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|  |  | **Legend** |  | **Credit Hours**  **Mechanical Engineering Degree Flow Chart** | | | | | | | | | | | | | | | | | | |
|  |  | **Course Code**  Course Name  *Credit Hours* |  | **18 hrs.** |  |  |  |  |  |  |  |  | **TECH 130**  Computer skills  *3 hrs.* |  | **ACT 105**  Communication & Study Skills  *3 hrs.* |  | **MATH 100**  College Algebra  *3 hrs.* |  | **ENG 125**  General English (I)  *9 hrs.* |  | Level 1 | Year 1 (PYP) |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Preparatory Year |  | **16 hrs.** |  |  |  |  |  |  |  |  | **PHYS 100**  Basic Physics  *3 hrs.* |  | **ENGL 127**  English for Eng. Purposes  *4 hrs.* |  | **MATH 108**  Trigonometry  *3 hrs.* |  | **ENG 126**  General English (II)  *6 hrs.* |  | Level 2 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | College Requirements |  | **18 hrs.** |  |  |  |  | **IC 101**  Intro. to Islamic Culture  *2 hrs.* |  | **CHEM 101**  General Chemistry 1  *4 hrs.* |  | **PHYS 103**  General Physics1  *4 hrs.* |  | **GE106**  *Intro to engineering*  *2 hrs.* |  | **MATH 105**  Diff calcu  *3 hrs.* |  | ***GE212***  *Computer programing*  *3 hrs* |  | Level 3 | Year 2 (BS) |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | University Requirements |  | **16 hrs.** |  |  |  |  |  |  | **ENGL 116**  *Dialecting in English*  *3 hrs* |  | **GE 107**  Engineering drawing and design  *3 hrs.* |  | **PHYS 104**  General Physics2  *4 hrs.* |  | **MATH 106**  Integral Calculus  *3 hrs.* |  | **MATH 107**  Arrays and matrices  *3 hrs.* |  | Level 4 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Department Requirements |  | **18 hrs.** |  |  |  |  | **ENGL 107**  Technical writing  *3 hrs.* |  | *IC 102*  *The Islam and society building*  *2 hrs.* |  | ***ME 371***  *Thermodynamics 1*  *3 hrs.* |  | **ME 254**  Engineering Materials  *4 hrs.* |  | **MATH 203**  Diff. and Integ. Calc.  *3 hrs.* |  | **CE 201**  Statics  *3 hrs.* |  | Level 5 | Year 3 (Major) |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | **Prerequisite** |  | **18 hrs.** |  |  |  |  | **IC 103**  The Islamic economic system  *2 hrs.* |  | **ME 383**  Fluid mechanics  *3 hrs.* |  | **ME 352**  **Mechanics of materials**  *3 hrs.* |  | **ME 311**  *Manufacturing techniques*  ***4 hrs.*** |  | **MATH 204**  Differential equations  *3 hrs.* |  | **ME 202**  Dynamics  *3 hrs.* |  | Level 6 |
|  |  | **Corequisite** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | **18 hrs.** |  |  | **ARAB 103**  *Arabic editing*  *2 hrs.* |  | ***ME 374***  *Thermodynamics 2*  *3 hrs.* |  | ***ME 363***  *Mechanics of machines*  *3 hrs.* |  | **ME 321**  *Mechanical measurements*  *2 hrs.* |  | **ME 304**  Mech eng Design 1  3 hrs. |  | **ME 201**  *Geo. modeling in Eng.*  *2 hrs.* |  | **MATH 254**  *Num. methods*  *3 hrs.* |  | Level 7 | Year 4 (Major) |
|  |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | |  | **16 hrs.** | **100 Credit Hours excluding PYP year** |  |  |  | **IC 104**  Islamic Political System  *2 hrs.* |  | **ME 375**  Heat transfer  3 hrs. |  | **ME 322**  Mechanical Lab 1  2 hrs. |  | **EE 308**  Electrical circuits and machines  3 hrs. |  | **STAT 324**  Eng. Probability & Statistics  *3 hrs.* |  | **ME 364**  System dynamics and control  3 hrs. |  | Level 8 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | **17 hrs.** | *ME 499*  *Coop. Training*  *0 hrs.* |  | **ME 496**  Graduation Project-1  *2 hrs.* |  | **ME xxx**  Technical Elective 4  *3 hrs.* |  | **ME xxx**  Technical Elective 3  *3 hrs.* |  | **ME xxx**  Technical Elective 2  *3 hrs.* |  | **ME xxx**  Technical Elective 1  *2 hrs.* |  | **GE 404**  Projects  Management  *2 hrs*. |  | **GE 490**  Ethics and profession pract  *2 hrs.* |  | Level 9 | Year 5 (Track) |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | **14 hrs.** |  |  |  |  | **ME 497**  Graduation Project-2  *2 hrs.* |  | **ME xxx**  Technical Elective 4  *3 hrs.* |  | **ME xxx**  Technical Elective 3  *3 hrs.* |  | **ME xxx**  Technical Elective 2  *3 hrs.* |  | **ME xxx**  Technical Elective 1  *3 hrs.* |  | **GE 403**  Engineering Economy  *2 hrs.* |  | Level 10 |

**List of Mechanical ENGINEERING Department Tracks and Elective courses**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| *Student must take at least 12 credit hours with adviser’s approval* | | | | | | |
| **Track Name:** | **ENERGY AND THERMAL POWER ENGINEERING** | |  | **Track Name:** | **PRODUCTION AND MANUFACTURING PROCESSES** | |
| **Course Code** | **Course Title** | **Prerequisites** |  | **Course Code** | **Course Title** | **Prerequisites** |
| ME 323 | Mechanical Thermal Power Lab. | ME 322 |  | ME 305 | Mechanical Engineering Design (2) | ME 304 |
| ME 443 | Principles of Refrigeration |  |  | ME 324 | Production and Manufacturing Lab. | ME 322 |
| ME 444 | Air Conditioning | ME 371 |  | ME 411 | Modern Manufacturing Processes |  |
| ME 471 | Power Plants |  |  | ME 462 | Mechanical Vibrations |  |
| ME 474 | Internal Combustion Engines |  |  | ME 412 | Metal Forming and Metal Cutting Analysis |  |
| ME 477 | Energy Conversion Systems |  |  | ME 413 | Manufacturing Systems |  |
| ME 479 | Water Desalination |  |  | ME 467 | Introduction to Robotics |  |
| ME 485 | Fluid Machinery |  |  | ME 494 | Selected Topics in production and manufacturing |  |
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For questions, please feel free to contact us at[maessa@su.edu.sa](mailto:maessa@su.edu.sa)