# **DUAL DEGREE PROGRAMME B. Tech & MBA** (2014-15)

## **Course Structure**





# **DUAL DEGREE PROGRAMME B. Tech & MBA** (2014-15)

## **Course Structure**

Applicable to students admitted in 2013 -14 & 2014 - 15 Academic Session



## **Total Credits for B.Tech & MBA Course Structure (2014-15)**

| Name of the Course                                       | B.Tech<br>Credits | MBA<br>Credits | Total<br>Credits |
|--|-------------------|----------------|------------------|
| B.Tech in Civil Engg. & MBA                              | 187               | 92             | 279              |
| B.Tech in Computer Science Engg. & MBA                   | 185               | 92             | 277              |
| B.Tech in Electrical Engg. & MBA                         | 187               | 92             | 279              |
| B.Tech in Electronics & Electrical Engg. & MBA           | 186               | 92             | 278              |
| B.Tech in Electronics &<br>Telecommunication Engg. & MBA | 187               | 92             | 279              |
| B.Tech in Mechanical Engg. & MBA                         | 186               | 92             | 278              |



#### COURSE STRUCTURE FOR FIRST YEAR DUAL DEGREE B.TECH & MBA PROGRAMME AT KIIT UNIVERSITY, BHUBANESWAR

#### (FOR STUDENTS ADMITTED IN THE SESSION 2013-2014 & 2014-2015)

(Syllabus common to All Branches of Dual Degree B. Tech & MBA Programme)

#### FIRST SEMESTER

#### (SCHEME-I)

| Theor   | У                           |                        |   |   |   |       |        |  |
|---------|-----------------------------|------------------------|---|---|---|-------|--------|--|
| SI.     | Course Code                 | Subject                | L | Т | Р | Total | Credit |  |
| No      |                             |                        |   |   |   |       |        |  |
| 1.      | MA1001                      | Mathematics – I        | 3 | 1 | 0 | 4     | 4      |  |
| 2.      | PH1001                      | Physics – I            | 3 | 0 | 0 | 3     | 3      |  |
| 3.      | CH1001                      | Chemistry              | 3 | 1 | 0 | 4     | 4      |  |
| 4.      | ME1001                      | Engg. Mechanics        | 3 | 1 | 0 | 4     | 4      |  |
| 5.      | EE1001                      | Electrical Science     | 3 | 0 | 0 | 3     | 3      |  |
| Total 7 | Fotal Theory                |                        |   |   |   |       |        |  |
| Practic | al                          |                        |   |   |   |       |        |  |
| 1.      | PH1091                      | Physics Lab – I        | 0 | 0 | 3 | 3     | 2      |  |
| 2.      | CH1091                      | Chemistry Lab          | 0 | 0 | 3 | 3     | 2      |  |
| 3.      | EE1091                      | Electrical Science Lab | 0 | 0 | 3 | 3     | 2      |  |
| Session | al                          |                        |   |   |   |       |        |  |
| 1.      | CE1081                      | Engg. Graphics         | 0 | 0 | 3 | 3     | 2      |  |
| Total l | Total Practical & Sessional |                        |   |   |   |       |        |  |
| Semes   | Semester Total              |                        |   |   |   |       |        |  |

#### SECOND SEMESTER (SCHEME-I)

| Course Code        | Subject  | L  | Т  | Р   | Total   | Credit   |  |
|--------------------|--|--|--|---|---|--|--|
| MA1002             | Mathematics – II   | 3  | 1  | 0   | 4   | 4  |  |
| PH1002             | Physics – II   | 3  | 0  | 0   | 3   | 3  |  |
| CS1001             | Programming in C   | 3  | 0  | 0   | 3   | 3  |  |
| EC1001             | Basic Electronics  | 3  | 0  | 0   | 3   | 3  |  |
| HS1001             | Professional Communication   | 3  | 0  | 0   | 3   | 3  |  |
| Fotal Theory       |  |  |  |   |   |  |  |
|                    |  |  |  |   |   |  |  |
| PH1092             | Physics Lab – II   | 0  | 0  | 3   | 3   | 2  |  |
| EC1091             | Basic Electronics Lab  | 0  | 0  | 3   | 3   | 2  |  |
| CS1091             | Computer Programming Lab   | 0  | 0  | 3   | 3   | 2  |  |
|                    |  |  |  |   |   |  |  |
| ME1081             | Basic Manufacturing Systems  | 0  | 0  | 3   | 3   | 2  |  |
| HS1081             | Professional Communication Lab   | 0  | 0  | 2   | 2   | 1  |  |
| ctical & Sessional |  |  |  |   | 14  | 9  |  |
| Semester Total     |  |  |  |   |   |  |  |
| EAA1               | Extra Academic Activity  |  |  |   |   | P/NP   |  |
|                    | MA1002<br>PH1002<br>CS1001<br>EC1001<br>HS1001<br>ory<br>PH1092<br>EC1091<br>CS1091<br>ME1081<br>HS1081<br>ctical & Sessional<br>Total | MA1002   Mathematics – II     PH1002   Physics – II     CS1001   Programming in C     EC1001   Basic Electronics     HS1001   Professional Communication     ory   PH1092     PH1092   Physics Lab – II     EC1091   Basic Electronics Lab     CS1091   Computer Programming Lab     ME1081   Basic Manufacturing Systems     HS1081   Professional Communication Lab     ctical & Sessional   Total | MA1002   Mathematics – II   3     PH1002   Physics – II   3     CS1001   Programming in C   3     EC1001   Basic Electronics   3     HS1001   Professional Communication   3     ory   PH1092   Physics Lab – II   0     EC1091   Basic Electronics Lab   0   0     CS1091   Computer Programming Lab   0     ME1081   Basic Manufacturing Systems   0     HS1081   Professional Communication Lab   0 | MA1002Mathematics – II31PH1002Physics – II30CS1001Programming in C30EC1001Basic Electronics30HS1001Professional Communication30ory00EC1091Basic Electronics Lab00CS1091Computer Programming Lab00ME1081Basic Manufacturing Systems00HS1081Professional Communication Lab00Total | MA1002   Mathematics – II   3   1   0     PH1002   Physics – II   3   0   0     CS1001   Programming in C   3   0   0     EC1001   Basic Electronics   3   0   0     HS1001   Professional Communication   3   0   0     Ory   O   3   0   0   3     PH1092   Physics Lab – II   0   0   3     EC1091   Basic Electronics Lab   0   0   3     CS1091   Computer Programming Lab   0   0   3     ME1081   Basic Manufacturing Systems   0   0   3     HS1081   Professional Communication Lab   0   0   2     ctical & Sessional   Total | MA1002   Mathematics – II   3   1   0   4     PH1002   Physics – II   3   0   0   3     CS1001   Programming in C   3   0   0   3     EC1001   Basic Electronics   3   0   0   3     HS1001   Professional Communication   3   0   0   3     ory   I6     PH1092   Physics Lab – II   0   0   3   3     EC1091   Basic Electronics Lab   0   0   3   3     EC1091   Basic Electronics Lab   0   0   3   3     CS1091   Computer Programming Lab   0   0   3   3     ME1081   Basic Manufacturing Systems   0   0   3   3     HS1081   Professional Communication Lab   0   0   2   2     ctical & Sessional   14   30   30 |  |



#### FIRST SEMESTER (SCHEME-II)

| Theory             |                             |                                |   |   |   |       |        |  |
|--------------------|-----------------------------|--------------------------------|---|---|---|-------|--------|--|
| Sl. No.            | <b>Course Code</b>          | Subject                        | L | Т | Р | Total | Credit |  |
| 1.                 | MA1001                      | Mathematics – I                | 3 | 1 | 0 | 4     | 4      |  |
| 2.                 | PH1001                      | Physics – I                    | 3 | 0 | 0 | 3     | 3      |  |
| 3.                 | CS1001                      | Programming in C               | 3 | 0 | 0 | 3     | 3      |  |
| 4.                 | EC1001                      | Basic Electronics              | 3 | 0 | 0 | 3     | 3      |  |
| 5.                 | HS1001                      | Professional Communication     | 3 | 0 | 0 | 3     | 3      |  |
| <b>Total Theor</b> | 16                          | 16                             |   |   |   |       |        |  |
| Practical          |                             |                                |   |   |   |       |        |  |
| 1.                 | PH1091                      | Physics Lab – I                | 0 | 0 | 3 | 3     | 2      |  |
| 2.                 | EC1091                      | Basic Electronics Lab          | 0 | 0 | 3 | 3     | 2      |  |
| 3.                 | CS1091                      | Computer Programming Lab       | 0 | 0 | 3 | 3     | 2      |  |
| Sessional          |                             |                                |   |   |   |       |        |  |
| 1.                 | ME1081                      | Basic Manufacturing Systems    | 0 | 0 | 3 | 3     | 2      |  |
| 2.                 | HS1081                      | Professional Communication Lab | 0 | 0 | 2 | 2     | 1      |  |
| Total Pract        | Fotal Practical & Sessional |                                |   |   |   |       |        |  |
| Semester T         | Semester Total              |                                |   |   |   |       |        |  |

#### SECOND SEMESTER (SCHEME-II)

| Theory            |                             |                         |   |   |   |       |        |  |  |
|-------------------|-----------------------------|-------------------------|---|---|---|-------|--------|--|--|
| Sl. No.           | Course Code                 | Subject                 | L | Т | Р | Total | Credit |  |  |
|                   |                             |                         |   |   |   |       |        |  |  |
| 1.                | MA1002                      | Mathematics –II         | 3 | 1 | 0 | 4     | 4      |  |  |
| 2.                | PH1002                      | Physics – II            | 3 | 0 | 0 | 3     | 3      |  |  |
| 3.                | CH1001                      | Chemistry               | 3 | 1 | 0 | 4     | 4      |  |  |
| 4.                | ME1001                      | Engg. Mechanics         | 3 | 1 | 0 | 4     | 4      |  |  |
| 5.                | EE1001                      | Electrical Science      | 3 | 0 | 0 | 3     | 3      |  |  |
| Total Theo        | Total Theory                |                         |   |   |   |       |        |  |  |
| Practical         |                             |                         |   |   |   |       |        |  |  |
| 1.                | PH1092                      | Physics Lab – II        | 0 | 0 | 3 | 3     | 2      |  |  |
| 2.                | CH1091                      | Chemistry Lab           | 0 | 0 | 3 | 3     | 2      |  |  |
| 3.                | EE1091                      | Electrical Science Lab  | 0 | 0 | 3 | 3     | 2      |  |  |
| Sessional         |                             |                         |   |   |   |       |        |  |  |
| 1.                | CE1081                      | Engg. Graphics          | 0 | 0 | 3 | 3     | 2      |  |  |
| <b>Total Prac</b> | Total Practical & Sessional |                         |   |   |   |       |        |  |  |
| Semester '        | Semester Total              |                         |   |   |   |       |        |  |  |
| 1                 | EAA1                        | Extra Academic Activity |   |   |   |       | P/NP   |  |  |

#### COURSE STRUCTURE FOR B.TECH IN CIVIL ENGINEERING AND MBA

| Theory    |                             |                                |   |   |   |       |        |
|-----------|-----------------------------|--------------------------------|---|---|---|-------|--------|
| Sl. No.   | Course Code                 | Subjects                       | L | Т | Р | Total | Credit |
| 1         | MA2001                      | Mathematics-III                | 3 | 1 | 0 | 4     | 4      |
| 2         | CE2001                      | Solid Mechanics                | 3 | 1 | 0 | 4     | 4      |
| 3         | CE2003                      | Fluid Mechanics-I              | 3 | 1 | 0 | 4     | 4      |
| 4         | CE2005                      | Surveying                      | 3 | 0 | 0 | 3     | 3      |
| 5         | CE2007                      | Civil Engineering Materials &  | 3 | 0 | 0 | 3     | 3      |
|           |                             | Construction                   |   |   |   |       |        |
| 6         | CE2009                      | Environmental Engineering-I    | 3 | 0 | 0 | 3     | 3      |
| 7         | BM5201                      | Financial Accounting           | 2 | 0 | 0 | 2     | 2      |
| 8         | BM5202                      | Cost and Management Accounting | 2 | 0 | 0 | 2     | 2      |
| Total of  | Theory                      | 1                              |   | 1 |   | 25    | 25     |
| Practical | l                           |                                |   |   |   |       |        |
| 1         | CE2091                      | Environmental Engg. Lab        | 0 | 0 | 3 | 3     | 2      |
| 2         | CE2093                      | Material Testing Lab           | 0 | 0 | 3 | 3     | 2      |
| 3         | CE2095                      | Surveying Field Work-I         | 0 | 0 | 3 | 3     | 2      |
| Sessional | İ                           | •                              | ÷ |   |   | •     |        |
| 1         | CE2081                      | Building Drawings              | 0 | 0 | 3 | 3     | 2      |
| Total Pra | Total Practical & Sessional |                                |   |   |   |       |        |
| Semester  | · Total                     |                                |   |   |   | 37    | 33     |
|           |                             |                                |   |   |   |       | -      |

