

Curriculum for 2015 Batch

Semester I

| S. No | Course Code | Course Title | Course Credit | Course Category |
|----------------------|-------------|--------------------------------|---------------|-----------------|
| 1. | CS1100 | Computational Engineering | 4 | BET |
| 2. | CY1010 | Chemistry I | 3 | SCY |
| 3. | ID1100 | Concepts in Engineering Design | 3 | BET |
| 4. | MA1010 | Mathematics I | 4 | SMA |
| 5. | ME1120 | Engineering Drawing | 3 | BES |
| 6. | PH1010 | Physics 1 | 3 | SPH |
| 7. | PH1030 | Physics Laboratory | 2 | SPH |
| 8. | WS1010 | Workshop I | 2 | BES |
| Total Credits | | | 24 | |

Semester II

| S. No | Course Code | Course Title | Course Credit | Course Category |
|----------------------|-------------|--------------------------------------|---------------|-----------------|
| 1. | CY1020 | Chemistry II(Theoretical & Physical) | 3 | SCY |
| 2. | CY1030 | Chemistry Laboratory I | 2 | SCY |
| 3. | ID1200 | Ecology and Environment | 2 | BET |
| 4. | AM1100 | Engineering Mechanics | 4 | BET |
| 5. | GN1100 | Life Skills | 2 | HPF |
| 6. | MA1020 | Mathematics II | 4 | SMA |
| 7. | NS1030 | National Service Scheme** | 0 | NSS |
| 8. | PH1020 | Physics II | 3 | SPH |
| 9. | ME1100 | Thermodynamics | 3 | BET |
| 10. | WS1020 | Workshop II | 2 | BES |
| Total Credits | | | 25 | |

**CWC category courses are without credits but mandatory for the award of the degree

Civil Engineering

Semester III

| S. No | Course Code | Course Title | Course Credit | Course Category |
|----------------------|-------------|--|---------------|-----------------|
| 1. | EE1100 | Basic Electrical Engineering | 3 | BET |
| 2. | CE2050 | Building Drawing | 2 | PML |
| 3. | CE2330 | Civil Engineering Materials and Construction | 4 | PMT |
| 4. | CE1020 | Functional Design of Buildings | 2 | PMT |
| 5. | AM2200 | Strength of Materials | 4 | PMT |
| 6. | BT1010 | Life Sciences | 2 | SLS |
| 7. | | Humanities Elective | 3 | <u>HSS</u> |
| 8. | | Mathematics Elective | 3 | <u>SMA</u> |
| Total Credits | | | 23 | |

Semester IV

| S. No | Course Code | Course Title | Course Credit | Course Category |
|----------------------|-------------|----------------------------|---------------|-----------------|
| 1. | CE2020 | Structural Engineering | 4 | PMT |
| 2. | CE2040 | Hydraulic Engineering | 4 | PMT |
| 3. | CE2060 | Geology and Soil Mechanics | 4 | PMT |
| 4. | CE2080 | Surveying Theory | 4 | PMT |
| 5. | CE2100 | Surveying Practical | 2 | PML |
| 6. | | Humanities Elective | 3 | <u>HSS</u> |
| 7. | | Mathematics Elective | 3 | <u>SMA</u> |
| Total Credits | | | 24 | |

Semester V

| S. No | Course Code | Course Title | Course Credit | Course Category |
|---------------------------------|--------------------|-----------------------------------|----------------------|------------------------|
| 1. | CE3010 | Transportation Engineering I | 3 | PMT |
| 2. | CE3030 | Water Resources Engineering | 4 | PMT |
| 3. | CE3060 | Basic Reinforced Concrete Design | 4 | PMT |
| 4. | CE3350 | Geotechnical Engineering | 4 | PMT |
| 5. | CE3410 | Construction Materials Laboratory | 2 | PML |
| 6. | | Professional Major Elective-1 | 3 | PME |
| 7. | | General Category Elective-1 | 3 | GCE |
| Total Credits | | | 23 | |
| 8. | | Professional Major Elective-1 | 3 | PME* |
| Total Credits for Honors | | | 26 | |

