |  |  |  | Durat ion of Exam (Hour s) | No of hours /wee k |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P | $\begin{gathered} \text { Tota } \\ \text { I } \\ \text { Cred } \\ \text { its } \end{gathered}$ | Marks of Class works | Theor y | Practi cal | Total |  |  |
| 1 | 16CSE22C1 | Soft Computing | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 2 | 16CSE22C2 | Algorithm Design | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 3 | 16CSE22C3 | Seminar | - |  | 2 | 2 | 50 | - | - | 50 | - | 2 |
| 4 | 16CSE22CL1 | Soft Computing Lab | - | - | 2 | 2 | 50 | - | 50 | 100 | 3 | 2 |
| 5 | 16CSE22CL2 | Algorithm Design Lab | - | - | 2 | 2 | 50 | - | 50 | 100 | 3 | 2 |
| 6 | $\begin{aligned} & \text { 16CSE22D1 or } \\ & \text { 16CSE22D2 or } \\ & \text { 16CSE22D3 or } \\ & \text { 16CSE22D4 } \end{aligned}$ | Elective-1 | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 7 |  | Open Elective |  |  |  | 3 |  |  |  |  |  | 3 |
| 8 |  | Foundation Elective |  |  |  | 2 |  |  |  |  |  | 2 |
|  |  |  | 23 |  |  |  |  |  |  |  |  |  |

NOTE:Examiner will set nine question in total. Question One will be compulsory and will comprises af all section and remaining eight questions to be set by taking two questions from each unit. The students have to attempt five questions in total, first being compulsory and selecting one from each Unit.

Elective 1: Choose any one from the following papers

| 16CSE22D1 | Mobile and Wireless Communicat |
| :--- | :--- |
| 16CSE22D2 | Optimization Techniques |
| 16CSE22D3 | Discrete Mathematics |
| 16CSE22D4 | Internet and Web Development |

Elective 2
A candidate has to select this paper from the pool of Open Electives provided by the University
Elective 3
A candidate has to select this aser from the of of Foundation Electives provided by the University.


## M.D UNIVERSITY <br> SCHEME OF STUDIES AND EXAMINATION <br> M.TECH 2nd YEAR (COMPUTER SCIENCE \& ENGINEERING) <br> SEMESTER 3rd

CBCS Scheme effective from 2017-18


NOTE:
Examiner will set nine questions in total. Question One will be compulsory and will comprises of all sections and remaining eight questions to be set by taking two questions from each unit. The students have to attempt five questions in total, first being compulsory and selecting one from each Unit.

## OPEN ELECTIVE

A candidate has to select this paper from the pool of open electives provided by the University.


# M.D UNIVERSITY <br> SCHEME OF STUDIES AND EXAMINATION <br> M.TECH 2nd YEAR (COMPUTER SCIENCE \& ENGINEERING) <br> SEMESTER 4th <br> CBCS Scheme effective from 2017-18 

| SI. <br> No | Course No. | Subject | Teaching Schedule |  |  |  | Examination Schedule (Marks) |  |  |  | No of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P | Total | Marks of Class works | Theory | Practical | Total |  |
| 1. | 17CSE24C1 | Dissertation and viva (Dissertation Stage 2) | - | - | - | - | 250 | - | 500 | 750 | 20 |
|  |  | TOTAL | . . - - |  |  |  | - |  |  |  |  |

NOTE:

1. Students have to publish a research paper in a journal / conference of the research work done in the semester.


## Maharshi Dayanand University, Rohtak

## SCHEME OF STUDIES \& EXAMINATION <br> MASTER OF TECHNOLOGY <br> (CYBER FORENSICS AND INFORMATION SECURITY) <br> SEMESTER-III <br> EFFECTIVE FROM 2013-14

| Course No. | Course Title |  | Teaching <br> Schedule |  | Marks |  | Total | Duration <br> of Exam <br> (Hrs) |
| :--- | :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L T | P | Sessional | Exam. |  |  |  |
| MTCF 301 | Preserving \& Recovering <br> Digital Evidence | 4 | - | - | 50 | 100 | 150 | 3 |
| MTCF 302 | Cyber Laws \& Security <br> Policy | 4 | - | - | 50 | 100 | 150 | 3 |
|  | Elective-III | 4 | - | - | 50 | 100 | 150 | 3 |
| MTCF 307 | Dissertation Phase 1 | - | - | 8 | 100 | - | 100 | 3 |
| MTCF 308 | Seminar \& Technical Writing | - | - | 2 | 50 | - | 50 | - |
| TOTAL |  | 12 | - | 10 | 300 | 300 | 600 |  |

Elective- III

MTCF 303- Biometric Security
MTCF 304- Applied Cryptography
MTCF 305-Distributed Systems Security
MTCF 306- Secure Software Engineering


# Maharshi Dayanand University, Rohtak 

SCHEME OF STUDIES \& EXAMINATION MASTER OF TECHNOLOGY (CYBER FORENSICS AND INFORMATION SECURITY)

## SEMESTER-IV

## EFFECTIVE FROM 2013-14

| Course No. | Course Title | Teaching <br> Schedule |  | Marks |  | Total |  |
| :--- | :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Sessional | Exam. |  |
| MTCF 401 | Dissertation Phase-II | - | - | 24 | 200 | 400 | 600 |
|  |  |  |  |  |  |  |  |
|  | Total |  | - | 24 | 200 | 400 | 600 |



## MAHARSHI DAYANAND UNIVERSITY, ROHTAK

## SCHEME OF STUDIES AND EXAMINATIONS FOR MASTER OF TECHNOLOGY IN <br> ELECTRICAL ENGINEERING

(Specialization: Electrical Power Systems)
SEMESTER-III

| S.No | Course Code | Course Title | Teaching Schedule |  |  | Class <br> Work | Examination |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | Theory | Practical |  |
|  |  |  | L | T | P |  |  | 15 |  |
| 1 | MTEPS301 | Elective - III | 3 | 1 | 0 | 50 | 100 | - | 150 |
| 2 | MTEPS302 | Elective - IV | 3 | 1 | 0 | 50 | 100 | 50 | 100 |
| 3 | MTEPS303 | Seminar |  |  | 2 | 50 | - | - | 150 |
| 4 | MTEPS304 | Dissertation- | 0 | 0 | 4 | 150 | - |  |  |
|  |  | Phase I |  |  |  | 30 | 200 | 50 | 550 |

1. The paper setter shall set each theory paper of $\mathbf{1 0 0}$ marks covering entire syllabus. However the examiner shall evaluate the performance of the student in the theory paper finally by assigning one of the grades out of $A^{+}, A, B, C, D \& E$. The examination of practical courses shall also be evaluated on the basis of these grades.
2. The sessionals of theory, practical and Seminar courses shall also be evaluated in the basis of these grades.
3. The choice of student for any elective shall not be binding on the department to offer it.
4. The grading system is define at the end of scheme of studies \& examinations and will be supplied by the University to the examiner(s).


## MAHARSHI DAYANAND UNIVERSITY, ROHTAK

## SCHEME OF STUDIES AND EXAMINATIONS FOR MASTER OF TECHNOLOGY IN ELECTRICAL ENGINEERING

(Specialization: Electrical Power Systems)
SEMESTER-IV

| S.No. | Course <br> Code | Course Title | Teaching <br> Schedule |  |  | Class <br> Work | Examination |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P |  | Theory | E.VIVA |  |
| 1 | MTEPS401 | Dissertation Final Phase | 0 | 0 | 20 | 200 | - | 400 | 600 |
|  |  |  |  |  | 20 | 200 | - | 400 | 600 |

NOTE:

1. The sessionals of Dissertation shall be evaluated on the basis of grades i.e $\mathbf{A}^{+}$,
$A, B, C, D \& E$.
2. The Dissertation shall be evaluated by an examination committee consisting of the head of the department, Dissertation Supervisor and one External examiner. The evaluation should be based on above grades.
3. The grading system is define at the end of scheme of studies \& examinations and will be supplied by the University to the examiner(s).


## M.D.UNIVERSITY, ROHTAK <br> SEMESTER 1 EAR (ELECTRONICS \& COMMUNICATION)

CBCS Scheme effective from 2016-17

| $\begin{aligned} & \text { Sl. } \\ & \text { No } \end{aligned}$ | Course Code | Subject | Credit Pattern |  |  |  | Examination Schedule (Marks) |  |  |  | Dura tion of Exam (Hou rs) | No of Hours /week |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P | Total Credi ts | Mark $\mathbf{s}$ of Class work | $\begin{gathered} \text { Theor } \\ y \\ \hline \end{gathered}$ | $\begin{gathered} \text { Practic } \\ \text { al } \\ \hline \end{gathered}$ | Total |  |  |
| 1 | 16ECE21Cl | Advance Microprocessor \& Microcontroller | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 2 | 16ECE21C2 | Satellite and Space Communication | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 3 | 16ECE21C3 | Information and Communication Theory | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 4 | 16ECE21C4 | Advanced Digital Signal Processing | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 5 | 16ECE21C5 | Data Communication Networks | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 6 | 16ECE21C6 | Seminar | - |  | - | 2 | 50 | - | - | 50 |  | 2 |
|  | 16ECE21CL1 | Satellite Lab | - | - | 2 | 2 | 50 | - |  | 100 | 3 | 4 |
| 7 |  |  |  |  |  |  |  | - | 50 |  |  |  |
| 8 | 16ECE21CL2 | Advance Microprocessor \& Microcontroller Lab | - | - | 2 | 2 | 50 | - | 50 | 100 | 3 | 4 |
|  |  | TOTAL | 26 |  |  |  |  |  |  |  |  |  |

NOTE:
Examiner will set nine question in total. Question One will be compulsory and will comprise short answer type questions from all sections and remaining eight questions to be set by taking two questions from each unit. The students have to attempt five questions in total, first being compulsory and selecting one from each Unit.


## SCHEME OF STUDIES AND M.D.UNIVERSITY, ROHTAK \& COMMUNATION M.TECH 1st YEAR (ELECTRONICS CBCS Scheme effective from 2016-17

| $\begin{gathered} \mathbf{S I} \\ \dot{\mathbf{N}} \end{gathered}$ | Course No. | Subject | Credit Pattern |  |  | Examination Schedule (Marks) |  |  |  | Duration of Exam (Hours) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 1 T | P | Total Credi ts | Marks of Class works | Theory | Practical |  |  |
| 1 | 16ECE22C1 | Wireless Mobile Communication | 40 | - | , | 50 | 100 | Practical | 150 | 3 |
| 2 | 16ECE22C2 | Optical <br> Communication | 40 | - | 4 | 50 | 100 | - | 150 | 3 |
| 3 | 16ECE22C3 | Seminar | ven | - | 2 | 50 | - | - | 50 |  |
| 4 | 16ECE22CL1 |  | - | 2 | 2 | 50 | - | 50 | 100 | 3 |
|  |  |  | - | 2 | 2 | 50 | - | 50 | 100 | 3 |
|  |  |  |  |  |  |  |  |  |  |  |
| 6 | 16ECE22D1 <br> or <br> 16ECE22D2 <br> or <br> 16ECE22D3 <br> or <br> 16ECE22D4 | Elective-1 | 40 | - | 4 | 50 | 100 | - | $150$ | 3 |
|  |  | Open Elective |  |  | 3 |  |  |  |  |  |
| 8 |  | Foundation Elective |  |  | 2 |  |  |  |  |  |
|  |  | TOTAL |  |  | 23 |  |  |  |  |  |

NOTE: Examiner will set nine questions in total. Question One will be compulsory and will comprise short answer type questions from all sections and remaining eight questions to be set by taking two questions from each unit. The students have to attempt five questions in total, first being compulsory and selecting one from each Unit.

Elective 1: Choose any one from the following four papers:

> 16ECE22D1 - Electronic System Design
> 16ECE22D2 - Image Processing
> 16ECE22D3 - ADVANCED MATHEMATICS FOR ENGINEERS 16ECE22D4 - VLSI Design

Open Elective: A candidate has to select this paper from the pool of Open Electives provided by the University. Foundation Elective: A candidate has to select this paper from the pool of Foundating flectives provided by the University.


## M.DUNIVERSITY <br> SCHEME OF STUDIES AND EXAMINATION M.TECH 2nd YEAR (ELECTRONICS \& COMMUNICATION) SEMESTER 3rd <br> CBCS Scheme effective from 2017-18

| $\begin{aligned} & \text { Sl. } \\ & \text { No } \end{aligned}$ | Course No. | Subject | Teaching Schedule |  |  |  | Examination Schedule (Marks) |  |  |  | DurationofExam(Hours) | No of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P | Total | Marks of Class works | Theory | Practica | Total |  |  |
| 1 | 17ECE23C1 | Neural Networks \& Fuzzy Logics | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 2 | 17ECE23C2 | CDMA | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
|  |  | DISSERTATIO | - | - | - | 4 | 100 | - | - | 100 |  | 2 |
| 3 | 17ECE23C3 | N (PHASE-I) |  |  |  |  |  |  |  |  |  |  |
| 4 | 17ECE23C4 | Seminar | - | - | - | 2 | 50 | - | - | 50 |  | 2 |
|  |  | Project | - | - | 2 | 2 | 50 | - | 50 | 100 |  | 2 |
| 5 | 17ECE23CLl | MATLAB Lab | - | - | 2 | 2 | 50 | - | 50 | 100 |  | 2 |
| 6 | 17ECE23CL2 |  |  |  |  |  |  |  |  |  |  |  |
| 7 |  | OPEN ELECTIVE |  |  |  |  |  |  |  |  |  | 3 |
| 7 |  |  |  |  |  |  |  |  |  |  |  | 21 |

NOTE:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of Calculator will not be permitted in the examination.
2. Students have to publish a research paper in a journal / conference on the basis of literature survey done in the semester.

OPEN ELECTIVE: A candidate has to select this paper from the pool of open electives provided by the University.


## M.D UNIVERSITY <br> SCHEME OF STUDIES AND EXAMINATION M.TECH 2nd YEAR (ELECTRONICS \& COMMUNICATION) <br> SEMESTER 4th

CBCS Scheme effective from 2017-18


NOTE:

1. Students have to publish a research paper in a journal / conference of the research work done in the semester.


## M. TECH. MECHANICAL ENGINEERING (MACHINE DESIGN) COURSE SCHEME and DETAILED SYLLABUS

Semesterwise Course Scheme

| FIRST SEMESTER |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Subject <br> Code | Subject | Credit | L-T-P | Marks Weightage |  | Grand total |
|  |  |  |  | Theory | Sessional |  |
| 1. M 801 A | Numerical Analysis and Optimization | 3 | $3-0-0$ | 100 | 50 |  |
| 2. M803A | Instrumentation and Measurement | 3 | $3-0-0$ | 100 | 50 |  |
| 3. M805A | Experimental Stress Analysis | 3 | $3-0-0$ | 100 | 50 |  |
| 4. M807A | Metal Forming Analysis | 3 | $3-0-0$ | 100 | 50 |  |
| 5. M809A | Mechatronics and Product Design | 3 | 3-0-0 | $\begin{aligned} & 100 \\ & \text { Ext. } \end{aligned}$ | $\begin{aligned} & 50 \\ & \text { Int. } \end{aligned}$ |  |
| 6. M811A | Experimental Stress Analysis Lab | 1 | 0-0-2 | 25 | 25 |  |
| 7. M813A | Mechanical Measurement Lab | 1 | 0-0-2 | 25 | 25 |  |
| 8. M815A | Computational Lab | 1 | 0-0-2 | 25 | 25 |  |
|  | Total | 18 | 15-0-6 | 575 | 325 | 900 |
| SECOND SEMESTER |  |  |  |  |  |  |
| 9. M 802 A | Theory of Elasticity | 3 | $3-0-0$ | 100 | 50 |  |
| 10. M804A | Design of Mechanisms | 3 | 3-0-0 | 100 | 50 |  |
| 11. M806A | Principles of Machine Design | 3 | $3-0-0$ | 100 | 50 |  |
| 12. | General Elective - I | 3 | $3-0-0$ | 100 | 50 |  |
| 13. | General Elective - II | 3 | $3-0-0$ | 100 | 50 |  |
|  |  |  |  | Ext. | Int. |  |
| 14. M812A | Seminar | 1 | 0-0-2 | 25 | 25 |  |
| 15. M814A | CAD/CAM Lab | 1 | 0-0-2 | 25 | 25 |  |
| 16. M816A | Design Practice Lab-I | 1 | 0-0-2 | 25 | 25 |  |
|  | Total | 18 | 15-0-6 | 575 | 325 | 900 |
| THIRD SEMESTER |  |  |  |  |  |  |
| 17. M821A | Mechanical Behavior of Materials | 3 | 3-0-0 | 100 | 50 |  |
| 18. M823A | Mechanical Vibrations | 3 | 3-0-0 | 100 | 50 |  |
| 19. M825A | General Elective III | 3 | 3-0-0 | 100 | 50 |  |
|  |  |  |  | Ext. | Int. |  |
| 20. M827A | Design Practice Lab II | 1 | 0-0-2 | 25 | 25 |  |
| 21. M829A | Materials Behavior and Vibration Lab | 1 | 0-0-2 | 25 | 25 |  |
| 22. M831A | Minor Project | 5 | 0-0-10 | 150 | 100 |  |
|  | Total | 16 | 9-0-14 | 500 | 300 | 800 |


| $\begin{array}{l}\text { Subject } \\ \text { Code }\end{array}$ | Subject |  | Credit | L-T-P | Marks Weightage |  |
| :---: | :--- | :--- | :--- | :--- | :--- | :--- |
| Ext. | Int. |  |  |  |  |  |$]$

## ELECTIVES I

1. M837 Design of Bearings and Shaft
2. M838 Computer Aided Design
3. M839 Design of Pollution Control Equipments
4. M840 Design of Pressure Vessels

## ELECTIVES II

1. M845 Fracture Mechanics
2. M846 Design and Metallurgy of Welded Joints
3. M847 Finite Element Methods
4. M848 Materials Management

## ELECTIVE III

1. M 849

Total Quality Management
2. M850 Robotic Engineering
3. M851 Computer Aided Vehicle Design
4. M852 Tribology


## M.D.UNIVERSITY, ROHTAK <br> SCHEME OF STUDIES AND EXAMINATION M.TECH 1st YEAR (MANUFACTURING \& AUTOMATION) <br> SEMESTER 1

CBCS Scheme effective from 2016-17

| $\begin{aligned} & \text { Sl. } \\ & \text { No } \end{aligned}$ | Course Code | Subject | Credit Pattern |  |  |  | Examination Schedule (Marks) |  |  |  | Dura tion of Exam (Hou rs) | No of <br> Hours /week |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P | Total Credi ts | Mark $s$ of Class work | $\begin{gathered} \text { Theor } \\ \mathrm{y} \\ \hline \end{gathered}$ | Practic al | Total |  |  |
| 1 | $\begin{aligned} & \text { 16MMA21C1 } \\ & \text { 16MMA21C2 } \end{aligned}$ | Metal Forming Analysis | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 2 |  | Mechatronics \& Product Design | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 3 | 16MMA21C3 | Total Quality Management | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 4 | 16MMA21C4 | Welding \& Allied Processes | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 5 | 16MMA21CLI | Mechatronics Lab | - | - | 2 | 2 | 50 |  | 50 | 100 | 3 | 4 |
| 6 | 16MMA21CL2 | Welding Lab | - | - | 2 | 2 | 50 |  | 50 | 100 | 3 | 4 |
| 7 | 16MMA21CL3 | CAD/CAM Lab | - | - | 2 | 2 | 50 |  | 50 | 100 | 3 | 4 |
| 8 | 16MMA21C5 | Seminar | - |  | - | 2 | 50 | - | - | 50 |  | 2 |
| 9 | 16MMA21D1 or <br> 16MMA21D2 or 16MMA21D3 OR <br> 16MMA21D4 | Elective I | 4 | - |  | 4 | 50 | 100 |  | 150 | 3 | 4 |
|  |  |  | 28 |  |  |  |  |  |  |  |  |  |
|  |  | TOTAL |  |  |  |  |  |  |  |  |  |  |

Elective I: Choose any one from the following three papers:
16MMA21D1 - INDUSTRIAL INSPECTION
16MMA21D2 - DESIGN AND METALLURGY OF WELDED
JOINTS 16MMA21D3 - FOUNDARY TECHNOLOGY
16MMA21D4-DESIGN PLANNING CONTORL AND PRODUCTION SYSTEM
NOTE:
Examiner will set nine questions in total. Question One will be compulsory and will comprise short answer type questions from all sections and remaining eight questions to be set by taking two questions from each unit. The students have to attempt five questions in total, first being compulsory and selecting one from each Unit.


## M.D.UNIVERSITY, ROHTAK SCHEME OF STUDIES AND EXAMINATION M.TECH 1st YEAR (MANUFACTURING \& AUTOMATION) <br> SEMESTER 2 <br> CBCS Scheme effective from 2016-17



TOTAL
NOTE: Examiner will set nine questions in total. Question One will be compulsory and will comprise short answer type questions from all sections and remaining eight questions to be set by taking two questions from each unit. The students have to attempt five questions in total, first being compulsory and selecting one from each Unit.
Elective II : Choose any one from the following three papers:
16MMA22D1 - QUALITY CONTROL TECHNIQUES
16MMA22D2 - FINITE ELEMENT METHODS
16MMA22D3 - ARTIFICIAL INTELLEGENCE IN MANUFACTURING
Open Elective: A candidate has to select this paper from the pool of Open Electives provided by the University.
Foundation Elective: A candidate has to select this paper from the pool of Foundation Electives provided by the University-

# Maharshi Dayanand University, Rohtak 

## SCHEME OF STUDIES \& EXAMINATION

 MASTER OF TECHNOLOGY (STRUCTURAL DESIGN)
## SEMESTER-III

EFFECTIVE FROM 2012-13

| Course No. | Course Title | Teaching Schedule |  |  | Marks |  | Total | Duration of Exam (Hrs) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Sessional | Exam. |  |  |
| MTSD 301 | Design of Structures- III | 4 | - | - | 50 | 100 | 150 | 3 |
|  |  |  |  |  |  | 100 | 150 | 3 |
| MTSD 302 | Professional Practices | 4 | - | - | 50 | 100 | 150 | 3 |
|  | Elective-III | 4 | - | - | 50 | 50 | 100 | 3 |
| MTSD 303 | Computational Laboratory-III | - | - | 3 | 50 | 50 | 50 |  |
| MTSD 304 | Seminar \& Technical Writing | - |  | 2 | 100 | - | 100 |  |
| MTSD 305 | Dissertation Phase-I | - |  | 4 | 100 |  |  |  |
|  |  | 12 | - | 9 | 350 | 350 | 700 |  |
| TOTAL |  |  |  |  |  |  |  |  |

1. The paper setter shall set each theory paper of 100 marks covering entire syllabus. However the Examiner shall evaluate the performance of the student in the theory paper finally by assigning one of the grades out of $A+A, B, C, D \& E$. The examination of practical courses shall also be evaluated on the basis of these grades.
2. The sessionals of theory and practical courses shall also be evaluated in the basis of these grades.
3. The choice of student for any elective shall not be binding on the department to offer it.
4. The grading system is define at the end of scheme of studies \& examinations and will be supplied by the University to the examiner(s).


## Maharshi Dayanand University, Rohtak

 SCHEME OF STUDIES \& EXAMINATION MASTER OF TECHNOLOGY (STRUCTURAL DESIGN) SEMESTER-IVEFFECTIVE FROM 2012-13

| Course No. | Course Title | Teaching <br> Schedule |  | Marks |  | Total <br>  | L | Duration <br> of Exam <br> (Hrs) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| MTSD 401 | Dissertation | - | - | 24 | Sessional | Exam. |  |  |
| TOTAL |  |  |  |  |  | 400 | 600 | 3 |

NOTE:

1. The sessionals of Dissertation shall be evaluated on the basis of grades i.e $A+, A, B, C, D \& E$.
2. The Dissertation shall be evaluated by an examination committee consisting of the head of the department, Dissertation Supervisor and one External examiner. The evaluation should be based on above grades.
3. The grading system is define at the end of scheme of studies \& examinations and will be supplied by the University to the examiner(s)


## List of Electives:

## Elective- I

MTSD 107 - Composite Structures
MTSD 108 - Analysis and Design of Plates \& Shells
MTSD 109 - Advanced Foundation Design and Geotechnics
MTSD 110 - Material Science

## Elective- II

MTSD 207- Advanced Steel Design
MTSD 208 - Advanced Reinforced Concrete Design

MTSD 209-Earth Retaining Structures
MTSD 210-Construction Failures

## Elective- III

MTSD 306- High Rise Structures
MTSD 307- Design of Hydraulic Systems
MTSD 308- Design Of Bridges


Second Year: Third Semester

| Course Code | Title of the Course (s) | External Marks | Sessional Marks | Practical Marks | Total Marks | $\begin{aligned} & \text { Credits } \\ & \text { (L-T-P) } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Core Courses |  |  |  |  |  |  |
| 17IMG23C1 | Strategic Management | 80 | 20 | - | 100 | 3-1-0 |
| 17IMG23C2 | Management Information Systems | 80 | 20 | - | 100 | 3-1-0 |
| 17IMG23C3 | Entrepreneurship | 80 | 20 | - | 100 | 3-1-0 |
| 17IMG23C4 |  | 100 | - | - | 100 | 4 |
| Open Elective Course |  |  |  |  |  |  |
| Each student will opt one course from the pool of Open Elective Courses provided by the University, excluding the Open Elective Courses prepared by the Institute of Management Studies and Research. |  |  |  |  |  | 3 |
| Discipline Specific Elective Courses (specialization areas offered under dual specialization scheme) |  |  |  |  |  |  |
| Human Resource Management |  |  |  |  |  |  |
| 17IMG23GH1 | Performance Management | 80 | 20 | - | 100 | 3-1-0 |
| 17IMG23GH2 | Organizational Change <br> and  <br> Development  <br>   | 80 | 20 | - | 100 | 3-1-0 |
| Finance |  |  |  |  |  |  |
| 17IMG23GF1 | Management of Financial Services and Institutions | 80 | 20 | - | 100 | 3-1-0 |
| 17IMG23GF2 | Project Management and Infrastructure Finance | 80 | 20 | - | 100 | 3-1-0 |
| Information Technology |  |  |  |  |  |  |
| 17IMG23GT1 | Object Oriented Analysis and Design | 50 | - | 50 | 100 | 3-0-1 |
| 17IMG23GT2 | Programming in Oracle | 50 | - | 50 | 100 | 3-0-1 |
| International Business |  |  |  |  |  |  |
| 17IMG23GI1 | Foreign Management Exchange | 80 | 20 | - | 100 | 3-1-0 |
| 17IMG23GI2 | International Trade Theory and Practice | 80 | 20 | - | 100 | 3-1-0 |
| Marketing |  |  |  |  |  |  |
| 17IMG23GM1 | Brand Management | 80 | 20 | - | 100 | 3-1-0 |
| 17IMG23GM2 | Consumer Behavior | 80 | 20 | - | 100 | 3-1-0 |
| Total Credits |  |  |  |  |  | 35 |

## Note:

1. Students are required to choose any two specialization areas offered under dual specialization scheme. The specialization area opted in $3^{\text {rd }}$ Semester would remain same in $4^{\text {th }}$ semester also.
2. Only the following combinations of specializations shall be offered to the students of Two Year MBA Programme:
a. Finance and Marketing
b. Finance and Human Resource Management
c. Human Resource Management and Marketing
d. Finance and Information Technology
e. Finance and International Business
f. Marketing and International Business
g. Marketing and Information Teqhnology


Second Year: Fourth Semester

| Course Code | Title of the Course (s) | External Marks | Sessional/ <br> Internal <br> Marks | Practical Marks | Total <br> Marks | Credits (L-T-P) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Core Courses |  |  |  |  |  |  |
| 17IMG24CI | E-Commerce | 50 | - | 50 | 100 | 3-0-1 |
| 17IMG24C2 | Project Report | 100 | 100 | - | 200 | 8 |
| 171MG24C3 | Comprehensive Viva-voce | 100 | - | - | 100 | 4 |
| Discipline Specific Elective Courses (specialization areas offered under dual specialization scheme) |  |  |  |  |  |  |
| Human Resource Management |  |  |  |  |  |  |
| 17IMG24GH1 | IndustrialRelations <br> and Labour Legislations | 80 | 20 | - | 100 | 3-1-0 |
| 17IMG24GH2 | Strategic Human Resource Management | 80 | 20 | - | 100 | 3-1-0 |
| Finance |  |  |  |  |  |  |
| 17IMG24GF1 | Management of Banking and Insurance | 80 | 20 | - | 100 | 3-1-0 |
| 17IMG24GF2 | Security Analysis and Portfolio Management | 80 | 20 | - | 100 | 3-1-0 |
| Information Technology |  |  |  |  |  |  |
| 17IMG24GT1 | Systems Analysis and Design | 80 | 20 | - | 100 | 3-1-0 |
| 17IMG24GT2 | Programming in JAVA | 50 | - | 50 | 100 | 3-0-1 |
| International Business |  |  |  |  |  |  |
| 17IMG24GII | International Financial Management | 80 | 20 | - | 100 | 3-1-0 |
| 17IMG24GI2 | International Logistics | 80 | 20 | - | 100 | 3-1-0 |
| Marketing |  |  |  |  |  |  |
| 17IMG24GM1 | Integrated Marketing Communication | 80 | 20 | - | 100 | 3-1-0 |
| 17IMG24GM2 | Service Marketing | 80 | 20 | - | 100 | 3-1-0 |
| Total Credits |  |  |  |  |  | 32 |

## Note:

1. Students are required to choose any two specialization areas offered under dual specialization scheme. The specialization area opted in $3^{\text {rd }}$ Semester would remain same in $4^{\text {th }}$ semester also.
2. Only the following combinations of specializations shall be offered to the students of Two Year MBA Programme:
a. Finance and Marketing
b. Finance and Human Resource Management
c. Human Resource Management and Marketing
d. Finance and Information Technology
e. Finance and International Business
f. Marketing and International Business
g. Marketing and Information Technology
3. The topic of the Project Report (Code 16IMG24C2) shall be finalized in $3^{\text {rd }}$ semester by a Committee of the faculty members to be constituted by Director/Principal of the concerned Institute after presentation by candidate before
the
Committee.