#### SEMESTER-III

#### **SEMESTER-IV**

| Theo  | ory              |                                |    |   |   |       |        |
|-------|------------------|--------------------------------|----|---|---|-------|--------|
| Sl.   | Course           | Subjects                       | L  | Т | Р | Total | Credit |
| No.   | Code             |                                |    |   |   |       |        |
| 1     | MA2004           | Numerical Methods              | 3  | 1 | - | 4     | 4      |
| 2     | CE2002           | Fluid Mechanics-II             | 3  | 1 | - | 4     | 4      |
| 3     | CE2004           | Structural Analysis-I          | 3  | 1 | - | 4     | 4      |
| 4     | CE2006           | Transportation Engineering-I   | 3  | - | - | 3     | 3      |
| 5     | CE2008           | Advanced Surveying             | 3  | - | - | 3     | 3      |
| 6     | CE2012           | Design of Concrete Structure-I | 3  | 1 | - | 4     | 4      |
| 7     | BM5403           | Managerial Economics           | 3  | 1 | 0 | 4     | 4      |
| Total | l of Theory      | - <b>-</b>                     | •  |   | • | 26    | 26     |
| Prace | tical            |                                |    |   |   |       | •      |
| 1     | CE2092           | Fluid Mechanics Lab            | 0  | 0 | 3 | 3     | 2      |
| 2     | CE2094           | Transportation Engg. Lab.      | 0  | 0 | 3 | 3     | 2      |
| 3     | CE2096           | Surveying Field Work-II        | 0  | 0 | 3 | 3     | 2      |
| Sessi | onal             |                                | •  |   |   |       |        |
| 1     |                  | Language Lab                   | 0  | 0 | 2 | 2     | 1      |
| Total | l Practical & Se |                                | 11 | 7 |   |       |        |
| Seme  | ester Total      |                                |    |   |   | 37    | 33     |

| <b>SEMESTER-V</b> |  |
|-------------------|--|
|-------------------|--|

| Theo  | ory            |                               |          |   |   |   |       |        |
|-------|----------------|-------------------------------|----------|---|---|---|-------|--------|
| SI.   | Course         | Subjects                      | L        | Т | Р |   | Total | Credit |
| No.   | Code           |                               |          |   |   |   |       |        |
| 1     | CE3001         | Structural Analysis-II        | 3        | 1 | 0 |   | 4     | 4      |
| 2     | CE3003         | Water Resources Engineering-I | 3        | 1 | - |   | 4     | 4      |
| 3     | CE3005         | Geotechnical Engineering-I    | 3        | 1 | 0 |   | 4     | 4      |
| 4     | CE3007         | Design of Steel Structure     | 3        | 1 | 0 |   | 4     | 4      |
| 5     | BM5103         | Organizational Behavior       | 2        | 0 | 0 |   | 2     | 2      |
| 6     | BM5503         | Quantitative Methods          | 2        | 0 | 0 |   | 2     | 2      |
| Tota  | l of Theory    | 1                             | <b>I</b> | I |   |   | 20    | 20     |
| Prac  | ctical         |                               |          |   |   |   | •     |        |
| 1     | CE3091         | Geotechnical Engineering Lab. | 0        | 0 |   | 3 | 3     | 2      |
| Sessi | ional          | •                             |          | • |   |   | •     |        |
| 1     | CE3081         | Hydrology & Irrigation Design | 0        | 0 | 3 |   | 3     | 2      |
| 2     | CE3083         | Structural Design (Steel)     | 0        | 0 | 3 |   | 3     | 2      |
| 3     |                | CAT-I                         | 0        | 0 | 2 |   | 2     | 1      |
| Tota  | l Practical &  | 11                            | 7        |   |   |   |       |        |
| Sem   | Semester Total |                               |          |   |   |   |       | 27     |

#### **SEMESTER-VI**

| Theo  | ory                         |                                    |   |   |   |       |        |
|-------|-----------------------------|------------------------------------|---|---|---|-------|--------|
| SI.   | Course Code                 | Subjects                           | L | Т | Р | Total | Credit |
| No.   |                             |                                    |   |   |   |       |        |
|       | GEAGOA                      |                                    |   | 1 |   |       |        |
| 1     | CE3002                      | Water Resources Engineering-II     | 3 | 1 | - | 4     | 4      |
| 2     | CE3004                      | Geotechnical Engineering-II        | 3 | 1 | - | 4     | 4      |
| 3     | CE3006                      | Design of Concrete Structures-II   | 3 | 1 | - | 4     | 4      |
| 4     | CE3008                      | Environmental Engineering-II       | 3 | - | - | 3     | 3      |
| 5     | CE3012                      | Construction Planning & Management | 3 | - | - | 3     | 3      |
| 6     | BM5301                      | Marketing Management – I           | 2 | 0 | 0 | 2     | 2      |
| 7     | BM5302                      | Marketing Management – II          | 2 | 0 | 0 | 2     | 2      |
| Tota  | l of Theory                 |                                    | 1 |   |   | 22    | 22     |
| Prac  | tical                       |                                    |   |   |   | •     |        |
| Sessi | ional                       |                                    |   |   |   |       |        |
| 1     | CE3082                      | Water Resources Design             | 0 | 0 | 3 | 3     | 2      |
| 2     | CE3084                      | Structural Design (RCC)            | 0 | 0 | 3 | 3     | 2      |
| 3     | CE3086                      | Geotechnical Engineering Design    | 0 | 0 | 3 | 3     | 2      |
| 4     | CE3088                      | Estimating & Costing               | 0 | 0 | 2 | 2     | 1      |
| 5     |                             | CAT-II                             | 0 | 0 | 2 | 2     | 1      |
| Tota  | Total Practical / Sessional |                                    |   |   |   |       |        |
| Sem   | Semester Total              |                                    |   |   |   |       | 30     |

#### SEMESTER-VII

| Sl.   | Course Code        | Subjects                      | L  | Т  | Р | Total | Credit |  |  |  |
|-------|--------------------|-------------------------------|----|----|---|-------|--------|--|--|--|
| No.   |                    |                               |    |    |   |       |        |  |  |  |
| 1     | CE4001             | Transportation Engineering-II | 3  | 0  | 0 | 3     | 3      |  |  |  |
| 2     |                    | Elective – I                  | 3  | 0  | 0 | 3     | 3      |  |  |  |
| 3     | BM5203             | Corporate Finance             | 3  | 1  | 0 | 4     | 4      |  |  |  |
| Tota  | l Theory           | 1                             | 10 | 10 |   |       |        |  |  |  |
| Prac  | Practical          |                               |    |    |   |       |        |  |  |  |
| 1     | CE4091             | Concrete & Structure Lab.     | 0  | 0  | 3 | 3     | 2      |  |  |  |
| Sessi | ional              |                               | •  |    | • |       |        |  |  |  |
| 1     | CE4081             | Transportation Design         | 0  | 0  | 3 | 3     | 2      |  |  |  |
| 2     | CE4083             | Environmental Design          | 0  | 0  | 3 | 3     | 2      |  |  |  |
| 3     | CE4085             | Project Preparation           | 0  | 0  | 6 | 6     | 3      |  |  |  |
| 4     | CE4087             | Practical Training            | -  | -  | - | -     | 2      |  |  |  |
| Tota  | l Practical & Sess | 15                            | 11 |    |   |       |        |  |  |  |
| Sem   | Semester Total     |                               |    |    |   |       | 21     |  |  |  |

#### **SEMESTER-VIII**

| Sl.     | Course Code                 | Subjects                      | L | Т | Р | Total | Credit |  |
|---------|-----------------------------|-------------------------------|---|---|---|-------|--------|--|
| No.     |                             |                               |   |   |   |       |        |  |
| 1       |                             | Elective –II                  | 3 | 0 | 0 | 3     | 3      |  |
| 2       | BM5601                      | Information Technology for    | 2 | 0 | 0 | 2     | 2      |  |
|         |                             | Managers                      |   |   |   |       |        |  |
| 3       | BM5602                      | Enterprise Information System | 2 | 0 | 0 | 2     | 2      |  |
| Total T | heory                       |                               | 7 | 7 |   |       |        |  |
| Session | al                          |                               |   |   |   |       |        |  |
| 1       | CE4082                      | Project                       | 0 | 0 | 9 | 9     | 5      |  |
| 2       | CE4084                      | Comprehensive Viva Voce       | - | - | - | -     | 2      |  |
| 2       | CE4086                      | Seminar                       | 0 | 0 | 3 | 3     | 2      |  |
| On Job  | On Job Training             |                               |   |   |   |       |        |  |
| Total P | Total Practical & Sessional |                               |   |   |   |       |        |  |
| Semeste | Semester Total              |                               |   |   |   |       |        |  |

\* On - the - Job Training (OJT) of 20 Credits is to be covered in the Summer Term after 8th Semester.

| Sl.     | Course Code | Subjects   | L | Т | Р | Total | Credit |
|---------|-------------|--|---|---|---|-------|--------|
| No.     |             |  |   |   |   |       |        |
| 1       | BM5801      | Production and Operations Management                   | 3 | 1 | 0 | 4     | 4      |
| 2       | BM6703      | Business Ethics and Corporate Social<br>Responsibility | 2 | 0 | 0 | 2     | 2      |
| 3       | BM6702      | Legal Aspects of Business                              | 2 | 0 | 0 | 2     | 2      |
| 4       | BM5502      | Business Research Methodology                          | 2 | 0 | 0 | 2     | 2      |
| 5       | BM5102      | Human Resource Management                              | 2 | 0 | 0 | 2     | 2      |
| 6       | BM6701      | Strategic Management                                   | 3 | 1 | 0 | 4     | 4      |
| 7       |             | MBA Elective 1   | 2 | 0 | 0 | 2     | 2      |
| 8       |             | MBA Elective 2   | 2 | 0 | 0 | 2     | 2      |
| 9       |             | MBA Elective 3   | 2 | 0 | 0 | 2     | 2      |
| 10      |             | MBA Elective 4   | 2 | 0 | 0 | 2     | 2      |
| Total 7 | Гнеогу      | •  | • |   |   | 24    | 24     |
| Semes   | ter Total   |  |   |   |   | 24    | 24     |

#### SEMESTER-IX

#### **SEMESTER-X**

| Sl.     | Course   | Subjects        | L | Т | Р | Total | Credit |
|---------|----------|-----------------|---|---|---|-------|--------|
| No.     | Code     |                 |   |   |   |       |        |
| 1       |          | MBA Elective 5  | 2 | 0 | 0 | 2     | 2      |
| 2       |          | MBA Elective 6  | 2 | 0 | 0 | 2     | 2      |
| 3       |          | MBA Elective 7  | 2 | 0 | 0 | 2     | 2      |
| 4       |          | MBA Elective 8  | 2 | 0 | 0 | 2     | 2      |
| 5       |          | MBA Elective 9  | 2 | 0 | 0 | 2     | 2      |
| 6       |          | MBA Elective 10 | 2 | 0 | 0 | 2     | 2      |
| 7       |          | MBA Elective 11 | 2 | 0 | 0 | 2     | 2      |
| 8       |          | MBA Elective 12 | 2 | 0 | 0 | 2     | 2      |
| 9       |          | MBA Elective 13 | 2 | 0 | 0 | 2     | 2      |
| 10      |          | MBA Elective 14 | 2 | 0 | 0 | 2     | 2      |
| 11      |          | MBA Elective 15 | 2 | 0 | 0 | 2     | 2      |
| 12      |          | MBA Elective 16 | 2 | 0 | 0 | 2     | 2      |
| Semeste | er Total | ·               | • | • | • | 24    | 24     |

#### LIST OF DEPARTMENT ELECTIVES

#### **Department Elective - I**

| Sl.No. | Subject Code | Subject Name                                | Credit |
|--------|--------------|---|--------|
| 1.     | CE4031       | Concrete Technology                         | 3      |
| 2.     | CE4037       | Reinforced Concrete Repairs and Maintenance | 3      |
| 3.     | CE4047       | Groundwater Hydrology and Management        | 3      |
| 4.     | CE4051       | Flood and Drought Estimation and Management | 3      |
| 5.     | CE4053       | Solid and Hazardous Waste Management        | 3      |

#### Department Elective - II

| Sl.No. | Subject Code | Subject Name                                  | Credit |
|--------|--------------|---|--------|
| 1.     | CE4046       | Traffic Engineering & Transportation Planning | 3      |
| 2.     | CE4052       | Disaster Management                           | 3      |
| 3.     | CE4062       | Water Resources Systems                       | 3      |
| 4.     | CE4064       | Environmental Impact Assessment & Auditing    | 3      |
| 5.     | CE6134       | Project quality and Safety Management         | 3      |
|        |              |   |        |