Semester VI

| S. No | Course Code | Course Title | Course Credit | Course Category |
|---------------------------------|--------------------|--|----------------------|------------------------|
| 1. | CE3015 | Transportation Engineering II | 3 | PMT |
| 2. | CE3025 | Environmental Engineering | 4 | PMT |
| 3. | CE3035 | Basic Structural Steel Design | 4 | PMT |
| 4. | CE3115 | Hydraulic and Environmental Engineering Laboratory | 2 | PML |
| 5. | CE3125 | Internship | 2 | PMP |
| 6. | | Professional Major Elective-2 | 3 | PME |
| 7. | | General Category Elective-2 | 3 | GCE |
| Total Credits | | | 21 | |
| 8. | | Professional Major Elective-2 | 3 | PME* |
| Total Credits for Honors | | | 24 | |

* For Honors

Semester VII

| S. No | Course Code | Course Title | Course Credit | Course Category |
|---------------------------------|-------------|--------------------------------------|---------------|-----------------|
| 1. | CE4010 | Estimation & Construction Management | 4 | PMT |
| 2. | CE4030 | Structural Engineering Laboratory | 2 | PML |
| 3. | CE4050 | Project I | 3 | PMP |
| 4. | HS3050 | Professional Ethics | 2 | HSS |
| 5. | | Professional Major Elective-3 | 3 | PME |
| 6. | | General Category Elective-3 | 3 | GCE |
| Total Credits | | | 17 | |
| 7. | | Professional Major Elective-3 | 3 | PME* |
| 8. | | Professional Major Elective-4 | 3 | PME* |
| Total Credits for Honors | | | 23 | |

Semester VIII

| S. No | Course Code | Course Title | Course Credit | Course Category |
|---------------------------------|-------------|-------------------------------|---------------|-----------------|
| 1. | CE4060 | Project II | 7 | PMP |
| 2. | | Professional Major Elective-4 | 3 | PME |
| Total Credits | | | 10 | |
| 3. | | Professional Major Elective-5 | 3 | PME* |
| Total Credits for Honors | | | 13 | |

* For Honors

Computer Science and Engineering

Semester III

| S. No | Course Code | Course Title | Course Credit | Course Category |
|----------------------|-------------|---|---------------|-----------------|
| 1. | EE1100 | Basic Electrical Engineering | 3 | BET |
| 2. | CS2110 | Computer Programming Laboratory | 2 | PML |
| 3. | EE2702 | Digital Circuits Laboratory | 2 | PML |
| 4. | EE2001 | Digital Systems | 4 | PMT |
| 5. | CS2100 | Discrete Mathematics for Computer Science | 3 | PMT |
| 6. | BT1010 | Life Sciences | 2 | SLS |
| 7. | | Humanities Elective | 3 | <u>HSS</u> |
| 8. | | Mathematics Elective | 3 | <u>SMA</u> |
| Total Credits | | | 22 | |

Semester IV

| S. No | Course Code | Course Title | Course Credit | Course Category |
|----------------------|-------------|---|---------------|-----------------|
| 1. | CS2600 | Computer Organization & Architecture | 3 | PMT |
| 2. | CS2610 | Computer Organization & Architecture Laboratory | 2 | PML |
| 3. | CS2800 | Data Structures and Algorithms | 4 | PMT |
| 4. | CS2810 | Data Structures and Algorithms Lab | 2 | PML |
| 5. | CS2200 | Language Machines and Computations | 4 | PMT |
| 6. | | Humanities Elective | 3 | <u>HSS</u> |
| 7. | | Mathematics Elective | 3 | <u>SMA</u> |
| Total Credits | | | 21 | |

Semester V

| S. No | Course Code | Course Title | Course Credit | Course Category |
|---------------------------------|--------------------|---------------------------------|----------------------|------------------------|
| 1. | CS3100 | Paradigms of Programming | 4 | PMT |
| 2. | CS3300 | Language Translators | 3 | PMT |
| 3. | CS3310 | Language Translators Laboratory | 2 | PML |
| 4. | CS3500 | Operating Systems | 3 | PMT |
| 5. | CS3510 | Operating Systems Laboratory | 2 | PML |
| 6. | | Professional Major Elective-1 | 4 | PME |
| 7. | | General Category Elective-1 | 3 | GCE |
| Total Credits | | | 21 | |
| 8. | | Professional Major Elective-1 | 4 | PME* |
| Total Credits for Honors | | | 25 | |