## SCHEME OF EXAMINATIONS

FOR
TWO YEAR MBA PROGRAMME FROM THE SESSION 2019-20

## FIRST YEAR: FIRST SEMESTER

| Course Code | Title of the Course (s) | External <br> Marks | Sessional Marks | Practical Marks | Total Marks | Credits (L-T-P) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| CORE COURSES |  |  |  |  |  |  |
| 19IMG21C1 | Management Concepts and Organizational Behavior | 80 | 20 | - | 100 | 3-1-0 |
| 19IMG21C2 | Managerial Economics | 80 | 20 | - | 100 | 3-1-0 |
| 19IMG21C3 | Accounting for Managers | 80 | 20 | - | 100 | 3-1-0 |
| 19IMG21C4 | Business Statistics and Analytics | 80 | 20 | - | 100 | 3-1-0 |
| 19IMG21C5 | Operations Management | 80 | 20 | - | 100 | 3-1-0 |
| 19IMG21C6 | Computer Fundamentals and Office Automation Tools | 50 | - | 50 | 100 | 3-0-1 |
| 19IMG21C7 | Business Environment | 80 | 20 | - | 100 | 3-1-0 |
| Discipline Specific Elective Courses (Each student will opt one course) |  |  |  |  |  |  |
| 19IMG21D1 | Business Communication Skills | 80 | 20 | - | 100 | 3-1-0 |
| 19IMG21D2 | Event Management | 80 | 20 | - | 100 | 3-1-0 |
| Total Credits in ${ }^{\text {st }}$ Semester |  |  |  |  |  | 32 |

## FIRST YEAR: SECOND SEMESTER

| Course Code | Title of the Course (s) | External <br> Marks | Sessional <br> Marks | Practical <br> Marks | Total <br> Marks | Credits (L-T-P) |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :---: |
| CORE COURSES |  |  |  |  |  |  |  |
| 19IMG22C1 | Financial Management | 80 | 20 | - | 100 | $3-1-0$ |  |
| 19IMG22C2 | Marketing Management | 80 | 20 | - | 100 | $3-1-0$ |  |
| 19IMG22C3 | Human Resource Management | 80 | 20 | - | 100 | $3-1-0$ |  |
| 19IMG22C4 | Business Research Methods | 80 | 20 | - | 100 | $3-1-0$ |  |
| 19IMG22C5 | IT Infrastructure Management | 50 | - | 50 | 100 | $3-0-1$ |  |
| 19IMG22C6 | Comprehengive Civaryoce | 100 | - | - | 100 | 4 |  |

Semester-III

| Paper Code | Course | University Exams | Internal Assessment | Total Marks | $\begin{aligned} & \text { Credits } \\ & \text { (L:T:P) } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 17MCA33Cl | Computer Graphics | 80 | 20 | 100 | 4:0:0 |
| 17MCA33C2 | Operating Systems | 80 | 20 | 100 | 4:0:0 |
| 17MCA33C3 | Advance Database Systems | 80 | 20 | 100 | 4:0:0 |
| 17MCA33C4 | Data Communication and Computer Networks | 80 | 20 | 100 | 4:0:0 |
| 17MCA33C5 | Object Technology | 80 | 20 | 100 | 4:0:0 |
| 17MCA33CLI | SoftwareLab-5 <br> i) Graphics Programming <br> Using C/C++. <br> ii) UNIX / Shell Programming. | 100 | ---- | 100 | 0:0:3 |
| 17MCA33CL2 | SoftwareLab-6 <br> i) Java Programming <br> ii)ADBMS (PLSQL \& MYSQL) | $100{ }^{*}$ | --- | 100 | 0:0:3 |
|  |  |  |  |  | 26 Credits |

Semester-IV

| Paper Code | Course | University Exams | Internal Assessment | Total Marks | $\begin{aligned} & \text { Credits } \\ & \text { (L:T:P) } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 17MCA34Cl | Advanced Java Programming | 80 | 20 | 100 | 4:0:0 |
| 17MCA34C2 | Object Oriented Analysis and Design using UML | 80 | 20 | 100 | 4:0:0 |
| 17MCA34DAI/ <br> 17MCA34DA2/ <br> 17MCA34DA3 | i) Theory of Computation or <br> ii) Software Engineering or <br> iii) Multimedia and Its <br> Applications | 80 | 20 | 100 | 4:0:0 |
| 17MCA34DB1/ 17MCA34DB2/ 17MCA34DB3 | i) Analysis and Design of Algorithms or <br> ii) Computer Security or iii)Digital Image Processing | 80 | 20 | 100 | 4:0:0 |
| 17MCA34C3 | Artificial Intelligence and Expert System | 80 | 20 | 100 | 4:0:0 |
| 17MCA34CLI | SoftwareLab-7 <br> Advance Java Programming | 100 | --- | 100 | 0:0:3 |
| 17MCA34CL2 | Software Lab-8 <br> i) Object Oriented Analysis and Design using UML <br> ii) PROLOG | $10{ }^{*}$ | --- | 100 | 0:0:3 |
| 17MCA34C4 | Minor Project-I | - | 100 | 100 | 0:2:0 |
|  | Total |  |  |  | 28 Credits |



Total Credits= $\mathbf{3 1}$ Credits

* 20 marks out of 100 will be based on the evaluation/assessment of the candidate in Test(s) and Assignment(s) during the semester, which will be forwarded by the Head of Dept./Director to the Examiner(s). Further, both practical exams of a semester may be conducted on the same day in 2 sittings each maximum of 3 hours.



## MCA Third Year

| Semester-V |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Paper Code | Course | University Exams | Internal Assessment | Total Marks | $\begin{aligned} & \text { Credits } \\ & \text { (L:T:P) } \end{aligned}$ |
| 18MCA3SCI | Advanced Technology | 80 | 20 | 100 | 4:0:0 |
| 18MCA35C2 | Soft Computing | 80 | 20 | 100 | 4:0:0 |
| 18MCA35C3 | Data Warehousing and Data Mining | 80 | 20 | 100 | 4:0:0 |
| 18MCA35DA1/ 18MCA35DA $2 /$ 18MCA35DA3 | (i) Cloud Computing or <br> (ii) Big Data Analytics or <br> (iii) Software Testing and Quality Assurance | 80 | 20 | 100 | 4:0:0 |
| 18MCA35DB1/ 18MCA35DB2/ 18MCA35DB3 | (i) Internet of Things or <br> (ii) Mobile Computing or <br> (iii) Embedded Systems | 80 | 20 | 100 | 4:0:0 |
| 18MCA35CLl | Software Lab-9 <br> .NET Programming Using C\# | $10{ }^{*}$ | --- | 100 | 0:0:3 |
| 18MCA35CL2 | Software Lab-10 <br> Soft Computing | 100 | ---- | 100 | 0:0:3 |
| 18MCA35C6 | Minor Project-II | - | 100 | 100 | 0:2:0 |
|  | Total |  |  |  | 28 Credits |
| Open Elective (0) |  |  |  |  |  |
| To be Chosen from the pool of Open Electives provided by the University (excluding the open elective prepared by the Department of Comp Sc. \& Appls.) |  |  |  |  | 3 |

Total Credits= 31 Credits
20 marks out of 100 will be based on the evaluation/assessment of the candidate in Test(s) and Assignment(s) during the semester, which will be forwarded by the Head of Dept./Director to the Examiner(s). Further, both practical exams of a semester may be conducted on the same day in 2 sittings each maximum of 3 hours.

## Semester-VI

| Paper Code | Course | University <br> Exams | Internal <br> Assessment | Total <br> Marks | Credits |
| :--- | :--- | :---: | :---: | :---: | :---: |
| 18MCA36C1 | Major Project | 400 | 100 | 500 | 20 Credits |
|  | Grand Total of 3 Years/Credits |  |  |  |  |



2020-21

MAHARSHI DAYANAND UNIVERSITY, ROHTAK SCHEME OF STUDIES AND EXAMINATION
Bachelor of Technology (Civil Engineering) Scheme effective from 2019-20 SEMESTER $3^{\text {rd }}$

| Sr. <br> No | Course Code | Course Title | Hours <br> per <br> week <br> L-T- <br> P | Cont act hours per week | $\begin{array}{r} \text { Cre } \\ \mathrm{d} \end{array}$ | Examination Schedule (Marks) |  |  |  | Duration of Exam (Hours) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | Class <br> work | Theory | Practical | Total |  |
| 1. | HSMC-201-G | Economics For Engineers | 2-0-0 | 2 | 2 | 25 | 75 | - | 100 | 3 |
| 2. | PCC-201-G | Introduction to Civil Engineering | 2-0-0 | 2 | 2 | 25 | 75 | - | 100 | 3 |
| 3. | BSC-Math-205-G | Mathematics III | 2-1-0 | 3 | 3 | 25 | 75 | - | 100 | 3 |
| 4. | PCC-203-G | Engineering Mechanics | 3-1-0 | 4 | 4 | 25 | 75 | - | 100 | 3 |
| 5. | *MC-106-G | Environmental Science | 3-0-1 | 4 | 0 | 25 | 75 | - | -- | 3 |
| 6. | PCC-CE-205-G | Fluid Mechanics | 2-1-0 | 3 | 3 | 25 | 75 | - | 100 | 3 |
| 7. | PCC-CE-207-G | Surveying | 2-1-0 | 3 | 3 | 25 | 75 | - | 100 | 3 |
| 8. | LC-CE-209-G | Building Drawing lab | 0-0-2 | 2 | 1 | 25 | - | 25 | 50 | 3 |
| 9. | LC-CE-211-G | Engineering Mechanics Lab. | 0-0-2 | 2 | 1 | 25 | - | 25 | 50 | 3 |
| 10. | LC-CE-213-G | Fluid Mechanics Lab. | 0-0-2 | 2 | 1 | 25 | - | 25 | 50 | 3 |
| 11. | LC-CE-215-G | Surveying Lab. | 0-0-2 | 2 | 1 | 25 | - | 25 | 50 | 3 |
| TOTAL |  |  |  |  | 21 |  |  |  |  |  |

MC-106Gis a mandatory non -credit course in which the students will be required passing marks in theory.


## MAHARSHI DAYANAND UNIVERSITY, ROHTAK <br> SCHEME OF STUDIES AND EXAMINATION

## Bachelor of Technology (Civil Engineering) Scheme effective from 2019-20

SEMESTER $\mathbf{4}^{\text {th }}$

| Sr. <br> No. | Course Code | Course Title | Hours per | Contact hours per week | Credit | Examination Schedule (Marks) |  |  |  | Duration of Exam (Hours) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $\begin{gathered} \text { L-T- } \\ \text { P } \end{gathered}$ |  |  | Class work | Theory | Practical | Total |  |
| 1. | $\begin{aligned} & \text { HSMC- } \\ & \text { 202-G } \end{aligned}$ | Organization Behavior | 3-0-0 | 3 | 3 | 25 | 75 | - | 100 | 3 |
| 2. | $\begin{aligned} & \text { PCC-CE- } \\ & 202-G \end{aligned}$ | Hydraulic engineering | 3-1-0 | 4 | 4 | 25 | 75 | - | 100 | 3 |
| 3. | $\begin{aligned} & \text { PCC-CE- } \\ & \text { 204-G } \end{aligned}$ | Design of concrete structure | 3-1-0 | 4 | 4 | 25 | 75 | - | 100 | 3 |
| 4. | $\begin{aligned} & \text { PCC-CE- } \\ & 206-G \end{aligned}$ | Structural Analysis | 2-1-0 | 3 | 3 | 25 | 75 | - | 100 | 3 |
| 5. | $\begin{aligned} & \text { PCC-CE- } \\ & 208-G \end{aligned}$ | Geomatics \& Aerial surveying | 3-1-0 | 4 | 4 | 25 | 75 | - | 100 | 3 |
| 6. | $\begin{aligned} & \text { PCC-CE- } \\ & 210-G \end{aligned}$ | Material Testing \& Evaluation | 3-0-0 | 3 | 3 | 25 | 75 | - | 100 | 3 |
| 7. | $\begin{aligned} & \text { LC-CE- } \\ & 212-G \end{aligned}$ | Hydraulic engineering lab | 0-0-2 | 2 | 1 | 25 | - | 25 | 50 | 3 |
| 8. | $\begin{aligned} & \text { LC-CE- } \\ & \text { 214-G } \end{aligned}$ | Structural Analysis Lab | 0-0-2 | 2 | 1 | 25 | - | 25 | 50 | 3 |
| 9. | $\begin{aligned} & \text { LC-CE- } \\ & \text { 216-G } \end{aligned}$ | Geomatics \& Arial surveying Lab. | $0-0-2$ | 2 | 1 | 25 | - | 25 | 50 | 3 |
| 10. | $\begin{aligned} & \text { LC-CE- } \\ & \text { 218-G } \end{aligned}$ | Material Testing \& Evaluation Lab. | 0-0-2 | 2 | 1 | 25 | - | 25 | 50 | 3 |
| TOTAL |  |  |  |  | 25 |  |  |  |  |  |

## Note:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of Calculator and other materials will not be permitted in the examination.
2. (A) each student has to undergo practical training of $4 / 6$ weeks in an Industry/ Institute/ Professional Organization/ Research Laboratory/ training centre etc and its evaluation shall be carried out in the V semester on the basis of seminar, viva-voce, report and certificate of practical training obtained by the student.


## MAHARSHI DAYANAND UNIVERSITY, ROHTAK SCHEME OF STUDIES AND EXAMINATION

Bachelor of Technology (Civil Engineering) Scheme effective from 2020-21
SEMESTER 5 ${ }^{\text {th }}$

| $\begin{gathered} \text { Sr. } \\ \text { No. } \end{gathered}$ | Course Code | Course Title | Hours <br> per <br> Week <br> L-T-P | Contact <br> Hours <br> per <br> Week | Credit | Examination Schedule (Marks) |  |  |  | Duration of Exam (Hours) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | Class work | Theory | Practical | Total |  |
| 1. | PCC-CE-301-G | Hydrology and Water Resource Engineering | 2-1-0 | 3 | 3 | 25 | 75 | - | 100 | 3 |
| 2. | PCC-CE- 303-G | Highway Engineering-I | 2-1-0 | 3 | 3 | 25 | 75 | - | 100 | 3 |
| 3. | PCC-CE-305-G | Soil Mechanics | 3-1-0 | 4 | 4 | 25 | 75 | - | 100 | 3 |
| 4. | PCC-CE-307-G | Water Supply and Treatment | 2-1-0 | 3 | 3 | 25 | 75 | - | 100 | 3 |
| 5. | PCC-CE-309-G | $\begin{array}{\|c\|} \hline \text { Design of Steel } \\ \text { Structure } \\ \hline \end{array}$ | 3-1-0 | 4 | 4 | 25 | 75 | - | 100 | 3 |
| 6. | PCC-CE-311-G | Engineering Geology | 2-1-0 | 3 | 3 | 25 | 75 | - | 100 | 3 |
| 7. | LC-CE-313-G | Highway <br> Engineering-I <br> Lab. | 0-0-2 | 2 | 1 | 25 | - | 25 | 50 | 3 |
| 8. | LC -CE-315-G | Soil Mechanics Lab. | 0-0-2 | 2 | 1 | 25 | - | 25 | 50 | 3 |
| 9. | LC -CE-317-G | Design of Steel <br> Structure <br> Drawing lab | 0-0-2 | 2 | 1 | 25 | - | 25 | 50 | 3 |
| 10. | LC -CE-319-G | Engineering Geology Lab. | 0-0-2 | 2 | 1 | 25 | - | 25 | 50 | 3 |
| 11. | PROJ-CE-301-G | Survey camp | - | - | 2 | 25 | - | 25 | 50 | - |
| 12. | PROJ-CE-303-G | "Practical <br> Training- I | - | - | - | - | - |  | * Refer note 2 |  |
|  |  | TOTAL |  |  | 26 |  |  |  |  |  |

Note:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of Calculator and other materials will not be permitted in the examination.
2. The evaluation of Practical Training-I will be based on seminar, viva-voce, report submitted by the students. According to performance, the students are awarded to grades A, B, C, F. A student who is awarded ' $F$ ' grade is required tgrenfat Practical Training.


## MAHARSHI DAYANAND UNIVERSITY, ROHTAK SCHEME OF STUDIES AND EXAMINATION

Bachelor of Technology (Civil Engineering) Scheme effective from 2020-21 SEMESTER $6^{\text {th }}$

| Sr. <br> No. | Course Code | Course Title | Hours <br> per <br> Week <br> L-T-P | Contact <br> Hours per Week | Credit | Examination Schedule (Marks) |  |  |  | Duration of Exam (Hours) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | Class work | Theory | Practical | Total |  |
| 1. | PCC-CE-302-G | Irrigation <br> Engineering | 3-1-0 | 4 | 4 | 25 | 75 | - | 100 | 3 |
| 2. | PCC-CE- 304-G | Foundation Engineering | 3-1-0 | 4 | 4 | $25^{\circ}$ | 75 | - | 100 | 3 |
| 3. | PCC-CE-306-G | Highway Engineering-II | 3-1-0 | 4 | 4 | 25 | 75 | - | 100 | 3 |
| 4. | - | ${ }^{*}$ Elective-I | 2-1-0 | 3 | 3 | 25 | 75 | - | 100 | 3 |
| 5. | - | *Elective-II | 3-1-0 | 4 | 4 | 25 | 75 | - | 100 | 3 |
| 6. | LC-CE-308-G | Environmental Engineering Lab. | 0-0-2 | 2 | 1 | 25 | - | 25 | 50 | 3 |
| 7. | LC -CE-310-G | Foundation Engineering lab | 0-0-2 | 2 | 1 | 25 | - | 25 | 50 | 3 |
| 8. | LC -CE-312-G | Highway Engineering-II Lab. | 0-0-2 | 2 | 1 | 25 | - | 25 | 50 | $3 /$ |
| 9. | ESC-302-G | Computer aided Civil <br> Engineering Design | $1-0-2$ | 3 | 2 | 25 | - | 25 | 50 | 3 |
|  |  | TOTAL |  |  | 24 |  |  |  |  |  |


|  | Course Title |  |
| :--- | :--- | :--- |
| Course Code |  |  |
| Elective -I | 1. Waste Water Treatment | PEC-CEEL -302 G |
|  | 2. Air \& Noise Pollution Control | PEC-CEEL -304 G |
|  | 3. Environmental Impact Assessment | PEC-CEEL -306 G |
| Elective -II | 1. Advanced Concrete Structure | PEC-CEEL -308 G |
|  | 2. Pre-Stressed Concrete | PEC-CEEL -310 G |
|  | 3. Repair \& Rehabilitation Of Structure | PEC-CEEL -312 G |

## Note:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of Calculator and other materials will not be permitted in the examination.
2. Each student has to undergo practical trathing of 6 weeks during summer vacation and its evaluation shall be carried out in the VII semester?

# MAHARSHI DAYANAND UNIVERSITY, ROHTAK <br> SCHEME OF STUDIES \& EXAMINATIONS 

B. Tech. $4^{\text {th }}$ YEAR CIVIL ENGINEERING, SEMESTER-VII
(Scheme-F)

## EFFECTIVE FROM THE SESSION 2012-13

| Subject Code | Subject Name | Teaching schedule |  |  |  | Marks <br> For class <br> work | Marks for Examination |  |  Dotal <br> Marks  | Duration of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | $\mathbf{P}$ | Total |  | Theory | Practical |  |  |
| CE-401-F | Design of Steel Structure-II | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| CE-403-F | Disaster Mitigation and Management | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 4 |
| CE-405-F | Estimating and Costing | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| CE-407-F | Irrigation Engg-II | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| - -------- | Elective | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| CE-451-F | Hydro Power Engg. | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| CE-453-F | Ground Water Engg | 3 | 1 | 0 | 4 | 50 | 100 | 0 | 150 | 3 |
| CE-453-F |  | 0 | 0 | 2 | 2 | 50 | 0 | 50 | 100 | 3 |
| CE-455-F | Irrigation Drawing Lab | 0 | 0 | 2 |  |  | - | - | - |  |
| CE-457-F | Practical Training - II | - | - | 2 | - | - |  |  |  |  |
| $\begin{aligned} & \text { GFCE- } \\ & 459-F \end{aligned}$ | General Fitness for the Profession | - | - | - |  | - | ${ }^{-}$ | 50 | 50 |  |
|  | Total | 21 | 7 | 4 | 32 | 400 | 700 | 100 | 1200 |  |

## Note:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of calculator will not be permitted in the examination.
2. Student will be permitted to opt for any one elective run by the department. However, the departments will offer only those electives for which they have expertise. The choice of the students for any elective shall not be a binding for the department to offer, if the department does not have expertise.
3. Assessment of Practical Training-II, carried out at the end of VI semester, will be based on seminar, viva-voce and project report of the student. According to performance letter grades A, B, C, F are to be awarded. A student who is awarded ' $F$ ' grade is required to repeat Practical Training.