#### COURSE STRUCTURE FOR B.TECH IN COMPUTER ENGINEERING AND MBA

| Theory    |         |                                 |   |   |   |       |        |
|-----------|---------|---------------------------------|---|---|---|-------|--------|
| Sl. No.   | Course  | Subjects                        | L | Т | Р | Total | Credit |
|           | Code    |                                 |   |   |   |       |        |
| 1         | MA-2003 | Discrete Mathematics            | 3 | 1 | 0 | 4     | 4      |
| 2         | CS-2001 | Data Structures & Algorithms    | 3 | 1 | 0 | 4     | 4      |
| 3         | IT-2001 | Object Oriented Programming     | 3 | 0 | 0 | 3     | 3      |
| 4         | MA-2001 | Mathematics-III                 | 3 | 1 | 0 | 4     | 4      |
| 5         | EC-2009 | Digital Electronics Circuits    | 3 | 1 | 0 | 4     | 4      |
| 6         | CH-2001 | Environmental Sciences          | 2 | 0 | 0 | 2     | 2      |
| 7         | BM5201  | Financial Accounting            | 2 | 0 | 0 | 2     | 2      |
| 8         | BM5202  | Cost and Management Accounting  | 2 | 0 | 0 | 2     | 2      |
| Total of  | Theory  | 1                               |   |   | 1 | 25    | 25     |
| Practical | l       |                                 |   |   |   | •     |        |
| 1         | CE2091  | Data Structures Lab             | 0 | 0 | 3 | 2     | 2      |
| 2         | IT2091  | Object Oriented Programming Lab | 0 | 0 | 3 | 2     | 2      |
| 3         | EC2093  | Digital Electronics Lab         | 0 | 0 | 3 | 2     | 2      |
| Total Pr  | actical | · · · ·                         |   | • | • | 6     | 6      |
| Semester  | · Total |                                 |   |   |   | 31    | 31     |

#### SEMESTER III

#### **SEMESTER IV**

| Theor   | у             |                                      |    |   |   |       |        |
|---------|---------------|--------------------------------------|----|---|---|-------|--------|
| Sl.     | Course        | Subjects                             | L  | Т | Р | Total | Credit |
| No.     | Code          |                                      |    |   |   |       |        |
| 1       | CS-2004       | Database Management System           | 3  | 1 | 0 | 4     | 4      |
| 2       | CS-2002       | Operating System                     | 3  | 1 | 0 | 4     | 4      |
| 3       | IT-2002       | Programming Tools and Techniques     | 3  | 1 | 0 | 4     | 4      |
| 4       | EC-2004       | Principle of Digital Communication   | 3  | 1 | 0 | 4     | 4      |
| 5       | MA-2002       | Mathematics – IV                     | 3  | 1 | 0 | 4     | 4      |
| 6       | BM5403        | Managerial Economics                 | 3  | 1 | 0 | 4     | 4      |
| Total   | of Theory     |                                      |    |   |   | 24    | 24     |
| Practi  | cal           |                                      |    |   |   |       |        |
| 1       | CS-2094       | DBMS Lab                             | 0  | 0 | 3 | 2     | 2      |
| 2       | CS-2092       | Operating System Lab                 | 0  | 0 | 3 | 2     | 2      |
| 3       | IT-2092       | Programming Tools and Techniques Lab | 0  | 0 | 3 | 2     | 2      |
| Sessio  | nal           |                                      | 11 |   | 1 |       |        |
| 1       | HS-2081       | Language Lab                         | 0  | 0 | 2 | 2     | 1      |
| Total ] | Practical & S | essional                             |    |   |   | 8     | 7      |
| Semes   | ter Total     |                                      |    |   |   | 32    | 31     |

| Theory         |                  |  |   |   |   |       |        |
|----------------|------------------|--|---|---|---|-------|--------|
| Sl. No.        | Course           | Subjects                               | L | Т | Р | Total | Credit |
|                | Code             |  |   |   |   |       |        |
| 1              | CS-3001          | Design & Analysis of Algorithms        | 3 | 1 | 0 | 4     | 4      |
| 2              | IT-3003          | Software Engineering                   | 3 | 1 | 0 | 4     | 4      |
| 3              | IT-3001          | Computer Networks                      | 3 | 1 | 0 | 4     | 4      |
| 4              | CS-3003          | Formal Languages and Automata Theory   | 3 | 1 | 0 | 4     | 4      |
| 5              | CS-3005          | Computer Organization and Architecture | 3 | 1 | 0 | 4     | 4      |
| 6              | BM5103           | Organizational Behaviour               | 2 | 0 | 0 | 2     | 4      |
| 7              | BM5503           | Quantitative Methods                   | 2 | 0 | 0 | 2     | 4      |
| Total of T     | heory            |  | 1 |   |   | 24    | 24     |
| Practical      |                  |  |   |   |   |       |        |
| 1              | CS-3091          | Design & Analysis of Algorithms Lab    | 0 | 0 | 3 | 2     | 2      |
| 2              | IT-3091          | Computer Networks Lab                  | 0 | 0 | 3 | 2     | 2      |
| Sessional      | •                | -                                      |   |   | 1 |       |        |
| 1              | TP-3081          | CAT-I                                  | 0 | 0 | 2 | 1     | 1      |
| Total Prac     | ctical & Session | nal                                    |   |   |   | 5     | 5      |
| Semester Total |                  |  |   |   |   |       | 29     |

#### SEMESTER V

#### **SEMESTER VI**

| Theory         |                 |  |   |   |   |       |        |
|----------------|-----------------|--|---|---|---|-------|--------|
| Sl. No.        | Course<br>Code  | Subjects                               | L | Т | Р | Total | Credit |
|                |                 |  |   |   |   |       |        |
| 1              | CS-3002         | Compiler Design                        | 3 | l | 0 | 4     | 4      |
| 2              | IT-3004         | Object Oriented System Design          | 3 | 1 | 0 | 4     | 4      |
| 3              | CS-3006         | High Performance Computer Architecture | 3 | 1 | 0 | 4     | 4      |
| 4              | CS-3004         | Computer Graphics                      | 3 | 0 | 0 | 3     | 3      |
| 5              | BM5301          | Marketing Management I                 | 2 | 0 | 0 | 2     | 2      |
| 6              | BM5302          | Marketing Management II                | 2 | 0 | 0 | 2     | 2      |
| Total of The   | eory            |  | 1 | 1 | 1 | 19    | 19     |
| Practical      |                 |  |   |   |   |       |        |
| 1              | CS-3092         | Compiler Design Lab                    | 0 | 0 | 3 | 2     | 2      |
| 2              | IT-3098         | Software Engineering Lab               | 0 | 0 | 3 | 2     | 2      |
| 3              | CS-3094         | Computer Graphics Lab                  | 0 | 0 | 3 | 2     | 2      |
| Sessional      | 1               |  | 1 | 1 | 1 | 11    |        |
| 1              | TP-3082         | CAT -II                                | 0 | 0 | 2 | 1     | 1      |
| Total Practi   | cal & Sessional |  |   | I |   | 7     | 7      |
| Semester Total |                 |  |   |   |   | 26    | 26     |

#### SEMESTER VII

| Theory         |                 |                                   |   |   |   |       |        |
|----------------|-----------------|-----------------------------------|---|---|---|-------|--------|
| Sl. No.        | Course<br>Code  | Subjects                          | L | Т | Р | Total | Credit |
| 1              | CS-4001         | Artificial Intelligence           | 3 | 1 | 0 | 4     | 4      |
| 2              | IT-3002         | Data Analytics                    | 3 | 1 | 0 | 4     | 4      |
| 3              |                 | School Elective I / Open Elective | 3 | 0 | 0 | 3     | 3      |
| 4              | BM5203          | Corporate Finance                 | 3 | 1 | 0 | 4     | 4      |
| Total of The   | Total of Theory |                                   |   |   |   |       |        |
| Practical      |                 |                                   |   |   |   | •     |        |
| 1              | IT-3092         | Data Analytics Lab                | 0 | 0 | 3 | 2     | 2      |
| Sessional      |                 | -                                 |   | 1 |   |       |        |
| 1              | CS-4081         | Project Preparation               | 0 | 0 | 6 | 3     | 3      |
| 2              | CS-4083         | Practical Training                | - | - | - | -     | 2      |
| Total Practic  | cal & Sessional | -                                 | 1 |   |   | 7     | 7      |
| Semester Total |                 |                                   |   |   |   | 22    | 22     |

#### **SEMESTER VIII**

| Theory          |                 |                                     |   |   |   |       |        |
|-----------------|-----------------|-------------------------------------|---|---|---|-------|--------|
| Sl. No.         | Course          | Subjects                            | L | Т | Р | Total | Credit |
|                 | Code            |                                     |   |   |   |       |        |
| 1               |                 | School Elective II / Open Elective  | 3 | 0 | 0 | 3     | 3      |
| 2               |                 | School Elective III / Open Elective | 3 | 0 | 0 | 3     | 3      |
| 3               | BM5601          | Information Technology for Managers | 2 | 0 | 0 | 2     | 2      |
| 4               | BM5602          | Enterprise Information System       | 2 | 0 | 0 | 2     | 2      |
| Total of Theory |                 |                                     |   |   |   |       | 10     |
| Practical       |                 |                                     |   |   |   | 1     | 1      |
| Sessional       |                 |                                     |   |   |   |       |        |
| 1               | CS-4086         | Comprehensive Viva                  | - | - | - | -     | 2      |
| 2               | CS-4082         | Project                             | 0 | 0 | 9 | 5     | 5      |
| 3               | CS-4084         | Seminar                             | 0 | 0 | 3 | 2     | 2      |
| Total Practi    | cal & Sessional | 1                                   | 1 | 1 |   | 9     | 9      |
| Semester To     | Semester Total  |                                     |   |   |   |       | 19     |

\* On - the - Job Training (OJT) of 20 Credits is to be covered in the Summer Term after 8th Semester.

#### SEMESTER IX

| Sl. No.        | Course | Subjects   | L | Т | Р | Total | Credit |
|----------------|--------|--|---|---|---|-------|--------|
|                | Code   | Subjects   | - | • | - | 1000  | ortuit |
| 1              | BM5801 | Production and Operation<br>Management                 | 3 | 1 | 0 | 4     | 4      |
| 2              | BM6703 | Business Ethics and Corporate Social<br>Responsibility | 2 | 0 | 0 | 2     | 2      |
| 3              | BM6702 | Legal Aspects of Business                              | 2 | 0 | 0 | 2     | 2      |
| 4              | BM5502 | Business Research Methodology                          | 2 | 0 | 0 | 2     | 2      |
| 5              | BM5102 | Human Resource Management                              | 2 | 0 | 0 | 2     | 2      |
| 6              | BM6701 | Strategic Management                                   | 3 | 1 | 0 | 4     | 4      |
| 7              |        | MBA Elective -1  | 2 | 0 | 0 | 2     | 2      |
| 8              |        | MBA Elective -2  | 2 | 0 | 0 | 2     | 2      |
| 9              |        | MBA Elective -3  | 2 | 0 | 0 | 2     | 2      |
| 10             |        | MBA Elective -4  | 2 | 0 | 0 | 2     | 2      |
| otal of Theory |        |  |   |   |   | 24    | 24     |
| Semester Total |        |  |   |   |   | 24    | 24     |

#### **SEMESTER X**

| Sl. No.        | Course | Subjects         | L | Т | Р | Total | Credit |
|----------------|--------|------------------|---|---|---|-------|--------|
|                | Code   |                  |   |   |   |       |        |
|                |        | MBA Elective -5  | 2 | 0 | 0 | 2     | 2      |
| 2              |        | MBA Elective -6  | 2 | 0 | 0 | 2     | 2      |
| 3              |        | MBA Elective -7  | 2 | 0 | 0 | 2     | 2      |
| 1              |        | MBA Elective -8  | 2 | 0 | 0 | 2     | 2      |
| 5              |        | MBA Elective -9  | 2 | 0 | 0 | 2     | 2      |
| 6              |        | MBA Elective -10 | 2 | 0 | 0 | 2     | 2      |
| 7              |        | MBA Elective -11 | 2 | 0 | 0 | 2     | 2      |
| 8              |        | MBA Elective -12 | 2 | 0 | 0 | 2     | 2      |
| 9              |        | MBA Elective -13 | 2 | 0 | 0 | 2     | 2      |
| 10             |        | MBA Elective -14 | 2 | 0 | 0 | 2     | 2      |
| 11             |        | MBA Elective -15 | 2 | 0 | 0 | 2     | 2      |
| 12             |        | MBA Elective -16 | 2 | 0 | 0 | 2     | 2      |
| Total Theory   |        |                  |   |   |   | 24    | 24     |
| Semester Total |        |                  |   |   |   | 24    | 24     |

#### LIST OF DEPARTMENT ELECTIVES

#### **Department Elective - I**

| Sl.No.<br>1. | Subject Code<br>CS-4021 | Subject Name<br>Parallel and Distributed Computing | Credit<br>3 |
|--------------|-------------------------|--|-------------|
| 2.           | IT-4021                 | Computer Security                                  | 3           |
| 3.           | CS-4023                 | Real –Time Systems                                 | 3           |
| 4.           | IT-3006                 | Mobile Computing                                   | 3           |
| 5.           | CS-2006                 | Statistical Techniques                             | 3           |

