

## BRANCH X: DIPLOMA IN AUTOMOBILE ENGINEERING

| Course Code | Course Title                                  | Hours/Week |          |           | Credits | Maximum Marks |     |       |
|-------------|-----------------------------------------------|------------|----------|-----------|---------|---------------|-----|-------|
|             |                                               | Lecture    | Tutorial | Practical |         | CA            | FE  | Total |
| SEMESTER 1  |                                               |            |          |           |         |               |     |       |
| THEORY      |                                               |            |          |           |         |               |     |       |
| X21101      | ENGINEERING MATHEMATICS -I                    | 4          | 1        | -         | 5       | 25            | 75  | 100   |
| X21102      | PHYSICS                                       | 4          | 1        | -         | 5       | 25            | 75  | 100   |
| X21103      | CHEMISTRY                                     | 4          | -        | -         | 4       | 25            | 75  | 100   |
| X21104      | ENGLISH                                       | 4          | -        | -         | 4       | 25            | 75  | 100   |
| B21105      | ENGINEERING GRAPHICS- I                       | 2          | -        | 3         | 3.5     | 25            | 75  | 100   |
| PRACTICALS  |                                               |            |          |           |         |               |     |       |
| X21151      | PHYSICS LABORATORY                            | -          | -        | 2         | 1       | 25            | 75  | 100   |
| X21152      | CHEMISTRY LABORATORY                          | -          | -        | 2         | 1       | 25            | 75  | 100   |
| B21153      | FITTING, SHEET METAL & WIRING WORKSHOP        | -          | -        | 3         | 1.5     | 25            | 75  | 100   |
| B21154      | INPLANT TRAINING                              | -          | -        | 3         | 1.5     | -             | -   | GRADE |
| X21155      | PHYSICAL EDUCATION - I                        | -          | -        | 2         | 1       | -             | -   | GRADE |
|             | TOTAL                                         | 18         | 2        | 15        | 27.5    | 200           | 600 | 800   |
| SEMESTER 2  |                                               |            |          |           |         |               |     |       |
| THEORY      |                                               |            |          |           |         |               |     |       |
| X21201      | ENGINEERING MATHEMATICS -II                   | 4          | 1        | -         | 5       | 25            | 75  | 100   |
| X21202      | CALCULUS AND ITS APPLICATIONS                 | 4          | 1        | -         | 5       | 25            | 75  | 100   |
| B21203      | ENGINEERING PHYSICS                           | 4          | -        | -         | 4       | 25            | 75  | 100   |
| B21204      | CHEMISTRY OF ENGINEERING MATERIALS            | 4          | -        | -         | 4       | 25            | 75  | 100   |
| B21205      | ENGINEERING GRAPHICS - II                     | 2          | -        | 3         | 3.5     | 25            | 75  | 100   |
| PRACTICALS  |                                               |            |          |           |         |               |     |       |
| B21251      | ENGINEERING PHYSICS LABORATORY                | -          | -        | 2         | 1       | 25            | 75  | 100   |
| B21252      | CHEMISTRY OF ENGINEERING MATERIALS LABORATORY | -          | -        | 2         | 1       | 25            | 75  | 100   |
| B21253      | FOUNDRY AND WELDING LABORATORY                | -          | -        | 3         | 1.5     | 25            | 75  | 100   |
| B21254      | COMMUNICATIVE ENGLISH LABORATORY              | 1          | -        | 2         | 2       | 25            | 75  | 100   |
| X21255      | PHYSICAL EDUCATION -II                        | -          | -        | 2         | 1       | -             | -   | GRADE |
|             | TOTAL                                         | 19         | 2        | 14        | 28      | 225           | 675 | 900   |
| SEMESTER 3  |                                               |            |          |           |         |               |     |       |
| THEORY      |                                               |            |          |           |         |               |     |       |
| B21301      | PROBABILITY AND STATISTICS                    | 4          | 1        | -         | 5       | 25            | 75  | 100   |
| B21302      | THERMAL ENGINEERING                           | 4          | 1        | -         | 5       | 25            | 75  | 100   |
| B21303      | AUTOMOTIVE ENGINE SYSTEMS                     | 4          | 1        | -         | 5       | 25            | 75  | 100   |
| B21304      | PRODUCTION TECHNOLOGY                         | 4          | 1        | -         | 5       | 25            | 75  | 100   |
| PRACTICALS  |                                               |            |          |           |         |               |     |       |
| B21351      | BASICS OF COMPUTING AND INFORMATICS           | -          | -        | 3         | 1.5     | 25            | 75  | 100   |
| B21352      | THERMAL ENGINEERING LABORATORY                | -          | -        | 3         | 1.5     | 25            | 75  | 100   |
| B21353      | AUTOMOTIVE ENGINE SYSTEMS LABORATORY          | -          | -        | 3         | 1.5     | 25            | 75  | 100   |
| B21354      | MACHINE SHOP PRACTICE                         | -          | -        | 3         | 1.5     | 25            | 75  | 100   |
| B21355      | TECHNICAL COMMUNICATION LABORATORY            | 1          | -        | 2         | 2       | 25            | 75  | 100   |
|             | TOTAL                                         | 17         | 4        | 14        | 28      | 225           | 675 | 900   |