## ELECTIVES

1) CE -409-F - Energy planning and management
2) CE-411-F - Environmental pollution and control
3) $\mathrm{CE}-417-\mathrm{F} \quad$ - Finite Element Methods
4) CE-421-F - Environmental impact and management
5) CE-423-F - Elements of Earth Quake Engg.
6) CE-433-F - Hydraulic System Modeling


MAHRASHSI DAYANAND UNIVERSITY, ROHTAK
SCHEME OF STUDIES \& EXAMINATIONS

## B.Tech 2nd YEAR MECHANICAL ENGINEERING,

$3{ }^{\text {rd }}$ SEMESTER
Proposed 'F' Scheme w.e.f 2010-11

| Course | Course Title | Teaching Schedule |  |  |  | $\begin{gathered} \text { Marks } \\ \text { for } \\ \text { class } \\ \text { work } \\ \hline \end{gathered}$ | Marks for Examination |  | Total Marks | Duration of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { MAT-201-F } \\ & \text { or } \\ & \text { HUM-201-F } \end{aligned}$ | Mathematics-III <br> or Engineering Economics | $\begin{gathered} \mathrm{L} \\ \hline 3 \\ \text { or } \\ 3 \end{gathered}$ | $\begin{gathered} \mathrm{T} \\ \hline 2 \\ \text { or } \\ 1 \end{gathered}$ | P | Total <br> 5 <br> or <br> 4 | 50 | Theory <br> 100 | Practical | 150 | 3 |
| HUM-203-F | Fundamentals of <br> Management | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-201-F | Thermodynamics | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-203-F | Computer Aided Design | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-205-F | Engineering <br> Mechanics | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-207-F | Material Science | 3 | 1 | - | 4 | 50 | 100 |  | 150 | 3 |
| ME-209-F | Machine Drawing | 1 | - | 3 | 4 | 50 | - | 50 | 100 | 4 |
| ME-211-F | Computer Aided | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
|  | Design Lab |  |  |  |  |  |  |  |  |  |
| ME-213-F | Engineering | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
|  | Mechanics Lab |  |  |  |  |  |  |  |  |  |
| ME-215-F | Materials Science | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
|  | Lab |  |  |  |  |  |  |  |  |  |
|  | Total | 19 | 6 | 10 | 34/35 | 425 | 600 | 125 | 1150 |  |



## B.Tech. (Computer Science and Engineering)

Common with B.Tech. (Information Technology) \&
B.Tech. (Computer Science and Information Technology)

Scheme ofStudies/Examination w.e.f. 2019-20

## Semester-3

| Sr. No. | Course Code | Course Title | Hours per week |  |  | Tot <br> al <br> Con <br> tact <br> Hrs. <br> per <br> wee <br> k | Cre dit | Examination Schedule <br> (Marks) |  |  |  | Dur <br> atio <br> n of <br> Exa <br> m <br> (Ho <br> urs) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P |  |  | Mar k of Clas s wor k | The ory | Pra ctic al | Tot al |  |
| 1 | PCC-CSE-201G | Database <br> Management Systems | 3 | 0 | 0 | 3 | 3 | 25 | 75 |  | 100 | 3 |
| 2 | PCC-CSE-203G | Data Structures \& Algorithms | 3 | 0 | 0 | 3 | 3 | 25 | 75 |  | 100 | 3 |
| 3 | PCC-CSE-205G | Digital Electronics | 3 | 0 | 0 | 3 | 3 | 25 | 75 |  | 100 | 3 |
| 4 | PCC-CSE-207G | Python Programming | 2 | 0 | 0 | 2 | 2 | 25 | 75 |  | 100 | 3 |
| 5 | $\begin{aligned} & \text { BSC-MATH- } \\ & \text { 203G } \end{aligned}$ | Mathematics - III <br> (Multivariable <br> Calculus and <br> Differential <br> Equations) | 2 | 0 | 0 | 2 | 2 | 25 | 75 |  | 100 | 3 |
| 6 | HSMC-01G | Economics for Engineers | 3 | 0 | 0 | 3 | 3 | 25 | 75 |  | 100 | 3 |
| 7 | LC-CSE-209G | Database Management Systems LAB | 0 | 0 | 4 | 4 | 2 | 25 |  | 25 | 50 | 3 |
| 8 | LC-CSE-211G | Digital Electronics LAB | 0 | 0 | 4 | 4 | 2 | 25 |  | 25 | 50 | 3 |
| 9 | LC-CSE-213G | Data Structures \& Algorithms LAB Using C | 0 | 0 | 4 | 4 | 2 | 25 |  | 25 | 50 | 3 |
| 10 | LC-CSE-215G | Python Programming LAB | 0 | 0 | 2 | 2 | 1 | 25 |  | 25 | 50 | 3 |
| Total |  |  |  |  |  |  | 23 |  |  |  | 800 |  |

## B.Tech. (Computer Science and Engineering)

## Common with B.Tech. (Information Technology) \&

## B.Tech. (Computer Science and Information Technology)

Scheme ofStudies/Examination w.e.f. 2019-20
Semester-4

*MC-106Gis a mandatory non -credit course in mbick the students will be required passing marks in theory.
NOTE: At the end of 4th semester each sudent has to undergo Practical Training of 4/6 weeks in an Industry/ Institute/ Professional Organization/ Research Laboratory/ training centre etc. and submit typed report alongwith a certificate from the organization \& its evaluation shall be carried out in the 5th Semester

## Scheme of Studies and Examination

B.TECH (Computer Science \& Engineering) - $\mathbf{5}^{\text {th }}$ Semester
w.e.f. 2020-21

| Sr. <br> No. | Category | Course Code | Course Title | Hours per week |  |  | Total <br> Contac <br> t Hrs. <br> per week | Cre dit | Examination Schedule (Marks) |  |  |  | Dur <br> atio <br> n of <br> Exa <br> m <br> (Ho <br> urs) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | L | T | P |  |  | Mar <br> k of <br> Clas <br> s <br> wor <br> k | The ory | Pra ctic al | Tot al |  |
| 1 | Engineering <br> Science Course | ESC-CSE-301G | Microprocessor | 3 | 0 | 0 | 3 | 3 | 25 | 75 |  | 100 | 3 |
| 2 | Professional Core Course | PCC-CSE-303G | Computer Networks | 3 | 0 | 0 | 3 | 3 | 25 | 75 |  | 100 | 3 |
| 3 | Professional Core Course | PCC-CSE-305G | Formal Languages \& Automata | 3 | 0 | 0 | 3 | 3 | 25 | 75 |  | 100 | 3 |
| 4 | Professional Core Course | PCC-CSE-307G | Design \& Analysis of Algorithms | 3 | 0 | 0 | 3 | 3 | 25 | 75 |  | 100 | 3 |
| 5 | Professional Core Course | PCC-CSE-309G | Programming in Java | 3 | 0 | 0 | 3 | 3 | 25 | 75 |  | 100 | 3 |
| 6 | Professional Elective Course | Refer to Annexure I | Elective-I | 3 | 0 | 0 | 3 | 3 | 25 | 75 |  | 100 | 3 |
|  | Engineering <br> Science <br> Course | LC-ESC-321G | Microprocessor Lab $\qquad$ | 0 | 0 | 2 | 2 | 1 | 25 | - | 25 | 50 | 3 |
|  | Professional Core Course | LC-CSE-323G | Computer <br> Networks Lab | 0 | 0 | 3 | 3 | 1.5 | 25 | - | 25 | 50 | 3 |
|  | Professional Core Course | LC-CSE-325G | Design \& Analysis of Algorithms Using C++ | 0 | 0 | 3 | 3 | 1.5 | 25 | - | 25 | 50 | 3 |
|  | Professional Core Course | LC-CSE-327G | Programming in Java Lab | 0 | 0 | 3 | 3 | 1.5 | 25 | - | 25 | 50 | 3 |
|  | 1 Training | PT-CSE-329G | Practical Training- <br> 1 | - | - | - | - | - | - | - | * Refer Note 1 |  |  |
|  |  | TOTAL GREDIT ${ }^{\text {G/ }}$ |  |  |  |  |  | 23. 5 |  |  |  | 800 |  |

## Note:

1. The evaluation of Practical Training-I will be based on seminar, viva-voce, report submitted by the students. According to performance, the students are awarded grades A, B, C, F. A student who is awarded ' $F$ ' grade is required to repeat Practical Training.
2. Choose any one from Elective-1

Excellent: A; Good : B; Satisfactory: C; Not Satisfactory: F.

Scheme of Studies and Examination
B.TECH (Computer Science \& Engineering) - $\mathbf{6}^{\mathbf{t h}}$ Semester

| w.e.f. 2020-21 |  |  |  |  |  |  | Tot al Con tact Hrs. per wee k | Cre dit | Examination Schedule (Marks) |  |  |  | Dur <br> atio <br> n of <br> Exa <br> m <br> (Ho <br> urs) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sr. <br> No. | Category | Course Code | Course Title | L | T | P |  |  | Mar k of Clas s wor k | The ory | Pra ctic al | Tot <br> al |  |
| 1 | Professional | PCC-CSE-302G | Compiler Design | 3 | 0 | 0 | 3 | 3 | 25 | 75 |  | 100 | 3 |
|  | Core Course | PCC-CSE-302 |  |  |  |  |  |  |  |  |  |  |  |
| 2 | Professional | PCC-CSE-304G | Artificial | 3 | 0 | 0 | 3 | 3 | 25 | 75 |  | 100 | 3 |
|  | Core Course | PCC-CSE-304G |  |  |  |  |  |  |  |  |  |  |  |
| 3 | Professional | PCC-CSE-306G | Advanced Java | 3 | 0 | 0 | 3 | 3 | 25 | 75 |  | 100 | 3 |
|  | Core Course |  |  |  |  |  |  |  |  |  |  |  |  |
| 4 | Engineering Science | ESC-CSE-308G | Mobile and Wireless | 3 | 0 | 0 | 3 | 3 | 25 | 75 |  | 100 | 3 |
|  | Course |  | Communication |  |  |  |  |  |  |  |  |  |  |
| 5 | Professional Elective | Refer to | Elective-II | 3 | 0 | 0 | 3 | 3 | 25 | 75 |  | 100 | 3 |
|  | Course |  |  |  |  |  |  |  |  |  |  |  |  |
| 6 | Professional Elective | Refer to Annexure III | Elective-III | 3 | 0 | 0 | 3 | 3 | 25 | 75 |  | 100 | 3 |
|  | Course |  |  |  |  |  |  |  |  |  |  |  | 3 |
| 7 |  | 22 | Project-1 | 0 | 0 | 4 | 4 | 2 | 25 |  | 25 | 50 | 3 |
|  | Project | PROJ-CSE-322G | Project-1 |  |  |  |  |  |  |  |  |  |  |
| 8 |  |  | Compiler Design | 0 | 0 | 3 | 3 | 1.5 | 25 |  | 25 | 50 | 3 |
|  | Professional Core Course | LC-CSE-324G | Lab | 0 | 0 | 3 |  |  |  |  |  |  |  |
| 9 |  |  | Artificial |  |  |  | 3 | 1.5 | 25 |  | 25 | 50 | 3 |
|  | Professional | LC-CSE-326G | Intelligence Lab | 0 | 0 | 3 | 3 | 1.5 | 25 |  |  |  |  |
|  | Core Course |  | using python |  |  |  |  |  |  |  |  |  |  |
| 10 |  |  | Advanced Java | 0 | 0 | 2 | 2 | 1 | 25 |  | 25 | 50 | 3 |
|  | Core Course | LC-CSE-328G |  |  |  |  |  |  |  |  |  |  |  |
| 11. | Mandatory Courses | MC-317G | Constitution of India | 2 | 0 | 0 |  |  |  |  |  |  |  |
|  | Courses |  |  |  |  |  |  | 24 |  |  |  | 800 |  |

-MC-317G is a mandatory non-creditfegurse in which the students will be required passing marks in theory.
NOTE:


1. At the end of 6 th semester edach student has to undergo Practical Training of $4 / 6$ weeks in an Industry Institute/ Professional Organization/ Research Laboratory/ training centre etc. and submit typed report along with a certificate from the organization \& its evaluationsfrall be carried out in the 7th Semester.
2. Choose any one from Elective-II
3. Choose any one from Elective-III

## Annexure I

## Elective -I (Professional Elective Course)

1. PEC-CSE-311G:Software Engineering
2. PEC-CSE-313G: System Programming and System Administration
3. PEC-CSE-315G :Digital Image Processing

## Annexure II

## Elective -II (Professional Elective Course)

1. PEC-CSE-310G:Advanced Database Management System
2. PEC-CSE-312G :Mobile Application Development
3. PEC-CSE-314G:Computer Graphics
4. PEC-CSE-330G :Communication Engineering

## Annexure III

Elective -III (Professional Elective Course)

1. PEC-CSE-316G: Distributed System
2. PEC-CSE-318G :Information Technology \& Industry Business Skills
3. PEC-CSE-320G: Data Science
4. PEC-CSE-332G :VHDL and Digital Design


## M.D.UNIVERSITY, ROHTAK Scheme of Studies / Examination

Bachelor of Technology (Computer Science \& Engineering) SEMESTER VII
'F' Scheme Effective from 2012-13

| Sl. No. | Course No. | Subject | Teaching Schedule |  |  |  | Examination Schedule (Marks) |  |  |  | Duration of Exam <br> (Hours) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P | Total | Marks of Class work | Theory | Practical | Total |  |
| 1 | CSE-401 F | Advanced Computer Architecture | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 2 | CSE-403 F | Software Project Management (CSE.IT) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 3 | CSE-405 F | Compiler Design | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 4 | CSE-407 F | Neural Networks | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 5 | CSE-409 F | Advanced Java (CSE, IT) | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 6 |  | Elective | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| 7 | CSE-411 F | Compiler Design Lab | - | - | 2 | 2 | 25 | - | 50 | 75 | 3 |
| 8 | CSE-413 F | Neural Networks Using MATLAB | - | - | 2 | 2 | 25 | - | 50 | 75 | 3 |
| 9 | CSE-415 F | Advanced JAVA <br> Lab (CSE, IT) | - | - | 3 | 3 | 50 | -- | 100 | 150 | 3 |
| 10 | CSE-417 F | PRATICAL TRAINING-II | - | - | $-$ | - |  | - | - |  |  |
|  |  | TOTAL | 18 | 6 | 7 | 31 | 400 | 600 | 200 | 1200 |  |

## List of Electives

| 1. | CSE-423 F | Distributed Operating System |
| :--- | :--- | :--- |
| 2. | IT-465F | Network Security \& Management |
| 3. | CSE-421 F | Real Time Systems |
| 4. | CSE-435 F | Advanced Database Management Systems |
| 5. | IT-467 F | Computer Software Testing |
| 6. | TT-473 F | High Speed Networks |

## Note:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of calculator will not be permitted in the examination.
2. Student will be permitted to opt for any one elective run by the department. However, the departments will offer only those electives for which they have expertise. The choice of the students for any elective shall not be a binding for the department to offer, if the department does not have expertise.
3. Assessment of Practical Training-II, carried out at the end of VI semester, will be based on seminar, viva- voce and project report of the student. According to performance letter grades A, B, C, F are to be awarded. A student who is awarded ' $F$ ' grade is required to repeat Practical Training.


## MAHARSHI DAYANAND UNIVERSITY, ROHTAK <br> SCHEME OF STUDIES \& EXAMINATIONS <br> B.Tech. $4^{\text {th }}$ YEAR COMPUTER SC \& ENGINEERING, SEMESTER-VIII

(Scheme-F)

## EFFECTIVE FROM THE SESSION 2012-13

|  |  |  | Internal <br> Marks | External <br> Marks | Total Marks |
| :--- | :---: | :---: | :---: | :---: | :---: |
| 1. | CSE-402-F | Industrial Training/Institutional Project Work | 150 | 150 | 300 |

## Note:

The students are required to undergo Industrial Training or Institutional Project Work of duration not less than 4 months in a reputed organization or concerned institute. The students who wish to undergo industrial training, the industry chosen for undergoing the training should be at least a private limited company. The students shall submit and present the mid-term progress report at the Institute. The presentation will be attended by a committee. Alternately, the teacher may visit the Industry to get the feedback of the students.

The final viva-voce of the Industrial Training or Institutional Project Work will be conducted by an external examiner and one internal examiner appointed by the Institute. External examiner will be from the panel of examiners submitted by the concerned institute approved by the Board of Studies in Engg. \& Technology. Assessment of Industrial Training or Institutional Project Work will be based on seminar, viva-voce, report and certificate of Industrial Training or Institutional Project Work obtained by the student from the industry or Institute.

The internal marks distributions for the students who have undergone Industrial Training consist of 50 marks from the industry concern and 100 marks by the committee members consisting of faculty members of concerned department of the parent institute.

The teachers engaged for Institutional Project work shall have a workload of 2 hours per group (at least 4 students) per week.


## MAHARSHI DAYANAND UNIVERSITY, ROHTAK ELETRICAL ENGINEERING

B. Tech, $\mathbf{2}^{\text {nd }}$ year (III ${ }^{\text {rd }}$ semester) w.e.f 2019-20

| S. No. | Course Code | Course Title | Teaching Schedule |  |  | Marks of Class Work | Examination Marks |  | Total Marks | Credits | Duration of Examination (in hours) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P |  | Theory | Practical |  |  |  |
| 1. | $\begin{aligned} & \text { PCC- } \\ & \text { EE- } \\ & 201 \mathrm{a} \end{aligned}$ | Electric Circuit Analysis | 3 | 1 | 0 | 25 | 75 | 0 | 100 | 4 | 3 |
| 2. | $\begin{aligned} & \text { PCC- } \\ & \text { EE- } \\ & 203 \mathrm{G} \\ & \hline \end{aligned}$ | Electric Circuit <br> Analysis <br> Laboratory | 0 | 0 | 2 | 25 | 0 | 25 | 50 | 1 | - |
| 3. | $\begin{gathered} \text { PCC- } \\ \text { EE- } \\ 205 \mathrm{~g} \end{gathered}$ | Analog Electronics | 3 | 0 | 0 | 25 | 75 | 0 | 100 | 3 | 3 |
| 4. | $\begin{aligned} & \text { PCC- } \\ & \text { EE- } \\ & 207 \mathrm{G} \\ & \hline \end{aligned}$ | Analog Electronics <br> Laboratory | 10 | 0 | 2 | 25 | 0 | 25 | 50 | 1 |  |
| $5 .$ | $\begin{gathered} \text { PCC- } \\ \text { EE- } \\ 209 \mathrm{G} \\ \hline \end{gathered}$ | Electrical Machines-I | 3 | 1 | 0 | 25 | 75 | 0 | 100 | 4 | 3 |
| 6. | $\begin{gathered} \hline \text { PCC- } \\ \text { EE- } \\ 211 \mathrm{G} \\ \hline \end{gathered}$ | Electrical <br> Machines-I <br> Laboratory | 0 | 0 | 2 | 25 | 0 | 25 | 50 | 1 |  |
| 7. | $\begin{gathered} \text { PCC- } \\ \text { EE- } \\ 210 G \end{gathered}$ | ```Measurement and Instrumentation``` | 3 | 0 | 0 | 25 | 75 | 0 | 100 | 3 | 3 |
| 8. | $\begin{gathered} \text { PCC- } \\ \text { EE- } \\ 212 G \end{gathered}$ | Measurement and Instrumentation Laboratory | 0 | 0 | 2 | 25 | 0 | 25 | 50 | 1 | - |
| 9. | $\begin{gathered} \hline \text { ESC- } \\ 202-G \end{gathered}$ | Engineering Mechanics | 3 | 1 | 0 | 25 | 75 | 0 | 100 | 4 | 3 |
| 10. | MC- <br> GES- <br> 106-G | Environmental Studies | 3 | 0 | 1 | 25 | 75 | 0 | 100 | 0 | 3 |
| Total |  |  |  |  |  |  |  |  | 800 | 22 |  |

L-Lecture, T-Tutorial, P-Practical

Note: The use of programmable devices such as programmable calculators etc. is not allowed duning the exanissharing of materials will not be permitted during examination.

# MAHARSHI DAYANAND UNIVERSITY, ROHTAK ELECTRICAL ENGINEERING 

B. Tech, $\mathbf{2}^{\text {nd }}$ year (IV ${ }^{\text {th }}$ semester) w.e.f 2019-20

| $\begin{gathered} \hline \text { S. } \\ \text { No. } \end{gathered}$ | Course Code | Course Title | Teaching Schedule |  |  | Marks of Class Work | Examination Marks |  | Total Marks | Credits | Duration of Examination (in hours) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P |  | Theory | Practical |  |  |  |
| 1. | $\begin{gathered} \hline \text { PCC- } \\ \text { EE- } \\ 202 \mathrm{G} \end{gathered}$ | Digital Electronics | 3 | 0 | 0 | 25 | 75 | 0 | 100 | 3 | 3 |
| 2. | $\begin{gathered} \hline \text { PCC- } \\ \text { EE- } \\ 204 \mathrm{G} \\ \hline \end{gathered}$ | Digital Electronics Laboratory | 0 | 0 | 2 | 25 | 0 | 25 | 50 | 1 | - $\quad 3$ |
| 3. | $\begin{gathered} \text { PCC- } \\ \text { EE- } \\ 206 \mathrm{G} \end{gathered}$ | Electrical Machines-II | 3 | 1 | 0 | 25 | 75 | 0 | 100 | 4 | 3 |
| 4. | $\begin{gathered} \hline \text { PCC- } \\ \text { EE- } \\ 208 \mathrm{G} \\ \hline \end{gathered}$ | Electrical Machines-II Laboratory | 0 | 0 | 2 | 25 | 0 | 25 | 50 | 1 | - |
| 5. | $\begin{gathered} \text { PCC- } \\ \text { EE- } \\ 210 G \end{gathered}$ | Transmission and Distribution | 3 | 0 | 0 | 25 | 75 | 0 | 100 | 3 | 3 |
| 6. | $\begin{gathered} \text { PCC- } \\ \text { EE- } \\ 212 \mathrm{G} \\ \hline \end{gathered}$ | Transmission and Distribution Laboratory | 0 | 0 | 2 | 25 | 0 | 25 | 50 | 1 | - |
| 7. | $\begin{gathered} \hline \text { PCC- } \\ \text { EE- } \\ 214 \mathrm{G} \end{gathered}$ | Signals and Systems | 3 | 0 | 0 | 25 | 75 | 0 | 100 | 3 | 3 |
| 8. | $\begin{aligned} & \text { PCC- } \\ & \text { EE- } \\ & 216 G \end{aligned}$ | Electromagnetic Fields | 3 | 1 | 0 | 25 | 75 | 0 | 100 | 4 | 3 |
| 9. | $\begin{array}{c\|} \hline \text { BSC- } \\ \text { MATH- } \\ 204 \mathrm{G} \\ \hline \end{array}$ | Mathematics-III (Probability and Statistics) | 3 | 1 | 0 | 25 | 75 | 0 | 100 | 4 | 3 |
| 10. |  | Indian Constitution | 3 | 0 | 0 | 25 | 75 | 0 | 100 | 0 | 3 |
| 11. | $\begin{aligned} & \text { BSC- } \\ & \text { BIO- } \\ & 201 \mathrm{~g} \end{aligned}$ | Biology-I | 2 | 1 | 0 | 25 | 75 | 0 | 100 | 3 | 3 |
|  |  |  |  |  |  |  |  |  | 850 | 27 |  |
|  | TOTAL |  |  |  |  |  |  |  | 850 | 27 |  |

L-Lecture, T-Tutorial, P-Practical

| Mandatory Course | Course Code | Course Title |
| :---: | :---: | :---: |
|  |  | Indian Constitution |
|  |  | Essence of Indian Traditional <br> Knowledge |



# Scheme of Studies and Examination <br> B.TECH (Electrical Engineering) - 5 ${ }^{\text {th }}$ Semester <br> w.e.f. 2020-21 

| $\begin{array}{\|l} \hline \text { Sl. } \\ \text { No. } \end{array}$ | Course Code | Course Title | Teaching Schedule <br> L T |  |  | Marks <br> of <br> class <br> work | Examination marks <br> Theory Practical |  | Total Marks | Credit | Duration of examinat ion in hour |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1. | $\begin{aligned} & \hline \text { PCC- } \\ & \text { EE- } \\ & 301 \mathrm{l} \end{aligned}$ | Power Systems-I | 3 | 0 | 0 | 25 | 75 | 0 | 100 | 3 | 3 |
| 2. | $\begin{array}{\|l\|} \hline \text { LC -EE- } \\ 303 G \\ \hline \end{array}$ | Power Systems-I <br> Laboratory | 0 | 0 | 2 | 25 | 0 | 25 | 50 | 1 | 2 |
| 3. | $\begin{aligned} & \hline \text { PCC - } \\ & \text { EE305G } \end{aligned}$ | Control System | 3 | 0 | 0 | 25 | 75 | 0 | 100 | 3 | 3 |
| 4. | $\begin{aligned} & \text { LC-EE- } \\ & \text { 307G } \\ & \hline \end{aligned}$ | $\begin{array}{\|l} \hline \text { Control System } \\ \text { LAB } \\ \hline \end{array}$ | 0 | 0 | 2 | 25 | 0 | 25 | 50 | 1 |  |
| 5. | $\begin{array}{\|l\|} \hline \text { PCC- } \\ \text { EE- } \\ 309 \mathrm{G} \end{array}$ | Microprocessor\& Microcontroller | 3 | 0 | 0 | 25 | 75 | 0 | 100 | 3 | 3 |
| 6. | $\begin{aligned} & \text { LC -EE- } \\ & 311 \mathrm{G} \end{aligned}$ |  <br> Microcontroller Lab | 0 | 0 | 2 | 25 | 0 | 25 | 50 | 1 | 2 |
| 7. | PCC-EE- <br> 313G | Computer Aided Electrical <br> Machine Design | 3 | 1 | 0 | 25 | 75 | 0 | 100 | 3 | 3 |
| 8. | $\begin{aligned} & \text { LC-EE- } \\ & 315 \mathrm{G} \end{aligned}$ | Computer Aided Electrical Machine Design Lab | 0 | 0 | 2 | 25 | 0 | 25 | 50 | 1 | 2 |
| 9. | PEC-I | Professional Elective Courses (PEC): Refer List-I | 3 | 0 | 0 | 25 | 75 | 0 | 100 | 3 | 3 |
| 10. | OEC-I | Open Elective Courses: Refer List -II | 3 | 0 | 0 | 25 | 75 | 0 | 100 | 3 | 3 |
| 11. | $\begin{aligned} & \text { HSMC- } \\ & 01 \mathrm{G} \end{aligned}$ | Economics for Engineers | 3 | 0 | 0 | 25 | 75 | 0 | 100 | 3 | 3 |
| 12. | PT- <br> EE317G | Practical <br> Training-1 | - | - | - | - | - | - | * Refer | Note 1 | 5 |
|  | Total |  |  |  |  |  |  |  | 900 | 25 |  |

## Note:

1. The evaluation of Practical Training-I will be based on seminar, viva-voce, report submitted by the students. According to performance, the students are awardedgrades
A, B, C, F. A student who is awarded ' $F$ ' grade is required to sepeat pratical Training.
2. Choose any one from Professional Elective
3. Choose any one from Open Elective

Excellent: A; Good : B; Satisfactory: C; Not Satisfactory: F.


## List-I

| Sr. No | Code | Subject | Credit |
| ---: | :--- | :--- | ---: |
| 1 | PEC-EE-01G | Wind and Solar Energy System | 3 |
| 2 | PEC-EE-03G | Electrical Drives | 3 |
| 3 | PEC-EE-05G | HVDC Transmission System | 3 |
| 4 | PEC-EE-07G | High Voltage Engineering | 3 |

## List-II

| Sr.No | Code | Subject | Credit |
| ---: | :--- | :--- | ---: |
| 1 | OEC-EE01G | Electrical Engineering Materials | 3 |
| 2 | OEC-EE03G | Nano Electronics | 3 |
| 3 | OEC-EE05G | Intelligent Instrumentation | 3 |
| 4 | OEC-EE07G | Power Plant Engineering | 3 |



Scheme of Studies and Examination
B.TECH (Electrical Engineering) - 6 $^{\text {th }}$ Semester
w.e.f. 2020-21

| Sl. <br> No. | Course Code | Course Title | Teaching Schedule <br> L T P |  |  | Marks of class work | Examination marks Theory Practical |  | Total Marks | $\begin{aligned} & \text { Cre } \\ & \text { dit } \end{aligned}$ | Duration of examination in hour |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1. |  | Power SystemsII | 3 | 0 | 0 | 25 | 75 | 0 | 100 | 3 | 3 |
| 2. | LC -EE- $304 \mathrm{G}$ | Power SystemsII Laboratory | 0 | 0 | 2 | 25 | 0 | 25 | 50 | 1 |  |
| 3. | $\begin{array}{\|l\|} \hline \text { PCC- }- \\ \text { EE- } \\ 306 G \\ \hline \end{array}$ | Power <br> Electronics | 3 | 0 | 0 | 25 | 75 | 0 | 100 | 3 | 3 |
| 4. | $\begin{aligned} & \text { LC -EE- } \\ & 308 \mathrm{G} \end{aligned}$ | Power <br> Electronics <br> Laboratory | 0 | 0 | 2 | 25 | 0 | 25 | 50 | 1 | 2 |
| 5. | $\begin{aligned} & \text { LC -EE- } \\ & 310 \mathrm{G} \end{aligned}$ | Electronics <br> Design <br> Laboratory | 1 | 0 | 4 | 25 | 50 | 25 | 100 | 3 | 3 |
| 6. | PEC-II | Professional <br> Elective <br> Courses <br> (PEC): Refer <br> List-III | 3 |  |  | 25 | 75 | 0 | 100 | 3 | 3 |
| 7. | PEC-III | Professional Elective Courses (PEC): Refer List-IV | 3 |  |  | 25 | 75 | 0 | 100 | 3 | 3 |
| 8. | OEC-II | Open Elective <br> Courses: <br> Refer List -V | 3 |  |  | 25 | 75 | 0 | 100 | 3 | 3 <br> 3 |
| 9. | HSMC $-02 \mathrm{G}$ | Organisationa <br> 1 Behaviour | 3 |  |  | 25 | 75 | 0 | 100 | 3 | 3 |
|  | Total |  |  |  |  |  |  |  | 800 | 23 |  |

## Note:

1. Each student has to undergo practical training of 6 weeks during summer vacation after $6^{\text {th }}$ semester and its evaluation shall be carried out in $7^{\text {th }}$ Semester.
2. Choose any one from Professional Elective
3. Choose any one from Open Elective


List-III

| PROGRAMME ELECTIVE (Semester-VI) |  |  |  |
| :--- | :--- | :--- | :--- |
| Sr. No | Code | Subject | Credit |
| 1. | PEC-EE-04G | Digital Signal Processing | 3 |
| 2. | PEC-EE-06G | Power System Protection | 3 |

## List-IV

| PROGRAMME ELECTIVE (Semester-VI) |  |  |  |
| :--- | :--- | :--- | :--- |
| 3. | PEC-EE-18G | Advance Electric Drives | 3 |
| 4. | PEC-EE-08G | Power Quality and FACTS | 3 |

List-V

| OPEN ELECTIVE-I [ Semester-VI] |  |  |  |
| :---: | :--- | :--- | :--- |
| Sr.No | Code | Subject | Credit |
| 1. | OEC-EE-04G | VHDL and DIGITAL <br> DESIGN | 3 |
| 2. | OEC-EE-06G | Distributed Energy <br> Integration | 3 |
| 3. | OEC-EE-08G | Conventional and <br> Renewable Energy <br> Resources | 3 |
| 4. | OEC-EE-10G | Soft Computing | 3 |


M.D. UNIVERSITY, ROHTAK

Scheme of studies \& Examination B. Tech. (Electrical Engg.)