#### **Department Elective - II**

| Sl.No. | Subject Code | Subject Name                              | Credit |
|--------|--------------|---|--------|
| 1.     | IT-4022      | Management Information System             | 3      |
| 2.     | IT-4042      | M- Commerce                               | 3      |
| 3.     | IT-4062      | Cyber Law and Intellectual Property Right | 3      |
| 4.     | IT-4044      | Internet of Things                        | 3      |
| 5.     | IT-4001      | Enterprise Resource Planning              | 3      |

#### **Department Elective - III**

| Sl.No.<br>1. | Subject Code<br>CS-4042 | Subject Name<br>Embedded System | Credit<br>3 |
|--------------|-------------------------|---------------------------------|-------------|
| 2.           | CS-4044                 | Microprocessor                  | 3           |
| 3.           | CS-4026                 | Robotics and Control            | 3           |
| 4.           | CS-4064                 | Computer Vision                 | 3           |
| 5.           | IT-4026                 | Natural Language Processing     | 3           |
| 6.           | CS-4062                 | Human Computer Interaction      | 3           |

#### COURSE STRUCTURE FOR B.TECH IN ELECTRICAL ENGINEERING AND MBA **SEMESTER-III**

| Theory    |                             |   |   |   |   |       |        |
|-----------|-----------------------------|---|---|---|---|-------|--------|
| Sl. No.   | Subject Code                | Subjects                                | L | Т | Р | Total | Credit |
| 1.        | MA 2001                     | Mathematics –III                        | 3 | 1 | 0 | 4     | 4      |
| 2.        | EE 2001                     | Electrical Machines-I                   | 3 | 1 | 0 | 4     | 4      |
| 3.        | EE 2003                     | Network Analysis                        | 3 | 1 | 0 | 4     | 4      |
| 4.        | EC 2007                     | Analog Electronics                      | 3 | 1 | 0 | 4     | 4      |
| 5.        | CS 2003                     | Data Structure and Java Programming     | 3 | 1 | 0 | 4     | 4      |
| 6.        | CH 2001                     | Environmental Science                   | 2 | 0 | 0 | 2     | 2      |
| 7.        | BM 5201                     | Financial Accounting                    | 2 | 0 | 0 | 2     | 2      |
| 8.        | BM 5202                     | Cost and Management Accounting          | 2 | 0 | 0 | 2     | 2      |
| Total Th  | eory                        |   |   |   |   | 26    | 26     |
| Practical |                             |   |   |   |   | 1     |        |
| 1.        | CS 2093                     | Data Structure and Java Programming Lab | 0 | 0 | 3 | 3     | 2      |
| 2.        | EE 2091                     | Networks & Electronics Circuit Lab      | 0 | 0 | 3 | 3     | 2      |
| Sessional |                             | L                                       | 1 | 1 | 1 | 1     | I      |
| 1.        | HS 2081                     | Language Lab                            | 0 | 0 | 3 | 3     | 1      |
| Total Pra | Total Practical & Sessional |   |   |   |   |       | 5      |
| Total of  | Semester                    |   |   |   |   | 35    | 31     |

#### **SEMESTER-IV**

| Theory            |                    |   |   |   |          |       |        |
|-------------------|--------------------|---|---|---|----------|-------|--------|
| Sl. No.           | Subject Code       | Subjects  | L | Т | P        | Total | Credit |
| 1.                | MA 2002            | Mathematics-IV                                  | 3 | 1 | 0        | 4     | 4      |
| 2.                | EE 2002            | Electrical Machines –II                         | 3 | 1 | 0        | 4     | 4      |
| 3.                | EC 2009            | Digital Electronics Circuits                    | 3 | 1 | 0        | 4     | 4      |
| 4.                | EE 2004            | Electrical Measurements and Instrumentation     | 3 | 1 | 0        | 4     | 4      |
| 5.                | ME 2016            | Thermal Engineering Applications                | 3 | 1 | 0        | 4     | 4      |
| 6.                | BM 5403            | Managerial Economics                            | 3 | 1 | 0        | 4     | 4      |
| Total Theory      |                    |   |   |   |          |       | 24     |
| Practica          | 1                  |   |   |   |          |       |        |
| 1.                | EE 2092            | Electrical Measurements and Instrumentation Lab | 0 | 0 | 3        | 3     | 2      |
| 2.                | EE 2094            | Digital Circuit Lab                             | 0 | 0 | 3        | 3     | 2      |
| 3.                | EE 2096            | Electrical Machines Lab                         | 0 | 0 | 3        | 3     | 2      |
| Total Pr          | actical & Sessiona | al  | 1 | 1 | <u>I</u> | 9     | 6      |
| Total of Semester |                    |   |   |   | 33       | 30    |        |

| Theory                      |                               |  |   |   |   |       |        |
|-----------------------------|-------------------------------|--|---|---|---|-------|--------|
| Sl. No.                     | Subject Code                  | Subjects                                   | L | Т | Р | Total | Credit |
| 1.                          | EE 3001                       | Electric Power Transmission & Distribution | 3 | 1 | 0 | 4     | 4      |
| 2.                          | EE 3003 Linear Control Theory |  | 3 | 1 | 0 | 4     | 4      |
| 3.                          | 3. EE 3005 Power Electronics  |  | 3 | 1 | 0 | 4     | 4      |
| 4.                          | EC 3003                       | Microprocessors & Microcontrollers         | 3 | 1 | 0 | 4     | 4      |
| 5.                          | BM5103                        | Organization Behaviour                     | 2 | 0 | 0 | 2     | 2      |
| 6.                          | BM5503                        | Quantitative Methods                       | 2 | 0 | 0 | 2     | 2      |
| Total Th                    | eory                          | I  |   | 1 | 1 | 20    | 20     |
|                             | Practical:                    |  |   |   |   |       |        |
| 1.                          | EE 3091                       | Power Electronics Lab                      | 0 | 0 | 3 | 3     | 2      |
| 2.                          | EE 3093                       | Microprocessors Lab                        | 0 | 0 | 3 | 3     | 2      |
| 3.                          | EE 3095                       | Control System Lab                         | 0 | 0 | 3 | 3     | 2      |
| Sessiona                    | 1                             |  |   |   |   |       |        |
| 1.                          | TP 3081                       | CAT-I                                      | 0 | 0 | 2 | 2     | 1      |
| Total Practical & Sessional |                               |  |   |   |   | 11    | 7      |
| Total of                    | Semester                      |  |   |   |   | 31    | 27     |

#### SEMESTER-V

#### **SEMESTER-VI**

| Theory            |                    |   |   |   |   |       |        |
|-------------------|--------------------|---|---|---|---|-------|--------|
| Sl. No.           | Subject Code       | Subjects                                  | L | Т | Р | Total | Credit |
| 1.                | EE 3002            | Power Systems Operation & Control         | 3 | 1 | 0 | 4     | 4      |
| 2.                | EE 3004            | EE 3004 Electromagnetic Field             |   | 0 | 0 | 3     | 3      |
| 3.                | EC 3009            | Communication Engineering                 | 3 | 1 | 0 | 4     | 4      |
| 4.                | EC 3008            | Introduction to Digital Signal Processing | 3 | 1 | 0 | 4     | 4      |
| 5.                |                    | Department Elective-I / Open Elective     | 3 | 0 | 0 | 3     | 3      |
| 6.                | BM 5301            | Marketing Management-I                    | 2 | 0 | 0 | 2     | 2      |
| 7.                | BM 5302            | Marketing Management-I                    | 2 | 0 | 0 | 2     | 2      |
| Total Th          | Total Theory       |   |   |   |   |       |        |
| Practica          | 1                  |   |   |   |   |       |        |
| 1.                | EE 3092            | Power Systems Lab                         | 0 | 0 | 3 | 3     | 2      |
| Sessiona          | 1:                 |   |   | 1 |   |       |        |
| 1.                | EE 3082            | Electrical Machine Design                 | 0 | 0 | 3 | 3     | 2      |
| 2.                | TP 3082            | CAT-II                                    | 0 | 0 | 2 | 2     | 1      |
| Total Pr          | actical & Sessiona | al  | 1 | 1 |   | 8     | 5      |
| Total of Semester |                    |   |   |   |   | 30    | 27     |

#### SEMESTER-VII

| Theory       |                            |  |   |   |          |       |        |
|--------------|----------------------------|--|---|---|----------|-------|--------|
| SI.<br>No.   | Subject<br>Code            | Subjects                               | L | T | Р        | Total | Credit |
| 1.           | EE 4001                    | Electric Drives                        | 3 | 1 | 0        | 4     | 4      |
| 2.           | EE 4003                    | Switch Gear and Protection             | 3 | 0 | 0        | 3     | 3      |
| 3.           | EE 4005                    | Renewable Energy Systems               | 3 | 0 | 0        | 3     | 3      |
| 4.           |                            | Department Elective-II / Open Elective | 3 | 0 | 0        | 3     | 3      |
| 5.           | BM5203 Corporate Finance 3 |  | 1 | 0 | 4        | 4     |        |
| Total Theory |                            |  |   |   |          |       | 17     |
| Practic      | al:                        |  |   |   |          |       |        |
| 1.           | EE 4091                    | Electric Drives Lab                    | 0 | 0 | 3        | 3     | 2      |
| Session      | al:                        |  |   | 1 |          |       |        |
| 1.           | EE 4081                    | Project Preparation                    | 0 | 0 | 6        | 6     | 3      |
| 2.           | EE 4083                    | Practical Training                     | - | - | -        | -     | 2      |
| 3.           | EE 4085                    | Power System Design                    | 0 | 0 | 3        | 3     | 2      |
| Total P      | ractical & So              | essional                               | 1 | 1 | <u> </u> | 12    | 9      |
| Total o      | of Semester                |  |   |   |          | 29    | 26     |

#### **SEMESTER-VIII**

| SI.<br>No.        | Subject<br>Code | Р                                   | Total | Credit |   |    |    |
|-------------------|-----------------|-------------------------------------|-------|--------|---|----|----|
| 1.                | EL 4001         | Industrial Automation & Control     | 3     | 0      | 0 | 3  | 3  |
| 2.                |                 | Department Elective- III            | 3     | 0      | 0 | 3  | 3  |
| 3.                | BM 5601         | Information Technology for Managers | 2     | 0      | 0 | 2  | 2  |
| 4.                | BM 5602         | Enterprise Information System       | 2     | 0      | 0 | 2  | 2  |
| Total Theory      |                 |                                     |       |        |   |    | 10 |
| Session           | al:             |                                     |       |        |   |    |    |
| 1.                | EE 4082         | Project                             | 0     | 0      | 9 | 9  | 5  |
| 2.                | EE 4084         | Seminar                             | 0     | 0      | 3 | 3  | 2  |
| 3.                | EE 4086         | Comprehensive Viva                  | -     | -      | - | -  | 2  |
| Fotal S           | Sessional       |                                     |       |        |   | 12 | 9  |
| Total of Semester |                 |                                     |       |        |   | 22 | 19 |

On - the - Job Training (OJT) of 20 Credits is to be covered in the Summer Term after 8th Semester.

| Theory     |             |  |   |   |   |       |        |  |
|------------|-------------|--|---|---|---|-------|--------|--|
| SI.<br>No. | <b>5</b>    |  |   |   |   | Total | Credit |  |
| 1.         | BM5801      | Production and Operation Management                    | 3 | 1 | 0 | 4     | 4      |  |
| 2.         | BM6703      | Business Ethics and Corporate Social<br>Responsibility | 2 | 0 | 0 | 2     | 2      |  |
| 3.         | BM6702      | Legal Aspect of Business                               | 2 | 0 | 0 | 2     | 2      |  |
| 4.         | BM5502      | Business Research Methodology                          | 2 | 0 | 0 | 2     | 2      |  |
| 5.         | BM5102      | Human Resource Management                              | 2 | 0 | 0 | 2     | 2      |  |
| 6.         | BM6701      | Strategic Management                                   | 4 | 0 | 0 | 4     | 4      |  |
| 7.         |             | MBA Elective-I   | 2 | 0 | 0 | 2     | 2      |  |
| 8.         |             | MBA Elective-II  | 2 | 0 | 0 | 2     | 2      |  |
| 9.         |             | MBA Elective-III                                       | 2 | 0 | 0 | 2     | 2      |  |
| 10.        |             | MBA Elective-IV  | 2 | 0 | 0 | 2     | 2      |  |
| Total 7    | Theory      | 1  |   |   |   | 24    | 24     |  |
| Total      | of Semester |  |   |   |   | 24    | 24     |  |

