

Int Engr - Sustainability Degree Checklist (2024/25 catalog)

| Complete | Core Curriculum (33-39 Units) | Course that Satisfies Requirement | Units | |
|----------|---|--|--------------------------------|------------|
| | First Year Writing (CFYW) | FYW 150 | 3 | |
| | Mathematical Reasoning (CMRP) | MATH 150 | | |
| | Second Language Competency | | 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) | | 3 | |
| | Scientific and Technological Inquiry (ESTI) | ENGR 101 | | |
| | Historical Inquiry (EHSI) | | 3 | |
| | Social and Behavioral Inquiry (ESBI) | | 3 | |
| | Literary Inquiry (ELTI) | | 3 | |
| | Artistic Inquiry (EARI) | | 3 | |
| | Diversity, Inclusion, Social Justice (FDD1) | ENGR 103 | | |
| | Diversity, Inclusion, Social Justice (FDD2 or FDG2) | GENG 350 | | |
| | Advanced Writing (CADW) | GENG 350 | | |
| | Oral Communication (CORL) | | 3 | |
| | Quantitative Reasoning (CQUR) | ISYE 330 | | |
| | First Year Integration (CINL) | LLC course | | |
| | Advanced Integration (CINT) | GENG 492 | | |
| Complete | Math/Science Courses (33-34 Units) | Prerequisites/(Corequisites) | | |
| | CHEM 151/151L - General Chemistry I & Lab | (MATH 115 or MATH 150 or MATH 151) | 4 | |
| | EOSC 105 - Natural Disasters or EOSC 110 - Dynamic Earth | | 4 | |
| | MATH 150 - Calculus I | | 4 | |
| | MATH 151 - Calculus II | MATH 150 (C- or better) | 4 | |
| | MATH 310 - Applied Math for Science and Engineering I | MATH 151 (C- or better) | 3 | |
| | MATH 250 - Calculus III or MATH 262 - Discrete Math | MATH 151 (C- or better) | 3-4 | |
| | ISYE 330 - Engineering Probability & Statistics | MATH 151 | 3 | |
| | PHYS 270/270L - Mechanics & Lab | MATH 150 | 4 | |
| | PHYS 271/271L - Electricity & Magnetism & Lab | PHYS 270/270L (C- or better), MATH 151 | 4 | |
| Complete | Engineering Core Courses (12.5 Units) | Prerequisites/(Corequisites) | | |
| | ENGR 101 - Introduction to Engineering | (MATH 150) | 3 | |
| | ENGR 102 - Electromechanical System Design | ENGR 101, COMP 110, (MATH 151) | 3 | |
| | ENGR 103 - User-Centered Design | ENGR 101, (MATH 151) | 3 | |
| | COMP 110 - Computational Problem Solving | MATH 115 or placement in MATH 130 or higher | 3.5 | |
| Complete | Engineering Core Courses (35 Units) | Prerequisites/(Corequisites) | | |
| | GENG 250 - Integrated Approach to Energy | (PHYS 271, PHYS 271L, ENGR 102, ENGR 103, MATH 310) | 3 | |
| | GENG 311 - Engineering Materials Science | CHEM 151/151L, MATH 151, PHYS 271/271L | 3 | |
| | GENG 288 - Integrated Approach to Electrical Engineering | PHYS 271, MATH 310 | 4 | |
| | GENG 380 - Sustainability and Engineering | | 3 | |
| | MENG 210 - Statics | PHYS 270, MATH 150 | 3 | |
| | Engineering Elective (lower or upper division) | | 3 | |
| | Engineering Elective (upper division) | | 3 | |
| | GENG 350 - Engineering and Social Justice | ENGR 103, (GENG 250 or GENG 288 or MENG 311) | 3 | |
| | GENG 360 - Experimental Engineering | ENGR 102, GENG 288 or ELEC 201, MENG 210, GENG 250 or MENG 260, COMP 110, MATH 310, (ISYE 330) | 3 | |
| | GENG 491 - Engineering Senior Design I | GENG 360, (GENG 350) | 4 | |
| | GENG 492 - Engineering Senior Design II | GENG 491 | 3 | |
| Complete | Sustainability Concentration (22-27 Units) | Prerequisites/(Corequisites) | | |
| | EOSC 123 - Organisms & Ecosystems | | 4 | |
| | EOSC 300 or EOSC 303 - Enviro. Issues or Enviro Issues Abroad | EOSC 105 or EOSC 110, EOSC 123 | 3 | |
| | Choose 3 courses from Group A | | 9-10 | |
| | Choose 1 course from Group B | | 3-4 | |
| | Choose 2 courses from Group A, B, or C | | 3-6 | |
| Complete | Additional Requirements | Notes for Additional Requirements | | |
| | Connect (Career Readiness Program) | Complete 12 points (orientation, networking, senior survey, and 9 flex points) | | |
| | Free Electives | Complete additional units needed to meet 147 Unit requirement for degree | | |
| | | | Total GENG Degree Units | 147 |

Group A Sustainability Engineering: GENG 383, GENG 384, GENG 482, ISYE 385, MENG 415

Group B Sustainability Science: EOSC 305, EOSC 314, EOSC 415, EOSC 420, EOSC 431, EOSC 434, EOSC 435, EOSC 473, EOSC 474, EOSC 485, EOSC 487, EOSC 488

Group C Sustainability Elective: BSCM 302, BSCM 305, CHEM 152, CHEM 355, EOSC 220, ECON 308, GENG 420, ETLW 302, ETLW 313, ETLW 403, HIST 370, ISYE 335, ISYE 340,

ISYE 420, ISYE 430, ISYE 480, MENG 260, MENG 360, MENG 370, MENG 410, MGMT 304, MGMT 310, MGMT 312, PHIL 338, PHIL 344, PHIL 415, POLS 340, POLS 342,

POLS 348, POLS 349, SOCI 315, SOCI 471, SOCI 473, THRS 338