SEMESTER VII
F'Scheme
EFFECTIVE FROM THE SESSION 2012-13

| Course No. | Course Title | Teaching Schedule |  |  |  | Marks of Class Work | Examination |  | Total Marks | Duration of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Total |  | Theory | Practical |  |  |
| EE-403-F | Electric Drives And Control | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ECE-409-F | Digital Signal Processing | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-405-F | Power System Operation And Control | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
|  | *Open Elective | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
|  | *Dept Elective | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-409-F | Computer Applications To Power System Analysis | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| EE-413-F | Electric Drives And Control Lab. |  |  | 3 | 3 | 50 | - | 50 | 100 | 3 |
| ECE-429-F | Digital Signal Processing Lab | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| EE-419-F | Computer Applications To Power System Analysis Lab. | - | - | 3 | 3 | 50 | - | 50 | 100 | 3 |
| GFEE-401-F | General Fitness For The Profession | - | - | - | - |  | - | 50 | 50 | 3 |
| EE-401-F | Practical Training - II | - | - | - | 32 | 425 | - | 175 | 1200 | - |
|  | TOTAL | 18 | 6 | 8 | 32 | 425 | 600 | 175 |  |  |

## List of Open Electives

| 1. | HUM-451-F | Language Skills for Engineers |
| :---: | :--- | :--- |
| 2. | HUM-453-F | Human Resource Management |
| 3. | HUM-459-F | Renewable Energy Resources and Technology |
| 4. | ME-451-F | Mechatronics Systems |
| 5. | IC-455-F | Intelligent Instrumentation for Engineers |
| 6. | OR-401-F | Operations Research |

## List of Dept Electives

1. $\mathrm{EHV} \mathrm{AC/DC}$
(EE-432-F)
2. Fuzzy Logic Control
3. Fuzzy Logic Control
(IC-404-F)
(EE-438-F)
4. High Voltage Engineering
5. Electrical Power Quality
(EE-442-F)
(EE-444-F)
6. Power Manastrame
(EE-450-F)

## Note:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of calculator will not be permitted in the examination.
2. *Student will be permitted to opt for any one elective run by the other departments. However, the departments will offer only those electives for which they have expertise. The choice of the students for any elective shall not be a binding for the department to offer, if the department does not have expertise.
3. A team consisting of Principal/Director, HOD of concerned department and external examiner appointed by University shall carry out the evaluation of the student for his/her General Fitness for the Profession.
4. Assessment of Practical Training-II, carried out at the end of VI semester, will be based on seminar, viva-voce and project report of the student from the industry. According to performance, letter Grades $\mathbf{A}, \mathbf{B}, \mathbf{C}, \mathbf{F}$ are to be awarded. A student who is awarded ' F ' grade is required to repeat Practical Training.

M.D. UNIVERSITY, ROHTAK

Scheme of studies \& Examination
B. Tech. (Electrical Engg.)

SEMESTER VIII
F'Scheme

## EFFECTIVE FROM THE SESSION 2012-13

| Sr. No | Course No | Subject | Internal <br> Marks | External Marks | Total Marks |
| :--- | :---: | :---: | :---: | :---: | :---: |
| 1. | EE-402-F | Industrial Training/Institutional Project Work | 150 | 150 | 300 |

## Note:

The students are required to undergo Industrial Training or Institutional Project Work of duration not less than 4 months in a reputed organization or concerned institute. The students who wish to undergo industrial training, the industry chosen for undergoing the training should be at least a private limited company. The students shall submit and present the mid-term progress report at the Institute. The presentation will be attended by a committee. Alternately, the teacher may visit the Industry to get the feedback of the students.

The final viva-voce of the Industrial Training or Institutional Project Work will be conducted by an external examiner and one internal examiner appointed by the Institute. External examiner will be from the panel of examiners submitted by the concerned institute approved by the Board of Studies in Engg. \& Technology. Assessment of Industrial Training or Institutional Project Work will be based on seminar, viva-voce, report and certificate of Industrial Training or Institutional Project Work obtained by the student from the industry or Institute.

The internal marks distributions for the students who have undergone Industrial Training consist of $\mathbf{5 0}$ marks from the industry concern and $\mathbf{1 0 0}$ marks by the committee members consisting of faculty members of concerned department of the parent institute.

The teachers engaged for Institutional Project work shall have a workload of $\mathbf{2}$ hours per group (at least 4 students) per week.


## MAHARSHI DAYANAND UNIVERSITY, ROHTAK <br> SCHEME OF STUDIES \& EXAMINATIONS <br> B.TECH (Electronics and Communication Engineering) Common with <br> B.Tech (Electronics and Tele Communication) <br> SEMESTER -3 ${ }^{\text {rd }}$ w.e.f. 2019-20

| S. No. | Course No. | Course Title | Teaching Schedule |  |  | Marks <br> of Class work | Examination Marks |  | Tota I | Credit | Duratio $n$ of Exam | Contact Hrs./wk |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P |  | Theor y | Practic al |  |  |  |  |
| 1 | PCC- <br> ECE201G | Electronic Devices | 3 | 0 | - | 25 | 75 | - | 100 | 3 | 3 | 3 |
|  | LC- | Electronic Devices |  |  |  |  |  |  |  |  |  |  |
| 2 | ECE203G | lab | 0 | 0 | 2 | 25 |  | 25 | 50 | 1 | 3 | 2 |
| 3 | $\begin{array}{\|l\|} \hline \text { PCC- } \\ \text { ECE206G } \end{array}$ | Analog Circuits | 3 | 0 | - | 25 | 75 | - | 100 | 3 | 3 | 3 |
| 4 | LC- ECE208G | Analog Circuits lab | 0 | 0 | 2 | 25 | - | 25 | 50 | 1 | 3 | 2 |
| 5 | PCC- <br> ECE209G | Signals and Systems | 3 | 0 | - | 25 | 75 | - | 100 | 3 | 3 | 3 |
| 6 | PCC- <br> ECE211G | Network Theory | 3 | 1 | - | 25 | 75 | - | 100 | 3 | 3 | 3 |
| 7 | $\begin{aligned} & \text { LC-ECE- } \\ & 212 \mathrm{G} \end{aligned}$ | Network Theory Lab | 0 | 0 | 2 | 25 | - | 25 | 50 | 1 | 3 | 2 |
| 8 | LC-ECE-213G | PCB \& ELECTRONIC WORKSHOP LAB | 0 | 0 | 2 | 25 | - | 25 | 50 | 1 | 3 | $2$ |
| 9 | HSMC-01G | Economics for Engineers (Common with CSE) | 3 | 0 | 0 | 25 | 75 | - | 100 | 3 | 3 | 3 |
| 10 | *MC-106G | Environmental Science | 3 | 0 | 1 | 25 | 75 | - | - | - | 3 | 4 |
| Total |  |  |  |  |  |  |  |  | 700 | 19 |  | 27 |

"MC-106G is a mandatory non-credit course in which the students will be required passing marks in theory.


## MAHARSHI DAYANAND UNIVERSITY, ROHTAK

## SCHEME OF STUDIES \& EXAMINATIONS <br> B.TECH (Electronics and Communication Engineering) <br> Common with <br> B.Tech (Electronics and Tele Communication) <br> SEMESTER -4th w.e.f. 2019-20

| S. No. | Course No. | Course Title | Teaching Schedule |  |  | Marks of Class work | Examination Marks |  | Tota I | $\begin{array}{\|c} \text { Cred } \\ \text { it } \end{array}$ | $\begin{array}{\|c} \text { Duratio } \\ \mathrm{n} \text { of } \\ \text { Exam } \end{array}$ | $\begin{array}{\|c\|} \text { Conta } \\ \text { ct } \\ \text { Hrs./w } \\ \text { k. } \\ \hline \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P |  | Theor y | Practic al |  |  |  |  |
| 1 | PCC- <br> ECE202G | Communication System | 3 | 0 | - | 25 | 75 | - | 100 | 3 | 3 | 3 |
| 2 | LCECE204G | Communication System lab | 0 | 0 | 2 | 25 | - | 25 | 50 | 1 | 3 | 2 |
| 3 | $\begin{aligned} & \text { PCC- } \\ & \text { ECE205G } \end{aligned}$ | Digital Electronics | 3 | 1 | - | 25 | 75 | - | 100 | 3 | 3 | 4 |
|  | LC- | Digital Electronics lab | 0 | 0 | 2 | 25 |  | 25 | 50 | 1 | 3 | 2 |
| 5 | PCC- <br> ECE210G | Microcontrollers | 3 | 1 | - | 25 | 75 | - | 100 | 3 | 3 | 4 |
| 6 | $\begin{aligned} & \text { LC-ECE- } \\ & 214 \mathrm{G} \end{aligned}$ | Microcontrollers Lab | 0 | 0 | 2 | 25 | - | 25 | 50 | 1 | 3 | 2 |
| 7 | HSMC-02G | Organizational Behavior | 3 | 0 | 0 | 25 | 75 | - | 100 | 3 | 3 | 3 |
| 8 | $\begin{aligned} & \text { BSC-MATH- } \\ & 202 \mathrm{G} \end{aligned}$ | Mathematics-III (Partial differential equations and Numerical methods) | 3 | 1 | - | 25 | 75 | - | 100 | 4 | 3 | 4 |
| 9 | $\begin{aligned} & \text { PCC-CSE- } \\ & 221 \mathrm{G} \end{aligned}$ | Data Structures | 3 | 0 | 0 | 25 | 75 | - | 100 | 3 | 3 | 3 |
| Total |  |  |  |  |  |  |  |  | 750 | 22 |  |  |

NOTE: At the end of 4th semester each student has to undergo Practical Training of $4 / 6$ weeks in an Industry/ Institute/ Professional Organization/Research Laboratory/ training centre etc. and submit typed report along with a certificate frombtho gganization \& its evaluation shall be carried out in the 5th Semester.

Scheme of Studies and Examination
B.TECH (Electronics \& Communication Engineering) $\mathbf{5}^{\text {th }}$ Semester
w.e.f. 2020-21

| Sr. <br> No. | Category | Course Code | Course Title | Hours per week |  |  | Tota 1 Con tact Hrs. per wee k | $\begin{array}{\|c} \text { Cre } \\ \text { dit } \end{array}$ | Examination Schedule (Marks) |  |  |  | Duration ofExam(Hours) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | L | T | P |  |  | $\begin{gathered} \text { Inte } \\ \text { rnal } \\ \text { Ass } \\ \text { ess } \\ \text { men } \\ \text { t } \end{gathered}$ | $\begin{array}{\|c} \hline \text { Ext } \\ \text { ern } \\ \text { al } \\ \text { Exa } \\ \text { min } \\ \text { atio } \\ \text { n } \end{array}$ | Pra al | $\begin{gathered} \text { Tot } \\ \text { al } \end{gathered}$ |  |
| 1 | Professional Core Course | PCC-ECE301G | Electromagnetic Waves | 3 | 1 | 0 | 4 | 4 | 25 | 75 |  | 100 | 3 |
| 2 | Professional Core Course | PCC-ECE303G | Computer Organization \& Architecture | 3 | 0 | 0 | 3 | 3 | 25 | 75 |  | 100 | 3 |
| 3 | Professional Core Course | PCC-ECE305G | Communication Engineering | 3 | 1 | 0 | 4 | 4 | 25 | 75 |  | 100 | 3 |
| 4 | Professional Core Course | PCC-ECE307G | Digital Signal Processing | 3 | 1 | 0 | 4 | 4 | 25 | 75 |  | 100 | 3 |
| 5 | Program Elective Course | Refer to <br> Annexure I | Program <br> Elective-I | 3 | 1 | 0 | 4 | 4 | 25 | 75 |  | 100 | 3 |
| 6 | Open <br> Elective <br> Course | Refer to <br> Annexure I | Open Elective-I | 3 | 0 | 0 | 3 | 3 | 25 | 75 |  | 100 | 3 |
| 7 | Professional Core Course | LC-ECE323G | Electromagnetic Waves Lab | 0 | 0 | 3 | 3 | 1.5 | 25 |  | 25 | 50 | 3 |
| 8 | Professional Core Course | LC-ECE325G | Digital Signal Processing Lab | 0 | 0 | 3 | 3 | 1.5 | 25 |  | 25 | 50 | 3 |
| 9 | Training | PT-ECE327G | Practical <br> Training - 1 |  |  | - | - | - | - | - | * Refer Note 1 |  |  |
| TOTAL CREDIT |  |  |  |  |  |  |  | 25 |  |  |  | 700 |  |

## Note:

1. The evaluation of Practical Training-I will be based on seminar, viva-voce, report submitted by the students. According to performance, the students are awarded grades A, B, C, F. A student who is awarded ' $F$ ' grade is required to repeat Practical Training.
2. Choose any one from Elective-I
3. Choose any one from open Elective-I

Excellent: A; Good : B; Satisfactory

Elective-I

| PEC-ECE309G | Power Electronics |
| :--- | :--- |
| PEC-ECE311G | Nano electronics |
| PEC-ECE313G | Linear IC Applications |
| PEC-ECE315G | Scientific computing |

## Open Elective-I

| OEC-ECE317G | Object Oriented Programming with C++ |
| :--- | :--- |
| OEC-ECE319G | Additive Manufacturing |
| OEC-ECE321G | Measurements and Instrumentation |

Scheme of Studies and Examination
B.TECH (Electronics \& Communication Engineering) - $\mathbf{6}^{\text {th }}$ Semester
w.e.f. 2020-21


## Note:

1. Each student has to undergo practical training of 6 weeks during summer vacation after $6^{\text {th }}$ semester and its evaluation shall be carried out in $7^{\text {th }}$ Semester.
2. Choose any one from Elective-II
3. Choose any one from Open Elective-II

## Annexure II

Elective -II

| PEC-ECE310G | Bio-Medical Electronics |
| :--- | :--- |
| PEC-ECE312G | VHDL and Digital Design |
| PEC-ECE314G | Introduction to MEMS |
| PEC-ECE316G | Speech and Audio Processing |

## Open Elective-II

| OEC-ECE318G | Python Programming |
| :--- | :--- |
| OEC-ECE320G | Probability and Stochastic Processes |

## M.D. UNIVERSITY, ROHTAK

## Scheme of studies \& Examination

 B. Tech. (Electronics and Communication Engg.)SEMESTER VII

F'Scheme Effective from 2012-2013

| Course No. | Course Title | Teaching Schedule |  |  |  | Marks <br> of <br> Class <br> Work | Examination |  | Total Marks | Duration of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Total |  | Theory | Practical |  |  |
| ECE-405-F | WIRELESS COMMUNICATION | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ECE-403-F | SATELITE COMMUNICATION ENGINEERING | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ECE-407-F | DATA COMMUNICATION | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ECE-415-F | OPTICAL COMMUNICATION SYSTEMS | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
|  | *Dept Elective-I | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ECE-409-F | Digital Signal Processing | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ECE-423-F | Wireless \& Satellite |  |  | 3 | 3 | 50 | - | 50 | 100 | 3 |
|  | Communication Lab |  |  |  |  |  |  |  |  |  |
| ECE-427-F | Digital Signal Processing Lab | - | - | 2 | 2 | 25 | - | 25 | 50 | 3 |
| ECE-429-F | Data Communication | - | - | 3 | 3 | 50 | - | 50 | 100 | 3 |
|  | Lab |  |  |  |  |  |  |  |  |  |
| GFEE-401-F | General Fitness For The Profession | - | - | - | - |  | - | 50 | 50 | 3 |
| ECE-404-F | Practical Training II |  |  |  |  |  |  |  |  |  |
|  | TOTAL | 18 | 6 | 8 | 32 | 425 | 600 | 175 | 1200 |  |



## List of Dept Electives-I

| ECE-419-F | Mobile Communication |
| :--- | :--- |
| ECE-461-F | Genetic Algorithms \& Applications |
| ECE-453-F | Radar and Sonar Engg. |
| ECE-411-F | Wireless Sensor Network |
|  |  |
|  |  |

## Note:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of calculator will not be permitted in the examination.
2. *Student will be permitted to opt for any one elective run by the other departments. However, the departments will offer only those electives for which they have expertise. The choice of the students for any elective shall not be a binding for the department to offer, if the department does not have expertise.
3. A team consisting of Principal/Director, HOD of concerned department and external examiner appointed by University shall carry out the evaluation of the student for his/her General Fitness for the Profession.

NOTE:-

1. Assessment of Practical Training-II, ( ECE-404F) carried out at the end of VI semester, will be based on seminar, viva-voce and project report of the student from the industry. According to performance letter Grades A, B, C, F are to be awarded. A student who is awarded ' $F$ ' grade is required to repeat Practical Training.


## M.D. UNIVERSITY, ROHTAK

## Scheme of studies \& Examination

 B. Tech. (Electronics and Communication Engg.)
## SEMESTER VIII

F ' Scheme Effective from 2012-2013

Training of Six Months

| Course No. | Course Title | Teaching Schedule |  |  |  | Marks of Class Work | Examination |  | Total Marks | Duration of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Total |  | Theory P | ctical |  |  |
| ECE-402-F | Industrial Training /Institutional Project work | - | - | 8 | 8 | 150 | $\pm$ | 150 | 300 | - |
|  | Total |  |  | 8 | 8 |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |

## Note:

1. The students are required to undergo Industrial Training or Institutional Project work of duration not less than 4 months in a reputed organization or concerned institute. The student who wish to undergo industrial training, the industry chosen for should be a private limited company. The final Viva-voca of the industrial training or Institutional Project work will be conducted by the
2. external examiner and one internal examiner appointed by the institute. External examiner will be from penal of examiner.
Assessment of traing or project will be based on Seminar, viva-voca, report and certificate of Industrial Training or Institutional project work.
3. The internal marks distribution for students who have undergone Industrial training consist of $\mathbf{5 0}$ marks from the Industry concern and $\mathbf{1 0 0}$ Marks by the committee members consisting of faculty members of concerned department of the present institute.
4. The teacher engaged for institutional project work shall have a workload of $\mathbf{2}$ hours per group ( at least 4 students per work)


## MAHARSHI DAYANAND UNIVERSITY, ROHTAK

## Scheme of Examination for Semester III (Second Year)

## B.TECH (FIRE TECHNOLOGY AND SAFETY) w.e.f. 2019-20

| $\begin{gathered} \mathrm{S} \\ \mathrm{~N} \end{gathered}$ | Category | Course Code | Course Title | Hours per week |  |  | Total Contact hrs/week | Credit | Examination Schedule (Marks) |  |  |  | Duration of Exam (Hours) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | L | T | P |  |  | Mark of Class work | TH | Pr | Tot al |  |
| 1 | Basic Science Course | $\begin{aligned} & \text { BSC-FT- } \\ & 201 G \end{aligned}$ | Mathematics-III | 3 | 1 | 0 | 4 | 4 | 25 | 75 |  | 100 | 3 |
| 2 | Professional Core Courses | $\begin{aligned} & \text { PCC-FT- } \\ & 203 \mathrm{G} \end{aligned}$ | Basics of Fire Science | 3 | 0 | 0 | 3 | 3 | 25 | 75 |  | 100 | 3 |
| 3 | Professional Core Courses | $\begin{gathered} \text { PCC-FT- } \\ 205 G \end{gathered}$ | Fire Service Hydraulics-I | 3 | 1 | 0 | 4 | 4 | 25 | 75 |  | 100 | 3 |
| 4 | Engineering Science Course | $\begin{aligned} & \text { ESC-FT- } \\ & \text { 207G } \end{aligned}$ | Basics of Thermal Engineering | 3 | 1 | 0 | 4 | 4 | 25 | 75 |  | 100 | 3 |
| 5 | Professional Core Courses | $\begin{aligned} & \text { PCC-FT- } \\ & 209 \mathrm{G} \end{aligned}$ | Automobile Safety | 3 | 1 | 0 | 4 | 4 | 25 | 75 |  | 100 | 3 |
| 6 | Professional Core Courses | $\begin{aligned} & \text { PCC-FT- } \\ & 211 \mathrm{G} \end{aligned}$ | Fire Protection Workshop | 0 | 0 | 2 | 2 | 1 | 25 |  | 25 | 50 | 3 |
| 7 | Professional Core Courses | $\begin{gathered} \text { PCC-FT- } \\ 213 G \end{gathered}$ | Automobile Safety Lab | 0 | 0 | 2 | 2 | 1 | 25 |  | 25 | 50 | 3 |
| 8 | Engineering Science Course | $\begin{aligned} & \text { ESC-FT- } \\ & 215 G \end{aligned}$ | Basics Thermal Engineering Lab | 0 | 0 | 2 | 2 | 1 | 25 |  | 25 | 50 | 3 |
| 9 | Training | $\begin{gathered} \text { PT-FT- } \\ 217 \text { G } \end{gathered}$ | Fire Ground Operation-I | 0 | 0 | 2 | 2 | 1 | 25 |  | 25 | 50 | 3 |
| TOTAL CREDIT |  |  |  |  |  |  |  | 23 |  |  |  | 700 |  |



## MAHARSHI DAYANAND UNIVERSITY, ROHTAK

## Scheme of Examination for Semester IV (Second Year)

## B.TECH (FIRE TECHNOLOGY AND SAFETY) w.e.f. 2019-20

| SN | Category | Course Code | Course Title | Hours per week |  |  | Total Contact hrs/week | Credit | Examination Schedule (Marks) |  |  |  | Duration of Exam (Hours) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | L | T | P |  |  | Marks of Class work | TH | Pr | Total |  |
| 1 | Humanities and Social science including Management courses | $\begin{aligned} & \text { HSMC- } \\ & \text { FT-202G } \end{aligned}$ | Principles of <br>  <br> Organisation <br> Behaviour | 3 | 0 | 0 | 3 | 3 | 25 | 75 |  | 100 | 3 |
| 2 | Engineering Science Course | $\begin{aligned} & \text { ESC-FT- } \\ & 204 \mathrm{G} \end{aligned}$ | Basics of Safety Engineering | 3 | 0 | 0 | 3 | 3 | 25 | 75 |  | 100 | 3 |
| 3 | Professional Core Courses | $\begin{aligned} & \text { PCC-FT- } \\ & 206 \mathrm{G} \end{aligned}$ |  <br> Paramedics | 3 | 1 | 0 | 4 | 4 | 25 | 75 |  | 100 | 3 |
| 4 | Professional Core Courses | $\begin{aligned} & \text { PCC-FT- } \\ & 208 G \end{aligned}$ | Fire Service Hydraulics-II | 3 | 1 | 0 | 4 | 4 | 25 | 75 |  | 100 | 3 |
| 5 | Professional Core Courses | $\begin{aligned} & \text { PCC-FT- } \\ & 210 G \end{aligned}$ | Safety in Construction | 3 | 1 | 0 | 4 | 4 | 25 | 75 |  | 100 | 3 |
| 6 | Professional Core Courses | $\begin{aligned} & \text { PCC-FT- } \\ & 212 G \end{aligned}$ | First Aid \& Paramedics Lab | 0 | 0 | 2 | 2 | 1 | 25 |  | 25 | 50 | 3 |
| 7 | Professional Core Courses | $\begin{aligned} & \text { PCC-FT- } \\ & 214 \mathrm{G} \end{aligned}$ | Fire Service Hydraulics Lab | 0 | 0 | 2 | 2 | 1 | 25 |  | 25 | 50 | 3 |
| 8 | Training | $\begin{gathered} \hline \text { PT -FT- } \\ 216 \mathrm{G} \end{gathered}$ | Fire Ground Operation-II | 0 | 0 | 2 | 2 | 1 | 25 |  | 25 | 50 | 3 |
| 9 | Mandatory Course | $\begin{aligned} & \text { "MC- } \\ & 106 \mathrm{G} \end{aligned}$ | Environmental Science | 3 | 0 | 1 |  |  | 25 | 75 |  |  | 4 |
| TOTAL CREDIT |  |  |  |  |  |  |  | 21 |  |  |  | 650 |  |

## Abbreviations: TH- Theory , PR- Practical

MC-106 G is a mandatory non-credit course in which the students will be required passing marks in theory.
NOTE: At the end of 4th semester each student has to undergo Practical Training of $4 / 6$ weeks in an Industry/ Institute/ Professional Jrganization/Research Laboratory/ training centre etc. and submit typed report along with a certificate from the organization \& its :valuation shall be carried out in the 5 th Semester.