#### SEMESTER-IX

#### **SEMESTER-X**

| Theor        | y               |                 |   |   |   |       |        |
|--------------|-----------------|-----------------|---|---|---|-------|--------|
| SI.<br>No.   | Subject<br>Code | Subjects        | L | Т | Р | Total | Credit |
| 1.           |                 | MBA Elective-5  | 2 | 0 | 0 | 2     | 2      |
| 2.           |                 | MBA Elective-6  | 2 | 0 | 0 | 2     | 2      |
| 3.           |                 | MBA Elective-7  | 2 | 0 | 0 | 2     | 2      |
| 4.           |                 | MBA Elective-8  | 2 | 0 | 0 | 2     | 2      |
| 5.           |                 | MBA Elective-9  | 2 | 0 | 0 | 2     | 2      |
| 6.           |                 | MBA Elective-10 | 2 | 0 | 0 | 2     | 2      |
| 7.           |                 | MBA Elective-11 | 2 | 0 | 0 | 2     | 2      |
| 8.           |                 | MBA Elective-12 | 2 | 0 | 0 | 2     | 2      |
| 9.           |                 | MBA Elective-13 | 2 | 0 | 0 | 2     | 2      |
| 10.          |                 | MBA Elective-14 | 2 | 0 | 0 | 2     | 2      |
| 11.          |                 | MBA Elective-15 | 2 | 0 | 0 | 2     | 2      |
| 12.          |                 | MBA Elective-16 | 2 | 0 | 0 | 2     | 2      |
| Total Theory |                 |                 |   |   |   |       | 24     |

#### LIST OF DEPARTMENT ELECTIVES

#### **Department Elective - I**

| Sl.No. | Subject Code | Subject Name                             | Credit |
|--------|--------------|--|--------|
| 1.     | CS 3052      | RDBMS                                    | 3      |
| 2.     | EE 3022      | Power Apparatus Design                   | 3      |
| 3.     | EE 3024      | Principles of Industrial Instrumentation | 3      |
| 4.     | EE 3026      | Electrical Engineering Material          | 3      |

#### **Department Elective - II**

| Sl.No. | Subject Code | Subject Name   | Credit |
|--------|--------------|--|--------|
| 1.     | EE4021       | Power Station Engineering  | 3      |
| 2.     | EE 4023      | Installation, Commissioning and Maintenance of Electrical Equipments | 3      |
| 3.     | EE 4033      | Modern Control Theory  | 3      |
| 4.     | EE 4035      | Utilization of Electric Power  | 3      |

#### **Department Elective - III**

| Sl.No. | Subject Code | Subject Name                     | Credit |
|--------|--------------|----------------------------------|--------|
| 1.     | EE 4032      | Power Quality                    | 3      |
| 2.     | EE 4036      | High Voltage Engineering         | 3      |
| 3.     | EE 4040      | Electric Traction and Drive      | 3      |
| 4.     | EE6126       | Advanced Power System Protection | 3      |

#### COURSE STRUCTURE FOR B.TECH IN ELECTRONICS & ELECTRICAL ENGINEERING AND MBA SEMESTER-III

| Theory     |                    |                                    |   |   |   |       |         |
|------------|--------------------|------------------------------------|---|---|---|-------|---------|
| Sl.No      | Subject Code       | Course Title                       | L | Т | Р | Total | Credits |
| 1.         | MA2001             | Mathematics-III                    | 3 | 1 | 0 | 4     | 4       |
| 2.         | EC2007             | Analog Electronics                 | 3 | 1 | 0 | 4     | 4       |
| 3.         | EE2003             | Network Analysis                   | 3 | 1 | 0 | 4     | 4       |
| 4.         | EC2003             | Signals & Systems                  | 3 | 0 | 0 | 3     | 3       |
| 5.         | EE2001             | Electrical Machine – I             | 3 | 1 | 0 | 4     | 4       |
| 6.         | CS2003             | Data Structure & Java Programming  | 3 | 1 | 0 | 4     | 4       |
| 7.         | BM5201             | Financial Accounting               | 2 | 0 | 0 | 2     | 2       |
| 8.         | BM5202             | Cost and Management Accounting     | 2 | 0 | 0 | 2     | 2       |
| Total of   | Гһеогу             |                                    | I | 1 | 1 | 27    | 27      |
| Practical  |                    |                                    |   |   |   |       | 1       |
| 9.         | EC2091             | Electronic Circuits & Networks Lab |   |   |   | 3     | 2       |
| 10.        | CS2093             | Data Structure & Programming Lab   |   |   |   | 3     | 2       |
| Sessional  |                    |                                    | I | 1 | 1 |       | 1       |
| 11.        | HS2081             | Language Lab                       |   |   |   | 2     | 1       |
| Total of ] | Practical & Sessio | onal                               | I | 1 | 1 | 8     | 5       |
| Semester   | Total              |                                    |   |   |   | 35    | 32      |

#### SEMESTER-IV

| Theory             |              |                                    |   |    |    |       |         |
|--------------------|--------------|------------------------------------|---|----|----|-------|---------|
| Sl.No              | Subject Code | Course Title                       | L | Т  | Р  | Total | Credits |
| 1.                 | MA2002       | Mathematics – IV                   | 3 | 1  | 0  | 4     | 4       |
| 2.                 | EC2009       | Digital Electronic Circuits        | 3 | 1  | 0  | 4     | 4       |
| 3.                 | EE2002       | Electrical Machine – II            | 3 | 1  | 0  | 4     | 4       |
| 4.                 | EC2008       | Measurements & Instrumentation     | 3 | 1  | 0  | 4     | 4       |
| 5.                 | CH2001       | Environmental Science              | 2 | 0  | 0  | 2     | 2       |
| 6.                 | BM5403       | Managerial Economics               | 3 | 1  | 0  | 4     | 4       |
| Total of           | Theory       | 1                                  |   | 11 |    | 22    | 22      |
| Practica           | 1            |                                    |   |    |    |       |         |
| 7.                 | EC2096       | Digital & Linear IC Lab            | 0 | 0  | 3  | 3     | 2       |
| 8.                 | EC2098       | Measurements & Instrumentation Lab | 0 | 0  | 3  | 3     | 2       |
| 9.                 | EE2096       | Electrical Machine Lab             | 0 | 0  | 3  | 3     | 2       |
| Total of Practical |              |                                    |   |    |    | 9     | 6       |
| Semester Total     |              |                                    |   |    | 31 | 28    |         |

#### Theory **Course Title** Sl.No Subject Code L Т Р Total Credits EC3001 Electromagnetic Theory 3 1. 1 0 4 4 Electric Power Transmission & Distribution 2. EE3001 3 0 4 4 1 3. EC3003 Microprocessors & Microcontrollers 3 1 0 4 4 4. EL3001 Control Systems 0 4 3 1 4 EC3007 Digital Signal Processing 3 0 5. 1 4 4 BM5103 Organizational Behavior 2 6. 2 0 0 2 2 7. BM5503 Quantitative Methods 2 0 0 2 **Total of Theory** 24 24 Practical 8. EL3091 Control Systems Lab 0 0 3 3 2 9. 2 EC3095 DSP Lab 0 0 3 3 10. EE3093 Microprocessor & Microcontroller Lab 0 0 3 3 2 Sessional TP3081 CAT-I 2 11. 2 0 0 1 **Total of Practical & Sessional** 7 11 Semester Total 35 31 **SEMESTER-VI** Theory Sl.No Subject Code **Course Title** Т Credits L P Total 1. EC3009 Communication Engg 3 1 0 4 4 2. EE3005 3 1 0 4 Power Electronics 4 3. EE3002 Power System Operation & Control 3 1 0 4 4 Dept. Elective – I / Open Elective 4. 3 0 0 3 3 5. BM5301 Marketing Management – I 2 2 0 0 2 BM5302 Marketing Management - II 2 2 2 6. 0 0 **Total of Theory** 19 19 **Practical** 7. EC3091 Communication Engg Lab 0 0 3 3 2 8. EE3091 Power Electronics Lab 0 0 3 3 2 EE3092 2 9. Power Systems Lab 0 0 3 3 Sessional TP3082 CAT-II 2 2 10. 0 0 1 **Total of Practical & Sessionals** 11 7

#### **SEMESTER-V**

30

26

Semester Total

#### SEMESTER-VII

| Theory     |                    |                                 |   |   |   |       |         |
|------------|--------------------|---------------------------------|---|---|---|-------|---------|
| Sl.No      | Subject Code       | Course Title                    | L | Т | Р | Total | Credits |
| 1.         | EE4001             | Electric Drives                 | 3 | 1 | 0 | 4     | 4       |
| 2.         | EE4003             | Switch Gear & Protection        | 3 | 0 | 0 | 3     | 3       |
| 3.         | EL4001             | Industrial Automation & Control | 3 | 0 | 0 | 3     | 3       |
| 4.         | BM5203             | Corporate Finance               | 3 | 1 | 0 | 4     | 4       |
| 5.         |                    | Dept. Elective – II             | 3 | 0 | 0 | 3     | 3       |
| Total of 7 | Гһеогу             | 1                               | I | I | I | 17    | 17      |
| Practical  |                    |                                 |   |   |   |       | 1       |
| 1.         | EE4091             | Electric Drives Lab             | 0 | 0 | 3 | 3     | 2       |
| Sessional  | 1                  | 1                               | I | 1 |   |       | 1       |
| 1.         | EE4081             | Power System Design             | 0 | 0 | 3 | 3     | 2       |
| 2.         | EL4081             | Project Preparation             |   |   |   | 6     | 3       |
| 3.         | EL4083             | Practical Training              | - | - | - | -     | 2       |
| Total of l | Practical & Sessio | nal                             |   | 1 | 1 | 12    | 9       |
| Semester   | Total              |                                 |   |   |   | 29    | 26      |

#### SEMESTER-VIII

| Theory             |   |                                      |   |   |   |       |         |
|--------------------|---|--------------------------------------|---|---|---|-------|---------|
| Sl.No              | Subject<br>Code   | Course Title                         | L | Т | Р | Total | Credits |
| 1.                 |   | Dept. Elective – III / Open Elective | 3 | 0 | 0 | 3     | 3       |
| 2.                 | BM5601  | Information Technology for Managers  | 2 | 0 | 0 | 2     | 2       |
| 3.                 | BM5602  | Enterprise Information System        | 2 | 0 | 0 | 2     | 2       |
| Total of 7         | Theory  | ·                                    | • |   | 1 | 7     | 7       |
| Sessional          |   |                                      |   |   |   | •     |         |
| 1.                 | EL4082  | Project                              | 0 | 0 | 9 | 9     | 5       |
| 2.                 | EL4084  | Seminar                              | 0 | 0 | 3 | 3     | 2       |
| 3.                 | 3.     EL4086     General Viva Voce     - |                                      |   |   |   |       |         |
| Total of Sessional |   |                                      |   |   |   |       | 9       |
| Semester           | Semester Total  |                                      |   |   |   |       | 16      |

On - the - Job Training (OJT) of 20 Credits is to be covered in the Summer Term after 8th Semester.

\*

#### SEMESTER-IX

| Theory     |              |  |   |   |   |       |         |
|------------|--------------|--|---|---|---|-------|---------|
| Sl.No      | Subject Code | Course Title   | L | Т | Р | Total | Credits |
| 1.         | BM5801       | Production and Operation Management                    | 3 | 1 | 0 | 4     | 4       |
| 2.         | BM6703       | Business Ethics and Corporate Social<br>Responsibility | 2 | 0 | 0 | 2     | 2       |
| 3.         | BM6702       | Legal Aspect of Business                               | 2 | 0 | 0 | 2     | 2       |
| 4.         | BM5502       | Business Research Methodology                          | 2 | 0 | 0 | 2     | 2       |
| 5.         | BM5102       | Human Resource Management                              | 2 | 0 | 0 | 2     | 2       |
| 6.         | BM6701       | Strategic Management                                   | 4 | 0 | 0 | 4     | 4       |
| 7.         |              | MBA Elective - 1                                       | 2 | 0 | 0 | 2     | 2       |
| 8.         |              | MBA Elective - 2                                       | 2 | 0 | 0 | 2     | 2       |
| 9.         |              | MBA Elective - 3                                       | 2 | 0 | 0 | 2     | 2       |
| 10.        |              | MBA Elective - 4                                       | 2 | 0 | 0 | 2     | 2       |
| Total of 7 | Theory       | 1  |   | 1 | 1 | 24    | 24      |
| Semester   | Total        |  |   |   |   | 24    | 24      |

#### **SEMESTER-X**

| Sl.No             | Subject<br>Code | Course Title      | L | Т | Р | Total | Credits |
|-------------------|-----------------|-------------------|---|---|---|-------|---------|
| 1.                | Couc            | MBA Elective - 5  | 2 | 0 | 0 | 2     | 2       |
| 2.                |                 | MBA Elective - 6  | 2 | 0 | 0 | 2     | 2       |
| 3.                |                 | MBA Elective - 7  | 2 | 0 | 0 | 2     | 2       |
| 4.                |                 | MBA Elective - 8  | 2 | 0 | 0 | 2     | 2       |
| 5.                |                 | MBA Elective - 9  | 2 | 0 | 0 | 2     | 2       |
| 6.                |                 | MBA Elective - 10 | 2 | 0 | 0 | 2     | 2       |
| 7.                |                 | MBA Elective - 11 | 2 | 0 | 0 | 2     | 2       |
| 8.                |                 | MBA Elective - 12 | 2 | 0 | 0 | 2     | 2       |
| 9.                |                 | MBA Elective - 13 | 2 | 0 | 0 | 2     | 2       |
| 10.               |                 | MBA Elective - 14 | 2 | 0 | 0 | 2     | 2       |
| 11.               |                 | MBA Elective - 15 | 2 | 0 | 0 | 2     | 2       |
| 12.               |                 | MBA Elective - 16 | 2 | 0 | 0 | 2     | 2       |
| <b>Cotal of T</b> | heorv           |                   | 1 | I | I | 24    | 24      |

