**Republic of the Philippines**

**SORSOGON STATE COLLEGE**

**Sorsogon City Campus**

**ENGINEERING-ARCHITECTURE DEPARTMENT**

**NEW ENHANCED CURRICULUM**

BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING

(Adopted CMO No. 09, s. 2008)

**FIRST YEAR - 1ST SEMESTER**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| CODE | COURSE TITLE | NO OF HOURS | | UNITS | PRE-REQUISITE |
| LEC | LAB |
|  | \*English Plus |  |  |  |  |
| Math 1 | College Algebra | 3 | 0 | 3 | NONE |
| Math 2 | Plane &Spherical trigonometry | 3 | 0 | 3 | NONE |
| Chem 1 | General Chemistry | 3 | 3 | 4 | NONE |
| Drawing 1 | Engineering Drawing | 1 | 3 | 2 | NONE |
| Eng 1 | Communication Skills | 3 | 0 | 3 | NONE |
| Fil 1 | Sining ng Pakikipagtalastasan | 3 | 0 | 3 | NONE |
| Soc Scie 1 | Taxation and Agrarian Reform | 3 | 0 | 3 | NONE |
| Comp 1 | Computer Fundamentals& Prog’g | 1 | 3 | 2 | NONE |
| P.E 1 | Health and Physical Fitness | 2 | 0 | 2 | NONE |
| NSTP 1 | CWTS 1/ROTC 1 |  |  | (3) | NONE |
|  | TOTAL | 21 | 12 | 25 |  |

**FIRST YEAR - 2ND SEMESTER**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| CODE | COURSE TITLE | NO OF HOURS | | UNITS | PRE-REQUISITE |
| LEC | LAB |
| Math 3 | Advance algebra | 2 | 0 | 2 | College Algebra |
| Math 4 | Solid Mensuration | 2 | 0 | 2 | College Algebra,Plane&Sph |
| Math 5 | Analytic Geometry | 2 | 0 | 2 | College Algebra,Plane&Sph |
| Eng 2 | Tech., Writing, Reporting & Corr. | 3 | 0 | 3 | English 1 |
| Fil 2 | Pagbasa at Pagsulat sa Iba’t ibang Diskurso | 3 | 0 | 3 | Filipino 1 |
| Hum 1 | Lit. Drama & Visual Art, Music & Dance | 3 | 0 | 3 | NONE |
| Soc Scie 2 | General Psychology | 3 | 0 | 3 |  |
| Drawing 2 | Engineering Drawing 2(CAD 1) | 1 | 3 | 2 | Drawing 1 |
| P.E 2 | Individual Sports | 2 | 0 | 2 | P.E 1 |
| NSTP | CWTS 2/ROTC2 |  |  | (3) | NSTP 1/ROTC 1 |
|  | TOTAL | 21 | 3 | 22 |  |

**SECOND YEAR-1ST SEMESTER**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| CODE | COURSE TITLE | NO OF HOURS | | UNITS | PRE-REQUISITE |
| LEC | LAB |
| Math 6 | Differential Calculus | 4 | 0 | 4 | PHS 1 |
| PHS 1 | Physics 1 | 3 | 3 | 4 | Math 6 |
| Eng 3 | Speech Communication | 3 | 0 | 3 | English 1 & 2 |
| Hum 2 | Humanities 2 | 3 | 0 | 3 |  |
| Soc Sci 3 | Social Science 3 | 3 | 0 | 3 |  |
| MS 1 | Life & Works of Rizal | 3 | 0 | 3 |  |
| P.E 3 | Team Sports | 2 | 0 | 2 | P.E 1&2 |
|  | TOTAL | 21 | 3 | 22 |  |

**SECOND YEAR-2ND SEMESTER**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| CODE | COURSE TITLE | NO OF HOURS | | UNITS | PRE-REQUISITE |
| LEC | LAB |
| PHS 2 | Physics 2 | 3 | 3 | 4 | Physics 1 |
| Math 7 | Integral Calculus | 4 | 0 | 4 | Math 6 |
| Math 8 | Probability & Statistic | 3 | 0 | 3 | Math 1 |
| Hum 3 | Humanities 3 | 3 | 0 | 3 |  |
| Soc Sci 4 | Social Science 4 | 3 | 0 | 3 |  |
| Philo | Logic & Philo Analysis | 3 | 0 | 3 |  |
| BES 1 | Environmental Engineering | 3 | 0 | 3 | Chemistry |
| P.E. 4 | Recreational Activities | 2 | 0 | 2 | P.E 1,2,3 |
|  | TOTAL | 24 | 3 | 25 |  |

**THIRD YEAR-1ST SEMESTER**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| CODE | COURSE TITLE | NO OF HOURS | | UNITS | PRE-REQUISITE |
| LEC | LAB |
| ORIENTATION | Orientation to ME | 1 | 0 | 1 |  |
| Math 9 | Differential equation | 3 | 0 | 3 | Math 7 |
| Mech 1 | Statics of rigid bodies | 3 | 0 | 3 | PHS 2 |
| ME 311 | Thermodynamics 1 | 3 | 0 | 3 | PHS 2,MATH 7 |
| ME 312 | Machine elements 1 | 2 | 3 | 3 | Eng’g Drwg 2 |
| ME 313 | Workshop theory & practice | 0 | 6 | 2 |  |
| EE 310 | Basic electrical eng’g | 2 | 3 | 3 | Math 7,PHS 2 |
| COMP 2 | Basic CADD/CAM | 0 | 3 | 1 | Eng’g Drawing |
| CE 310 | Elementary surveying | 1 | 3 | 2 | Math 2 plane trigonometry & eng’g drawing |
| BES 2 | Eng’g Economy | 3 | 0 | 3 | 3rd yr standing |
|  | TOTAL | 15 | 18 | 24 |  |