## Scheme of Studies and Examination

## B.TECH (Fire Technology and Safety) $-5^{\text {th }}$ Semester

w.e.f. 2020-21

| $\begin{aligned} & \mathbf{S} \\ & \mathbf{N} \end{aligned}$ | Category | Course Code | Course Title | Hours per week |  |  | Total Contact hrs/week | Credit | Examination Schedule (Marks) |  |  |  | Dura <br> tion of Exam (Hou rs) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | L | T | P |  |  | Interna I <br> Assess ment | Ext <br> ern <br> al <br> Ex <br> ami <br> nat <br> ion | $\mathbf{P r}$ | Total |  |
| 1 | Professional Core Courses | $\begin{gathered} \text { PCC-FT- } \\ 301 \mathrm{G} \end{gathered}$ | Building <br> Construction \& Urban Planning | 3 | 1 | 0 | 4 | 4 | 25 | 75 |  | 100 | 3 |
| 2 | Professional Core Courses | $\begin{gathered} \text { PCC-FT- } \\ 303 \mathrm{G} \end{gathered}$ | Mechanics of Structure | 3 | 1 | 0 | 4 | 4 | 25 | 75 |  | 100 | 3 |
| 3 | Professional Core Courses | $\begin{gathered} \text { PCC-FT- } \\ 305 \text { G } \end{gathered}$ | Passive Measures for Fire Safety | 3 | 1 | 0 | 4 | 4 | 25 | 75 |  | 100 | 3 |
| 4 | Professional Elective Courses | - | Elective-I | 3 | 0 | 0 | 3 | 3 | 25 | 75 |  | 100 | 3 |
| 5 | Professional Elective Courses | - | Elective -II | 3 | 0 | 0 | 3 | 3 | 25 | 75 |  | 100 | 3 |
| 6 | Professional Core Courses | $\begin{gathered} \text { PCC-FT- } \\ 307 \mathrm{G} \end{gathered}$ | Mechanics of Structure Lab | 0 | 0 | 2 | 2 | 1 | 25 |  | 25 | 50 | 3 |
| 7 | Seminar | $\begin{gathered} \text { PR-FT- } \\ \text { 309G } \end{gathered}$ | Industrial Seminar-I | 0 | 0 | 2 | 2 | 1 | 50 |  |  | 50 | 3 |
| 8 | Training | $\begin{gathered} \text { PR-FT - } \\ 311 \mathrm{G} \end{gathered}$ | Fire Ground Operation-III | 0 | 0 | 2 | 2 | 1 | 25 |  | 25 | 50 | 3 |
| 9 | Mandatory Course | $\begin{array}{r} \text { MC- } \\ 315-G \end{array}$ | Essence of Indian <br> Traditional <br> Knowledge | 2 | 0 | 0 |  |  |  |  |  |  | 3 |
| TOTAL |  |  |  |  |  |  |  | 21 |  |  |  | 650 |  |

## Note:

1. Choose any one from Elective-I
2. Choose any one from Elective-II


Scheme of Studies and Examination
B.TECH (Fire Technology and Safety) $\mathbf{- 6}^{\text {th }}$ Semester
w.e.f. 2020-21

| $\begin{aligned} & \mathbf{S} \\ & \mathbf{N} \end{aligned}$ | Category | Course Code | Course Title | Hours per week |  |  | Total Contact hrs/week | Credit | Examination Schedule (Marks) |  |  |  | Dura <br> tion of Exam <br> (Hou rs) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | L | T | P |  |  | Internal <br> Assess <br> ment | Ext <br> ern <br> al <br> Exa <br> min <br> atio <br> n | Pr | Total |  |
| 1 | Professional Core Courses | $\begin{gathered} \text { PCC-FT- } \\ 302 \text { G } \end{gathered}$ | Rescue Equipment and Techniques | 3 | 1 | 0 | 4 | 4 | 25 | 75 |  | 100 | 3 |
| 2 | Professional Core Courses | $\begin{gathered} \text { PCC-FT- } \\ 304 \mathrm{G} \end{gathered}$ | Fire Protection and Salvage Operation | 3 | 0 | 0 | 3 | 3 | 25 | 75 |  | 100 | 3 |
| 3 | Professional Elective Courses | - | Elective-III | 3 | 0 | 0 | 3 | 3 | 25 | 75 |  | 100 | 3 |
| 4 | Professional Elective Courses | - | Elective-IV | 3 | 0 | 0 | 3 | 3 | 25 | 75 |  | 100 | 3 |
| 5 | Open <br> Elective <br> Courses | - | Open Elective-I | 3 | 0 | 0 | 3 | 3 | 25 | 75 |  | 100 | 3 |
| 6 | Open <br> Elective <br> Courses | - | Open Elective -II | 3 | 0 | 0 | 3 | 3 | 25 | 75 |  | 100 | 3 |
| 7 | Professional Core Courses | $\begin{gathered} \text { PCC-FT- } \\ 306 \mathrm{G} \end{gathered}$ | Computer Applications and CAD Lab | 0 | 0 | 2 | 2 | 1 | 25 |  | 25 | 50 | 3 |
| 8 | Training | $\begin{gathered} \text { PR-FT- } \\ 308 \text { G } \end{gathered}$ | Fire Ground Operation-IV (Rescue Operations) | 0 | 0 | 2 | 2 | 1 | 25 |  | 25 | 50 | 3 |
| TOTAL |  |  |  |  |  |  |  | 21 |  |  |  | 700 |  |

1. At the end of $6^{\text {th }}$ semester each student has to undergo Practical Training based on Fire and Safety/ Fire and Safety equipments installation, care and maintenance/Fire and Safety Audits/Any Certificate Course related to Fire and Safety (Min Contact Hours must be 30 Hrs ) gf4/6 yyeeks in an Industry/ Institute/ Professional Organization/ Research Laboratory/ Training Centre/ other building Occupancy etc. and submit typed report along with a certificate from the organization \& its exatuation shall be carried out in the $7^{\text {th }}$ Semester.
2. Choose any one from Elective-III
3. Choose any one from Elective-IV
4. Choose any one from Open Elective-I

5. Choose any one from Open Elective-II

Professional Elective Courses (Third Year)

| Sr. <br> No. | Course Code | Course Title | Total Contact Hrs | Credit |
| :---: | :--- | :--- | :---: | :---: |
| 1 | PEC-FTEL321 | Fire Safety Codes and Standards | 3 | 3 |
| 2 | PEC-FTEL322 | Nuclear Safety and Radioactive Materials | 3 | 3 |
| 3 | PEC-FTEL323 | Fire Risk Calculations | 3 | 3 |
| 4 | PEC-FTEL324 | Salvage Evaluation of Fire Situation | 3 | 3 |
| 5 | PEC-FTEL325 | Special Hazards and Protection | 3 | 3 |
| 6 | PEC-FTEL326 | Building Design and Drawing | 3 | 3 |
| 7 | PEC-FTEL327 | Fire Modeling | 3 | 3 |
| 8 | PEC-FTEL328 | Electrical Systems and Safety in Design | 3 | 3 |
| 9 | PEC-FTEL329 | Safety in Petroleum and Petrochemical Industries | 3 | 3 |
| 10 | PEC-FTEL330 | Design of Pipe, Pressure Vessels and Machine Elements | 3 |  |

Open Elective Courses (Third Year)

| Sr. <br> No. | Course Code | Course Title | Total Contact Hrs | Credit |
| :---: | :--- | :--- | :---: | :---: |
| 1 | OEC-FTEL-331 | Materials and Metrology | 3 | 3 |
| 2 | OEC-FTEL-332 | Power Plant Engineering | 3 | 3 |
| 3 | OEC-FTEL-333 | Computer Applications, and CAD-CAM | 3 | 3 |
| 4 | OEC-FTEL-334 | Process Instrumentation and Control Engineering | 3 | 3 |
| 5 | OEC-FTEL-335 | Operation Research | 3 | 3 |
| 6 | OEC-FTEL-336 | Industrial Noise and Vibrations | 3 | 3 |
| 7 | OEC-FTEL-337 | Engineering Economics | 3 | 3 |
| 8 | OEC-FTEL-338 | Artificial Intelligence | 3 | 3 |
| 9 | OEC-FTEL-339 | Environmental Engineering and Management | 3 | 3 |
| 10 | OEC-FTEL-340 | Robotics and Robot Applications | 3 | 3 |

## Note: A Student can not choose the same subject as Professional Elective Courses and Open Elective

 Courses in Sem V and Sem VI

## Professional Elective - V

| Sr. No. | Code | Subject |
| :---: | :--- | :--- |
| 1 | PEC-FT-419G | Industrial, Ruraland Forest Development |
| 2 | PEC-FT-421G | Fire and Smoke Dynamics |
| 3 | PEC-FT-423G | Fires in Common Commercial Goods -I |
| 4 | PEC-FT-425G | Fire Service Communication and Mobilizing |
| 5 | PEC-FT-427G | Safety Provisions and Precautions in Industry |

## Open Elective - III

| Sr. No. | Code | Subject |
| :---: | :--- | :--- |
| 1 | OEC-FT-429G | Environment Protectionand WasteManagement |
| 2 | OEC-FT-431G | Safety Engineeringand its IndustrialApplications |
| 3 | OEC-FT-433G | Transportation Engineering andSafety |
| 4 | OEC-FT-435G | Tribology and Maintenance |
| 5 | OEC-FT-437G | TotalQuality Management |



## ProfessionalElective-VI

| Sr. No. | Code | Subject |
| :---: | :--- | :--- |
| 1 | PEC-FT-418G | Fire Service Operations |
| 2 | PEC-FT-420G | Fire and ArsonInvestigation |
| 3 | PEC-FT-422G | Structure's Behaviorunder Fire |
| 4 | PEC-FT-424G | Practical Firemanship |
| 5 | PEC-FT-426G | Fires in Common Commercial Goods -II |

## Open Elective - IV

| Sr. No. | Code | Subject |
| :---: | :--- | :--- |
| 1 | OEC-FT-428G | Entrepreneurship |
| 2 | OEC-FT-430G | Safety in Mines |
| 3 | OEC-FT-432G | Environment and Sustainable Development |
| 4 | OEC-FT-434G | CyberLaws and Ethics |
| 5 | OEC-FT-436G | IndustrialEngineering and Safety Management |



# MAHRASHSI DAYANAND UNIVERSITY, ROHTAK 

SCHEME OF STUDIES \& EXAMINATIONS
B.Tech $4^{\text {th }}$ YEAR FIRE TECHNOLOGY \& SAFETY, $7^{\text {th }}$ SEMESTER

Proposed ' $F$ ' Scheme w.e.f 2012-13

| Course | Proposed 'F' Scheme w.e.f 2012-13 |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Course Title | Teaching schedule |  |  |  | Marks <br> For <br> class <br> work | Marks for Examination |  | Total Marks | Duration of Exam |
|  |  | L | T | P | Total |  | Theory | Practical |  |  |
| FT 401 F | Safety and Risk Management | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 403 F | Industrial Engineering | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 405 F | Operational Research | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 407 F | Disaster Management | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 409 F | Fire Fighting Installation and Automation | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ---- | Dept. Elective | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| FT 411 F | Fire Fighting Installation and Automation Lab | - | - | 2 | 2 | 50 | - | 50 | 100 | 3 |
| FT 413 F | Squad Drill | - | - | 2 | 2 | 50 | - | 50 | 100 | 3 |
|  | Total | 18 | 6 | 4 | 28 | 400 | 600 | 100 | 1100 | - |

## Dept. Elective:

1. FT 417 F Process Instrumentation and Control Engineering
2. FT 419 F Automobile Engineering and Safety.
3. FT 421 F Advanced Safety Engineering and Management.
4. FT 423 F Environmental Protection and Waste Management.
5. FT 425 F Human Factor Engineering.
6. FT 427 F Simulation and Process Modeling
7. FT 429 F Total Quality management
8. FT 431 F Safety in Health Care waste Management
9. FT 433 F Safety in Construction


# MAHRASHSI DAYANAND UNIVERSITY, ROHTAK <br> SCHEME OF STUDIES \& EXAMINATIONS B.Tech $4^{\text {th }}$ YEAR FIRE TECHNOLOGY \& SAFETY, $8^{\text {th }}$ SEMESTER 

Proposed 'F' Scheme w.e.f 2012-13

|  |  | Proposed 'F' Scheme w.e.f 2012-13 |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| SI. No. Course No. | Subject | Internal <br> Marks | External <br> Marks | Total <br> Marks |  |
| 1. | FT- 402-F | Industrial Training/Institutional Project Work | 150 | 150 | 300 |

Note:
The students are required to undergo Industrial Training or Institutional Project Work of duration not less than 4 months in a reputed organization or concerned institute. The students who wish to undergo industrial training, the industry chosen for undergoing the training should be at least a private limited company. The students shall submit and present the mid-term progress report at the Institute. The presentation will be attended by a committee. Alternately, the teacher may visit the Industry to get the feedback of the students.

The final viva-voce of the Industrial Training or Institutional Project Work will be conducted by an external examiner and one internal examiner appointed by the Institute. External examiner will be from the panel of examiners submitted by the concerned institute approved by the Board of Studies in Engineering and Technology. Assessment of Industrial Training or Institutional Project Work will be based on seminar, viva-voce, report and certificate of Industrial Training or Institutional Project Work obtained by the student from the industry or Institute.

The internal marks distributions for the students who have undergone Industrial Training consist of $\mathbf{5 0}$ marks from the industry concern and $\mathbf{1 0 0}$ marks by the committee members consisting of faculty members of concerned department of the parent institute.

The teachers engaged for Institutional Project work shall have a workload of 2 hours per group (at least 4 students) per week.


MAHARSHI DAYANAND UNIVERSITY, ROHTAK
Scheme of Examination for Semester III (Second Year)
B.Tech ( MECHANICAL ENGINEERING)w.e.f. 2019-20

| Sr . <br> No. | Category Course Notation | Course Code | Course Title | Hours per week |  | Total <br> Conta <br> ct <br> hrs/w <br> eek | Cre dit | Examination Schedule (Marks) |  |  |  | Durati on of Exam (Hour s) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | L | T P |  |  | Mark of Class work | The ory | Pra ctic al | $\begin{gathered} \text { Tota } \\ 1 \end{gathered}$ |  |
| 1 | Basic Science course | $\begin{gathered} \text { BSC-ME- } \\ 201 G \end{gathered}$ | Physics II(Optics \& Waves) | 3 | 00 | 3 | 3 | 25 | 75 |  | 100 | 3 |
| 2 | Basic Science course | $\begin{gathered} \text { BSC-ME- } \\ 203 G \end{gathered}$ | Mathematics-III | 3 | 10 | 4 | 4 | 25 | 75 |  | 100 | 3 |
| 3. | Basic Science course | $\begin{gathered} \hline \text { BSC-BIO- } \\ 205 \mathrm{G} \end{gathered}$ | Biology | 2 | 10 | 3. | 3 | 25 | 75 |  | 100 | 3 |
| 4. | Engineering Science course | $\begin{gathered} \text { ESC-ECE- } \\ 207 \mathrm{G} \end{gathered}$ | Basics of Electronics Eng. | 2 | 00 | 2 | 2 | 25 | 75 |  | 100 | 3 |
| 5. | Engineering Science course | $\begin{aligned} & \text { ESC-ME- } \\ & 209 \mathrm{G} \end{aligned}$ | Engineering Mechanics | 3 | 00 | 3 | 3 | 25 | 75 |  | 100 | 3 |
| 6. | Engineering Science course | $\begin{aligned} & \text { ESC-ME- } \\ & 211 \mathrm{G} \end{aligned}$ | Basics of Mechanical Eng. | 2 | 00 | 2 | 2 | 25 | 75 |  | 100 | 3 |
| 7. | Professional Core courses | $\begin{gathered} \text { PCC-ME- } \\ 213 \mathrm{G} \end{gathered}$ | Thermodynamics | 3 | 10 | 4 | 4 | 25 | 75 |  | 100 | 3 |
|  | - |  | Basics of |  |  |  | \% |  |  |  |  |  |
| 8. | Engineering Science course | $\begin{gathered} \text { LC-ME- } \\ 215 \mathrm{G} \end{gathered}$ | MechanicalEngg. lab | 0 | 02 | 2 | 1 | 25 |  | 25 | 50 | 3 |
| TOTAL CREDIT |  |  |  |  |  |  | 22 |  |  |  | 750 |  |

MAHARSHI DAYANAND UNIVERSITY, ROHTAK
Scheme of Examination for Semester IV (Second Year)
B.Tech.( MECHANICAL ENGINEERING)w.e.f. 2019-20

| Sr . <br> No. | Category Course Notation | Course Code | Course Title | Hours per week |  | Total Conta ct hrs/w eek | $\begin{aligned} & \text { Cre } \\ & \text { dit } \end{aligned}$ | Examination Schedule (Marks) |  |  |  | Durati on of Exam (Hour s) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | L T | T P |  |  | Mark of Class work | The ory | Pr act ica 1 | Total |  |
| 1 | Professional Core courses | $\begin{array}{\|l} \hline \text { PCC-ME- } \\ \text { 202G } \end{array}$ | Applied <br> Thermodynamics | 31 | 10 | 4 | 4 | 25 | 75 |  | 100 | 3 |
| 2 | Professional Core courses | $\begin{aligned} & \text { PCC- ME- } \\ & \text { 204G } \end{aligned}$ | Fluid Mechanics | 31 | 10 | 4 | 4 | 25 | 75 |  | 100 | 3 |
| 3 | Professional Core courses | $\begin{aligned} & \text { PCC- ME- } \\ & \text { 206G } \end{aligned}$ | Strength of materials | 311 | 10 | 4 | 4 | 25 | 75 |  | 100 | 3 |
| 4 | Professional Core courses | $\begin{aligned} & \text { PCC- ME- } \\ & \text { 208G } \end{aligned}$ | Materials Engineering | 30 | 00 | 3 | 3 | 25 | 75 |  | 100 | 3 |
| 5 | Professional Core courses | $\begin{aligned} & \text { PCC- ME- } \\ & \text { 210G } \end{aligned}$ | Instrumentation \& Control | 30 | 00 | 3 | 3 | 25 | 75 |  | 100 | 3 |
| 6 | Professional Core courses | $\begin{aligned} & \text { LC- ME- } \\ & 212 \mathrm{G} \end{aligned}$ | Applied <br> Thermodynamics <br> Lab | 00 | 02 | 2 | 1 | 25 |  | 25 | 50 | 37 |
| 7 | Professional Core courses | $\begin{aligned} & \text { LC-ME- } \\ & 214 \mathrm{G} \end{aligned}$ | SOM Lab | 00 | 02 | 2 | 1 | 25 |  | 25 | 50 | 3 |
| 8 | Professional Core courses | $\begin{aligned} & \text { LC-ME- } \\ & 216 \mathrm{G} \end{aligned}$ | Fluid Mechanics Lab | 00 | 02 | 2 | 1 | 25 |  | 25 | 50 | 3 |
| 9 | Professional Core courses | $\begin{aligned} & \text { LC-ME- } \\ & 218 G \end{aligned}$ | Materials Lab | 00 | 02 | 2 | 1 | 25 |  | 25 | 50 | 3 |
| 10 | Professional Core courses | $\begin{aligned} & \text { LC- ME- } \\ & 220 \mathrm{G} \end{aligned}$ | Instrumentation Lab |  | 02 | 2 | 1 | 25 |  | 25 | 50 | 3 |
| 11 | Mandatory course | ${ }^{\circ} \mathrm{MC-106G}$ | Environment Science | 30 | 01 | - |  | 25 | 75 |  | - | 4 |
| TOTAL CREDIT |  |  |  |  |  |  | 23 |  |  |  | 750 |  |

*MC-106Gis a mandatory non -credit course in which the students will be required passing marks in theory.
NOTE: At the end of 4th semester each student has to undergo Practical Training of $4 / 6$ weeks in an Industry/ Institute/ Professional Organization/ Research Laboratory/ training centre etc. and submit typed report along with a certificate from the organization \& its evaluation shall be carried out in the 5th Semester.


## Scheme of Studies and Examination B.TECH (Mechanical Engineering) - $5^{\text {th }}$ Semester <br> w.e.f. 2020-21



## Note:



1. The evaluation of Practical Training-I will be based on seminar, viva-voce, report submitted by the students. According to performance, the students are awarded grades A, B, C, F. A/student who is awarded ' $F$ ' grade is required to repeat Practical Training.

Excellent: A; Good : B; Satisfactory: C; Not Satisfactory: F.

## OPEN ELECTIVE COURSES (OEC)/ HUMANITIES AND SOCIAL SCIENCES INCLUDING MANAGEMENT COURSES (HSMC)-LIST-I

LIST-I (Semester -V)

| S. No. | Code | Name of Course | No. of Contact <br> Hours | Credits |
| :--- | :--- | :--- | :---: | :---: |
| 1. | HSMC-01G | Economics For Engineers | 2 | 2 |
| 2. | HSMC-03G | Finance and Accounting | 2 | 2 |
| 3. | OEC-ME-301G | Air and Noise Pollution and <br> Control | 2 | 2 |
| 4. | OEC-ME-303G | Installation Testing \& Maintenance <br> of Electrical Equipments | 2 | 2 |
| 5. | OEC-ME-305G | Microprocessor and Interfacing | 2 | 2 |

Note: Students have to select any one subject from the above list of courses.


Scheme of Studies and Examination B.TECH (Mechanical Engineering) - $\mathbf{6}^{\text {th }}$ Semester
w.e.f. 2020-21

| $\begin{aligned} & \mathbf{S} . \\ & \mathbf{N} . \end{aligned}$ | Course Code | Course Title | Hours per week |  |  | Total <br> Cont <br> act <br> hrs/w <br> eek | Cre dit | Examination Schedule (Marks) |  |  |  | Du <br> rati <br> on of Ex am (Ho urs ) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | $\mathbf{P}$ |  |  | Inter nal Asses smen t | Exte <br> rnal <br> Exa <br> min <br> atio <br> n | Pract ical | Total |  |
| 1 | PCC-ME-302G | Manufacturing <br> Technology-II | 3 | 0 | 0 | 3 | 3 | 25 | 75 |  | 100 |  |
| 2 | PCC- ME-304G | Design of machine element-I | 3 | 0 | 0 | 3 | 3 | 25 | 75 |  | 100 |  |
| 3 | PCC- ME-306G | Heat Transfer | 3 | 1 | 0 | 4 | 4 | 25 | 75 |  | 100 |  |
| 4 | PCC- ME-308G | Dynamics of Machines | 3 | 0 | 0 | 3 | 3 | 25 | 75 |  | 100 |  |
| 5 | LC-ME-310G | Workshop Lab-I | 0 | 0 | 3 | 3 | 1.5 | 25 |  | 25 | 50 |  |
| 6 | LC-ME-312G | Workshop Lab-II | 0 | 0 | 2 | 2 | 1 | 25 |  | 25 | 50 |  |
| 7 | LC-ME-314G | Heat Transfer Lab | 0 | 0 | 2 | 2 | 1 | 25 |  | 25 | 50 |  |
| 8 | LC-ME-316G | Dynamics of Machines Lab | 0 | 0 | 2 | 2 | 1 | 25 |  | 25 | 50 |  |
| 9 | PCC-ME-318G | Seminar | 0 | 0 | 2 | 2 | 1 | 50 |  |  | 50 |  |
| 10 | PEC | Professional Elective Courses(PEC): Refer List -I | 3 | 0 | 0 | 3 | 3 | 25 | 75 |  | 100 |  |
| 11 | HSMC-II | Refer List-II | 2 | 0 | 0 | 2 | 2 | 25 | 75 |  | 100 |  |
|  | HSMC-II TOTAL |  |  |  |  |  | 23.5 |  |  |  | 850 |  |

## NOTE:

1. Each student has to undergo practical training of $4 / 6$ weeks during summer vacation and its evaluation shall be carried out in the VII semester.
2. Assessment of Practical Training-II, undergone at the end of VI semester, will be based on seminar, viva-voce, report and certificate of practical training obtained by the student from the industry/ Professional organization/ Research Laboratory etc. According to performance letter grades A, B, C, F are to be awarded:

Excellent: A; Good : B; Satisfactory:C; notsatisfactory: F.
A student who has been awarded ' $F$ ' grade will be required to repeat the practical training.


PROFESSIONAL ELECTIVE COURSES (PEC) (Semester-VI) LIST-I

| S. No. | Code | Name of Course | No. of Contact <br> Hours | Credits |
| :--- | :--- | :--- | :---: | :---: |
| 1. | PEC-ME-320G | Internal Combustion Engines \& Gas <br> Turbines | 3 | 3 |
| 2. | PEC-ME-322G | Welding Technology | 3 | 3 |
| 3. | PEC-ME-324G | Air Craft Technology | 3 | 3 |
| 4. | PEC-ME-326G |  <br> Maintainability | 3 | 3 |

Note: Students will have to select any one out of the list.

## HUMANITIES AND SOCIAL SCIENCES INCLUDING MANAGEMENT COURSES (HSMC)-LIST-II.

## List-II (Semester-VI)

| S. No. | Code | Name of Course | No. of <br> Contact <br> Hours | Credits |
| :--- | :--- | :--- | :---: | :---: |
| 1. | HSMC -02G | Organizational Behaviour | 2 | 2 |
| 2. | HSMC -04G | Human Resource Management | 2 | 2 |
| 3. | HSMC -06G | Industrial Psychology | 2 | 2 |
| 4. | HSMC -08G | Fundamentals of Management | 2 | 2 |

Note: Students have to select any one subject from the above list of courses.


MAHARSHI DAYANAND UNIVERSITY, ROHTAK
SCHEME OF STUDIES \& EXAMINATIONS
B.Tech. $4^{\text {th }}$ YEAR MECHANICAL ENGINEERING, SEMESTER- VII
(Scheme-F)
EFFECTIVE FROM THE SESSION 2012-13

| Course | Course Title | Teaching schedule |  |  |  | Marks <br> For <br> class <br> work | Marks for Examination |  | Total Marks | Duration <br> of Exam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Total |  | Theory | Practical |  |  |
| ME-401-F | Strength of Material-II | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-403-F | Refrigeration \& AirConditioning | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-405-F | Operation Research | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-407-F | Power Plant Engineering | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-409-F | Mechanical Vibration | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ------------- | Elective | 3 | 1 | - | 4 | 50 | 100 | - | 150 | 3 |
| ME-411-F | Refrigeration \& Air- | - | - | 2 | 2 | 50 | - | 50 | 100 | 37 |
|  | Conditioning Lab |  |  |  |  |  |  |  |  |  |
| ME-413-F | Advanced CAD/CAM Lab | - | - | 2 | 2 | 50 | - | 100 | 150 |  |
| ME-415-F | Practical Training-II | - | - | 2 | 2 | - |  | - | - |  |
| $\begin{aligned} & \text { GFME- } \\ & \text { 435-F } \end{aligned}$ | General Fitness for the Profession | - | - | - | ${ }^{-}$ | - | ${ }^{-}$ | 50 | 50 | 3 |
|  | Protal | 18 | 6 | 6 | 30 | 400 | 600 | 200 | 1200 |  |

## LIST OF ELECTIVES

| S.NO. | SUBJECT CODE | DEPTT. ELECTIVE |
| :---: | :---: | :--- |
| 1. | ME-417-F | QUALITY ENGINEERING |
| 2. | ME 419-F | FINITE ELEMENT METHODS |
| 3. | ME-421-F | ENERGY MANAGEMENT PRINCIPLES |
| 4. | ME-425-F | COMPUTER INTEGRATED <br> MANUFACTURING |
| 5. | ME- 429-F | RELIABILITY ENGINEERING |
| 6. | ME-431-F | SOLAR ENERGY ENGINEERING |

# MAHARSHI DAYANAND UNIVERSITY, ROHTAK <br> SCHEME OF STUDIES \& EXAMINATIONS <br> B.Tech. $4^{\text {th }}$ YEAR MECHANICAL ENGINEERING, SEMESTER- VIII <br> (Scheme-F) <br> EFFECTIVE FROM THE SESSION 2012-13 

| SI. No. | Course No. | Subject | Internal <br> Marks | External <br> Marks | Total <br> Marks |
| :--- | :---: | :---: | :---: | :---: | :---: |
| 1. | ME- 402-F | Industrial Training/Institutional Project Work | 150 | 150 | 300 |

## Note:

The students are required to undergo Industrial Training or Institutional Project Work of duration not less than 4 months in a reputed organization or concerned institute. The students who wish to undergo industrial training, the industry chosen for undergoing the training should be at least a private limited company. The students shall submit and present the mid-term progress report at the Institute. The presentation will be attended by a committee. Alternately, the teacher may visit the Industry to get the feedback of the students.
The final viva-voce of the Industrial Training or Institutional Project Work will be conducted by an external examiner and one internal examiner appointed by the Institute. External examiner will be from the panel of examiners submitted by the concerned institute approved by the Board of Studies in Engg. \& Technology. Assessment of Industrial Training or Institutional Project Work will be based on seminar, viva-voce, report and certificate of Industrial Training or Institutional Project Work obtained by the student from the industry or Institute.
The internal marks distributions for the students who have undergone Industrial Training consist of 50 marks from the industry concern and 100 marks by the committee members consisting of faculty members of concerned department of the parent institute.
The teachers engaged for Institutional Project work shall have a workload of 2 hours per group (at least 4 students) per week.