#### LIST OF DEPARTMENT ELECTIVES

#### **Department Elective - I**

| Sl.No. | Subject Code | Subject Name             | Credit |
|--------|--------------|--------------------------|--------|
| 1.     | EL3002       | Advanced Control Systems | 3      |
| 2.     | EC3004       | VLSI Design              | 3      |
| 3.     | EC3024       | Embedded Systems         | 3      |
| 4.     | CS3054       | Computer Architecture    | 3      |

#### **Department Elective - II**

| Sl.No. | Subject Code | Subject Name                          | Credit |
|--------|--------------|---------------------------------------|--------|
| 1.     | EE4021       | Power Station Engineering             | 3      |
| 2.     | EC4023       | Adaptive Systems & Signal Processing  | 3      |
| 3.     | EE4005       | Renewable Energy Systems              | 3      |
| 4.     | EE6121       | Computer Application in Power Systems | 3      |

#### **Department Elective - III**

| Sl.No. | Subject Code | Subject Name                     | Credit |
|--------|--------------|----------------------------------|--------|
| 1.     | EE4036       | High Voltage Engineering         | 3      |
| 2.     | EE4034       | Advanced Power Electronics       | 3      |
| 3.     | EC6108       | Digital Image Processing         | 3      |
| 4.     | EI4038       | Power Plant Instrumentation      | 3      |
| 5.     | EC4048       | Mobile Communication Engineering | 3      |

#### COURSE STRUCTURE FOR B.TECH IN ELECTRONICS & TELECOMMUNICATION ENGINEERING AND MBA SEMESTER-III

| Theory     |                    |                                      |   |   |   |       |         |
|------------|--------------------|--------------------------------------|---|---|---|-------|---------|
| Sl. No     | Subject Code       | Course Title                         | L | Т | Р | Total | Credits |
| 1.         | MA2001             | Mathematics – III                    | 3 | 1 | 0 | 4     | 4       |
| 2.         | EC2001             | Analog Electronic Circuits – I       | 3 | 1 | 0 | 4     | 4       |
| 3.         | EC2003             | Signals & Systems                    | 3 | 0 | 0 | 3     | 3       |
| 4.         | EE2003             | Network Analysis                     | 3 | 1 | 0 | 4     | 4       |
| 5.         | EC2005             | Semiconductor Devices                | 3 | 0 | 0 | 3     | 3       |
| 6.         | CS2003             | Data Structure & Java Programming    | 3 | 1 | 0 | 4     | 4       |
| 7.         | BM5201             | Financial Accounting                 | 2 | 0 | 0 | 2     | 2       |
| 8.         | BM5202             | Cost and Management Accounting       | 2 | 0 | 0 | 2     | 2       |
| Total of ' | Гһеогу             | I                                    |   |   | 1 | 26    | 26      |
| Practical  |                    |                                      |   |   |   | 1     |         |
| 9.         | EC2091             | Electronic Circuits and Networks Lab | 0 | 0 | 3 | 3     | 2       |
| 10.        | CS2093             | Data Structure & Programming Lab     | 0 | 0 | 3 | 3     | 2       |
| Sessional  | <br>               | I                                    | I | L | 1 | 11    |         |
| 11         | HS2081             | Language Lab                         | 0 | 0 | 2 | 2     | 1       |
| Total of   | Practical & Sessio | nal                                  | I | 1 | 1 | 8     | 5       |
| Semester   | Total              |                                      |   |   |   | 34    | 31      |
|            |                    |                                      |   |   |   | I     |         |

#### SEMESTER-IV

| Theory         |              |                                  |   |     |    |       |         |
|----------------|--------------|----------------------------------|---|-----|----|-------|---------|
| Sl. No         | Subject Code | Course Title                     | L | Т   | Р  | Total | Credits |
| 1.             | MA2002       | Mathematics – IV                 | 3 | 1   | 0  | 4     | 4       |
| 2.             | EC2002       | Analog Electronic Circuits – II  | 3 | 1   | 0  | 4     | 4       |
| 3.             | EC2009       | Digital Electronic Circuits      | 3 | 1   | 0  | 4     | 4       |
| 4.             | EC2006       | Analog Communication Techniques  | 3 | 1   | 0  | 4     | 4       |
| 5.             | EC2008       | Measurements and Instrumentation | 3 | 1   | 0  | 4     | 4       |
| 6.             | CH2001       | Environmental Science            | 2 | 0   | 0  | 2     | 2       |
| 7.             | BM5403       | Managerial Economics             | 3 | 1   | 0  | 4     | 4       |
| Total of       | Theory       | 1                                |   | 1 1 |    | 26    | 26      |
| Practical      | l            |                                  |   |     |    |       |         |
| 7.             | EC2092       | Analog Integrated Circuits Lab   | 0 | 0   | 3  | 3     | 2       |
| 8.             | EC2093       | Digital Electronic Circuits Lab  | 0 | 0   | 3  | 3     | 2       |
| Total of       | Practical    | 1                                | I | 1   | 1  | 6     | 4       |
| Semester Total |              |                                  |   |     | 32 | 30    |         |

#### **SEMESTER-V**

| Theory          |                 | SENTESTER V                          |          |   |   |       |         |
|-----------------|-----------------|--------------------------------------|----------|---|---|-------|---------|
| Sl. No          | Subject Code    | Course Title                         | L        | Т | Р | Total | Credits |
| 1.              | EC3001          | Electromagnetic Theory               | 3        | 1 | 0 | 4     | 4       |
| 2.              | EC3003          | Microprocessors & Microcontrollers   | 3        | 1 | 0 | 4     | 4       |
| 3.              | EL3001          | Control Systems                      | 3        | 1 | 0 | 4     | 4       |
| 4.              | EC3005          | Digital Communication Techniques     | 3        | 1 | 0 | 4     | 4       |
| 5.              | BM5103          | Organizational Behavior              | 2        | 0 | 0 | 2     | 2       |
| 6.              | BM5503          | Quantitative Methods                 | 2        | 0 | 0 | 2     | 2       |
| Total of Theory |                 |                                      |          |   |   | 20    | 20      |
| Practica        | ıl              |                                      |          |   |   |       |         |
| 6.              | EC3091          | Communication Engineering Lab        | 0        | 0 | 3 | 3     | 2       |
| 7.              | EC3093          | Microprocessor & Microcontroller Lab | 0        | 0 | 3 | 3     | 2       |
| 8.              | EI3093          | Control & Instrumentation Lab        | 0        | 0 | 3 | 3     | 2       |
| Sessiona        | al              |                                      |          |   |   | I     | 1       |
| 9.              | TP3081          | CAT-I                                | 2        | 0 | 0 | 2     | 1       |
| Total of        | Practical & Ses | sional                               | <u> </u> | 1 | 1 | 11    | 7       |
| Semester Total  |                 |                                      |          |   |   | 31    | 27      |
|                 |                 | SEMESTER-VI                          |          |   |   | 1     | I       |

#### SEMESTER-VI

|            |                     | SEIVIES I ER- VI                             |   |   |   |       |         |
|------------|---------------------|--|---|---|---|-------|---------|
| Theory     |                     |  |   |   |   |       |         |
| Sl. No     | Subject Code        | Course Title                                 | L | Т | Р | Total | Credits |
| 1.         | EC3002              | Antenna & Wave Propagation                   | 3 | 1 | 0 | 4     | 4       |
| 2.         | EC3004              | VLSI Design                                  | 3 | 0 | 0 | 3     | 3       |
| 3.         | EC3007              | Digital Signal Processing                    | 3 | 1 | 0 | 4     | 4       |
| 4.         |                     | Dept. Elective – I / Open Elective           | 3 | 0 | 0 | 3     | 3       |
| 5.         | EC3006              | Data Communication & Networking              | 3 | 1 | 0 | 4     | 4       |
| 6.         | BM5301              | Marketing Management – I                     | 2 | 0 | 0 | 2     | 2       |
| 7.         | BM5302              | Marketing Management – II                    | 2 | 0 | 0 | 2     | 2       |
| Total of   | Гһеогу              | I  |   |   | 1 | 22    | 22      |
| Practical  |                     |  |   |   |   |       |         |
| 8.         | EC3094              | VLSI Lab                                     | 0 | 0 | 3 | 3     | 2       |
| 9.         | EC3095              | DSP Lab                                      | 0 | 0 | 3 | 3     | 2       |
| 10.        | EC3096              | Electronic System Design & Simulation<br>Lab | 0 | 0 | 3 | 3     | 2       |
| Sessional  |                     |  |   |   |   |       |         |
| 11.        | TP3082              | CAT-II                                       | 2 | 0 | 0 | 2     | 1       |
| Total of I | Practical & Session | onal   |   | 1 | 1 | 11    | 7       |
| Semester   | Total               |  |   |   |   | 33    | 29      |
|            |                     |  |   |   |   |       |         |

#### **SEMESTER-VII**

| Theory          |                   |  |   |   |   |       |         |
|-----------------|-------------------|--|---|---|---|-------|---------|
| Sl. No          | Subject Code      | Course Title                               | L | Т | Р | Total | Credits |
| 1.              | EC4001            | RF & Microwave Engg.                       | 3 | 1 | 0 | 4     | 4       |
| 2.              | EC4003            | Wireless & Mobile Communication Engg.      | 3 | 1 | 0 | 4     | 4       |
| 3.              |                   | Dept. Elective – II                        | 3 | 0 | 0 | 3     | 3       |
| 4.              | BM5203            | Corporate Finance                          | 3 | 1 | 0 | 4     | 4       |
| Total of Theory |                   |  |   |   |   | 15    | 15      |
| Practical       |                   |  |   |   |   |       |         |
| 5.              | EC4091            | Microwave & Antenna Lab                    | 0 | 0 | 3 | 3     | 2       |
| 6.              | EC4093            | Wireless Communication & Networking<br>Lab | 0 | 0 | 3 | 3     | 2       |
| Sessional       |                   |  |   |   |   |       |         |
| 7.              | EC4081            | Project Preparation                        | 0 | 0 | 6 | 6     | 3       |
| 8.              | EC4083            | Practical Training                         | - | - | - | -     | 2       |
| Total of P      | ractical &Session | nal  |   |   |   | 6     | 5       |
| Semester        | Total             |  |   |   |   | 27    | 24      |

#### **SEMESTER-VIII**

| Theory     |                 |                                     |   |   |   |       |         |
|------------|-----------------|-------------------------------------|---|---|---|-------|---------|
| Sl. No     | Subject<br>Code | Course Title                        | L | T | Р | Total | Credits |
| 1.         |                 | Dept. Elective – III                | 3 | 0 | 0 | 3     | 3       |
| 2.         |                 | Dept. Elective – IV / Open Elective | 3 | 0 | 0 | 3     | 3       |
| 3.         | BM5601          | Information Technology for Managers | 2 | 0 | 0 | 2     | 2       |
| 4.         | BM5602          | Enterprise Information System       | 2 | 0 | 0 | 2     | 2       |
| Total of 7 | Total of Theory |                                     |   |   |   | 10    | 10      |
| Sessional  |                 |                                     |   |   |   |       | •       |
| 5.         | EC4082          | Project                             | 0 | 0 | 9 | 9     | 5       |
| 6.         | EC4084          | Seminar                             | 0 | 0 | 3 | 3     | 2       |
| 7.         | EC4086          | General Viva-Voce                   | - | - | - | -     | 2       |
| Total of S | Sessional       | •                                   | • | • | • | 12    | 9       |
| Semester   | r Total         |                                     |   |   |   | 22    | 19      |

\* On - the - Job Training (OJT) of 20 Credits is to be covered in the Summer Term after 8th Semester.