Semester VI

| S. No | Course Code | Course Title | Course Credit | Course Category |
|---------------------------------|--------------------|----------------------------------|----------------------|------------------------|
| 1. | CS3200 | Computer Networks | 3 | PMT |
| 2. | CS3210 | Computer Networks Laboratory | 2 | PML |
| 3. | CS3700 | Introduction to Database Systems | 3 | PMT |
| 4. | CS3710 | Database Systems Laboratory | 2 | PML |
| 5. | CS3660 | Internship | 2 | PMP |
| 6. | | Professional Major Elective-2 | 4 | PME |
| 7. | | General Category Elective-2 | 3 | GCE |
| 8. | | General Category Elective-3 | 3 | GCE |
| Total Credits | | | 22 | |
| 9. | | Professional Major Elective-2 | 4 | PME* |
| Total Credits for Honors | | | 26 | |

* For Honors

Semester VII

| S. No | Course Code | Course Title | Course Credit | Course Category |
|---------------------------------|--------------------|--|----------------------|------------------------|
| 1. | <u>CS4400</u> | Principles of Software Engineering | 3 | PMT |
| 2. | <u>CS4410</u> | Principles of Software Engineering Lab | 2 | PML |
| 3. | CS4800 | Project I | 3 | PMP |
| 4. | HS3050 | Professional Ethics | 2 | HSS |
| 5. | | Professional Major Elective -3 | 3 | PME |
| 6. | | Professional Major Elective -4 | 3 | PME |
| 7. | | Professional Major Elective -5 | 3 | PME |
| 8. | | Professional Major Elective -6 | 3 | PME |
| Total Credits | | | 22 | |
| 9. | | Professional Major Elective -3 | 3 | PME* |
| Total Credits for Honors | | | 25 | |

Semester VIII

| S. No | Course Code | Course Title | Course Credit | Course Category |
|---------------------------------|--------------------|--------------------------------|----------------------|------------------------|
| 1. | CS4810 | Project II | 7 | PMP |
| 2. | | General Category Elective -4 | 3 | GCE |
| Total Credits | | | 10 | |
| 3. | | Professional Major Elective -4 | 3 | PME* |
| Total Credits for Honors | | | 13 | |

* For Honors

Electrical Engineering

Semester III

| S. No | Course Code | Course Title | Course Credit | Course Category |
|----------------------|-------------|----------------------------------|---------------|-----------------|
| 1. | EE2702 | Digital Circuits Laboratory | 2 | PML |
| 2. | EE2001 | Digital Systems | 4 | PMT |
| 3. | EE1001 | Electrical and Magnetic Circuits | 4 | PMT |
| 4. | EE1101 | Signals and Systems | 4 | PMT |
| 5. | BT1010 | Life Sciences | 2 | SLS |
| 6. | | Humanities Elective | 3 | <u>HSS</u> |
| 7. | | Mathematics Elective | 3 | <u>SMA</u> |
| Total Credits | | | 22 | |

Semester IV

| S. No | Course Code | Course Title | Course Credit | Course Category |
|----------------------|-------------|--|---------------|-----------------|
| 1. | CS2600 | Computer Organization & Architecture | 3 | PMT |
| 2. | CS2610 | Computer Organization & Architecture Lab | 2 | PML |
| 3. | EE2005 | Electrical Machines | 4 | PMT |
| 4. | EE2006 | Electromagnetic Fields | 4 | PMT |
| 5. | EE3002 | Analog Circuits Theory | 4 | PMT |
| 6. | EE2701 | CAD Laboratory | 2 | PML |
| 7. | | Humanities Elective | 3 | <u>HSS</u> |
| 8. | | Mathematics Elective | 3 | <u>SMA</u> |
| Total Credits | | | 25 | |

Semester V

| S. No | Course Code | Course Title | Course Credit | Course Category |
|---------------------------------|--------------------|--|----------------------|------------------------|
| 1. | EE2003 | Power Systems | 4 | PMT |
| 2. | EE3001 | Solid State Devices | 4 | PMT |
| 3. | EE3004 | Control Engineering | 4 | PMT |
| 4. | EE3005 | Analog and Digital Communication Systems | 4 | PMT |
| 5. | EE3125 | Control Systems Laboratory | 2 | PML |
| 6. | EE3703 | Analog Circuits Laboratory | 2 | PML |
| Total Credits | | | 20 | |
| 7. | | Professional Major Elective -1 | 3 | PME* |
| Total Credits for Honors | | | 23 | |