## CURRICULUM AND SCHEME OF EXAMINATIONS OF BBA PROGRAMME FROM THE SESSION 2014-15

## SECOND YEAR

## Third Semester

| Paper No | Title of Paper(s) | External <br> Marks | Internal <br> Assessment/ <br> Work-shop <br> Marks | Practical <br> Marks | Total <br> Marks |
| :--- | :--- | :---: | :---: | :---: | :---: |
| BBAN301 | Cost and Management <br> Accounting | 80 | 20 | - | 100 |
| BBAN302 | Marketing Management | 80 | 20 | - | 100 |
| BBAN303 | Capital Markets | 80 | 20 | - | 100 |
| BBAN304 | Introduction to <br> Information Technology | 50 | - | 50 | 100 |
| BBAN305 | Environment Studies | 80 | 20 | - | 100 |
| BBAN306 | Disaster Management | 80 | 20 | - | 100 |
|  | TOTAL |  |  |  | 600 |

## Fourth Semester

| Paper No | Title of Paper(s) | External <br> Marks | Internal <br> Assessment/ <br> Work-shop <br> Marks | Practical <br> Marks | Total <br> Marks |
| :--- | :--- | :---: | :---: | :---: | :---: |
| BBAN401 | Financial Management | 80 | 20 | - | 100 |
| BBAN402 | Human Resource <br> Management | 80 | 20 | - | 100 |
| BBAN403 | Business Research <br> Methods | 80 | 20 | - | 100 |
| BBAN404 | Business Laws | 80 | 20 | - | 100 |
| BBAN405 | Data Base Management <br> System | 50 | - | 50 | 100 |
| BBAN406 | Human Rights and Values | 80 | 20 | - | 100 |
|  | TOTAL |  |  |  | 600 |



CURRICULUM AND SCHEME OF EXAMINATIONS OF
BBA PROGRAMME FROM THE SESSION 2014-15

## THIRD YEAR

## Fifth Semester

| Paper No | Title of Paper(s) | External <br> Marks | Internal <br> Assessment/ <br> Work-shop <br> Marks | Practical <br> Marks | Total <br> Marks |
| :--- | :--- | :---: | :---: | :---: | :---: |
| BBAN501 | Production and Materials <br> Management | 80 | 20 | - | 100 |
| BBAN502 | Company Law | 80 | 20 | - | 100 |
| BBAN503 | Indian Business <br> Environment | 80 | 20 | - | 100 |
| BBAN504 |  <br> Internet | 50 | - | 50 | 100 |
| BBAN505 | Presentation Skills and <br> Personality Development | 80 | 20 | - | 100 |
| BBAN506 | Cyber Security | 80 | 20 | - | 100 |
| BBAN507 Summer Training Report | 100 | - | - | 100 |  |
|  | TOTAL |  |  |  | 700 |

## Sixth Semester

| Paper No | Title of Paper(s) | External <br> Marks | Internal <br> Assessment/ <br> Work-shop <br> Marks | Practical <br> Marks | Total <br> Marks |
| :--- | :--- | :---: | :---: | :---: | :---: |
| BBAN601 | Income Tax | 80 | 20 | - | 100 |
| BBAN602 |  <br> Design | 80 | 20 | - | 100 |
| BBAN603 | Foundations of <br> International Business | 80 | 20 | - | 100 |
| BBAN604 | Consumer Protection | 80 | 20 | - | 100 |
| BBAN605 | E-Commerce | 50 | - | 50 | 100 |
| BBAN606 | Project Report | 100 | - | - | 100 |
| BBAN607 | Comprehensive Viva- <br> voce | 100 | - | - | 100 |
|  | TOTAL |  |  |  | 700 |

Session 2014-15

## M.D. UNIVERSITY <br> SCHEME OF STUDIES AND EXAMINATION <br> M.TECH 1st YEAR (COMPUTER SCIENCE \& ENGINEERING) <br> SEMESTER 1st <br> CBCS Scheme effective from 2016-17

| $\begin{aligned} & \text { Sr. } \\ & \text { No } \end{aligned}$ | Course No. | Subject | Teaching Schedule |  |  |  | Examination Schedule (Marks) |  |  |  | Duratio <br> n of Exam (Hours) | No of hours/ week |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P | Total Credi ts | Marks of Class works | Theor <br> y | Practi cal | Total |  |  |
| 1 | 16CSE21C1 | Data Communication and Computer Networks | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 2 | 16CSE21C2 | Advanced Operating Systems | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 3 | 16CSE21C3 | Advanced Database <br> Management System | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 4 | 16CSE21C4 | Data Warehouse and Mining | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 5 | 16CSE21C5 |  | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 6 | 16CSE21C6 | Seminar | - |  | - | 2 | 50 | - | - | 50 |  | 2 |
| 7 | 16CSE21CL1 | Advanced Operating Systems Lab | - | - | 2 | 2 | 50 | - | 50 | 100 | 3 | 2 |
| 8 | 16CSE21CL2 | Advanced Database Management System Lab | - | - | 2 | 2 | 50 | - | 50 | 100 | 3 | 2 |
|  |  | TOTAL | 26 |  |  |  |  |  |  |  |  |  |

## NOTE:

Examiner will set nine question in total. Question one will be compulsory and will comprises of all section and remaining eight questions to be set by taking two questions from each unit. The students have to attempt five questions in total, first being compulsory and selecting one from each Unit.


## M.D. UNIVERSITY <br> SCHEME OF STUDIES AND EXAMINATION M.TECH 1st YEAR (COMPUTER SCIENCE \& ENGINEERING) <br> SEMESTER 2nd CBCS Scheme effective from 2016-17

| $\begin{aligned} & \text { Sr. } \\ & \text { No } \end{aligned}$ | Course No. | Subject | Teaching Schedule |  |  |  | Examination Schedule (Marks) |  |  |  | Durat ion of Exam (Hour s) | No of hours /wee k |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P | $\begin{gathered} \text { Tota } \\ \text { I } \\ \text { Cred } \\ \text { its } \end{gathered}$ | Marks of Class works | Theor y | Practi cal | Total |  |  |
| 1 | 16CSE22C1 | Soft Computing | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 2 | 16CSE22C2 | Algorithm Design | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 3 | 16CSE22C3 | Seminar | - |  | 2 | 2 | 50 | - | - | 50 | - | 2 |
| 4 | 16CSE22CL1 | Soft Computing Lab | - | - | 2 | 2 | 50 | - | 50 | 100 | 3 | 2 |
| 5 | 16CSE22CL2 | Algorithm Design Lab | - | - | 2 | 2 | 50 | - | 50 | 100 | 3 | 2 |
| 6 | $\begin{aligned} & \text { 16CSE22D1 or } \\ & \text { 16CSE22D2 or } \\ & \text { 16CSE22D3 or } \\ & \text { 16CSE22D4 } \end{aligned}$ | Elective-1 | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 7 |  | Open Elective |  |  |  | 3 |  |  |  |  |  | 3 |
| 8 |  | Foundation Elective |  |  |  | 2 |  |  |  |  |  | 2 |
|  |  |  | 23 |  |  |  |  |  |  |  |  |  |

NOTE:Examiner will set nine question in total. Question One will be compulsory and will comprises af all section and remaining eight questions to be set by taking two questions from each unit. The students have to attempt five questions in total, first being compulsory and selecting one from each Unit.

Elective 1: Choose any one from the following papers

| 16CSE22D1 | Mobile and Wireless Communicat |
| :--- | :--- |
| 16CSE22D2 | Optimization Techniques |
| 16CSE22D3 | Discrete Mathematics |
| 16CSE22D4 | Internet and Web Development |

Elective 2
A candidate has to select this paper from the pool of Open Electives provided by the University
Elective 3
A candidate has to select this aser from the of of Foundation Electives provided by the University.


## M.D UNIVERSITY <br> SCHEME OF STUDIES AND EXAMINATION <br> M.TECH 2nd YEAR (COMPUTER SCIENCE \& ENGINEERING) <br> SEMESTER 3rd

CBCS Scheme effective from 2017-18


NOTE:
Examiner will set nine questions in total. Question One will be compulsory and will comprises of all sections and remaining eight questions to be set by taking two questions from each unit. The students have to attempt five questions in total, first being compulsory and selecting one from each Unit.

## OPEN ELECTIVE

A candidate has to select this paper from the pool of open electives provided by the University.


# M.D UNIVERSITY <br> SCHEME OF STUDIES AND EXAMINATION <br> M.TECH 2nd YEAR (COMPUTER SCIENCE \& ENGINEERING) <br> SEMESTER 4th <br> CBCS Scheme effective from 2017-18 

| SI. <br> No | Course No. | Subject | Teaching Schedule |  |  |  | Examination Schedule (Marks) |  |  |  | No of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P | Total | Marks of Class works | Theory | Practical | Total |  |
| 1. | 17CSE24C1 | Dissertation and viva (Dissertation Stage 2) | - | - | - | - | 250 | - | 500 | 750 | 20 |
|  |  | TOTAL | . . - - |  |  |  | - |  |  |  |  |

NOTE:

1. Students have to publish a research paper in a journal / conference of the research work done in the semester.


## Maharshi Dayanand University, Rohtak

## SCHEME OF STUDIES \& EXAMINATION <br> MASTER OF TECHNOLOGY <br> (CYBER FORENSICS AND INFORMATION SECURITY) <br> SEMESTER-III <br> EFFECTIVE FROM 2013-14

| Course No. | Course Title |  | Teaching <br> Schedule |  | Marks |  | Total | Duration <br> of Exam <br> (Hrs) |
| :--- | :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L T | P | Sessional | Exam. |  |  |  |
| MTCF 301 | Preserving \& Recovering <br> Digital Evidence | 4 | - | - | 50 | 100 | 150 | 3 |
| MTCF 302 | Cyber Laws \& Security <br> Policy | 4 | - | - | 50 | 100 | 150 | 3 |
|  | Elective-III | 4 | - | - | 50 | 100 | 150 | 3 |
| MTCF 307 | Dissertation Phase 1 | - | - | 8 | 100 | - | 100 | 3 |
| MTCF 308 | Seminar \& Technical Writing | - | - | 2 | 50 | - | 50 | - |
| TOTAL |  | 12 | - | 10 | 300 | 300 | 600 |  |

Elective- III

MTCF 303- Biometric Security
MTCF 304- Applied Cryptography
MTCF 305-Distributed Systems Security
MTCF 306- Secure Software Engineering


# Maharshi Dayanand University, Rohtak 

SCHEME OF STUDIES \& EXAMINATION MASTER OF TECHNOLOGY (CYBER FORENSICS AND INFORMATION SECURITY)

## SEMESTER-IV

## EFFECTIVE FROM 2013-14

| Course No. | Course Title | Teaching <br> Schedule |  | Marks |  | Total |  |
| :--- | :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Sessional | Exam. |  |
| MTCF 401 | Dissertation Phase-II | - | - | 24 | 200 | 400 | 600 |
|  |  |  |  |  |  |  |  |
|  | Total |  | - | 24 | 200 | 400 | 600 |



## MAHARSHI DAYANAND UNIVERSITY, ROHTAK

## SCHEME OF STUDIES AND EXAMINATIONS FOR MASTER OF TECHNOLOGY IN <br> ELECTRICAL ENGINEERING

(Specialization: Electrical Power Systems)
SEMESTER-III

| S.No | Course Code | Course Title | Teaching Schedule |  |  | Class <br> Work | Examination |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | Theory | Practical |  |
|  |  |  | L | T | P |  |  | 15 |  |
| 1 | MTEPS301 | Elective - III | 3 | 1 | 0 | 50 | 100 | - | 150 |
| 2 | MTEPS302 | Elective - IV | 3 | 1 | 0 | 50 | 100 | 50 | 100 |
| 3 | MTEPS303 | Seminar |  |  | 2 | 50 | - | - | 150 |
| 4 | MTEPS304 | Dissertation- | 0 | 0 | 4 | 150 | - |  |  |
|  |  | Phase I |  |  |  | 30 | 200 | 50 | 550 |

1. The paper setter shall set each theory paper of $\mathbf{1 0 0}$ marks covering entire syllabus. However the examiner shall evaluate the performance of the student in the theory paper finally by assigning one of the grades out of $A^{+}, A, B, C, D \& E$. The examination of practical courses shall also be evaluated on the basis of these grades.
2. The sessionals of theory, practical and Seminar courses shall also be evaluated in the basis of these grades.
3. The choice of student for any elective shall not be binding on the department to offer it.
4. The grading system is define at the end of scheme of studies \& examinations and will be supplied by the University to the examiner(s).


## MAHARSHI DAYANAND UNIVERSITY, ROHTAK

## SCHEME OF STUDIES AND EXAMINATIONS FOR MASTER OF TECHNOLOGY IN ELECTRICAL ENGINEERING

(Specialization: Electrical Power Systems)
SEMESTER-IV

| S.No. | Course <br> Code | Course Title | Teaching <br> Schedule |  |  | Class <br> Work | Examination |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P |  | Theory | E.VIVA |  |
| 1 | MTEPS401 | Dissertation Final Phase | 0 | 0 | 20 | 200 | - | 400 | 600 |
|  |  |  |  |  | 20 | 200 | - | 400 | 600 |

NOTE:

1. The sessionals of Dissertation shall be evaluated on the basis of grades i.e $\mathbf{A}^{+}$,
$A, B, C, D \& E$.
2. The Dissertation shall be evaluated by an examination committee consisting of the head of the department, Dissertation Supervisor and one External examiner. The evaluation should be based on above grades.
3. The grading system is define at the end of scheme of studies \& examinations and will be supplied by the University to the examiner(s).


## M.D.UNIVERSITY, ROHTAK <br> SEMESTER 1 EAR (ELECTRONICS \& COMMUNICATION)

CBCS Scheme effective from 2016-17

| $\begin{aligned} & \text { Sl. } \\ & \text { No } \end{aligned}$ | Course Code | Subject | Credit Pattern |  |  |  | Examination Schedule (Marks) |  |  |  | Dura tion of Exam (Hou rs) | No of Hours /week |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P | Total Credi ts | Mark $\mathbf{s}$ of Class work | $\begin{gathered} \text { Theor } \\ y \\ \hline \end{gathered}$ | $\begin{gathered} \text { Practic } \\ \text { al } \\ \hline \end{gathered}$ | Total |  |  |
| 1 | 16ECE21Cl | Advance Microprocessor \& Microcontroller | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 2 | 16ECE21C2 | Satellite and Space Communication | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 3 | 16ECE21C3 | Information and Communication Theory | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 4 | 16ECE21C4 | Advanced Digital Signal Processing | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 5 | 16ECE21C5 | Data Communication Networks | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 6 | 16ECE21C6 | Seminar | - |  | - | 2 | 50 | - | - | 50 |  | 2 |
|  | 16ECE21CL1 | Satellite Lab | - | - | 2 | 2 | 50 | - |  | 100 | 3 | 4 |
| 7 |  |  |  |  |  |  |  | - | 50 |  |  |  |
| 8 | 16ECE21CL2 | Advance Microprocessor \& Microcontroller Lab | - | - | 2 | 2 | 50 | - | 50 | 100 | 3 | 4 |
|  |  | TOTAL | 26 |  |  |  |  |  |  |  |  |  |

NOTE:
Examiner will set nine question in total. Question One will be compulsory and will comprise short answer type questions from all sections and remaining eight questions to be set by taking two questions from each unit. The students have to attempt five questions in total, first being compulsory and selecting one from each Unit.


## SCHEME OF STUDIES AND M.D.UNIVERSITY, ROHTAK \& COMMUNATION M.TECH 1st YEAR (ELECTRONICS CBCS Scheme effective from 2016-17

| $\begin{gathered} \mathbf{S I} \\ \dot{\mathbf{N}} \end{gathered}$ | Course No. | Subject | Credit Pattern |  |  | Examination Schedule (Marks) |  |  |  | Duration of Exam (Hours) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 1 T | P | Total Credi ts | Marks of Class works | Theory | Practical |  |  |
| 1 | 16ECE22C1 | Wireless Mobile Communication | 40 | - | , | 50 | 100 | Practical | 150 | 3 |
| 2 | 16ECE22C2 | Optical <br> Communication | 40 | - | 4 | 50 | 100 | - | 150 | 3 |
| 3 | 16ECE22C3 | Seminar | ven | - | 2 | 50 | - | - | 50 |  |
| 4 | 16ECE22CL1 |  | - | 2 | 2 | 50 | - | 50 | 100 | 3 |
|  |  |  | - | 2 | 2 | 50 | - | 50 | 100 | 3 |
|  |  |  |  |  |  |  |  |  |  |  |
| 6 | 16ECE22D1 <br> or <br> 16ECE22D2 <br> or <br> 16ECE22D3 <br> or <br> 16ECE22D4 | Elective-1 | 40 | - | 4 | 50 | 100 | - | $150$ | 3 |
|  |  | Open Elective |  |  | 3 |  |  |  |  |  |
| 8 |  | Foundation Elective |  |  | 2 |  |  |  |  |  |
|  |  | TOTAL |  |  | 23 |  |  |  |  |  |

NOTE: Examiner will set nine questions in total. Question One will be compulsory and will comprise short answer type questions from all sections and remaining eight questions to be set by taking two questions from each unit. The students have to attempt five questions in total, first being compulsory and selecting one from each Unit.

Elective 1: Choose any one from the following four papers:

> 16ECE22D1 - Electronic System Design
> 16ECE22D2 - Image Processing
> 16ECE22D3 - ADVANCED MATHEMATICS FOR ENGINEERS 16ECE22D4 - VLSI Design

Open Elective: A candidate has to select this paper from the pool of Open Electives provided by the University. Foundation Elective: A candidate has to select this paper from the pool of Foundating flectives provided by the University.


## M.DUNIVERSITY <br> SCHEME OF STUDIES AND EXAMINATION M.TECH 2nd YEAR (ELECTRONICS \& COMMUNICATION) SEMESTER 3rd <br> CBCS Scheme effective from 2017-18

| $\begin{aligned} & \text { Sl. } \\ & \text { No } \end{aligned}$ | Course No. | Subject | Teaching Schedule |  |  |  | Examination Schedule (Marks) |  |  |  | DurationofExam(Hours) | No of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P | Total | Marks of Class works | Theory | Practica | Total |  |  |
| 1 | 17ECE23C1 | Neural Networks \& Fuzzy Logics | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 2 | 17ECE23C2 | CDMA | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
|  |  | DISSERTATIO | - | - | - | 4 | 100 | - | - | 100 |  | 2 |
| 3 | 17ECE23C3 | N (PHASE-I) |  |  |  |  |  |  |  |  |  |  |
| 4 | 17ECE23C4 | Seminar | - | - | - | 2 | 50 | - | - | 50 |  | 2 |
|  |  | Project | - | - | 2 | 2 | 50 | - | 50 | 100 |  | 2 |
| 5 | 17ECE23CLl | MATLAB Lab | - | - | 2 | 2 | 50 | - | 50 | 100 |  | 2 |
| 6 | 17ECE23CL2 |  |  |  |  |  |  |  |  |  |  |  |
| 7 |  | OPEN ELECTIVE |  |  |  |  |  |  |  |  |  | 3 |
| 7 |  |  |  |  |  |  |  |  |  |  |  | 21 |

NOTE:

1. Students will be allowed to use non-programmable scientific calculator. However, sharing of Calculator will not be permitted in the examination.
2. Students have to publish a research paper in a journal / conference on the basis of literature survey done in the semester.

OPEN ELECTIVE: A candidate has to select this paper from the pool of open electives provided by the University.


## M.D UNIVERSITY <br> SCHEME OF STUDIES AND EXAMINATION M.TECH 2nd YEAR (ELECTRONICS \& COMMUNICATION) <br> SEMESTER 4th

CBCS Scheme effective from 2017-18


NOTE:

1. Students have to publish a research paper in a journal / conference of the research work done in the semester.


## M. TECH. MECHANICAL ENGINEERING (MACHINE DESIGN) COURSE SCHEME and DETAILED SYLLABUS

Semesterwise Course Scheme

| FIRST SEMESTER |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Subject <br> Code | Subject | Credit | L-T-P | Marks Weightage |  | Grand total |
|  |  |  |  | Theory | Sessional |  |
| 1. M 801 A | Numerical Analysis and Optimization | 3 | $3-0-0$ | 100 | 50 |  |
| 2. M803A | Instrumentation and Measurement | 3 | $3-0-0$ | 100 | 50 |  |
| 3. M805A | Experimental Stress Analysis | 3 | $3-0-0$ | 100 | 50 |  |
| 4. M807A | Metal Forming Analysis | 3 | $3-0-0$ | 100 | 50 |  |
| 5. M809A | Mechatronics and Product Design | 3 | 3-0-0 | $\begin{aligned} & 100 \\ & \text { Ext. } \end{aligned}$ | $\begin{aligned} & 50 \\ & \text { Int. } \end{aligned}$ |  |
| 6. M811A | Experimental Stress Analysis Lab | 1 | 0-0-2 | 25 | 25 |  |
| 7. M813A | Mechanical Measurement Lab | 1 | 0-0-2 | 25 | 25 |  |
| 8. M815A | Computational Lab | 1 | 0-0-2 | 25 | 25 |  |
|  | Total | 18 | 15-0-6 | 575 | 325 | 900 |
| SECOND SEMESTER |  |  |  |  |  |  |
| 9. M 802 A | Theory of Elasticity | 3 | $3-0-0$ | 100 | 50 |  |
| 10. M804A | Design of Mechanisms | 3 | 3-0-0 | 100 | 50 |  |
| 11. M806A | Principles of Machine Design | 3 | $3-0-0$ | 100 | 50 |  |
| 12. | General Elective - I | 3 | $3-0-0$ | 100 | 50 |  |
| 13. | General Elective - II | 3 | $3-0-0$ | 100 | 50 |  |
|  |  |  |  | Ext. | Int. |  |
| 14. M812A | Seminar | 1 | 0-0-2 | 25 | 25 |  |
| 15. M814A | CAD/CAM Lab | 1 | 0-0-2 | 25 | 25 |  |
| 16. M816A | Design Practice Lab-I | 1 | 0-0-2 | 25 | 25 |  |
|  | Total | 18 | 15-0-6 | 575 | 325 | 900 |
| THIRD SEMESTER |  |  |  |  |  |  |
| 17. M821A | Mechanical Behavior of Materials | 3 | 3-0-0 | 100 | 50 |  |
| 18. M823A | Mechanical Vibrations | 3 | 3-0-0 | 100 | 50 |  |
| 19. M825A | General Elective III | 3 | 3-0-0 | 100 | 50 |  |
|  |  |  |  | Ext. | Int. |  |
| 20. M827A | Design Practice Lab II | 1 | 0-0-2 | 25 | 25 |  |
| 21. M829A | Materials Behavior and Vibration Lab | 1 | 0-0-2 | 25 | 25 |  |
| 22. M831A | Minor Project | 5 | 0-0-10 | 150 | 100 |  |
|  | Total | 16 | 9-0-14 | 500 | 300 | 800 |


| $\begin{array}{l}\text { Subject } \\ \text { Code }\end{array}$ | Subject |  | Credit | L-T-P | Marks Weightage |  |
| :---: | :--- | :--- | :--- | :--- | :--- | :--- |
| Ext. | Int. |  |  |  |  |  |$]$

## ELECTIVES I

1. M837 Design of Bearings and Shaft
2. M838 Computer Aided Design
3. M839 Design of Pollution Control Equipments
4. M840 Design of Pressure Vessels

## ELECTIVES II

1. M845 Fracture Mechanics
2. M846 Design and Metallurgy of Welded Joints
3. M847 Finite Element Methods
4. M848 Materials Management

## ELECTIVE III

1. M 849

Total Quality Management
2. M850 Robotic Engineering
3. M851 Computer Aided Vehicle Design
4. M852 Tribology


## M.D.UNIVERSITY, ROHTAK <br> SCHEME OF STUDIES AND EXAMINATION M.TECH 1st YEAR (MANUFACTURING \& AUTOMATION) <br> SEMESTER 1

CBCS Scheme effective from 2016-17

| $\begin{aligned} & \text { Sl. } \\ & \text { No } \end{aligned}$ | Course Code | Subject | Credit Pattern |  |  |  | Examination Schedule (Marks) |  |  |  | Dura tion of Exam (Hou rs) | No of <br> Hours /week |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P | Total Credi ts | Mark $s$ of Class work | $\begin{gathered} \text { Theor } \\ \mathrm{y} \\ \hline \end{gathered}$ | Practic al | Total |  |  |
| 1 | $\begin{aligned} & \text { 16MMA21C1 } \\ & \text { 16MMA21C2 } \end{aligned}$ | Metal Forming Analysis | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 2 |  | Mechatronics \& Product Design | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 3 | 16MMA21C3 | Total Quality Management | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 4 | 16MMA21C4 | Welding \& Allied Processes | 4 | 0 | - | 4 | 50 | 100 | - | 150 | 3 | 4 |
| 5 | 16MMA21CLI | Mechatronics Lab | - | - | 2 | 2 | 50 |  | 50 | 100 | 3 | 4 |
| 6 | 16MMA21CL2 | Welding Lab | - | - | 2 | 2 | 50 |  | 50 | 100 | 3 | 4 |
| 7 | 16MMA21CL3 | CAD/CAM Lab | - | - | 2 | 2 | 50 |  | 50 | 100 | 3 | 4 |
| 8 | 16MMA21C5 | Seminar | - |  | - | 2 | 50 | - | - | 50 |  | 2 |
| 9 | 16MMA21D1 or <br> 16MMA21D2 or 16MMA21D3 OR <br> 16MMA21D4 | Elective I | 4 | - |  | 4 | 50 | 100 |  | 150 | 3 | 4 |
|  |  |  | 28 |  |  |  |  |  |  |  |  |  |
|  |  | TOTAL |  |  |  |  |  |  |  |  |  |  |

Elective I: Choose any one from the following three papers:
16MMA21D1 - INDUSTRIAL INSPECTION
16MMA21D2 - DESIGN AND METALLURGY OF WELDED
JOINTS 16MMA21D3 - FOUNDARY TECHNOLOGY
16MMA21D4-DESIGN PLANNING CONTORL AND PRODUCTION SYSTEM
NOTE:
Examiner will set nine questions in total. Question One will be compulsory and will comprise short answer type questions from all sections and remaining eight questions to be set by taking two questions from each unit. The students have to attempt five questions in total, first being compulsory and selecting one from each Unit.


