

**CHOICE BASED CREDIT SYSTEM
EVALUATION SCHEME
AND
COURSE OF STUDY
(According to AICTE Model Curriculum)**



**B. TECH.
IN
MECHANICAL ENGINEERING**

BATCH: 2022 - 2026

**FACULTY OF ENGINEERING AND TECHNOLOGY
GURUKULA KANGRI (DEEMED TO UNIVERISTY),
HARIDWAR**

Gurukula Kangri Vishwavidyalaya, Haridwar
Faculty of Engineering & Technology
Mechanical Engineering
B. Tech. I Year

(Semester – I)

| S.NO. | COURSE CODE | COURSE OPTED | SUBJECT | Period per week | | | EVALUATION SCHEME | | | | Credit | Subject TOTAL |
|---------------------------------------|-------------|---------------------|-------------------------------------|----------------------|---|---|-------------------|----|-------|-----------|--------|---------------|
| | | | | L | T | P | SESSIONAL EXAM. | | | EXAM. ESE | | |
| | | | | | | | CT | TA | TOTAL | | | |
| THEORY SUBJECTS | | | | | | | | | | | | |
| 1 | BAC-C102 | BSC-1 | Engineering Chemistry | 3 | 1 | 0 | 20 | 10 | 30 | 70 | 4 | 100 |
| 2 | BEM-C102 | BSC-2 | Engineering Mathematics-I | 3 | 1 | 0 | 20 | 10 | 30 | 70 | 4 | 100 |
| 3 | BME-C103 | ESC-1 | Basic Mechanical Engineering | 3 | 0 | 0 | 20 | 10 | 30 | 70 | 3 | 100 |
| 4 | BCE-C102 | ESC-2 | Programming for Problem Solving | 3 | 1 | 0 | 20 | 10 | 30 | 70 | 4 | 100 |
| 5 | BEN-A103 | HSMC-1 | Environment Studies | 2 | 0 | 0 | 20 | 10 | 30 | 70 | 0 | 100 |
| 6 | | Induction Programme | | Three weeks duration | | | | | | | | |
| PRACTICAL / TRAINING / PROJECT | | | | | | | | | | | | |
| 7 | BAC-C151 | BSC-1 Lab | Engineering Chemistry Lab | 0 | 0 | 2 | 10 | 5 | 15 | 35 | 1 | 50 |
| 8 | BME-C153 | ESC-1 Lab | Engineering Graphics and Design Lab | 1 | 0 | 2 | 10 | 5 | 15 | 35 | 2 | 50 |
| 9 | BCE-C151 | ESC-2 Lab | Programming for Problem Solving Lab | 0 | 0 | 2 | 10 | 5 | 15 | 35 | 1 | 50 |
| 10 | BEG-A151 | HSMC Lab | Technical Communication Lab | 0 | 0 | 2 | 10 | 5 | 15 | 35 | 1 | 50 |
| TOTAL | | | | 15 | 3 | 8 | 140 | 70 | 210 | 490 | 20 | 700 |

L-Lecture; **T**-Tutorial; **P**-Practical; **CT**-Cumulative Test; **TA**- Teacher Assessment; **ESE**-End Semester Examination; **BSC**-Basic Science Course; **ESC**- Engineering Science Courses; **PEC**-Program Elective Course; **SEC**- Skill Enhancement Course; **AECC**- Ability Enhancement Compulsory Course; **HSMC**-Humanities, Social Science & Management Course

Grading & Grade Points: O(Outstanding)= 10; **A⁺**(Excellent)= 9; **A**(Very Good)= 8; **B⁺**(Good)= 7; **B**(Above Average)= 6; **C**(Average)= 5; **P**(Pass)= 4; **F**(Fail)= 0; **Ab**(Absent)= 0

BME C101 → Semester
 0, 5 & 6 stands for theory, Practical & Seminar /Project respectively
BME C101 → Paper Code

Gurukula Kangri Vishwavidyalaya, Haridwar
Faculty of Engineering & Technology
Mechanical Engineering
B. Tech. I Year