Semester VI

| S. No | Course Code | Course Title | Course Credit | Course Category |
|---------------------------------|--------------------|--------------------------------------|----------------------|------------------------|
| 1. | EE3010 | Digital Signal Processing | 4 | PMT |
| 2. | EE3015 | Measurements and Instrumentation | 4 | PMT |
| 3. | EE3115 | Measurements and Instrumentation Lab | 2 | PML |
| 4. | EE3110 | Electrical Machines Lab | 2 | PML |
| 5. | EE3135 | Internship | 2 | PMP |
| 6. | | Professional Major Elective -1 | 3 | PME |
| 7. | | General Category Elective -1 | 3 | GCE |
| 8. | | General Category Elective -2 | 3 | GCE |
| Total Credits | | | 23 | |
| 9. | | Professional Major Elective -2 | 3 | PME* |
| Total Credits for Honors | | | 26 | |

* For Honors

Semester VII

| S. No | Course Code | Course Title | Course Credit | Course Category |
|---------------------------------|--------------------|--|----------------------|------------------------|
| 1. | EE4110 | Communication Systems and Microwave Laboratory | 2 | PML |
| 2. | EE4120 | Power Systems Lab | 2 | PML |
| 3. | EE4130 | Project I | 3 | PMP |
| 4. | HS3050 | Professional Ethics | 2 | HSS |
| 5. | | Professional Major Elective -2 | 3 | PME |
| 6. | | Professional Major Elective-3 | 3 | PME |
| 7. | | General Category Elective -3 | 3 | GCE |
| Total Credits | | | 18 | |
| 8. | | Professional Major Elective -3 | 3 | PME* |
| 9. | | Professional Major Elective -4 | 3 | PME* |
| Total Credits for Honors | | | 24 | |

Semester VIII

| S. No | Course Code | Course Title | Course Credit | Course Category |
|---------------------------------|--------------------|--------------------------------|----------------------|------------------------|
| 1. | EE4135 | Project II | 7 | PMP |
| 2. | | General Category Elective -4 | 3 | GCE |
| Total Credits | | | 10 | |
| 3. | | Professional Major Elective -5 | 3 | PME* |
| Total Credits for Honors | | | 13 | |

* For Honors

Mechanical Engineering

Semester III

| S. No | Course Code | Course Title | Course Credit | Course Category |
|----------------------|-------------|--------------------------------|---------------|-----------------|
| 1. | EE1100 | Basic Electrical Engineering | 3 | BET |
| 2. | AM2530 | Foundations of Fluid Mechanics | 4 | PMT |
| 3. | ME2050 | Machine Drawing Practice | 4 | <u>PML</u> |
| 4. | AM2200 | Strength of Materials | 4 | PMT |
| 5. | BT1010 | Life Sciences | 2 | SLS |
| 6. | | Humanities Elective | 3 | <u>HSS</u> |
| 7. | | Mathematics Elective | 3 | <u>SMA</u> |
| Total Credits | | | 23 | |

Semester IV

| S. No | Course Code | Course Title | Course Credit | Course Category |
|----------------------|-------------|---|---------------|-----------------|
| 1. | ME2220 | Kinematics and Dynamics of Machinery | 4 | PMT |
| 2. | ME2240 | Measurements, Instrumentation and Control | 4 | PMT |
| 3. | ME2260 | Materials and Design | 4 | PMT |
| 4. | ME2280 | Manufacturing Processes | 4 | PMT |
| 5. | ME2540 | Applied Mechanics Lab | 2 | PML |
| 6. | | Humanities Elective | 3 | <u>HSS</u> |
| 7. | | Mathematics Elective | 3 | <u>SMA</u> |
| Total Credits | | | 24 | |