## M.D.UNIVERSITY, ROHTAK SCHEME OF STUDIES AND EXAMINATION M.TECH 1st YEAR (MANUFACTURING \& AUTOMATION) <br> SEMESTER 2 <br> CBCS Scheme effective from 2016-17



TOTAL
NOTE: Examiner will set nine questions in total. Question One will be compulsory and will comprise short answer type questions from all sections and remaining eight questions to be set by taking two questions from each unit. The students have to attempt five questions in total, first being compulsory and selecting one from each Unit.
Elective II : Choose any one from the following three papers:
16MMA22D1 - QUALITY CONTROL TECHNIQUES
16MMA22D2 - FINITE ELEMENT METHODS
16MMA22D3 - ARTIFICIAL INTELLEGENCE IN MANUFACTURING
Open Elective: A candidate has to select this paper from the pool of Open Electives provided by the University.
Foundation Elective: A candidate has to select this paper from the pool of Foundation Electives provided by the University-

# Maharshi Dayanand University, Rohtak 

## SCHEME OF STUDIES \& EXAMINATION

 MASTER OF TECHNOLOGY (STRUCTURAL DESIGN)
## SEMESTER-III

EFFECTIVE FROM 2012-13

| Course No. | Course Title | Teaching Schedule |  |  | Marks |  | Total | Duration of Exam (Hrs) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | P | Sessional | Exam. |  |  |
| MTSD 301 | Design of Structures- III | 4 | - | - | 50 | 100 | 150 | 3 |
|  |  |  |  |  |  | 100 | 150 | 3 |
| MTSD 302 | Professional Practices | 4 | - | - | 50 | 100 | 150 | 3 |
|  | Elective-III | 4 | - | - | 50 | 50 | 100 | 3 |
| MTSD 303 | Computational Laboratory-III | - | - | 3 | 50 | 50 | 50 |  |
| MTSD 304 | Seminar \& Technical Writing | - |  | 2 | 100 | - | 100 |  |
| MTSD 305 | Dissertation Phase-I | - |  | 4 | 100 |  |  |  |
|  |  | 12 | - | 9 | 350 | 350 | 700 |  |
| TOTAL |  |  |  |  |  |  |  |  |

1. The paper setter shall set each theory paper of 100 marks covering entire syllabus. However the Examiner shall evaluate the performance of the student in the theory paper finally by assigning one of the grades out of $A+A, B, C, D \& E$. The examination of practical courses shall also be evaluated on the basis of these grades.
2. The sessionals of theory and practical courses shall also be evaluated in the basis of these grades.
3. The choice of student for any elective shall not be binding on the department to offer it.
4. The grading system is define at the end of scheme of studies \& examinations and will be supplied by the University to the examiner(s).


## Maharshi Dayanand University, Rohtak

 SCHEME OF STUDIES \& EXAMINATION MASTER OF TECHNOLOGY (STRUCTURAL DESIGN) SEMESTER-IVEFFECTIVE FROM 2012-13

| Course No. | Course Title | Teaching <br> Schedule |  | Marks |  | Total <br>  | L | Duration <br> of Exam <br> (Hrs) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| MTSD 401 | Dissertation | - | - | 24 | Sessional | Exam. |  |  |
| TOTAL |  |  |  |  |  | 400 | 600 | 3 |

NOTE:

1. The sessionals of Dissertation shall be evaluated on the basis of grades i.e $A+, A, B, C, D \& E$.
2. The Dissertation shall be evaluated by an examination committee consisting of the head of the department, Dissertation Supervisor and one External examiner. The evaluation should be based on above grades.
3. The grading system is define at the end of scheme of studies \& examinations and will be supplied by the University to the examiner(s)


## List of Electives:

## Elective- I

MTSD 107 - Composite Structures
MTSD 108 - Analysis and Design of Plates \& Shells
MTSD 109 - Advanced Foundation Design and Geotechnics
MTSD 110 - Material Science

## Elective- II

MTSD 207- Advanced Steel Design
MTSD 208 - Advanced Reinforced Concrete Design

MTSD 209-Earth Retaining Structures
MTSD 210-Construction Failures

## Elective- III

MTSD 306- High Rise Structures
MTSD 307- Design of Hydraulic Systems
MTSD 308- Design Of Bridges


## SCHEME OF EXAMINATIONS

FOR
TWO YEAR MBA PROGRAMME FROM THE SESSION 2019-20

## FIRST YEAR: FIRST SEMESTER

| Course Code | Title of the Course (s) | External <br> Marks | Sessional Marks | Practical Marks | Total Marks | Credits (L-T-P) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| CORE COURSES |  |  |  |  |  |  |
| 19IMG21C1 | Management Concepts and Organizational Behavior | 80 | 20 | - | 100 | 3-1-0 |
| 19IMG21C2 | Managerial Economics | 80 | 20 | - | 100 | 3-1-0 |
| 19IMG21C3 | Accounting for Managers | 80 | 20 | - | 100 | 3-1-0 |
| 19IMG21C4 | Business Statistics and Analytics | 80 | 20 | - | 100 | 3-1-0 |
| 19IMG21C5 | Operations Management | 80 | 20 | - | 100 | 3-1-0 |
| 19IMG21C6 | Computer Fundamentals and Office Automation Tools | 50 | - | 50 | 100 | 3-0-1 |
| 19IMG21C7 | Business Environment | 80 | 20 | - | 100 | 3-1-0 |
| Discipline Specific Elective Courses (Each student will opt one course) |  |  |  |  |  |  |
| 19IMG21D1 | Business Communication Skills | 80 | 20 | - | 100 | 3-1-0 |
| 19IMG21D2 | Event Management | 80 | 20 | - | 100 | 3-1-0 |
| Total Credits in ${ }^{\text {st }}$ Semester |  |  |  |  |  | 32 |

## FIRST YEAR: SECOND SEMESTER

| Course Code | Title of the Course (s) | External <br> Marks | Sessional <br> Marks | Practical <br> Marks | Total <br> Marks | Credits (L-T-P) |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :---: |
| CORE COURSES |  |  |  |  |  |  |  |
| 19IMG22C1 | Financial Management | 80 | 20 | - | 100 | $3-1-0$ |  |
| 19IMG22C2 | Marketing Management | 80 | 20 | - | 100 | $3-1-0$ |  |
| 19IMG22C3 | Human Resource Management | 80 | 20 | - | 100 | $3-1-0$ |  |
| 19IMG22C4 | Business Research Methods | 80 | 20 | - | 100 | $3-1-0$ |  |
| 19IMG22C5 | IT Infrastructure Management | 50 | - | 50 | 100 | $3-0-1$ |  |
| 19IMG22C6 | Comprehengive Civaryoce | 100 | - | - | 100 | 4 |  |

SECOND YEAR: THIRD SEMESTER

| Course Code | Title of the Course (s) | External Marks | Sessional <br> Marks | Practical Marks | Total Marks | Credits (L-T-P) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| CORE COURSES |  |  |  |  |  |  |
| 201MG23C1 | Strategic Management | 80 | 20 | - | 100 | 3-1-0 |
| 201MG23C2 | Corporate Laws | 80 | 20 | - | 100 | 3-1-0 |
| 201MG23C3 | Operations Research | 80 | 20 | - | 100 | 3-1-0 |
| 201MG23C4 | Summer Training Report | 100 | - | - | 100 | 4 |
| Open Elective Course |  |  |  |  |  |  |
| Each student will opt one course from the pool of Open Elective Courses provided by the University, excluding the Open Elective Courses prepared by the Institute of Management Studies and Research. |  |  |  |  |  | 3 |

Discipline Specific Elective Courses (specialization areas offered under dual specialization scheme) Students will opt two papers in each of the two SAME specialization areas in III as well as IV semester.

| HUMAN RESOURCE MANAGEMENT |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 20IMG23GH1 | Compensation and Benefits Management | 80 | 20 | - | 100 | 3-1-0 |
| 20IMG23GH2 | Organizational Change and Intervention Strategies | 80 | 20 | - | 100 | 3-1-0 |
| 20IMG23GH3 | Human Resource Metrics and Analytics | 80 | 20 | - | 100 | 3-1-0 |
| 20IMG23GH4 | Management of Industrial Relations | 80 | 20 | - | 100 | 3-1-0 |
| 20IMG23GH5 | Strategic Human Resource Management | 80 | 20 | - | 100 | 3-1-0 |
| FINANCE MANAGEMENT |  |  |  |  |  |  |
| 20IMG23GF1 | Indian Financial System and Financial Markets | 80 | 20 | - | 100 | 3-1-0 |
| 20IMG23GF2 | Project Management | 80 | 20 | - | 100 | 3-1-0 |
| 20IMG23GF3 | Business Taxation | 80 | 20 | - | 100 | 3-1-0 |
| 20IMG23GF4 | Investment Management | 80 | 20 | - | 100 | 3-1-0 |
| 20IMG23GF5 | Bank Management | 80 | 20 | - | 100 | 3-1-0 |
| INFORMATION TECHNOLOGY MANAGEMENT |  |  |  |  |  |  |
| 20IMG23GT1 | E-Commerce and Applications | 50 | - | 50 | 100 | 3-0-1 |
| 20IMG23GT2 | Data Ware Housing and Data Mining | 80 | 20 | - | 100 | 3-1-0 |
| 20IMG23GT3 | E-Governance and Framework of ICT | 80 | 20 | - | 100 | 3-1-0 |

SECOND YEAR: FOURTH SEMESTER

| Course Code | Title of the Course (s) | External <br> Marks | Sessional / <br> Internal <br> Marks | Practical Marks | Total Marks | $\begin{aligned} & \text { Credits } \\ & \text { (L-T-P) } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Core Courses |  |  |  |  |  |  |
| 20IMG24C1 | B2B Marketing | 80 | 20 | - | 100 | 3-1-0 |
| 201MG24C2 | CSR and Business Ethics | 80 | 20 | - | 100 | 3-1-0 |
| 201MG24C3 | Project Report | 100 | 100 | - | 200 | 8 |
| 201MG24C4 | Comprehensive Viva-voce | 100 | - | - | 100 | 4 |

Discipline Specific Elective Courses (specialization areas offered under dual specialization scheme)
HUMAN RESOURCE MANAGEMENT

| 20IMG24GH1 | Business Negotiations and <br> Employee Relations | 80 | 20 | - | 100 | $3-1-0$ |
| :---: | :--- | :---: | :---: | :---: | :---: | :---: |
| 20IMG24GH2 | Training and Development | 80 | 20 | - | 100 | $3-1-0$ |
| 20IMG24GH3 | Managing Interpersonal and <br> Group Processes | 80 | 20 | - | 100 | $3-1-0$ |
| 20IMG24GH4 | International Human Resource <br> Management | 80 | 20 | - | 100 | $3-1-0$ |
| 20IMG24GH5 | Performance Management <br> Systems | 80 | 20 | - | 100 | $3-1-0$ |

FINANCE MANAGEMENT

| 20IMG24GF1 | Insurance and Risk Management | 80 | 20 | - | 100 | 3-1-0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 20IMG24GF2 | Management of Financial Services | 80 | 20 | - | 100 | 3-1-0 |
| 20IMG24GF3 | Financial and Commodity Derivatives | 80 | 20 | - | 100 | 3-1-0 |
| 20IMG24GF4 | International Financial Management | 80 | 20 | - | 100 | 3-1-0 |
| 20IMG24GF5 | Financial Decision Analysis | 80 | 20 | - | 100 | 3-1-0 |
| INFORMATION TECHNOLOGY MANAGEMENT |  |  |  |  |  |  |
| 20IMG24GT1 | Knowledge Management | 80 | 20 | - | 100 | 3-1-0 |
| 20IMG24GT2 | Information Security and Cyber Laws | 80 | 20 | - | 100 | 3-1-0 |



# Scheme of Examinations and Syllabus <br> for 

MCA 2- year programme
With effect from the Session 2020-21

## Programme Specific Outcomes:

The students upon completion of Regular MCA 2-year Programme will be able:
PSO1 To apply knowledge of computing fundamentals, computing specialization and domain knowledge for the abstraction and conceptualization of computing models from defined problems and requirements.
PSO2 To have the ability to understand and analyze a given real-world problem and propose feasible computing solutions. Also analyze customer requirements, create high level design, implement and document robust and reliable software systems.
PSO3 To transform complex business scenarios and contemporary issues into problems, investigate, understand and propose integrated solutions using emerging technologies.
PSO4 To use the latest technologies like IoT, AI, Machine Learning, Big Data Analytics, Cyber Security and modern hardware and software tools necessary for innovative software solutions and to possess leadership and managerial skills with best professional ethical practices and social concern
PSO5 To master fundamental project management skills, concepts and techniques, set attainable objectives and ensure positive results, meeting scope, time and budget constraints
PSO6 To recognize the need for self-motivation to engage in lifelong learning, the social, professional, cultural and ethical issues involved in the use of computer technology and give them due consideration in developing software systems
PSO7 To assess the need for innovation and initiate the process through entrepreneurship or otherwise and to work collaboratively as a member or leader in multidisciplinary teams
PSO8 .To select their career after acquiring necessary eligibility requirement and the skill-set.

## MCA First Year <br> Semester-I

| Paper Code | Course | $\begin{gathered} \text { External } \\ \text { Marks } \end{gathered}$ | Internal Marks | Total Marks | Credits |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Object Oriented Programming Using | 80 | 20 | 100 | 4:0:0 |
| 20MCA21Cl | JAVA | 80 | 20 | 100 | 4:0:0 |
| 20MCA21C2 | Compiler Design | 80 |  |  |  |
| 20MCA21C3 | Computer Graphics \& Multimedia | 80 | 20 | 100 | 4:0:0 |
|  | Digital Design \& | 80 | 20 | 100 | 4:0:0 |
| 20MCA21C4 | Computer Architecture Advance Data Structures | 80 | 20 | 100 | 4:0:0 |
| 20MCA21C5 | Advance Data Structures Using C++/Java | ${ }^{80}$ |  | 100 | 0:0:3 |
| 20 MCA 21 CLI | Software Lab -1 Based on 20MCA 21 Cl , 20MCA21C2 \& | 100* | --- | 100 |  |
|  | 20MCA21C3 |  | ---- | 100 | 0:0:3 |
| 20MCA21CL2 | Software Lab -2 <br> Based on 20MCA21C4 |  |  |  |  |
| 20MCA2ICL2 | \& 20MCA21C5 |  |  |  | Credits 26 |

## Semester-II

| Paper Code | Course | External | Internal Marks | Total Marks | Credits |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 20MCA22Cl | Advance Object Technology | 80 | 20 | 100 | 4:0:0 |
| 20MCA22C2 | Advance Database Systems \& Data Warehouse | 80 | 20 | 100 | 4:0:0 |
| 20MCA22C3 | Operating Systems \& Shell Programming | 80 | 20 | 100 | 4:0:0 |
|  | Elective-I |  |  |  |  |
| 20MCA22DA1/ | i) Theory of Computation | 80 | 20 | 100 | 4:0:0 |
| 20MCA22DA2/ | ii) Computer Networks \& Distributed Systems | 80 | 20 | 100 | 4:0:0 |
| 20MCA22DA3/ | iii) Web Technologies | 80 | 20 | 100 | 4:0:0 |
|  | Elective-II |  |  |  |  |
| 20MCA22DB1/ | i) Cloud Computing | 80 | 20 | 100 | 4:0:0 |
| 20MCA22DB2/ | ii) Software Engineering | 80 | 20 | 100 | 4:0:0 |
| 20MCA22DB3/ | iii) Advance Computer Architecture \& Quantum Computing | 80 | 20 | 100 | 4:0:0 |
| 20MCA22CLI | Software Lab-3 <br>  <br> Elective I and/or II | 100* | $\cdots$ | 100 | 0:0:3 |
| 20MCA22CL2 | Software Lab-4 <br>  <br> 20MCA22C3 | 100* | --- | 100 | 0:0:3 |
| 20MCA22C4 | Industry Internship Report/ Project Report/Dissertation -I | 100** | --- | 100 | 0:3:0 |
| Total |  |  |  |  | Credits 29 |
|  | Foundation Electives (0) |  |  |  |  |
|  | To be Chosen from the pool of Foundation Electives provided by the university. |  |  |  | 2 |

*20 marks out of 100 will be based on the attendance, evaluation/assessment of the candidate in Test(s) and Assignment(s) during the semester, which will be forwarded by the Head of Dept./Director to the Examiner(s). Further, both practical exams of a semester may be conducted on the same day in 2 sittings each maximum of 3 hours.
**20 marks out of 100 will be based on evaluation/assessment of the candidate by the internal supervisor.


Semester-III

| Paper Code | Course | University Exams | Internal Assessment | Total Marks | $\begin{aligned} & \text { Credits } \\ & \text { (L:T:P) } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 17MCA33Cl | Computer Graphics | 80 | 20 | 100 | 4:0:0 |
| 17MCA33C2 | Operating Systems | 80 | 20 | 100 | 4:0:0 |
| 17MCA33C3 | Advance Database Systems | 80 | 20 | 100 | 4:0:0 |
| 17MCA33C4 | Data Communication and Computer Networks | 80 | 20 | 100 | 4:0:0 |
| 17MCA33C5 | Object Technology | 80 | 20 | 100 | 4:0:0 |
| 17MCA33CLI | SoftwareLab-5 <br> i) Graphics Programming <br> Using C/C++. <br> ii) UNIX / Shell Programming. | 100 | ---- | 100 | 0:0:3 |
| 17MCA33CL2 | SoftwareLab-6 <br> i) Java Programming <br> ii)ADBMS (PLSQL \& MYSQL) | $100{ }^{*}$ | ---- | 100 | 0:0:3 |
|  |  |  |  |  | 26 Credits |

Semester-IV

| Pemester-IV | Course | University <br> Exams | Internal <br> Assessment | Total <br> Marks | Credits <br> (L:T:P) |
| :--- | :--- | :---: | :---: | :---: | :---: |
| 17MCA34C1 | Advanced Java Programming | 80 | 20 | 100 | $4: 0: 0$ |
| 17MCA34C2 | Object Oriented Analysis and <br> Design using UML | 80 | 20 | 100 | $4: 0: 0$ |
| 17MCA34DA1/ <br> 17MCA34DA2/ <br> 17MCA34DA3 | i) Theory of Computation or <br> ii) Software Engineering or <br> iii) Multimedia and Its <br> Applications | 80 | 20 | 100 | $4: 0: 0$ |
| 17MCA34DB1/ <br> 17MCA34DB21 <br> 17MCA34DB3 | i) Analysis and Design of <br> Algorithms or <br> ii) Computer Security or <br> iii)Digital Image Processing | 80 | 20 | 100 | $4: 0: 0$ |
| 17MCA34C3 | Artificial Intelligence and <br> Expert System | 80 | 20 | 100 | $4: 0: 0$ |
| 17MCA34CL1 | SoftwareLab-7 <br> Advance Java Programming | 100 | -- | 100 | $0: 0: 3$ |
|  | Software Lab-8 <br> i)Object Oriented Analysis <br> and Design using UML <br> ii) PROLOG | 100 | -- | 100 | $0: 0: 3$ |
| 17MCA34CL2 |  |  |  |  |  |
|  |  |  |  |  |  |
|  | Minor Project-I |  |  |  |  |



Total Credits= 31 Credits

* 20 marks out of 100 will be based on the evaluation/assessment of the candidate in Test(s) and Assignment(s) during the semester, which will be forwarded by the Head of Dept./Director to the Examiner(s). Further, both practical exams of a semester may be conducted on the same day in 2 sittings each maximum of 3 hours.


MCA Third Year
Semester-V

| Paper Code | Course | University Exams | Internal Assessment | Total Marks | $\begin{aligned} & \text { Credits } \\ & \text { (L:T:P) } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 18MCA3SC1 | Advanced Technology |  | 20 | 100 | 4:0:0 |
| 18MCA35C2 | Soft Computing | 80 | 20 | 100 | 4:0:0 |
| 18MCA35C3 | Data Warehousing and Data Mining | 80 | 20 | 100 | 4:0:0 |
| 18MCA35DA1/ 18MCA35DA2/ 18MCA35DA3 | (i) Cloud Computing or <br> (ii) Big Data Analytics or <br> (iii) Software Testing and Quality Assurance | 80 | 20 | 100 | 4:0:0 |
| 18MCA35DB1/ 18MCA35DB2/ 18MCA35DB3 | (i) Internet of Things or <br> (ii) Mobile Computing or <br> (iii) Embedded Systems | 80 | 20 | 100 | 4:0:0 |
| 18MCA35CL1 | Software Lab-9 <br> .NET Programming Using C\# | $10{ }^{*}$ | ---- | 100 | 0:0:3 |
| 18MCA35CL2 | Software Lab-10 <br> Soft Computing | 100 | ---- | 100 | 0:0:3 |
| 18MCA35C6 | Minor Project-II |  | 100 | 100 | 0:2:0 |
|  | Total |  |  |  | 28 Credits |
| Open Elective (0) $\quad 10$ |  |  |  |  |  |
| To be Chosen from the pool of Open Electives provided by the University (excluding the open elective prepared by the Department of Comp Sc. \& Appls.) |  |  |  |  | 3 |

Total Credits= 31 Credits

* 20 marks out of 100 will be based on the evaluation/assessment of the candidate in Test(s) and Assignment(s) during the semester, which will be forwarded by the Head of Dept./Director to the Examiner(s). Further, both practical exams of a semester may be conducted on the same day in 2 sittings each maximum of 3 hours.


## Semester-VI

| Paper Code | Course | University <br> Exams | Internal <br> Assessment | Total <br> Marks | Credits |
| :--- | :--- | :---: | :---: | :---: | :---: |
| 18MCA36C1 | Major Project | 400 | 100 | 500 | 20 Credits |
|  | Grand Total of 3 Years/Credits |  |  |  | $\mathbf{1 6 2}$ <br> Credits |



# MAHARSH DAVANAND UNIVERSITY, ROHTAK 

(Established under Haryana Act No. XXV of 1975)
' A ' Grade University accredited by NAAC
No.ACS-II/F-87/2017/ /178-1217
Dated


To
All the Heads of the University Teaching Departments,
M.D.University,

Rohtak
Sub:- Minutes of the meeting of the CBCS Board- List of Syllabi of Foundation Elective and Open Elective Courses for the session 2016-17
Sir/Madam,
I am directed to enclose herwith the minutes of the meeting of CBCS Board held on 10.01.2017 on the subject cited above duly approved by the Vice-Chancellor under Section 9A(5) of MDU Act .'r your information and taking further necessary action in the matter.

The Syllabi of Foundation Elective courses and Open Elective Courses under CBCS are available on the University Website which may be got downloaded and instructions to the students may be imparted accordingly.

Encl: As above | Superintendent (Academic) |
| :---: |
| for REGISTRAR |

Copy of the above is forwarded to the following for information and necessary action.

1. Director, IQAC, M.D.University, Rohtak
2. Controller of Examinations, M.D.University, Rohtak
3. Assistant Registrar(R-1,R-II/R-III/R-IV/Conduct/ Secrecy), M.D.University, Rohtak
4. P.A. to Dean,Academic Affiars, M.D.University, Rohtak
5. P.A. to Registrar, M.D.University, Rohtak


MINUTES FOR THE MEETING OF CBCS BOARD COMPRISING THE FOLLOWING CONSTITUTED BY THE VICE-CHANCELLOR HELD ON 10.01.2017 AT 4:00 P.M. IN THE OFFICE OF THE DEAN, ACADEMIC AFFAIRS, MAD. UNIVERSITY, ROHTAK TO CONSIDER THE MATTER REGARDING VARIOUS ISSUES RELATING TO SYLLABUS AND SUES OF FOUNDATION ELECTIVE AND OPEN ELECTIVE PAPERS OF PG COURSES UNDER CBCS FOR THE SESSION 2016-17.

## Members present:

1. Dr. N.R. Garg, Dean

- Chairman

2. Dr. P.K. Jaiwal
3. Dr. (Mrs.) Promila Batra
4. Dr. Surender Kumar
5. Prof. Hukum Chand
6. Dr. Narender Kumar
7. Dr. Bhagat Singh
8. Dr. Gulshan Taneja
9. Dr. Jitender Kumar
10. Dr. B.S. Sindhu

The following decisions were taken:-

1. Approved the following list of papers and Syllabi for the Foundation elective and Open Elective courses offered by various departments of the University under CBCS w.e.f. the session 2016-17 for the students of 2 -year \& 3-year programmes studying in the university teaching departments, UILMS, Gurgaon and affiliated colleges of the University:

## A) Foundation Elective Courses (Each of 2 Credits)

Students of all PG programmes under CBCS (w.e.f. 2016-17) are required to study one foundation elective course in $2^{\text {nd }}$ semester for 2 years Programmes and in $4^{\text {th }}$ Semester for 3 years Programmes. They may choose any one of the following courses irrespective of their subjects of study.

| Sr. <br> No. | Nomenclature of the <br> course | Course <br> Code | Offered by the Department of |
| :--- | :--- | :--- | :--- |
| 1 | Basics of Accounting | 16COMF1 | Commerce |
| 2 | Basics of E-Commerce | 16COMF2 | Commerce |
| 3 | Elements of Banking | 16COMF3 | Commerce |
| 4 | Computer Fundamentals | 16CSAF1 | Computer Science \& Applications |
| 5 | Appreciation of Short | 16ENGF1 | English \& Foreign Languages |



|  | Stories |  |  |
| :--- | :--- | :--- | :--- |
| 6 |  <br> Prose | 16ENGF2 | English \& Foreign Languages |
| 7 | Appreciation of Fiction | 16ENGF3 | English \& Foreign Languages |
| 8 | Appreciation of Drama | 16ENGF4 | English \& Foreign Languages |
| 9 | Moral Education | 16GENF1 | Genetics |
| 10 | Geography in Everyday Life <br> 16GEOF1 | Geography |  |
| 11 | Hindi Language and <br> Communication Skill | 16HNDF1 | Hindi |
| 12 | Entrepreneurship <br> Development | 16IMSF1 | IMSAR |
| 13 | Communication and Soft <br> Skills | 16IMSF2 | IMSAR |
| 14 | Media lay | 16LAWF1 | Law |
| 15 | Appreciation of Indian <br> Music | 16MUSF1 | Music |
| 16 | Psychology for Everyday <br> Living | 16PSYF1 | Psychology |

## B) Open Elective Courses (Each of $\mathbf{3}$ Credits)

Students of all PG programmes under CBCS (w.e.f. 2016-17) are required to study one open elective course in each of the $2^{\text {nd }}$ and $3^{\text {rd }}$ Semesters for 2-Years Programmes and in each of the $4^{\text {th }}$ and $5^{\text {th }}$ semesters for 3 -Years Programmes. They may choose any one of the following courses (excluding the courses offered by the departments of their own subjects, if not stated otherwise).

