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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 13 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 transfer3 hrs. |  | **ME 322**Mechanical Lab 12 hrs. |  | **EE 308**Electrical circuits and machines3 hrs. |  | **STAT 324**Eng. Probability & Statistics*3 hrs.* |  | **ME 364**System dynamics and control3 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**ProjectsManagement*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**

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| *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 atmaessa@su.edu.sa