

University of San Diego Shiley-Marcos School of Engineering
Mechanical Engineering Degree Checklist (2019/20 catalog)

| Complete | Core Curriculum | Course that Satisfies Requirement | Units | |
|-----------------|---|--|--------------|------------|
| | First Year Writing (CFYW) | FYW 150 | 3 | |
| | Mathematical Reasoning (CMRP) | MATH 150 | | |
| | Second Language Competency/Elective credit | | 3 to 9 | |
| | Lower-Division Theological and Religious Inquiry (FTRI) | | 3 | |
| | Upper-Division Theological and Religious Inquiry (FTRI) | | 3 | |
| | Philosophical Inquiry (FPHI) | | 3 | |
| | Ethical Inquiry (FETI) | PHIL 342 | 3 | |
| | Scientific and Technological Inquiry (ESTI) | ENGR 101 | | |
| | Historical Inquiry (EHSI) | | 3 | |
| | Social and Behavioral Inquiry (ESBI) | ECON 101 or 102 | 3 | |
| | Literary Inquiry (ELTI) | | 3 | |
| | Artistic Inquiry (EARI) | | 3 | |
| | Diversity, Inclusion, Social Justice (FDD1) | ENGR 103 | | |
| | Diversity, Inclusion, Social Justice (FDD2 or FDG2) | | | |
| | Advanced Writing (CADW) | ENGL 304 | 3 | |
| | Oral Communication (CORL) | COMM 203 | 3 | |
| | Quantitative Reasoning (CQUR) | ISYE 330 | | |
| | First Year Integration (CINL) | LLC course | | |
| | Advanced Integration (CINT) | MENG 492 | | |
| Complete | Math/Science Courses | Prerequisites/(Corequisites) | | |
| | CHEM 151/151L - General Chemistry | | 4 | |
| | MATH/Science Elective | | 3 | |
| | MATH 150 - Calculus I | | 4 | |
| | MATH 151 - Calculus II | MATH 150 | 4 | |
| | MATH 310 - Applied Math for Science and Engineering I | MATH 151 | 3 | |
| | MATH 250 - Calculus III | MATH 151 | 4 | |
| | ISYE 330 - Engr Probability & Statistics | MATH 151 | 3 | |
| | PHYS 270/270L – Mechanics +lab | MATH 150 | 4 | |
| | PHYS 271/271L – Electricity & Magnetism +lab | PHYS 270, MATH 151 | 4 | |
| Complete | Engineering Core Courses | Prerequisites/(Corequisites) | 33 | |
| | ENGR 101 - Introduction to Engineering | MATH 115 or (MATH 150) | 3 | |
| | ENGR 102 – Electromechanical System Design | ENGR 101, ENGR 121, MATH 150 | 3 | |
| | ENGR 103 – User-Centered Design | ENGR 101, MATH 150 | 3 | |
| | COMP 110 - Computational Problem Solving | (MATH 150) | 3 | |
| | MENG 311 - Materials Science | MATH 151 CHEM 151/151L | 3 | |
| | MENG 210 - Statics | MATH 150, PHYS 270 | 3 | |
| | MENG 260 - Introduction to Thermal Sciences | MATH 151, PHYS 270 | 3 | |
| | ELEC 201 - Electrical Circuits +lab | PHYS 271 (MATH 310) | 4 | |
| Complete | MENG Required Courses | Prerequisites/(Corequisites) | 25 | |
| | ISYE 350 - Manufacturing Processes | MENG 210, ENGR 311 | 3 | |
| | MENG 300 - Applied Thermodynamics | MENG 260 | 3 | |
| | MENG 351 - Machine Shop Practices | | 1 | |
| | MENG 352 - CAD Practices | | 1 | |
| | MENG 360 - Fluid Mechanics | MATH 310, MENG 260, MATH 250 | 3 | |
| | MENG 370, 370L - Mechanics of Materials +lab | MENG 210 | 4 | |
| | MENG 375 - Dynamics | MENG 210 | 3 | |
| | MENG 400, 400L - Heat Transfer +lab | MENG 360 | 4 | |
| | MENG 430 - Design of Machine Elements | MENG 370 | 3 | |
| | MENG 491 - Senior Design Project I | (COMM 203), ENGR 311, ENGL 304, (MENG 351, MENG 352, MENG 400, MENG 430) | 4 | |
| | MENG 492 - Senior Design Project II | MENG 491 | 3 | |
| Complete | MENG Elective Courses | | 32 | |
| | Simulation-based course | | 3 | |
| | Free Elective | | 4 | |
| | MENG Elective | | 3 | |
| | MENG Elective | | 3 | |
| | MENG Elective | | 3 | |
| | MENG Elective | | 3 | |
| | | | 19 | |
| | Total MENG Degree Units | | | 147 |