Legend: **CA**–Continuous Assessment; **FE**–Final Examination;

| Course Code | Course Title                                     | Hours/Week |          |           | Credits | Maximum Marks |     |       |
|-------------|--------------------------------------------------|------------|----------|-----------|---------|---------------|-----|-------|
|             |                                                  | Lecture    | Tutorial | Practical |         | CA            | FE  | Total |
| SEMESTER 4  |                                                  |            |          |           |         |               |     |       |
| THEORY      |                                                  |            |          |           |         |               |     |       |
| B21401      | MECHANICS OF MATERIALS                           | 4          | 1        | -         | 5       | 25            | 75  | 100   |
| B21402      | FLUID MECHANICS AND FLUID POWER                  | 4          | 1        | -         | 5       | 25            | 75  | 100   |
| B21403      | DESIGN & SELECTION OF MACHINE ELEMENTS           | 4          | 1        | -         | 5       | 25            | 75  | 100   |
| B21404      | AUTOMOTIVE TRANSMISSION SYSTEMS                  | 4          | -        | -         | 4       | 25            | 75  | 100   |
| PRACTICALS  |                                                  |            |          |           |         |               |     |       |
| B21451      | MATERIAL TESTING LABORATORY                      | -          | -        | 3         | 1.5     | 25            | 75  | 100   |
| B21452      | FLUID MECHANICS LABORATORY                       | -          | -        | 3         | 1.5     | 25            | 75  | 100   |
| B21453      | AUTOMOTIVE TRANSMISSION SYSTEMS LABORATORY       | -          | -        | 3         | 1.5     | 25            | 75  | 100   |
| B21454      | PROCESS AUTOMATION LABORATORY                    | 1          | -        | 3         | 2.5     | 25            | 75  | 100   |
| B21455      | COMPUTER AIDED MACHINE DRAWING                   | -          | -        | 3         | 1.5     | 25            | 75  | 100   |
| B21456      | INTERNSHIP <sup>#</sup>                          | -          | -        | -         | 3       | -             | -   | GRADE |
|             | TOTAL                                            | 17         | 3        | 15        | 30.5    | 225           | 675 | 900   |
| SEMESTER 5  |                                                  |            |          |           |         |               |     |       |
| THEORY      |                                                  |            |          |           |         |               |     |       |
| B21501      | METROLOGY AND QUALITY MANAGEMENT SYSTEMS         | 4          | 1        | -         | 5       | 25            | 75  | 100   |
| B21502      | AUTOMOTIVE ELECTRICAL AND ELECTRONICS SYSTEMS    | 4          | 1        | -         | 5       | 25            | 75  | 100   |
| B21Exx      | ELECTIVE THEORY- I                               | 4          | 1        | -         | 5       | 25            | 75  | 100   |
| PRACTICALS  |                                                  |            |          |           |         |               |     |       |
| B21551      | METROLOGY LABORATORY                             | -          | -        | 3         | 1.5     | 25            | 75  | 100   |
| B21552      | AUTOMOTIVE ELECTRICAL AND ELECTRONICS LABORATORY | -          | -        | 3         | 1.5     | 25            | 75  | 100   |
