



MECHANICAL ENGINEERING DEPARTMENT PROGRAMS

FIRST YEAR

| Semester 1 | | | | | | | | | | | |
|-------------|-------------------------------------|---------------|-----|-----|-------|--------------------|-----------|------|------------|-------------|-----------|
| Course Code | Course Name | Contact Hours | | | | Grade Distribution | | | Exam hours | Total grade | Cr. Hours |
| | | Lec | Tut | Lab | Total | Class work | Practical | Exam | | | |
| GEN1001 | Mathematics (3) | 2 | 2 | - | 4 | 30 | - | 70 | 3 | 100 | 3 |
| MEC1002 | Casting and Welding | 4 | - | 3 | 7 | 40 | 40 | 120 | 3 | 200 | 5 |
| POW1003 | Electrical Engineering | 2 | 1 | 1 | 4 | 30 | 30 | 90 | 3 | 150 | 2 |
| GEN1004 | Technical Reports | 2 | 1 | - | 3 | 30 | - | 70 | 2 | 100 | 2 |
| GEN1005 | Mechanical Drawing | 2 | 2 | - | 4 | 60 | - | 140 | 4 | 200 | 3 |
| Total | | 12 | 6 | 4 | 22 | | | | | | 15 |
| Semester 2 | | | | | | | | | | | |
| Course Code | Course Name | Contact Hours | | | | Grade Distribution | | | Exam hours | Total grade | Cr. Hours |
| | | Lec | Tut | Lab | Total | Class work | Practical | Exam | | | |
| GEN1006 | Computer Aided Drawing | 1 | - | 2 | 3 | 30 | 30 | 90 | 3 | 150 | 2 |
| MEC1007 | Theory of Machines (1) | 2 | 2 | - | 4 | 50 | - | 100 | 3 | 150 | 3 |
| MEC1008 | Material Engineering (1) | 4 | 1 | 1 | 6 | 30 | 30 | 90 | 3 | 150 | 4 |
| GEN1009 | Thermodynamics | 2 | 1 | - | 3 | 30 | - | 70 | 3 | 100 | 2 |
| MEC1010 | Engineering Statistics | 2 | 1 | - | 3 | 30 | - | 70 | 3 | 100 | 2 |
| MEC1011 | Industrial and Environmental Safety | 2 | 1 | - | 3 | 30 | - | 70 | 3 | 100 | 2 |
| Total | | 13 | 6 | 3 | 22 | | | | | | 15 |
| | | | | | | Total grade | | | | 1500 | |



MECHANICAL ENGINEERING DEPARTMENT PROGRAMS

SECOND YEAR

| Semester 1 | | | | | | | | | | | |
|-------------|----------------------------------|---------------|-----|-----|-------|--------------------|-----------|------|------------|-------------|-----------|
| Course Code | Course Name | Contact Hours | | | | Grade Distribution | | | Exam hours | Total grade | Cr. Hours |
| | | Lec | Tut | Lab | Total | Class work | Practical | Exam | | | |
| MEC2001 | Engineering Economy | 2 | 2 | - | 4 | 30 | - | 70 | 3 | 100 | 3 |
| ELC2002 | Electronic Circuits | 3 | 1 | 2 | 6 | 40 | 40 | 120 | 3 | 200 | 4 |
| MEC2003 | Fluid Mechanics | 2 | 1 | 1 | 4 | 30 | 30 | 90 | 3 | 150 | 2 |
| CSE2004 | Computer Programming | 2 | 1 | 1 | 4 | 30 | 30 | 90 | 3 | 150 | 2 |
| MEC2005 | Theory of Machines (2) | 2 | 2 | - | 4 | 50 | - | 100 | 3 | 150 | 3 |
| | Training | | | | | | | | | | |
| Total | | 11 | 7 | 4 | 22 | | | | | | 14 |
| Semester 2 | | | | | | | | | | | |
| Course Code | Course Name | Contact Hours | | | | Grade Distribution | | | Exam hours | Total grade | Cr. Hours |
| | | Lec | Tut | Lab | Total | Class work | Practical | Exam | | | |
| MEC2006 | Numerical Analysis | 2 | 1 | - | 3 | 30 | - | 70 | 3 | 100 | 2 |
| MEC2007 | Project Management | 2 | 1 | - | 3 | 30 | - | 70 | 3 | 100 | 2 |
| MEC2008 | Instrumentation and Measurements | 2 | 1 | 1 | 4 | 30 | 30 | 90 | 3 | 150 | 2 |
| MEC2009 | Quality Control | 2 | 2 | - | 4 | 30 | - | 70 | 3 | 100 | 3 |
| MEC2010 | Automatic Control | 2 | 2 | - | 4 | 50 | - | 100 | 3 | 150 | 3 |
| POW2011 | Electrical Machines | 2 | 1 | 1 | 4 | 30 | 30 | 90 | 3 | 150 | 2 |
| Total | | 12 | 8 | 2 | 22 | | | | | | 14 |
| | | | | | | Total grade | | | | 1500 | |

- Summer field training at specialized sites outside the college for four weeks after the second semester exams for the second year.