(Semester – II)

| S.NO. | COURSE CODE | COURSE OPTED | SUBJECT | Period per week | | | EVALUATION SCHEME | | | | Credit | Subject TOTAL |
|---------------------------------------|-------------|--------------|----------------------------------|-----------------|---|----|-------------------|----|-------|-----------|--------|---------------|
| | | | | L | T | P | SESSIONAL EXAM. | | | EXAM. ESE | | |
| | | | | | | | CT | TA | TOTAL | | | |
| THEORY SUBJECTS | | | | | | | | | | | | |
| 1 | BAP-C202 | BSC-3 | Engineering Physics | 3 | 1 | 0 | 20 | 10 | 30 | 70 | 4 | 100 |
| 2 | BEM-C202 | BSC-4 | Engineering Mathematics-II | 3 | 1 | 0 | 20 | 10 | 30 | 70 | 4 | 100 |
| 3 | BEE-C202 | ESC-3 | Basic Electrical Engineering | 3 | 1 | 0 | 20 | 10 | 30 | 70 | 4 | 100 |
| 4 | BET-C202 | ESC-4 | Electronics Devices | 3 | 1 | 0 | 20 | 10 | 30 | 70 | 4 | 100 |
| 5 | BHU-S202 | SEC-1 | Vedic Science and Engineering | 2 | 0 | 0 | 20 | 10 | 30 | 70 | 0 | 100 |
| PRACTICAL / TRAINING / PROJECT | | | | | | | | | | | | |
| 6 | BAP-C251 | BSC-3 Lab | Engineering Physics Lab | 0 | 0 | 2 | 10 | 5 | 15 | 35 | 1 | 50 |
| 7 | BEE-C251 | ESC-3 Lab | Basic Electrical Engineering Lab | 0 | 0 | 2 | 10 | 5 | 15 | 35 | 1 | 50 |
| 8 | BET-C251 | ESC-4 Lab | Electronic Devices lab | 0 | 0 | 2 | 10 | 5 | 15 | 35 | 1 | 50 |
| 9 | BME-C252 | ESC-5 Lab | Workshop Practice | 0 | 0 | 2 | 10 | 5 | 15 | 35 | 1 | 50 |
| 10 | BSP-S251 | SEC-2 Lab | Physical Training and Yoga | 0 | 0 | 2 | 10 | 5 | 15 | 35 | 0 | 50 |
| TOTAL | | | | 14 | 4 | 10 | 150 | 75 | 225 | 525 | 20 | 750 |

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Grading & Grade Points: **O**(Outstanding)= **10**; **A⁺**(Excellent)= **9**; **A**(Very Good)= **8**; **B⁺**(Good)= **7**; **B**(Above Average)= **6**; **C**(Average)= **5**; **P**(Pass)= **4**; **F**(Fail)= **0**; **Ab**(Absent)= **0**

Gurukula Kangri Vishwavidyalaya, Haridwar
Faculty of Engineering & Technology
Mechanical Engineering

B. Tech. II Year

(Semester – III)

| S.N O. | COURSE CODE | COURSE OPTED | SUBJECT | Period per week | | | EVALUATION SCHEME | | | | Credit | Subject TOTAL |
|---------------------------------------|----------------|-----------------|-----------------------------|--------------------|---|---|-------------------|----|-------|--------------|--------|------------------|
| | | | | L | T | P | SESSIONAL EXAM. | | | EXAM. ESE | | |
| | | | | | | | CT | TA | TOTAL | | | |
| THEORY SUBJECTS | | | | | | | | | | | | |
| 1 | BEM-C302 | BSC-5 | Engineering Mathematics-III | 3 | 1 | 0 | 20 | 10 | 30 | 70 | 4 | 100 |
| 2 | BME-C306 | ESC-6 | Materials Engineering | 3 | 0 | 0 | 20 | 10 | 30 | 70 | 3 | 100 |
| 3 | BME-C307 | ESC-7 | Applied Thermodynamics | 3 | 1 | 0 | 20 | 10 | 30 | 70 | 4 | 100 |
| 4 | BME-C308 | ESC-8 | Engineering Mechanics | 3 | 0 | 0 | 20 | 10 | 30 | 70 | 3 | 100 |
| 5 | BME-C309 | ESC-10 | Fluid Mechanics | 3 | 1 | 0 | 20 | 10 | 30 | 70 | 4 | 100 |
| PRACTICAL / TRAINING / PROJECT | | | | | | | | | | | | |
| 6 | BME-C356 | ESC-6 Lab | Materials Engineering Lab | 0 | 0 | 2 | 10 | 5 | 15 | 35 | 1 | 50 |
| 7 | BME-C357 | ESC-7 Lab | Applied Thermodynamics Lab | 0 | 0 | 2 | 10 | 5 | 15 | 35 | 1 | 50 |
| 8 | BME-C358 | ESC-8 Lab | Engineering Mechanics Lab | 0 | 0 | 2 | 10 | 5 | 15 | 35 | 1 | 50 |
| 9 | BME-C359 | ESC-10 Lab | Fluid Mechanics Lab | 0 | 0 | 2 | 10 | 5 | 15 | 35 | 1 | 50 |
| TOTAL | | | | 18 | 4 | 8 | 160 | 80 | 240 | 560 | 22 | 700 |