| Sr. <br> No. | Nomenclature of the course | Course <br> Code | Offered by the <br> Department | Offered for <br> Semester |
| :--- | :--- | :--- | :--- | :--- |
| 1 | Principles and Applications of <br> Agriculture Biotechnology-I | 16 CBTO 1 | Biotechnology | $2^{\text {nd }} S$ Sem |
| 2 | Principles and Applications of <br> Agriculture Biotechnology-II | 16 CBTO 2 | Biotechnology | $3^{\text {rd }}$ Sem |
| 3 | Principles and Applications of <br> Biotechnology-I | 16 CBTO 3 | Biotechnology | $2^{\text {nd }}$ Sem |
| 4 | Principles and Applications of <br> Biotechnology-II | 16 CBTO 4 | Biotechnology | $3^{\text {rd }}$ Sem |
| 5 | Basic Biochemistry | 16 BCHO 1 | Bio-Chemistry | $2^{\text {nd }}$ Sem |
| 6 | Human Health \& Nutritional <br> Disorders | 16 BCHO 2 | Bio-Chemistry | $3^{\text {rd }}$ Sem |
| 7 | Plant Resource Utilization | 16 BOTO 1 | Botany | $2^{\text {nd }} / 3^{\text {rd }}$ Sem |
| 8 | Fundamental of Income Tax | $16 \mathrm{COMO1}$ | Commerce | $2^{\text {nd }} / 3^{\text {rd }}$ Sem |
| 9 | Cyber Forensic \& Security | 16 CSAO | Computer Science | $2^{\text {nd }} / 3^{\text {rd }} S e m$ |
| 10 | National Security of India | 16 DSSO 1 | Defence $\&$ Strategic <br> Studies | $2^{\text {nd }} / 3^{\text {rd }}$ Sem |
| 11 | Fundamental Aspects of <br> Education | $16 \mathrm{EDUO1}$ | Education | $2^{\text {nd }} S e m$ |


| 12 | Trends and Concerns of Teacher Education | 16EDUO2 | Education | $3^{\text {rd }} \mathrm{Sem}$ |
| :---: | :---: | :---: | :---: | :---: |
| 13 | Environmental Issues | 16ENVO1 | Environmental Science | $2^{\text {nd }}$ Sem |
| 14 | Disaster Management | 16ENVO2 | Environmental Science | $3{ }^{\text {rd }}$ Sem |
| 15 | Food Adulteration | 16FTEO1 | Food Technology | $2^{\text {nd }} / 3{ }^{\text {rd }}$ Sern |
| 16 | Genetics \& Society | 16GENO1 | Genetics | $2^{\text {nd }}$ Sem |
| 17 | Forensic Science | 16GENO2 | Genetics | $3^{\text {rd }}$ Sem |
| 18 | Basics of Geoinformatics | 16GEOO1 | Geography | $2^{\text {nd }} / 3{ }^{\text {rd }}$ Sen 1 |
| 19 | Bhartiya Sahitya | 16HNDO1 | Hindi | $2^{\text {nd }} / 3^{\text {rd }}$ Sem |
| 20 | Fundamentals of Management | 16IMSO1 | IMSAR | $2^{\text {nd }}$ Sem |
| 21 | Fundamentals of Marketing | 16IMSO2 | IMSAR | $3^{\text {rd }} \mathrm{Sem}$ |
| 22 | Family Law | 16LAWO1 | Law | $2^{\text {nd }}$ Sem |
| 23 | Constitutional Law | 16LAWO2 | Law | $3^{\text {rd }}$ Sem |
| 24 | Academic Integrity \& Plagiarism | 16LISO1 | Library \& Information Science | $2^{\text {nd }} \mathrm{Sem}$ |
| 25 | Information Sources and Literacy | 16LISO2 | Library \& Information Science | $3^{\text {rd }} \mathrm{Sem}$ |
| 26 | Mathematical Techniques and Applications | 16MATO1 | Mathematics | $2^{\text {nd }}$ Sem |
| 27 | Parametric \& Non-Parametric Tests | 16MATO2 | Mathematics | $2^{\text {nd }} \mathrm{Sem}$ |
| 28 | Statistical Tools using SPSS | 16MATO3 | Mathematics | $3^{\text {rd }}$ Sem |
| 29 | MATLAB | 16MATO4 | Mathematics | $3^{\text {rd }}$ Sem |
| 30 | Microbial World-Diversity and Applications | 16MCBO1 | Microbiology | $2^{\text {nd }}$ Sem |
| 31 | Microbial Technology for Entrepreneurship | 16MCBO2 | Microbiology | $3^{\text {rd }} \mathrm{Sem}$ |
| 32 | Sources of Energy-I | 16PHYO1 | Physics | $2^{\text {nd }}$ Sem |
| 33 | Sources of Energy-II | 16PHYO2 | Physics | $3^{\text {rd }}$ Sem |
| 34 | Media \& Society | 16JRMO1 | Journalism | $2^{\text {nd }} / 3^{\text {rd }} \mathrm{Sem}$ |
| 35 | Ancient Indian Culture \& Philosophy | 16SKTO1 | Sanskrit | $2^{\text {nd }} / 3^{\text {rd }}$ Sem |
| 36 | Quantitative Techniques | 16STAO1 | Statistics | $2^{\text {nd }}$ Sem |
| 37 | Sampling \& Estimation Techniques | 16STAO2 | Statistics | $3{ }^{\text {rd }} \mathrm{Sem}$ |
| 38 | Optimization Techniques | 16STAO3 | Statistics | $2^{\text {nd }} / 3^{\text {rd }}$ Sem |
| 39 | Applied Zoology | 16Z0001 | Zoology | $2^{\text {nd }}$ Sem |
| 40 | Wild Life and Conservation | 16Z0002 | Zoology | $3^{\text {rd }} \mathrm{Sem}$ |

2. The Board considered the Syllabus of Bhartiya Sahitya recommended by the PG Board of Studies in Hindi and resolved that the Syllabus be reconsidered by the local members of PGBOS upto 11.01.2017 positively for minor changes. Dr. (Mrs.) Promila Batra, Dean, Faculty of Social Sciences and Dr. Surender Kumar, Dean, Faculty of Humanities be invited in the meeting for the suggestions. The Board authorizes the DAA to approve the revised syllabus.

3. The Board deleted the papers of "Communication skills" offered by the Departments of Biotechnology, Environmental Science and Zoology from the list of the Foundation Elective Papers.
Following Departments agreed to prepare the papers on Communication / Soft Skills for including the same in the list of foundation elective courses:

- Department of Psychology
- IMSAR

These departments are requested to prepare the syllabi of the said papers at the earliest so that the same be uploaded on the website of the University without any further dealy.
4. The board decided that the classes of foundation/open elective papers be held from 8:45 A.M. to 9:45 AM on the following days:

| Foundation Elective | Monday \& Tuesday |
| :--- | :--- |
| Open Elective | Wednesday to Friday/Saturday |



DIRECTOR, IQAC

MINUTEG OF THE MEETING OF THE BOARD OF S'TUDIES IN ENGINEERING AND TECHNOLOGY HELD ON 12.04 .2018 AT 11.30 PM IN THE OFFICE OF THE CHAIRMAN, B.O.S., UNIVERSITY INSTITUTE OF ENGINEERING AND TECINOLOGY, ROHTAK

A meeting of Board of Studies in Engineering \& Technology was held on 12.04.2018 at 11.30 PM in the office of the Chairman, B.O.S. University Institute of Engineering \& Technology, M.D. University, Rohtak.

## The following members attended the mecting: -

1. Dr. Rahul Rishi, Dean \& Director, UIET
2. Dr. Yudhvir Singh, Professor, CSE, UIET
3. Dr. Vineet Kumar, Professor, ME, UIET
4. Dr. Sonia, Professor, Biotech, UIET
5. Dr. Manvender Singh, Professor, Biotech, UIET
6. Dr. (Col.) Suresh Kumar, AP, ECE, UIET
7. Dr. Manjeet Kaur, AP, Biotech, UIET
8. Mrs. Meena Kumari, AP,$~ E E$, UIET
9. Mrs. Manju Bala, AP, Applied Sciences, UIET
10. Mr. Jitender Narwal (on behalf of Dr. Aman Aggarwal)
11. Dr. J.S. Saini, Professor, DCRUST, Murthal
12. Dr. C.C. Tripathi, Professor, UIET, KUK

Chairman
Mernber
Member
Member
Member
Member
Member
Member
Member
Member
Outside Expert
Outside Expert

At the outset, the Chairman B.O.S in Engineering \& Technology welcomed all the members of BOS who attended the meeting.

## Itern No. 1

## Ph.D Registration cases:-

Following students have successfully presented their cases for Ph.D Registration before the Departmental Committee and Departmental Research Committee. DRC has recommended the cases to B.O.S.

| S.N. | Name of Candidate | Topic of Research | Name of Supervisor / Co-Supervisor | Subject |
| :---: | :---: | :---: | :---: | :---: |
| 1 | Mr. Amit Kumar S/0 Sh. Kaptan Singh | DEVELOPMENT OF ALUMINIUM MATRIX COMPOSIIE USING FRICTION STIR PROCESSING FOR ITS SURFACE MODIFICATION | Dr. Vineet Kumar, Professor, Dept of Mechanical Engineering, UIET, M.D. University, Rohtak | Mechanical Engineering |
| 2 | Mr. Omdev S/o <br> si. Vedanand | DESIGN AND DEVELOPMENT OF effective regression test CASE prioritization | Dr Kamna, Assistant Professor, Dept. of Computer Science \& Engineering. UIIT, M.D University, Rohtak | Computer <br>  <br> Engineering |


|  |  | TECHNIQUE |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 3 | Mr. Sunil Duhan S/o Sh. Karan Singh | EXPERIMENTAL ANALYSIS ON MECHANICAL BEHAVIOUR OF FRICTION STIR WELDED ALUMINUM | Dr. Prabhakar Kaushik, Associate Professor, Dept. of Mechanical Engineering, UIET, M.D. University, Rohtak | Mechanical Engineering |
| 4 | Mr. Dhiraj Khurana S/o Sh. Sudarshan Khurana | HYBRID MODEL FOR RECOMMENDER SYSTEM USING EFFECTIVE LEARNING METHODS | Dr. Sunita Dhingra, Assistant Professor, Dept. of Computer Science \& Engineering, UIET, M.D. University, Rohtak | Computer <br>  <br> Engineering |
| 5 | Mr. Sachin S/o <br> Sh. Subhash Chander | NEW DATA HIDING MODEL FOR COVERT COMMUNICATION | Dr. Kamaldeep, Assistant Professor, Dept. of Computer Science \& Engineering, UIET, M.D. University, Rohtak/ <br> Dr. Ashok Kumar Yadav, Assistant Professor, Dept. of Computer Science \& Engineering, Amity School of Engg. \& Tech., New Delhi | Computer <br>  <br> Engineering |
| 6 | Mr. Lalit Gandhi S/o Sh. <br> Mohinder Pal Gandhi | DESIGN OF AN ENHANCED MODEL FOR TEMPORAL DATA MANAGEMENT | Dr. Rahul Rishi, Professor, Dept. of Computer Science \& Engineering, UIET, M.D. University, Rohtak | mputer ence \& ineering |
| 7 | Mr. Sandeep S/o Sh. Ranbir Singh Deswal | PROCESS PARAMETERS OPTIMIZATION OF 3D PRINTING FDM PROCESS USING COMPOSITE MATERIALS FOR PERFORMANCE ANALYSIS OF END-USE PARTS APPLICATIONS THROUGH EVOLUTIONARY ALGORITHMS. | Dr. Deepak Chhabra, Assistant Professor, Dept. of Mechanical Engineering, UIET, M.D. University, Rohtak | echanical gineering |
| 8 | Mr. Rajan S/o Sh. Amarnath | EXPERIMENTAL. <br> INVESTIGATIONS AND RECUPERATING MECHANICAL PROPERTIES \& SURFACE TOPOLOGY OF 3D PRINTED PARTS BY USING HYBRID teChniques | Dr. Deepak Chhabra, Assistant Professor, Dept. of Mechanical Engineering, UIET, M.D. University, Rohtak | chanical ineering |
| 9 | Mr. Manoj S/o Sh. Narender Singh | SYNTHESIS <br> AND CHARACTERISATION OF NOVEL LIGHT EMITTING RARE EARTHS METAL COMPLEXES FOR ORGANIC LIGHT EMITTING DIODES | Dr. Rajesh Kumar Lather, Assistant Applie <br> Professor, Applied Sciences Scienc <br> (Chemistry), UIET, M.D. University, (Chem   <br> Rohtak    <br>     | $\begin{aligned} & \text { ed } \\ & \text { ces } \\ & \text { nistry) } \end{aligned}$ |
| 10 | Mrs. Savita D/o Rajpal Singh | SYNTHESIS, CHARACTERISATION AND PHOTOLUMINESCENCE PROPERTIES OF ORGANIC METAL COMPLEXES FOR DISPLAY DEVICES | Dr. Rajesh Kumar Lather, Assistant Applied  <br> Professor, Applied Sciences Science <br> Chemistry), UIET, M.D. University,    <br> (Chemis    <br> Roitak    <br>     | $\begin{aligned} & \text { d } \\ & \text { es } \\ & \text { istry) } \end{aligned}$ |
|  |  |  | $i$ |  |

After detailed deliberations, B.O.S recommends the above cases for Ph.D registrations.

## Item No. 2

## S.O.E and syllabus of B.Tech $1^{\text {st }}$ year as per AICTE Model Curriculum w.e.f the session 2018-19

Board of Studies in Engineering \& Technology considered and approved the S.O.E and syllabus of B.Tech $1^{\text {st }}$ year (Common to all branches) as per-AICTE Model Curriculum w.e.f session 2018-19 along with mandatory induction programme.

## Item No. 3

The panel of examiners to evaluate the Ph.D thesis of the following students have been approved.

1. Mr. Sanjay Singla

The meeting ended with a Vote of thanks to the Chair.

Endst. No. UIET/2018/.57?-6ieq.


Dated: .23/.3/94...........
Copy of the above is forwarded to the following for information and further necessary action: -

1. All the members of the Board of Studies in Engineering \& Technology, MDUR
2. The A.R. (R\&S), M.D. University, Rohtak along with all relevant record (For item No. 1)
3. The A.R. (Academic), M.D. University, Rohtak along with S.O.E \& syllabus in the shape of hard copy as well as soft copy. (For item no. 2)
4. The A.R. (Secy.), M.D. University, Rohtak along with panel of Examiners. (For item no. 3)

Encl: As above


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MINUTES OF THE MEETING OF THE BOARD OF STUDIES IN ENGINEERING ANI TECHNOLOGY HELD ON $18 /(07 / 2019$ AT 10.300 AM IN THE OFFICE OF TIIE CHAIRMAN, B.O.S., UNIVERSITY INSTITUTE OF ENGINEERING AND TECHNOLOGY, ROHTAK

A meeting of Board of Studies in Engineering \& Technology was held on 18/07/2019 at 10.30 am in the office of the Chairman, B.O.S. University Institute of Engineering \& Technology, M.D. University, Rohtak.

The following members attended the meeting: -

1. Dr. Rahul Rishi, Director, UIET
2. Dr. Vineet Kumar, Professor, ME, UIET
3. Dr. Yudhvir Singh, Professor, CSE, UIET
4. Dr. Sonia, Professor, Biotech, UIET
5. Dr. Manvender Singh, Biotech, UIET
6. Dr. Ashwani Dhingra, Associate Professor, ME, UIET
7. Dr. (Col.) Suresh Kumar, AP, LCEE, UIET
8. Mrs. Meena Kumari, AP, EE, UIET
9. Dr. Shamsher Singh, AP, ECE
10. Ms. Manju Bala, AP, Physics
11. Mr. Jitender Kumar
12. Mr. Jitender Singh
13. Mr. Ankit Bansal

Chairman
Member
Member *
Member
Member
Member , Member
Member
Member
Member
Special Invitee
Special Invitee
Special Invitee

At the outset, the Chairman B.O.S in Engineering \& Technology welcomed all the members of BOS who attended the meeing.

## Item No. 1

S.O.E and syllabus of B.Tech 2nd year (B.Tech. (ECE), B.Tech. (ETE), B.Tech. (EE) and B.Tech. (Fire Technology \& Safety) w.e.f the session 2019-20

Board of Studies in Engineering \& Technology considered and approved the S.O.E and syllabus of B.Tech 2nd year for the following programmes w.e.f session 2019-20:

1. B.Tech (Electronics and Communication Engineering)
2. B.Tech (Electronics and Tele Communication)
3. B.Tech (ELECTRICAL ENGINEERING)
4. B.Tech (Fire Technology and Safety)

## Item No. 2

The panel of examiners to evaluate the PhD thesis of the following students have been approved.

1. Ms. Usha Bhocal
2. Mr. M. K. Datta

## Item No. 3

## Change of Ph.D. Supervisor of Mr. Ashish Bhardwaj

B.O.S. considered the approval the change of Ph.D. Supervisor from Prof. A. K. Para to Dr. Ajit Kumar Pattanayak. Prof. A. K. Para shall act as co-supervisor for which consent has been given.

The meeting ended with a Vote of thanks to the Chair.

Dated: ....) $181.7 .119 . . . .$. Endst. No. UIET/2019/....8.2.4... 827 Copy of the above is forwarded to the following for information and further necessary action: -

1. All the members of the Board of Studies in Engineering \& Technology, MDUR
2. The A.R. (Academic), M.D. University, Rohtak along with S.O.E \& syllabus in the shape of hard copy as well as soft copy. (For item no. 1)
3. The A.R. (Secy.), M.D. University, Rohtak along with panel of Examiners. (For 'item no. 2)
4. The A.R. (R\&S), MDU, Rohtak along with all relevant documents (For Item No. 3)

MINUTES OF THE MEETING OF THE FACULTY IN ENGINEERING AND TECHNOLOGY HELD ON 13.08.2018 AT 11.00 AM IN THE OFFICE OF DIRECTOR, UIET, M.D. UNIVERSITY, ROHTAK

A meeting of the Faculty in Engineering and Technology was held on 13.08.2018 at 11.00 AM in the office of Director, UIET, M.D. University, Rohtak. The following attended the meeting: -

1. Dr. Rahul Rishi, Dean \& Director, UIET
2. Dr. Yudhvir Singh, Prof., CSE
3. Dr. Manvender, Prof., Biotech
4. Dr. Ashwani Dhingra, Assoc. Prof., ME
5. Mrs. Amita Dhankhar, AP, CSE
6. Mr. Pardeep Gahlot, AP, ME
7. Dr. Vipin Kumar, AP, EE
8. Dr. Anil Sangwan, AP, ECE
9. Mrs. Savita, AP, Chemistry

## Chairman

Member
Member
Member
Member
Member
Member
Member
Member

At the outset, the Dean, Faculty of Engineering \& Technology welcomed all the members who attended the meeting.

## Item No. 1

Considered the recommendations of BOS in Engineering \& Technology made vide Reso. No. 2 of its meeting held on 24.07 .2018 that the component of tutorial of 1 hour duration be introduced in the subject of English (HSM-ENG-101G) and minor changes in SOE for B.Tech $1^{\text {st }}$ year (Common for all branches) w.e.f. 2018-19 be made as per Annexre-1 Pages 1-7. (Already circulated)
resolved that the scheme of examinations of the above course be RECOMMENDED TO ACADEMIC COUNCIL FOR APPROVAL. SINCE THE MEETING OF ACADEMIC COUNCIL IS NOT GOING TO BE HELD IN NEAR FUTURE AND THE CLASSES SHALL COMMENCE SHORTLY, THE SCHEME OF EXAMINATION MAY BE GOT APPROVED FROM THE VICE-CHANCELLOR IN ANTICIPATION OF THE APPROVAL OF ACADEMIC COUNCIL.

## Item No. 2

Considered the recommendations of BOS in Engineering \& Technology made vide Reso. No. 5 of its meeting held on 06.10.2017 that in other department the open and foundation electives under CBCS and have SOE such that open elective is of 100 marks ( 80 theory +20 sessional) and foundation elective is of 50 marks ( 40 theory + 10 sessional).


IT WAS RESOLVED THAT THE COURSE OFFERED BY UIET UNDER OPEN AND FOUNDATION ELECTIVE UNDER CBCS ALSO CARRY THE SAME DISTRIBUTION OF MARKS w.e.f. 2016-17.

Dean


Faculty of Engr. \&
Technology.

All the Heads of the Departments, M. D. University, Rohtak.

Sub.: Supply the syllabus of U.G courses under CBCS from the session 2020-21 Sir/Madam,

Kindly refer to this office letter dated 20.01 .2020 on the subject cited above (copy enclosed).

In this connection, I am directed to request you that syllabus and SOE of U.G courses under CBCS from the session 2020-21 may be got recommended from UG Board of Studies upto 28.02 .2020 positively, so that the matter may be placed before the concerned Faculties for consideration. The guidelines for U.G programmes under CBCS have already been sent by this office vide letter under reference. It is also requested that the syllabus prepared by the UGC, New Delhi of U.G courses available on its website may be consulted.

This may be treated as most urgent.

Encls. As above.
Yours faithfully,


Asstt. Registrar (Academic)
For Registrar
Endst. No. ACS-III/2020/1492-94
Dated 07-02-2020
Copy of the above is forwarded to the following for information and taking further necessary action:

1. O.S.D to Registrar, M. D. University, Rohtak.
2. P.A to Dean Academic Affairs, M. D. University, Rohtak (for kind information of D.A.A).
3. Director, UCC, M. D. University, Rohtak.

$$
\mathrm{Th}_{\text {Registrar }} \frac{1 \operatorname{Academic})}{3} / 20 .
$$

Asstt. Registrar

1. All the Dean of the Faculties, M.D.University, Rothak
2. All the Heads of the Departments, M.D.University, Rohtak

Sub: Minutes of the meeting of the committee held on 18.12.2019 Sir/Madam,

Please find enclosed herewith a copy of minutes of the meeting of the commiltee helc on 18.12.2019 in the Committee Room adjacent to Registrar's Office to recommend the guidelines/ordinance under CBCS for UG Programmes from the Session 2020-21 duly approved by the Vice-Chancellor.

Further, regarding point No. 3 of the minutes, it is intimated that the ViceChancellor has passed orders that learning outcomes be first prepared by the concerned HODs along with concerned DC/UGBOS

This is for your information and taking further necessary action accordingly.

Encl: As above.
Yours faithfully,


Superintendent (Academic)
For Registrar
Copy to:

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# MAHARSHI DAYANAND UNIVERSITY, ROHTAK <br> (Established under Haryana Act No. XXV of 1975) <br> ' $A$ ' Grade University accredited by NAAC 

## MINUTES OF THE MEETING OF COMMITTEE TO RECOMMEND THE GUIDELINES/ORDINANCE UNDER CBCS FOR U.G. PROGRAMME FROM THE SESSION 2020-21 IN THE COMMITTEE ROOM AI)IACENT TO REGISTRAR OFFICE, M.D.UNIVERSITY, ROHTAK HELD ON 18-12-19.

The following Members were present:-

| 1. Prof. Ajak. K.Rajan, Dean, Academic Affairs | Chairman |
| :--- | :--- |
| 2. Prof. Nina singh, Dean, Faculty of Social Sciences | Member |
| 3. Prof. Surender Kumar, Dean, Faculty of Humanities | Member |
| 4. Prof. Raj Kumar, Dean, Faculty of Management Sciences | Member |
| 5. Prof. R.R. Saini, Dean, Faculty of Commerce | Member |
| 6. Prof. Pushpa Dahiya, Dean, Faculty of Life Sciences | Member |
| 1. Prof. A.S. Man, Dean; Faculty of Physical Sciences | Member |
| 3. Prof. Vincet Kumar, Dean, Faculty of Engineering \& Technology | Member |
| 9. Prof. Sushma Singh, Dean, Faculty of Performing \& Visual Arts | Member |
| 10. Assistant Registrar, Academic | Member |

1. The Committee perused the minutes of earlier meeting dated 18.05.2019 and deliberated upon the issue at length and recommended that as per UGC guidelines with regard to Choice Based Credit System at UG level total credits for B.A., B. Com. and B.Sc. be kept as 132. (Annexure- I pages 1-2.)
2. The detailed guidelines for B.A., B.Sc. and B.Com. (Hons.) be framed later on.
3. traduale attributes and learning outcomesof B.A., B.Com., B.Sc. and B.B.A. be prepared by the concerned Deans of the Faculties as under:

Name of the course.

1. $I: A$.
2. B. SC. \& BCA
3. 1: Com.
4. $I: B . A$.

## Name of the members

i) Dean, Faculty of Social Sciences
ii) Dean, Faculty of Humanities
i) Dean, Faculty of Physical Sciences
ii) Dean, Faculty of Life Sciences

Dean, Faculty of Commerce
Dean, Faculty of Management Sciences
(Note: Some other member/(s) may be associated with the Committee by the concerned Dean of the Faculties.)
4. The above job be completed within two weeks time:

 (Rn. Saini)

18.12 .2019

(Surencer inumar)

(Raj Kumar)



|riot no. 3:

$$
\begin{aligned}
& \text { Framing learning outcomes can be dealt appropriately } \\
& \text { by respective Hobs along with concerned } D C / U G B O S \text { only. } \\
& \text { Nanetugl } \\
& 18.12 . \text { d. } 19
\end{aligned}
$$

## MAHARSHI DAYANAND UN:VERSITY ROHTAK

(A State University established under Haryana Act No. XXV of 1975) 'A+' Grade University Accredited by NAAC

Minutes of the meeting of the Committee comprising the following held on 08.05.2019 at 3:00 P.M. in Commitlee Room adjacent to the Registrar's office, M.D.Universitv, Rohtak to discuss the issues pertaining Hhe it:Iroductions of CBCS in UG programmes from Siession 2019-20.

Memoers present:-

1. Dr.A.K Rajan, Dean Academic Affairs Chairman
2. Dr. Surender Kumar, Dean, Faculty of Humanities
3. Dr. (Mrs.) Priti Jain, Dean, Faculty of Physical Sciences
4. Dr. Pushpa Dahiya, Dean, Faculty of Life Sciences
5. Prof. Hukam Chand, Dean, Faculty of Performing \& Visual Arts
6. Dr. Munish Garg, Dean, Faculty of Pharmaceutical Sciences
7. Dr. R.R. Saini, Dean, Faculty of Commerce
8. Dr. Vineet Kumar, Dean, Faculty of Engg. \& Tech.
9. Dr. Gulshan Taneja, Registrar
10. Dr. G.P. Saroha, Director, UCC
11. Dr. B.S. Sindhu, Controller of Examinations
12. Sh. Rajeev Sharma, Deputy Registrar (Academic)

Dr. Nina Singh, Dean, Faculty of Social Sciences could not atiend the meeting.
Dr. Raj Kumar, Dean, Faculty of Management Sciences cou!d not attend the meeting.

The committee considered the UGC guidelines for CBC'S at UG level and Instructional template raciliating implementation of Choice Based Credit System (CBCS) and recommended the Schemes $B . \wedge / B . C o m$ and B.Sc. under CBCS from the Session 2019-20 as under:-


SCHEME FOR CHOICE BASED CREDIT SYSTEM IN B.Sc.

|  | CORE <br> COURSE (12) <br> PapertPr:- <br> $12^{4}==48$ <br> $12^{2} 2=24$ <br> Papertut. <br> $12^{2} 5=60$ <br> $12^{4} 1=12$ <br> 12 | Abllity Enhancement Compulsory Course (AECC) (2)/Credit of each paper $=4$ | Skill Enhancement Course (SEC) (4))/Credit of each paper=4 | Discipline Specifige' E DSE (9))/Credit u. each paper=6 |
| :---: | :---: | :---: | :---: | :---: |
| 1 | DSC-1 A 18 | (English/Hindi/MIL <br> Communication) <br> Environmental <br> Science <br> 04 |  |  |
|  | DSC-2 A |  |  |  |
|  | DSC-3 A |  |  |  |
| 11 | DSC-1 B 18 | Environmental Science /(English/Hindi/MIL Communication) 04 | . | DSE-1 A 18 |
|  |  |  |  | DSE-2 A |
|  | DSC-2 B |  |  | DSE-3 A |
|  | DSC-3 B |  |  |  |
| III | DSC-1C 18 |  | SEC-1 04 | . |
|  | DSC-2 C |  |  |  |
|  | DSC- 3 C |  |  |  |
| IV | DSC-1 D 18 |  | SEC-2 04 |  |
|  | DSC-2 D |  |  |  |
|  | DSC-3 D |  |  |  |
| V | - |  | SEC-3 04 | DSE-1 B 18 |
|  |  |  |  | DSE-2 B |
|  |  |  |  | DSE-3 B |
| VI | - |  | SEC-4 04 | DSE-1 C 18 |
|  |  |  |  | DSE-2 C |
|  |  |  |  | DSE-3 C |
|  | 72 | 08 | 16 | 54 |




[^0]:    P.A. to Dean Academic Affairs (for kind information of the Dean Academic Affairs)