Semester V

| S. No | Course Code | Course Title | Course Credit | Course Category |
|---------------------------------|--------------------|-------------------------------------|----------------------|------------------------|
| 1. | ME3010 | Gas Dynamics | 3 | PMT |
| 2. | ME3020 | Heat and Mass Transfer | 4 | PMT |
| 3. | ME3030 | Combustion and IC Engines | 4 | PMT |
| 4. | ME3040 | Machine Tools and Metrology | 4 | PMT |
| 5. | ME3050 | Design of Machine Elements | 4 | PMT |
| 6. | ME3170 | Mechanical Engineering Laboratory I | 2 | PML |
| 7. | | General Category Elective-1 | 3 | GCE |
| Total Credits | | | 24 | |
| 8. | | Professional Major Elective -1 | 3 | PME* |
| Total Credits for Honors | | | 27 | |

Semester VI

| S. No | Course Code | Course Title | Course Credit | Course Category |
|---------------------------------|--------------------|--------------------------------------|----------------------|------------------------|
| 1. | ME3015 | Applied Thermo-Fluids Engineering | 4 | PMT |
| 2. | ME3025 | Mechanical Vibrations | 3 | PMT |
| 3. | ME3035 | Automation in Manufacturing | 3 | PMT |
| 4. | ME3180 | Mechanical Engineering Laboratory II | 2 | PML |
| 5. | ME3100 | Internship | 2 | PMP |
| 6. | | Professional Major Elective -1 | 3 | PME |
| 7. | | General Category Elective -2 | 3 | GCE |
| Total Credits | | | 20 | |
| 8. | | Professional Major Elective -2 | 3 | PME* |
| Total Credits for Honors | | | 23 | |

* For Honors

Semester VII

| S. No | Course Code | Course Title | Course Credit | Course Category |
|---------------------------------|--------------------|---------------------------------------|----------------------|------------------------|
| 1. | ME4010 | Industrial Engineering and Management | 4 | PMT |
| 2. | ME4170 | Mechanical Engineering Laboratory | 2 | PML |
| 3. | ME4150 | Project I | 3 | PMP |
| 4. | HS3050 | Professional Ethics | 2 | HSS |
| 5. | | Professional Major Elective -2 | 3 | PME |
| 6. | | General Category Elective-3 | 3 | GCE |
| Total Credits | | | 17 | |
| 7. | | Professional Major Elective -3 | 3 | PME* |
| 8. | | Professional Major Elective -4 | 3 | PME* |
| Total Credits for Honors | | | 23 | |

Semester VIII

| S. No | Course Code | Course Title | Course Credit | Course Category |
|---------------------------------|--------------------|--------------------------------|----------------------|------------------------|
| 1. | ME4160 | Project II | 7 | PMP |
| 2. | | General Category Elective -4 | 3 | GCE |
| Total Credits | | | 10 | |
| 3. | | Professional Major Elective -5 | 3 | PME* |
| Total Credits for Honors | | | 13 | |

* For honors.

Summary of Semester Wise Credits for 2015 batch

| | I | II | III | IV | V | VI | VII | VIII | Total |
|-----|----|----|-----|----|-------|-------|-------|-------|----------|
| CE | 24 | 25 | 23 | 24 | 23/26 | 21/24 | 17/23 | 10/13 | 167/182 |
| CSE | 24 | 25 | 22 | 21 | 21/25 | 22/26 | 22/25 | 10/13 | 167/181* |
| EE | 24 | 25 | 22 | 25 | 20/23 | 23/26 | 18/24 | 10/13 | 167/182 |
| ME | 24 | 25 | 23 | 24 | 24/27 | 20/23 | 17/23 | 10/13 | 167/182 |

*Will be 182 if one of the PME course of 4 credit is opted.

Category expansion

- BES : Basic Engineering Skills**
- BET : Basic Engineering Theory**
- CWC :Course without Credits**
- GCE : General Category Elective**
- HPF : Humanities / Professional Course**
- HSE : Humanities Elective**
- HSS : Humanities and Social Sciences**
- MAE : Mathematics Elective**
- NSS : National Service Scheme**
- PME : Professional Major Elective**
- PML : Professional Major Laboratory**
- PMP : Professional Major Practice**
- PMT : Professional Major Theory**
- SCY : Science Chemistry**
- SLS : Science Life Science**
- SMA : Science Mathematics**
- SPH : Science Physics**