| Theory     |              |  |   |          |   |       |         |
|------------|--------------|--|---|----------|---|-------|---------|
| Sl. No     | Subject Code | Course Title   | L | Т        | Р | Total | Credits |
| 1.         | BM5801       | Production and Operation Management                    | 3 | 1        | 0 | 4     | 4       |
| 2.         | BM6703       | Business Ethics and Corporate Social<br>Responsibility | 2 | 0        | 0 | 2     | 2       |
| 3.         | BM6702       | Legal Aspect of Business                               | 2 | 0        | 0 | 2     | 2       |
| 4.         | BM5502       | Business Research Methods                              | 2 | 0        | 0 | 2     | 2       |
| 5.         | BM5102       | Human Resource Management                              | 2 | 0        | 0 | 2     | 2       |
| 6.         | BM6701       | Strategic Management                                   | 4 | 0        | 0 | 4     | 4       |
| 7.         |              | MBA Elective - 1                                       | 2 | 0        | 0 | 2     | 2       |
| 8.         |              | MBA Elective - 2                                       | 2 | 0        | 0 | 2     | 2       |
| 9.         |              | MBA Elective - 3                                       | 2 | 0        | 0 | 2     | 2       |
| 10.        |              | MBA Elective - 4                                       | 2 | 0        | 0 | 2     | 2       |
| Total of 7 | Theory       | 1  |   | <u>I</u> | 1 | 24    | 24      |
| Semester   | Total        |  |   |          |   | 24    | 24      |

#### SEMESTER-IX

#### **SEMESTER-X**

| Theory<br>Sl. No | Total           | Credits           |   |   |   |       |         |
|------------------|-----------------|-------------------|---|---|---|-------|---------|
| 51.110           | Subject<br>Code | Course Title      | L | Т | P | Iotai | cicuits |
| 1.               |                 | MBA Elective - 5  | 2 | 0 | 0 | 2     | 2       |
| 2.               |                 | MBA Elective - 6  | 2 | 0 | 0 | 2     | 2       |
| 3.               |                 | MBA Elective - 7  | 2 | 0 | 0 | 2     | 2       |
| 4.               |                 | MBA Elective - 8  | 2 | 0 | 0 | 2     | 2       |
| 5.               |                 | MBA Elective - 9  | 2 | 0 | 0 | 2     | 2       |
| 6.               |                 | MBA Elective - 10 | 2 | 0 | 0 | 2     | 2       |
| 7.               |                 | MBA Elective - 11 | 2 | 0 | 0 | 2     | 2       |
| 8.               |                 | MBA Elective - 12 | 2 | 0 | 0 | 2     | 2       |
| 9.               |                 | MBA Elective - 13 | 2 | 0 | 0 | 2     | 2       |
| 10.              |                 | MBA Elective - 14 | 2 | 0 | 0 | 2     | 2       |
| 11.              |                 | MBA Elective - 15 | 2 | 0 | 0 | 2     | 2       |
| 12.              |                 | MBA Elective - 16 | 2 | 0 | 0 | 2     | 2       |
| fotal of T       | Cotal of Theory |                   |   |   |   |       |         |

#### LIST OF DEPARTMENT ELECTIVES

#### **Department Elective - I**

| Sl.No. | Subject Code | Subject Name               | Credit |
|--------|--------------|----------------------------|--------|
| 1.     | EC3022       | Advanced Microprocessors   | 3      |
| 2.     | EC3024       | Embedded Systems           | 3      |
| 3.     | EC3026       | Computational Intelligence | 3      |
| 4.     | EE3028       | Power Electronics Circuits | 3      |

#### **Department Elective - II**

| Sl.No. | Subject Code | Subject Name                            | Credit |
|--------|--------------|---|--------|
| 1.     | EL4001       | Industrial Automation & Control         | 3      |
| 2.     | EC4021       | Radar & Television Engg                 | 3      |
| 3.     | EC4023       | Adaptive Systems & Signal Processing    | 3      |
| 4.     | EI4025       | Principle of Analytical Instrumentation | 3      |

#### **Department Elective - III**

| Sl.No. | Subject Code | Subject Name                          | Credit |
|--------|--------------|---------------------------------------|--------|
| 1.     | EC4025       | Optical & Satellite Communication     | 3      |
| 2.     | CS3032       | RDBMS                                 | 3      |
| 3.     | EC6102       | Telecom Switching, Network & Protocol | 3      |
| 4.     | EC6224       | Low Power VLSI Design                 | 3      |

#### **Department Elective - IV**

| Sl.No. | Subject Code | Subject Name                     | Credit |
|--------|--------------|----------------------------------|--------|
| 1.     | EC6108       | Digital Image Processing         | 3      |
| 2.     | EC4044       | Information Theory & Coding      | 3      |
| 3.     | EC6112       | Communication & Network Security | 3      |
| 4.     | EC6128       | Wireless Sensor Network          | 3      |

#### COURSE STRUCTURE FOR B.TECH IN MECHANICAL ENGINEERING AND MBA **SEMESTER-III**

| Theory                         |                    |                                  |   |   |    |       |        |
|--------------------------------|--------------------|----------------------------------|---|---|----|-------|--------|
| Sl No.                         | <b>Course Code</b> | Subject                          | L | Т | Р  | Total | Credit |
| 1                              | ME2001             | Engineering Thermodynamics       | 3 | 1 | 0  | 4     | 4      |
| 2                              | ME2003             | Fluid Mechanics                  | 3 | 0 | 0  | 3     | 3      |
| 3                              | ME2005             | Mechanics of Solids              | 3 | 1 | 0  | 4     | 4      |
| 4                              | ME2007             | Material Science and Engineering | 3 | 0 | 0  | 3     | 3      |
| 5                              | ME2009             | Kinematic & Kinetics of Machines | 3 | 0 | 0  | 3     | 3      |
| 6                              | MA2001             | Mathematics-III                  | 3 | 1 | 0  | 4     | 4      |
| 7                              | BM5201             | Financial Accounting             | 2 | 0 | 0  | 2     | 2      |
| 8                              | BM5202             | Cost and Management Accounting   | 2 | 0 | 0  | 2     | 2      |
| Total of '                     | Гheory             |                                  |   | 1 |    | 25    | 25     |
| Practical                      |                    |                                  |   |   |    | II    |        |
| 1                              | ME2091             | Fluid Mechanics Lab              | 0 | 0 | 3  | 3     | 2      |
| 2                              | ME2093             | Material Testing Lab             | 0 | 0 | 3  | 3     | 2      |
| 3                              | ME2095             | Kinematics Lab                   | 0 | 0 | 3  | 3     | 2      |
| Sessional                      |                    |                                  | I | 1 | L  |       |        |
| 1                              | ME2081             | Machine Drawing                  | 0 | 0 | 3  | 3     | 2      |
| Total of Practical & Sessional |                    |                                  |   |   | 12 | 8     |        |
| Semester                       | Total              |                                  |   |   |    | 37    | 33     |

#### SEMESTER-IV

| <b>TI</b>      |                     |  |   |   |   |       |        |
|----------------|---------------------|--|---|---|---|-------|--------|
| Theory         |                     |  | - | , |   | 1     |        |
| Sl No.         | <b>Course Code</b>  | Subject  | L | Т | Р | Total | Credit |
| 1              | ME2002              | Machine Dynamics   | 3 | 0 | 0 | 3     | 3      |
| 2              | ME2004              | Heat Transfer  | 3 | 1 | 0 | 4     | 4      |
| 3              | ME2006              | Basic Manufacturing Processes                                | 3 | 0 | 0 | 3     | 3      |
| 4              | EE2006              | Introduction to Electrical Machines and<br>Power Electronics | 3 | 0 | 0 | 3     | 3      |
| 5              | MA2004              | Numerical Methods  | 3 | 1 | 0 | 4     | 4      |
| 6              | CH2001              | Environmental Science  | 2 | 0 | 0 | 2     | 2      |
| 7              | BM5403              | Manegerial Economics   | 3 | 1 | 0 | 4     | 4      |
| Total of       | Theory              |  |   |   |   | 23    | 23     |
| Practical      | l                   |  |   |   |   |       |        |
| 1              | ME2092              | Machine Dynamics Lab   | 0 | 0 | 3 | 3     | 2      |
| 2              | ME2094              | Heat Trasfer Lab   | 0 | 0 | 3 | 3     | 2      |
| 3              | EE2098              | Electrical Machines and Power Electronics<br>Lab             | 0 | 0 | 3 | 3     | 2      |
| Sessional      | l                   |  |   |   |   |       |        |
| 1              | ME2082              | Manufacturing Practice                                       | 0 | 0 | 3 | 3     | 2      |
| 2              | HS2081              | Language Lab   | 0 | 0 | 2 | 2     | 1      |
| Total of       | Practical & Sessior | nal  |   |   |   | 14    | 9      |
| Semester Total |                     |  |   |   |   | 37    | 32     |

#### SEMESTER-V

| Theory     |                |  |   |   |   |          |        |
|------------|----------------|--|---|---|---|----------|--------|
| Sl No.     | Course<br>Code | Subject                                    | L | Т | Р | Total    | Credit |
| 1          | ME3001         | Fluid Dynamics & Hydraulic Machines        | 3 | 1 | 0 | 4        | 4      |
| 2          | ME3003         | Internal Combustion Engines & Gas Turbines | 3 | 0 | 0 | 3        | 3      |
| 3          | ME3005         | Mechanical Measurements and Control        | 3 | 0 | 0 | 3        | 3      |
| 4          | ME3007         | Manufacturing Processes and Design         | 3 | 0 | 0 | 3        | 3      |
| 5          | ME3009         | Fundamentals of Machine Design             | 3 | 0 | 0 | 3        | 3      |
| 6          | BM5103         | Organizational Behaviour                   | 2 | 0 | 0 | 2        | 2      |
| 7          | BM5503         | Quantitative Methods                       | 2 | 0 | 0 | 2        | 2      |
| Total of T | heory          |  |   | 1 |   | 20       | 20     |
| Practical  |                |  |   |   |   | <u> </u> |        |
| 1          | ME3091         | Hydraulic Machines Lab                     | 0 | 0 | 3 | 3        | 2      |
| 2          | ME3093         | Measurements and Instrumentation Lab       | 0 | 0 | 3 | 3        | 2      |
| Sessional  |                |  |   |   |   |          |        |
| 1          | ME3081         | Machine Design                             | 0 | 0 | 3 | 3        | 2      |
| 2          | ME3083         | CAD Lab                                    | 0 | 0 | 3 | 3        | 2      |
| 3          | TP3081         | CAT-I                                      | 0 | 0 | 2 | 2        | 1      |
| Total of P | ractical & Ses | sional                                     | I | 1 | I | 14       | 9      |
| Semester   | Total          |  |   |   |   | 34       | 29     |

#### SEMESTER-VI

| Theory                         |             |  |   |   |   |       |        |
|--------------------------------|-------------|--|---|---|---|-------|--------|
| SI No.                         | Course Code | Subject                                    | L | Т | Р | Total | Credit |
| 1                              | ME3002      | Refrigeration & Air Conditioning           | 3 | 0 | 0 | 3     | 3      |
| 2                              | ME3004      | Metal Cutting & Cutting Tool Design        | 3 | 1 | 0 | 4     | 4      |
| 3                              | ME3006      | Metrology, Quality Control and Reliability | 3 | 0 | 0 | 3     | 3      |
| 4                              | ME3008      | Industrial Engineering & Management        | 3 | 0 | 0 | 3     | 3      |
| 5                              | ME3012      | Design of Machine Elements                 | 3 | 0 | 0 | 3     | 3      |
| 6                              | BM5301      | Marketing Management - I                   | 2 | 0 | 0 | 2     | 2      |
| 7                              | BM5302      | Marketing Management - II                  | 2 | 0 | 0 | 2     | 2      |
| Total of T                     | heory       |  |   |   |   | 20    | 20     |
| Practical                      |             |  |   |   |   |       |        |
| 1                              | ME3092      | IC Engines & RAC Lab                       | 0 | 0 | 3 | 3     | 2      |
| 2                              | ME3094      | Computational Technique Practice lab       | 0 | 0 | 3 | 3     | 2      |
| Sessional                      |             |  |   |   |   |       |        |
| 1                              | ME3082      | Metal Cutting & Cutting Tool Design        | 0 | 0 | 3 | 3     | 2      |
| 2                              | ME3084      | Computer aided design and Analysis         | 0 | 0 | 3 | 3     | 2      |
| 3                              | TP3082      | CAT-II                                     | 0 | 0 | 2 | 2     | 1      |
| Total of Practical & Sessional |             |  |   |   |   |       | 9      |
| Semester                       | Total       |  |   |   |   | 34    | 29     |

#### SEMESTER-VII

| Theory         |                 |                                      |   |   |   |       |        |
|----------------|-----------------|--------------------------------------|---|---|---|-------|--------|
| Sl No.         | Course<br>Code  | Subject                              | L | Т | Р | Total | Credit |
| 1              | ME4001          | Advanced Manufacturing Processes     | 3 | 0 | 0 | 3     | 3      |
| 2              |                 | Department Elective-I                | 3 | 0 | 0 | 3     | 3      |
| 3              |                 | Department Elective-II/Open Elective | 3 | 0 | 0 | 3     | 3      |
| 4              | BM5203          | Corporate Finance                    | 3 | 1 | 0 | 4     | 4      |
|                |                 |                                      |   |   |   |       |        |
| Total of Th    | neory           |                                      |   |   |   | 13    | 13     |
| Practical      |                 |                                      |   |   |   | ·     |        |
| 1              | ME4091          | Advanced Manufacturing Process Lab   | 0 | 0 | 3 | 3     | 2      |
| Sessional      |                 | -                                    |   |   | 1 | •     |        |
| 1              | ME4081          | Project Preparation                  | 0 | 0 | 6 | 6     | 3      |
| 2              | ME4083          | Practical Training                   | - | - | - | -     | 2      |
| Total of Pr    | actical & Sessi | onal                                 | · |   |   | 9     | 7      |
| Semester Total |                 |                                      |   |   |   | 22    | 20     |