INDUSTRIAL ENGINEERING PROGRAM

THIRD YEAR

| Semester 1 | | | | | | | | | | | |
|-------------|--|---------------|-----|-----|-------|--------------------|-----------|------|------------|-------------|-----------|
| Course Code | Course Name | Contact Hours | | | | Grade Distribution | | | Exam hours | Total grade | Cr. Hours |
| | | Lec | Tut | Lab | Total | Class work | Practical | Exam | | | |
| MEC3201 | Production Systems | 2 | 2 | - | 4 | 50 | - | 100 | 3 | 150 | 3 |
| MEC3202 | Operations Research (1) | 2 | 2 | - | 4 | 30 | - | 70 | 3 | 100 | 3 |
| MEC3203 | Work System and Productivity Enhancement | 3 | 2 | - | 5 | 50 | - | 100 | 3 | 150 | 4 |
| MEC 3204 | Machine Elements Design | 2 | 2 | - | 4 | 50 | - | 100 | 3 | 150 | 3 |
| ----- | Elective Course (1) | 2 | 1 | - | 3 | 30 | - | 70 | 3 | 100 | 2 |
| | Training | | | | | | | | | 100 | |
| Total | | 11 | 9 | 0 | 20 | | | | | | 15 |
| Semester 2 | | | | | | | | | | | |
| Course Code | Course Name | Contact Hours | | | | Grade Distribution | | | Exam hours | Total grade | Cr. Hours |
| | | Lec | Tut | Lab | Total | Class work | Practical | Exam | | | |
| MEC3208 | Information Technology in Industrial Engineering | 3 | - | 2 | 5 | 40 | 40 | 120 | 3 | 200 | 4 |
| MEC3209 | Maintenance Planning and Control | 2 | 1 | 1 | 4 | 30 | 30 | 90 | 3 | 150 | 2 |
| MEC3210 | Quality Engineering and Management | 2 | 2 | - | 4 | 30 | - | 70 | 3 | 100 | 3 |
| MEC3211 | Manufacturing Methods | 3 | 2 | - | 5 | 80 | - | 120 | 3 | 200 | 4 |
| ----- | Elective Course (2) | 2 | 1 | - | 3 | 30 | - | 70 | 3 | 100 | 2 |
| Total | | 12 | 6 | 3 | 21 | | | | | | 15 |
| | | | | | | Total grade | | | | 1500 | |

| Elective Course (1) | Elective Course (2) |
|---|---|
| (MEC3205) Innovation and Entrepreneurship (CSE3206) Internet of Things (3207) Selected Topics | ((POW3212) New and Renewable Energy Systems (MEC3213) Mechatronics (3214) Selected Topics |

- Summer field training at specialized sites outside the college for four weeks after the second semester exams for the third year.



INDUSTRIAL ENGINEERING PROGRAM

FOURTH YEAR

| Semester 1 | | | | | | | | | | | |
|-------------|---|---------------|-----|-----|-------|--------------------|-----------|------|------------|-------------|-----------|
| Course Code | Course Name | Contact Hours | | | | Grade Distribution | | | Exam hours | Total grade | Cr. Hours |
| | | Lec | Tut | Lab | Total | Class work | Practical | Exam | | | |
| MEC4201 | Product Design and Development | 2 | 2 | - | 4 | 50 | - | 100 | 3 | 150 | 3 |
| MEC4202 | Facilities Layout | 2 | 2 | - | 4 | 50 | - | 100 | 3 | 150 | 3 |
| MEC4203 | Operations Research (2) | 2 | 1 | - | 3 | 30 | - | 70 | 3 | 100 | 2 |
| MEC4204 | Simulation of Production Systems | 2 | 1 | - | 3 | 50 | - | 100 | 3 | 150 | 2 |
| ----- | Elective Course (3) | 2 | 1 | - | 3 | 30 | - | 70 | 3 | 100 | 2 |
| | Training | - | - | - | - | - | - | - | - | 100 | |
| ----- | Project | - | 4 | - | 4 | -- | Cont. | | | | 2 |
| Total | | 10 | 11 | - | 21 | | | | | | 14 |
| Semester 2 | | | | | | | | | | | |
| Course Code | Course Name | Contact Hours | | | | Grade Distribution | | | Exam hours | Total grade | Cr. Hours |
| | | Lec | Tut | Lab | Total | Class work | Practical | Exam | | | |
| MEC4208 | Data Analysis in Industrial Systems | 2 | - | 2 | 4 | 20 | 20 | 60 | 3 | 100 | 3 |
| MEC4209 | Human Factors Engineering | 3 | 2 | - | 5 | 30 | - | 70 | 3 | 100 | 4 |
| MEC4210 | Production Planning and Control | 3 | 2 | - | 5 | 50 | - | 100 | 3 | 150 | 4 |
| MEC4211 | Hydraulic and Pneumatic Control Systems | 2 | 1 | 1 | 4 | 20 | 20 | 60 | 3 | 100 | 2 |
| ----- | Elective Course (4) | 2 | 1 | - | 3 | 30 | - | 70 | 3 | 100 | 2 |
| MEC4215 | Project | - | 4 | - | 4 | 100 | 100 | | | 200 | 2 |
| Total | | 12 | 10 | 3 | 25 | | | | | | 17 |
| | | | | | | Total grade | | | | 1500 | |

| Elective Course (3) | Elective Course (4) |
|--|--|
| (MEC4205) Service Operations Management (MEC4206) Industrial Robots (4207) Selected Topics | (MEC4212) Supply Chain Management (MEC4213) Design of Experiments (4214) Selected Topics |

- The graduation project preparation for fourth-year students continues for 36 hours per week for four weeks after the second semester exams.