

**M. Tech: CAD/CAM & Robotics**  
**Curriculum**  
**First Semester**

| S No          | Course Code | Course Title                          | L | T | P | C  | Prerequisite |
|---------------|-------------|---------------------------------------|---|---|---|----|--------------|
| 1             | MATH5001    | Adv, Numerical and Statistical method | 3 | 1 | 0 | 3  | -            |
| 2             | MCCR5005    | COMPOSITE MATERIALS                   | 3 | 0 | 0 | 3  | -            |
| 3             | MCCR5004    | MODELLING & SIMULATION                | 3 | 0 | 0 | 3  | -            |
| 4             | MCCR5001    | ADVANCED COMPUTER AIDED DESIGN        | 3 | 0 | 0 | 3  | -            |
| 5             | MCCR5003    | ROBOTICS & CONTROL                    | 3 | 0 | 0 | 3  | -            |
| 6             | MCCR5002    | COMPUTER INTEGRATED MANUFACTURING     | 3 | 0 | 0 | 3  | -            |
| 7             | MCCR5006    | CIM LAB                               | 0 | 0 | 2 | 1  |              |
| Total credits |             |                                       |   |   |   | 19 |              |

**Second Semester**

| S No | Course Code | Course Title                          | L  | T | P | C  | Prerequisite |
|------|-------------|---------------------------------------|----|---|---|----|--------------|
| 1    | CENG5001    | Professional and Communication Skills | 0  | 0 | 4 | 2  | -            |
| 2    | MCCR5007    | Finite Element Methods                | 2  | 1 | 0 | 3  | -            |
| 3    | MCCR5008    | Computer Integrated Manufacturing     | 3  | 0 | 0 | 3  | -            |
| 4    | MCCR5009    | Advanced Vibration Engineering        | 3  | 0 | 0 | 3  | -            |
| 5    | MCCR5010    | Computer Aided Process Planning       | 2  | 0 | 0 | 2  | -            |
| 6    |             | Elective 1                            | 3  | 0 | 0 | 3  | -            |
| 7    |             | Elective 2                            | 3  | 0 | 0 | 3  | -            |
|      |             | Total                                 | 16 | 1 | 4 | 19 |              |

**Third Semester**

| S No | Course Code | Course Title | L | T | P | C | Prerequisite |
|------|-------------|--------------|---|---|---|---|--------------|
|------|-------------|--------------|---|---|---|---|--------------|

|               |          |  |   |   |   |    |   |
|---------------|----------|--|---|---|---|----|---|
| 1             | MCCR6001 | Advanced Computer Aided Design and Manufacturing Lab | 0 | 0 | 4 | 2  | - |
| 2             | MCCR9998 | Dessertation-1                                       | - | - | - | 5  | - |
| 3             |          | Elective 3   | 3 | 0 | 0 | 3  | - |
| 4             |          | Elective 4   | 3 | 0 | 0 | 3  | - |
| 5             |          | Elective 5   | 3 | 0 | 0 | 3  | - |
| Total credits |          |  |   |   |   | 16 |   |

#### Fourth Semester

| S No          | Course Code | Course Title   | L | T | P | C  | Prerequisite |
|---------------|-------------|----------------|---|---|---|----|--------------|
| 1             | MCCR9999    | Dissertation-2 | - | - | - | 15 | MCCR9999     |
| Total credits |             |                |   |   |   | 15 |              |

#### Programme Electives (Total Credits to be taken = 15 for 5 courses)

| S. No. | Course Code | Course Title                                  | L | T | P | C | Prerequisite/<br>Exposure |
|--------|-------------|---|---|---|---|---|---------------------------|
| 1      | MCCR5021    | AUTOMATED MATERIAL HANDLING SYSTEM            | 3 | 0 | 0 | 3 | -                         |
| 2      | MCCR5022    | FINITE ELEMENT METHODS                        | 3 | 0 | 0 | 3 | -                         |
| 3      | MCCR5023    | COMPOSITE MATERIALS                           | 3 | 0 | 0 | 3 | -                         |
| 4      | MCCR5024    | ADVANCED AUTOMATIC CONTROL                    | 3 | 0 | 0 | 3 | -                         |
| 5      | MCCR5025    | COMPUTATIONAL FLUID DYNAMICS & HEAT TRANSFER  | 3 | 0 | 0 | 3 | -                         |
| 6      | MCCR5026    | ADVANCED ROBOTICS                             | 3 | 0 | 0 | 3 | -                         |
| 7      | MCCR5027    | SMART MATERIALS                               | 3 | 0 | 0 | 3 | -                         |
| 8      | MCCR5028    | COMPUTER AIDED ANALYSIS OF MECHANICAL SYSTEMS | 3 | 0 | 0 | 3 | -                         |
| 9      | MCCR5029    | FRACTURE MECHANICS                            | 3 | 0 | 0 | 3 | -                         |
| 10     | MCCR5030    | MANUFACTURING SYSTEM ANALYSIS                 | 3 | 0 | 0 | 3 | -                         |

