

Manufacturing Engineering Technology degree map

Semester 1	16 cr	Semester 2	15 cr
MATH 112 Algebra -3 (LE-4) GENG 101 Intro to Engineering -3 (LE-9) CMST 192 Intro Communication -3 (LE-1) CHEM 210 General Chemistry I -4 (LE-3) ETS 115 Engineering Communications -3		MATH 211 Applied Calculus I -3 MATH 221 ENGL 191 Rhetorical & Analytical Writing -4 (LE-1) PHYS 231 General Physics -4 (LE-3) PHYS 234 ETS 156 Intro Env & Tech Studies -1 ETS 312 Computer-Aided Design -3	
Semester 3	15 cr	Semester 4	14 cr
GENG 102 Engg Problem Solving -3 CSCI200 ETS 260 Environmental Studies -3 (LE-10) ETS 185 ETS 240 Metrology -2 ETS 241 Statics/Dynamics -3 ETS 345 Manufacturing Processes -3		ETS 183 Tech & Third World -3 (LE-5,8, D) ETS 242 Thermo/Fluids -3 ↑PSY115, ETS185 ETS 243 Strength of Materials -3 STAT 239 Statistics for Physical Sciences -3 Technical Elective -3 Econ 205	
Semester 5	15 cr	Semester 6	15 cr
Liberal Ed Elective -3 (LE-2) POL 192 ETS 314 Design for Manufacturability -3 ETS 348 Plastics Manufacturing -3 ECON 205 or 206 -3 (LE-5) Technical Elective -3 PHYS 235		ETS 340 Continuous Improvement -3 ETS 343 Computer Integrated Mfg -3 GENG 360 Engineering Economics -2 GENG 380 Engineering Communication -2 Technical Elective -3 MATH 222 Technical Elective -2	
Semester 7	15 cr	Semester 8	15 cr
Liberal Ed Elective -3 (LE-6, D) ART 131 ETS 440 Production Systems Control -3 ETS 448 Composite Materials -3 ETS 470 Capstone -3 Technical Elective -3 ECE 201		Liberal Ed Elective -3 (only 1 option) (LE-6,7, D) ETS 446 Mfg Concepts -3 ↑ENGL184, CMTY222 ETS 471 Capstone -3 Technical Elective -3 ECE 220 Technical Elective -3 MATH 327	

Technical Electives:

20 credits of technical electives are required. At least 6 of these credits must be at the 300-400 level.

Production Systems

ETS 310 Management for Engr, Sci, & Tech (3)
ETS 374 Production Technology (3)
ETS 430 Mass Production (3)
MME 464 Process and Tool Design (3)
MME 470 Facilities Planning/Material Handling (3)

Analytics

STAT 321 Statistical Methods II (3)
STAT 360 Intro to Data Visualization (3)
STAT 421 Design of Experiments (3)
MATH 212 Survey of Calculus II (3)

Professional Experience

ETS 414 Topics in Technology (1-6 credits)
ETS 444 Internship (limit 4 credits)

Environment

ETS 363 Resource Management (3)
ETS 367 Environmental Regulation (3)
ETS 373 Environmental & Tech Assessment (3)
ETS 375 Society and the Environment (3)
ETS 468 Waste Management Systems (3)

Energy/Electricity

ETS 185 Energy Resources and Issues (3)
ETS 270 Electronics Technology (3)
ETS 388 Transportation/Energy Technology (3)
ETS 482 Renewable/Nondepletable Energy (3)

Other: by Advisor Approval

Manufacturing Engineering Technology degree map

Required Technical Courses:

ETS 115 Engineering Communications (3)
ETS 156 Intro to ETS (1)
ETS 240 Metrology (2)
ETS 241 Applied Statics and Dynamics (3)
ETS 242 Applied Thermodynamics & Fluid Mechanics (3)
ETS 243 Strength of Materials (3)
ETS 312 Computer-Aided Design (3)
ETS 314 Design for Manufacturability (3)
ETS 340 Continuous Improvement (3)
ETS 343 Computer Integrated Manufacturing (3)
ETS 345 Metalworking Processes (3)
ETS 348 Plastics Manufacturing (3)
ETS 440 Production Systems Control (3)
ETS 446 Manufacturing Concepts (3) or 447
ETS 448 Composite Materials (3)
ETS 470 Senior Project (Capstone) I (3)
ETS 471 Senior Project (Capstone) II (3)

Required General Courses

MATH 211 Applied Calculus I or MATH 221 (3)
STAT 239 Statistics for Physical Sciences (3)
GENG 101 Ethics & the Engineering Prof (3)
GENG 102 Engineering Problem Solving (3)
GENG 380 Engineering Communication (2)
GENG 360 Engineering Economics (2)
CHEM 210 General Chemistry 1 (4)
PHYS 231 General Physics 1 (4)

ETS 183 Technology & Third World Dev (3)
ECON 205 or 206 Macro/Micro (3)
ETS 260 Intro to Env Studies (3)

Liberal Education Courses

Goal Area 1 (Communication):

- **ENGL 191** Introduction to Rhetorical and analytical Writing (4)
- **CMST 192** Introduction to Communication Studies (3)

Goal Area 2 (Critical Thinking):

- One elective

Goal Area 3 (Natural sciences):

- **CHEM 210** General Chemistry 1 (4)
- **PHYS 231** General Physics I (4)

Goal Area 4 (Mathematical/Logical Reasoning):

- **MATH 211** Applied Calculus I (3) or **MATH 221** Calculus I

Goal Area 5 (History and the Social and Behavioral Sciences):

- **ETS 183** Technology and Third World Development (3)
- **ECON 205** Principles of Macroeconomics or **ECON 206** Principles of Microeconomics (3)

Goal Area 6 (The Humanities and Fine Arts):

- Two electives

Goal Area 7 (Human Diversity):

- One elective

Goal Area 8 (Global Perspectives):

- **ETS 183** Technology and Third World Development (3)

Goal Area 9 (Ethical and Civic Responsibility):

- **GENG 101** Ethics and the Engineering Profession (3)

Goal Area 10 (People and the Environment):

- **ETS 260** Introduction to Environmental Studies (3)