| B21553      | SOLID MODELING LABORATORY                        | -          | -        | 3         | 1.5     | 25            | 75  | 100   |
| B21554      | CNC PROGRAMMING & SIMULATION LABORATORY          | 2          | -        | 3         | 3.5     | 25            | 75  | 100   |
| B21555      | MINI PROJECT AND ENTREPRENEURSHIP                | 3          | -        | 3         | 4       | 25            | 75  | 100   |
|             | TOTAL                                            | 17         | 3        | 15        | 27      | 200           | 600 | 800   |
| SEMESTER 6  |                                                  |            |          |           |         |               |     |       |
| THEORY      |                                                  |            |          |           |         |               |     |       |
| B21601      | VEHICLE BODY ENGINEERING                         | 4          | -        | -         | 4       | 25            | 75  | 100   |
| B21602      | ELECTRIC, HYBRID AND FUEL CELL VEHICLES          | 4          | 1        | -         | 5       | 25            | 75  | 100   |
| B21Exx      | ELECTIVE THEORY -II                              | 4          | 1        | -         | 5       | 25            | 75  | 100   |
| PRACTICALS  |                                                  |            |          |           |         |               |     |       |
| B21651      | TWO AND THREE WHEELER SERVICING LABORATORY       | -          | -        | 3         | 1.5     | 25            | 75  | 100   |
| B21652      | FOUR WHEELER SERVICING LABORATORY                | -          | -        | 3         | 1.5     | 25            | 75  | 100   |
| B21653      | ASSEMBLY AND POWER TOOLS LABORATORY              | -          | -        | 3         | 1.5     | 25            | 75  | 100   |
| B21654      | PLC LABORATORY                                   | -          | -        | 3         | 1.5     | 25            | 75  | 100   |
| B21655      | PROJECT WORK AND VIVA VOCE                       | -          | -        | 9         | 4       | 25            | 75  | 100   |
|             | TOTAL                                            | 12         | 2        | 21        | 24      | 200           | 600 | 800   |

**ELECTIVE COURSES (Two to be opted)**

| Course Code | Course Title                        | Hours/Week |          |           | Credits | Maximum Marks |    |       |
|-------------|-------------------------------------|------------|----------|-----------|---------|---------------|----|-------|
|             |                                     | Lecture    | Tutorial | Practical |         | CE            | FE | Total |
| THEORY      |                                     |            |          |           |         |               |    |       |
| B21E01      | TWO AND THREE WHEELER TECHNOLOGY    | 4          | 1        | -         | 5       | 25            | 75 | 100   |
| B21E02      | DESIGN OF AUTOMOTIVE COMPONENTS     | 4          | 1        | -         | 5       | 25            | 75 | 100   |
| B21E03      | ADVANCED MANUFACTURING TECHNOLOGY   | 4          | 1        | -         | 5       | 25            | 75 | 100   |
| B21E04      | ENGINEERING MANAGEMENT              | 4          | 1        | -         | 5       | 25            | 75 | 100   |
| B21E05      | AUTOMOTIVE EMISSION AND NVH CONTROL | 4          | 1        | -         | 5       | 25            | 75 | 100   |

Legend: **CA**–Continuous Assessment; **FE**–Final Examination;  
<sup>#</sup> -Internship will be arranged for 4 weeks during the vacation at the end of 4<sup>th</sup> semester.