#### SEMESTER-VIII

| Theory             |                    |  |   |   |   |          |        |
|--------------------|--------------------|--|---|---|---|----------|--------|
| Sl No.             | <b>Course Code</b> | Subject                                | L | Т | Р | Total    | Credit |
| 1                  |                    | Department Elective-III/ Open Elective | 3 | 0 | 0 | 3        | 3      |
| 2                  | BM5601             | Information Technology for mangers     | 2 | 0 | 0 | 2        | 2      |
| 3                  | BM5602             | Enterprise Information System          | 2 | 0 | 0 | 2        | 2      |
| Total of 7         | Theory             |  | 1 | 1 | 1 | 7        | 7      |
| Sessional          |                    |  |   |   |   | <u> </u> |        |
| 1                  | ME4082             | Project                                | 0 | 0 | 9 | 9        | 5      |
| 2                  | ME4084             | Seminar                                | 0 | 0 | 3 | 3        | 2      |
| 3                  | ME4086             | Comprehensive Viva                     | - | - | - | -        | 2      |
| Total of Sessional |                    |  |   |   |   |          | 9      |
| Semester Total     |                    |  |   |   |   |          | 16     |

\* On - the - Job Training (OJT) of 20 Credits is to be covered in the Summer Term after 8th Semester.

| Theory   |         |   |   |   |   |       |        |
|----------|---------|---|---|---|---|-------|--------|
| SI No.   | Course  | Subject   | L | Т | Р | Total | Credit |
| 51 100.  | Code    | Subject   |   | 1 | r | Total | Crean  |
| 1        | BM5801  | Production and Operation Management                 | 3 | 1 | 0 | 4     | 4      |
| 2        | BM6703  | Business Ethics and Corporate Social Responsibility | 2 | 0 | 0 | 2     | 2      |
| 3        | BM6702  | Legal Aspects of Business                           | 2 | 0 | 0 | 2     | 2      |
| 4        | BM5502  | Business Research Methodology                       | 2 | 0 | 0 | 2     | 2      |
| 5        | BM5102  | Human Resource Management                           | 2 | 0 | 0 | 2     | 2      |
| 6        | BM6701  | Strategic Management                                | 3 | 1 | 0 | 4     | 4      |
| 7        |         | MBA Elective-1                                      | 2 | 0 | 0 | 2     | 2      |
| 8        |         | MBA Elective-2                                      | 2 | 0 | 0 | 2     | 2      |
| 9        |         | MBA Elective-3                                      | 2 | 0 | 0 | 2     | 2      |
| 10       |         | MBA Elective-4                                      | 2 | 0 | 0 | 2     | 2      |
| Total of | Theory  | 1   | I | 1 | 1 | 24    | 24     |
| Semeste  | r Total |   |   |   |   | 24    | 24     |

#### SEMESTER-IX

#### SEMESTER-X

| Theory       |             |                 |   |   |   |       |        |
|--------------|-------------|-----------------|---|---|---|-------|--------|
| Sl No.       | Course Code | Subject         | L | Т | Р | Total | Credit |
| Sessional    |             |                 |   |   | I | I     |        |
| 1            |             | MBA Elective-5  | 2 | 0 | 0 | 2     | 2      |
| 2            |             | MBA Elective-6  | 2 | 0 | 0 | 2     | 2      |
| 3            |             | MBA Elective-7  | 2 | 0 | 0 | 2     | 2      |
| 4            |             | MBA Elective-8  | 2 | 0 | 0 | 2     | 2      |
| 5            |             | MBA Elective-9  | 2 | 0 | 0 | 2     | 2      |
| 6            |             | MBA Elective-10 | 2 | 0 | 0 | 2     | 2      |
| 7            |             | MBA Elective-11 | 2 | 0 | 0 | 2     | 2      |
| 8            |             | MBA Elective-12 | 2 | 0 | 0 | 2     | 2      |
| 9            |             | MBA Elective-13 | 2 | 0 | 0 | 2     | 2      |
| 10           |             | MBA Elective-14 | 2 | 0 | 0 | 2     | 2      |
| 11           |             | MBA Elective-15 | 2 | 0 | 0 | 2     | 2      |
| 12           |             | MBA Elective-16 | 2 | 0 | 0 | 2     | 2      |
| Total of The | eory        | I               |   | 1 | 1 | 24    | 24     |

#### LIST OF DEPARTMENT ELECTIVES

#### **Department Elective - I**

| Sl.No. | Subject Code | Subject Name                           | Credit |
|--------|--------------|--|--------|
| 1.     | ME4021       | Automobile Engineering                 | 3      |
| 2.     | ME4023       | Gas Dynamics & Jet Propulsion          | 3      |
| 3.     | ME4025       | Computational Fluid Dynamics           | 3      |
| 4.     | ME4027       | Micro and Nano Fluidics                | 3      |
| 5.     | ME4029       | Alternative Fuels and Renewable Energy | 3      |

#### **Department Elective - II**

| Sl.No. | Subject Code | Subject Name                               | Credit |
|--------|--------------|--|--------|
| 1.     | ME4041       | Mechanical Vibration and Noise Engineering | 3      |
| 2.     | ME4043       | Introduction to Composite Materials        | 3      |
| 3.     | ME4045       | Introduction to Finite Element Method      | 3      |
| 4.     | ME4047       | Tribology                                  | 3      |
| 5.     | ME4049       | Advanced Mechanics of Solids               | 3      |

#### **Department Elective - III**

| Sl.No. | Subject Code | Subject Name                               | Credit |
|--------|--------------|--|--------|
| 1.     | ME4042       | Machine Maintenance & Condition Monitoring | 3      |
| 2.     | ME4044       | Rapid Prototyping                          | 3      |
| 3.     | ME4046       | Artificial Inteligence Techniques          | 3      |
| 4.     | ME4048       | Intellectual Property Right                | 3      |
| 5.     | ME4052       | Nano Technology                            | 3      |
|        |              |  |        |

#### COURSE STRUCTURE FOR DUAL DEGREE IN SCHOOL OF MANAGEMENT

#### **MBA - CORE AND ELECTIVE COURSES**

| SI.<br>No | Code   | Course  | Credits | Core / Elective |
|-----------|--------|---|---------|-----------------|
| 1         | BM5403 | Managerial Economics                                | 4       | Core            |
| 2         | BM5503 | Quantitative Methods                                | 2       | Core            |
| 3         | BM5502 | Business Research Methodology                       | 2       | Core            |
| 4         | BM5201 | Financial Accounting                                | 2       | Core            |
| 5         | BM5202 | Cost and Management Accounting                      | 2       | Core            |
| 6         | BM5203 | Corporate Finance                                   | 4       | Core            |
| 7         | BM5103 | Organizational Behavior                             | 2       | Core            |
| 8         | BM5102 | Human Resource Management                           | 2       | Core            |
| 9         | BM5601 | Information Technology for Managers                 | 2       | Core            |
| 10        | BM5602 | Enterprise Information Systems                      | 2       | Core            |
| 11        | BM5301 | Marketing Management - I                            | 2       | Core            |
| 12        | BM5302 | Marketing Management - II                           | 2       | Core            |
| 13        | BM6701 | Strategic Management                                | 4       | Core            |
| 15        | BM6702 | Legal Aspects of Business                           | 2       | Core            |
| 16        | BM6703 | Business Ethics and Corporate Social Responsibility | 2       | Core            |
| 17        | BM5801 | Production and Operations Management                | 4       | Core            |
| 18        | BM6201 | International Financial Management                  | 2       | Elective        |
| 19        | BM6202 | Corporate Governance                                | 2       | Elective        |
| 20        | BM6203 | Financial Services                                  | 2       | Elective        |
| 21        | BM6204 | Mergers, Acquisitions and Corporate Restructuring   | 2       | Elective        |
| 22        | BM6205 | Project Finance                                     | 2       | Elective        |
| 23        | BM6206 | Security Analysis & Portfolio Management            | 2       | Elective        |
| 24        | BM6207 | Derivatives and Risk Management                     | 2       | Elective        |
| 25        | BM6208 | Corporate Tax Planning                              | 2       | Elective        |
| 26        | BM6209 | Banking Operation & Regulations                     | 2       | Elective        |
| 27        | BM6210 | Business Analysis and Valuation                     | 2       | Elective        |
| 28        | BM6211 | Management Control Systems                          | 2       | Elective        |
| 29        | BM6212 | Infrastructure Development and Financing            | 2       | Elective        |
| 30        | BM6101 | Labour Laws   | 2       | Elective        |
| 31        | BM6102 | Training and Development                            | 2       | Elective        |
| 32        | BM6103 | Performance and Compensation Management             | 2       | Elective        |
| 33        | BM6104 | Manpower planning                                   | 2       | Elective        |
| 34        | BM6105 | Organization Development and Change                 | 2       | Elective        |
| 35        | BM6106 | Managing Employee Relations                         | 2       | Elective        |
| 36        | BM6107 | Leadership for Corporate Excellence                 | 2       | Elective        |
| 37        | BM6108 | Managerial Effectiveness                            | 2       | Elective        |
| 38        | BM6109 | Assessment Development Centre                       | 2       | Elective        |
| 39        | BM6110 | Recruitment and Selection                           | 2       | Elective        |
| 40        | BM6601 | Data Mining and Business Intelligence               | 2       | Elective        |

| 41 | BM6602 | KM and DSS   | 2 | Elective |
|----|--------|--|---|----------|
| 42 | BM6603 | Information Security and Risk Management                 | 2 | Elective |
| 43 | BM6604 | Software Project Management                              | 2 | Elective |
| 44 | BM6605 | Information Technology Infrastructure Management         | 2 | Elective |
| 45 | BM6606 | Planning and Implementing IT Strategies                  | 2 | Elective |
| 46 | BM6607 | ERPS   | 2 | Elective |
| 47 | BM6608 | Service Oriented Architecture and Web Services           | 2 | Elective |
| 48 | BM6609 | Cyber Law and Ethics in Information Technology           | 2 | Elective |
| 49 | BM6610 | E-Business   | 2 | Elective |
| 50 | BM6301 | Consumer Behavior  | 2 | Elective |
| 51 | BM6302 | Product & Brand Management                               | 2 | Elective |
| 52 | BM6303 | Services Marketing                                       | 2 | Elective |
| 53 | BM6304 | Sales & Distribution Management                          | 2 | Elective |
| 54 | BM6305 | Retail Management  | 2 | Elective |
| 55 | BM6306 | B2B Marketing  | 2 | Elective |
| 56 | BM6307 | Real Estate Marketing                                    | 2 | Elective |
| 57 | BM6308 | Customer Relationship Management                         | 2 | Elective |
| 58 | BM6309 | Integrated Marketing Communications                      | 2 | Elective |
| 59 | BM6310 | Hospitality & Tourism Marketing                          | 2 | Elective |
| 60 | BM6311 | Marketing Research                                       | 2 | Elective |
| 61 | BM6312 | Digital and Social Media Marketing                       | 2 | Elective |
| 62 | BM6313 | Agency and Media Management                              | 2 | Elective |
| 63 | BM5704 | Game Theory  | 2 | Elective |
| 64 | BM6891 | Fundamentals of Product Lifecycle Management             | 2 | Elective |
| 65 | BM6801 | Product Lifecycle Management and Product Data Management | 2 | Elective |
| 66 | BM6802 | Product Design and Development                           | 2 | Elective |
| 67 | BM6803 | Digital Manufacturing and Virtual Factory                | 2 | Elective |
| 68 | BM6804 | Customer Response to Manufactured Products               | 2 | Elective |
| 69 | BM6805 | Enterprise Resource Planning Systems                     | 2 | Elective |
| 70 | BM6608 | Service Oriented Architecture and Web Services           | 2 | Elective |
| 71 | BM6807 | Total Quality Management                                 | 2 | Elective |
| 72 | BM6808 | Supply Chain Management                                  | 2 | Elective |
| 73 | BM6809 | Project Management                                       | 2 | Elective |
| 74 | BM6810 | Technology Management                                    | 2 | Elective |
| 75 | BM6811 | Managing Service Operations                              | 2 | Elective |
| 76 | BM6812 | Innovation and Business Sustainability                   | 2 | Elective |
| 77 | BM6813 | Business by Design                                       | 2 | Elective |
|    |        |  |   |          |



### Kalinga Institute of Industrial Technology

#### **KIIT UNIVERSITY**

KIIT, Bhubaneswar-751024 Ph:(0674)-2725481, 2725171, 2740326,Fax: 0674 2725481, E.mail: kiit@kiit.ac.in, Website:www.kiit.ac.in