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BSC-Basic Science Course; **ESC**- Engineering Science Courses; **PEC**-Program Elective Course; **SEC**- Skill
Enhancement Course; **AECC**- Ability Enhancement Compulsory Course; **HSMC**-Humanities, Social Science & Management Course

Grading & Grade Points: O(Outstanding)= 10; **A⁺**(Excellent)= 9; **A**(Very Good)= 8; **B⁺**(Good)= 7; **B**(Above
Average)= 6; **C**(Average)= 5; **P**(Pass)= 4; **F**(Fail)= 0; **Ab**(Absent)= 0

Gurukula Kangri Vishwavidyalaya, Haridwar
Faculty of Engineering & Technology
Mechanical Engineering

B. Tech. II Year

(Semester – IV)

| S.N O. | COURSE CODE | COURSE OPTED | SUBJECT | Period per week | | | EVALUATION SCHEME | | | | Credit | Subject TOTAL |
|---------------------------------------|----------------|-----------------|---------------------------------------|--------------------|----------|----------|-------------------|-----------|------------|--------------|-----------|------------------|
| | | | | L | T | P | SESSIONAL EXAM. | | | EXAM. ESE | | |
| | | | | | | | CT | TA | TOTAL | | | |
| THEORY SUBJECTS | | | | | | | | | | | | |
| 1 | BME-C411 | ESC-16 | Fluid Machines | 3 | 1 | 0 | 20 | 10 | 30 | 70 | 4 | 100 |
| 2 | BME-C407 | ESC-11 | Manufacturing Science and Process | 3 | 0 | 0 | 20 | 10 | 30 | 70 | 3 | 100 |
| 3 | BME-C408 | ESC-12 | Kinematics & Dynamics of Machines | 3 | 1 | 0 | 20 | 10 | 30 | 70 | 4 | 100 |
| 4 | BME-C409 | ESC-13 | Strength of Materials | 3 | 1 | 0 | 20 | 10 | 30 | 70 | 4 | 100 |
| 5 | BME-C410 | ESC-14 | Principle and Practices of Management | 3 | 0 | 0 | 20 | 10 | 30 | 70 | 3 | 100 |
| 6 | BKT-A403 | HSMC-2 | Indian Knowledge Tradition | 2 | 0 | 0 | 20 | 10 | 30 | 70 | 0 | 100 |
| PRACTICAL / TRAINING / PROJECT | | | | | | | | | | | | |
| 7 | BME-C4511 | ESC-16 Lab | Fluid Machines Lab | 0 | 0 | 2 | 10 | 5 | 15 | 35 | 1 | 50 |
| 8 | BME-C457 | ESC-11 Lab | Manufacturing Science and Process Lab | 0 | 0 | 2 | 10 | 5 | 15 | 35 | 1 | 50 |
| 9 | BME-C458 | ESC-12 Lab | Theory of Machine lab | 0 | 0 | 2 | 10 | 5 | 15 | 35 | 1 | 50 |
| 10 | BME-C459 | ESC-15 Lab | Machine Drawing Lab | 0 | 0 | 2 | 10 | 5 | 15 | 35 | 1 | 50 |
| TOTAL | | | | 17 | 5 | 8 | 140 | 80 | 240 | 560 | 22 | 800 |

L-Lecture; **T**-Tutorial; **P**-Practical; **CT**-Cumulative Test; **TA**- Teacher Assessment; **ESE**-End Semester Examination; **PCC**- Program Core Course; **PEC**-Program Elective Course; **OEC**-Open Elective Course; **SEC**-Skill Enhancement Course; **AECC**- Ability Enhancement Compulsory Course; **HSMC**-Humanities, Social Science & Management Course

Grading & Grade Points: O (Outstanding) = **10**; **A⁺** (Excellent)= **9**; **A** (Very Good) = **8**; **B⁺** (Good) = **7**; **B** (Above Average) = **6**; **C** (Average) = **5**; **P** (Pass) = **4**; **F** (Fail) = **0**; **Ab**(Absent)= **0**

BME-C511 → Semester
 → 1, 6 & 7 stands for theory, Practical & Seminar /Project respectively
 → Paper Code