**THIRD YEAR - 2ND SEMESTER**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| CODE | COURSE TITLE | NO OF HOURS | | UNITS | PRE-REQUISITE  (co-requisite) |
| LEC | LAB |
| Math 10 | Advance engineering  Mathematics for ME | 3 | 0 | 3 | Diff. equations |
| BES 3 | Safety management | 1 | 0 | 1 | Third year standing |
| Mech 2 | Dynamics of rigid bodies | 2 | 3 | 3 | Mech 1,math 7 |
| Mech 3 | Mech. Of deformable bodies | 3 | 0 | 3 | Mech 1, math 7 |
| ME 321 | Thermodynamics 2 | 3 | 0 | 3 | ME 311 |
| ME 322 | Machine elements 2 | 2 | 3 | 3 | ME 312 |
| ME 323 | Mach. Shop theory & practice | 0 | 6 | 2 | Third year standing |
| ME 324 | Materials of engineering | 3 | 3 | 4 | Mech 1,chemistry |
| BES 4 | Eng’g management | 3 | 0 | 3 | Third year standing |
|  | TOTAL | 20 | 15 | 25 |  |

**FOURTH YEAR - 1ST SEMESTER**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| CODE | COURSE TITLE | NO OF HOURS | | UNITS | PRE-REQUISITE  (co-requisite) |
| LEC | LAB |
| Math 11 | Numerical methods with  Computer applications | 2 | 3 | 3 | Math 10 |
| Fluid 1 | Fluid mechanics | 3 | 0 | 3 | Eng’g mechanics |
| EE 410 | Basic electronics | 2 | 3 | 3 | Elem.elect.eng’g |
| ME 411 | Machine design 1 | 3 | 3 | 4 | Mat’ls Eng’g  Machine elements |
| ME 412 | ME Laboratory | 0 | 6 | 2 | Thermodynamics 2 |
| ME 413 | Heat transfer | 2 | 0 | 2 | Thermodynamics 1 |
| ME 414 | Vibration engineering | 2 | 0 | 2 | Diff. equation & BES 5 |
| ME Elec 1 | ME Elective 1 | 3 | 0 | 3 | 4rth year standing |
|  | TOTAL | 17 | 15 | 22 |  |

**FOURTH YEAR-2ND SEMESTER**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| CODE | COURSE TITLE | NO OF HOURS | | UNITS | PRE-REQUISITE  (co-requisite) |
| LEC | LAB |
| Fluid 2 | Fluid machinery | 3 | 0 | 3 | Fluid mechanics |
| EE 420 | AC/DC Machinery | 3 | 3 | 4 | Elem. Elect. Eng’g |
| ME 421 | Machine design 2 | 3 | 3 | 4 | Machine design 1 |
| ME 422 | ME Laboratory 2 | 0 | 6 | 2 | Thermodynamics 2  ME Laboratory |
| ME 423 | Refrigeration systems | 3 | 0 | 3 | Heat transfer |
| ME 424 | Combustion engineering | 2 | 0 | 2 | Thermodynamics 1 |
| ME 425 | Methods of research for ME | 1 | 0 | 1 | 4rth year standing |
| ME Elec 2 | ME Elective 2 | 3 | 0 | 3 | 4rth year standing |
|  | TOTAL | 18 | 12 | 22 |  |

**FOURTH YEAR - SUMMER**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| CODE | COURSE TITLE | NO OF HOURS | | UNITS | PRE-REQUISITE  (co-requisite) |
| LEC | LAB |
| OJT | On-the-Job Training  6 weeks (270 hours) | 0 | 270 | 5 | 4th year standing |

**FIFTH YEAR - 1ST SEMESTER**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| CODE | COURSE TITLE | NO OF HOURS | | UNITS | PRE-REQUISITE  (co-requisite) |
| LEC | LAB |
| ME 511 | Industrial Plant Engineering | 3 | 0 | 3 | OJT ind’l processes  Plant inspection |
| ME 512 | ME Laboratory 3 | 0 | 6 | 2 | ME 422 |
| ME 513 | Air conditioning & ventilation system | 2 | 3 | 3 | Thermodynamics refriger’n system |
| ME 514 | Industrial processes | 2 | 0 | 2 | 5th year standing |
| ME 515 | Instrumentation & control Eng’g | 2 | 3 | 3 | 5th year standing |
| ME PS 1 | ME project study 1 | 0 | 3 | 1 | Methods of research for ME |
| ME ELEC 3 | ME Elective 3 | 3 | 0 | 3 | 5th year standing |
|  | TOTAL | 12 | 15 | 17 |  |

**FIFTH YEAR - 2ND SEMESTER**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| CODE | COURSE TITLE | NO OF HOURS | | UNITS | PRE-REQUISITE  (co-requisite) |
| LEC | LAB |
| ME 521 | Power plant engineering | 4 | 3 | 5 | ME Lab 2 |
| ME 522 | ME Laws,Ethics,Codes &Standards | 3 | 0 | 3 | 5th year standing |
| ME 523 | Safety engineering for ME | 2 | 0 | 2 | 5th year standing |
| ME 524 | Seminar & plant visit | 0 | 3 | 1 | 5th year standing |
| CE 520 | Plumbing & sanitation Eng’g | 3 | 0 | 3 |  |
| ME PS 2 | ME Project study 2 | 0 | 0 | 1 | ME Project study 1 |
| ME Elec 4 | ME Elective 4 | 3 | 3 | 3 | 5th year standing |
|  | TOTAL | 15 | 9 | 18 |  |

TOTAL OF UNITS = 227