

Recommended Industrial Management and Technology Course sequence

Undergraduate Catalog - 2015/2016

Total undergraduate credits 120

Freshman (Fall)

3	TECH 211 - Computer-Aided-Design
3	MATH155 - Trigonometry
3	CHEM 110 - General Chemistry I
1	CHEM 111 - General Chemistry I Lab
3	ENGL103 - Composition I
3	General Education Requirement 1

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Sophomore (Fall)

3	Technology Area of Study 1
3	TECH 265 - Basic Manufacturing Processes
3	STAT 208 - Basis Statistics or STAT 301 - Elementary Statistics
3	TECH175 - Electricity and Electrical Fund.
1	TECH175A - Electricity and Electrical Fund. Lab
3	TECH 404 - Supervision in Industry

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Junior (Fall)

3	General Education Requirement 5
3	TECH 429 - Plant location, Layout, and Materials Handling
3	Technology Area of Study 3
3	TECH 391 - Industrial Quality Control
3	TECH 415 - Applied Industrial Experimental Analysis

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Senior (Fall)

3	Technology Area of Study 6
3	Ind Mgmt & Technology Elective 2
3	Technology Area of Study 7
3	Technology Elective 1
3	TECH 492 - Manufacturing Distribution Applications

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Freshman (Spring)

3	COMS100 - Communications
3	ENGL203 - Composition I
4	PHYS 150A - Physics or Phy210 - General Physics I
3	General Education Requirement 2
3	General Education Requirement 3

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Sophomore (Spring)

3	General Education Requirement 4
3	TECH 406 - Facilities Management Technology
3	ACCY 288 (or ACCY 206) - General Accounting
3	Technology Area of Study 2
3	Ind Mgmt & Tech Elective 1

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Junior (Spring)

3	TECH 404 - Supervision In Industry
3	Engl 308 - Tech Writing or Mgmt 346 - Business Comms
3	TECH 434 - Human Factors in Accident Prevention
3	Technology Area of Study 4
3	Technology Area of Study 5

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Senior (Spring)

3	Technology Elective 2
3	Technology Area of study 8
3	TECH 496 - Industrial Project Management
3	General Elective

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Industrial Management and Technology Electives (Choose 2)

TECH 305 - Green Technologies, TECH 402 - Industrial Training and Evaluation, TECH 442 - Work Simplification & Measurement, TECH 443 - Engineering Economy, TECH 444 - Production Control Systems, TECH 484 - Energy Management

Areas of Concentration within the Industrial Management & Technology Program

Computer-Aided-Design (CAD)

TECH 262 - Machine Production Processes
TECH 311 - Computer-Aided Modeling
TECH 312 - Design Dimensioning and Tolerancing
TECH 313 - Product Design and Development for Manufacturability
TECH 365 - Metrology
TECH 414 - Computer-Aided Machine Design

Two of the following

TECH 260 - Metal Fabrication Processes
TECH 344 - Materials and Processes in the Plastics Industry
TECH 345 - Plastic Molding Processes
TECH 417 - Design for Energy Efficient and Green Materials
TECH 420 - Computer-Integrated Manufacturing
TECH 427 - Testing Methods, Procedures, & Selection of Sustainable Plastics

Manufacturing Technology

TECH 260 - Metal Fabrication Processes
TECH 262 - Machine Production Processes
TECH 311 - Computer-Aided Modeling
TECH 313 - Product Design and Development for Manufacturability
TECH 365 - Metrology
TECH 420 - Computer-Integrated Manufacturing

Two of the following

TECH 312 - Design Dimensioning and Tolerancing
TECH 344 - Materials and Processes in the Plastics Industry
TECH 409 - Internship
TECH 417 - Design for Energy Efficient and Green Materials
TECH 427 - Testing Methods, Procedures, & Selection of Sustainable Plastics

Electronics Technology

TECH 270 - Electrical Fundamentals and Circuit Analysis I
TECH 270A - Electrical Fundamentals and Circuit Analysis Lab I
TECH 276 - Electronics I
TECH 276A - Electronics I Lab
TECH 277 - Digital Logic Design
TECH 277A - Digital Logic Design Lab
TECH 295 - Manufacturing Computer Applications or CSCI 215 - Visual Basic
TECH 377 - Microprocessors and Interfacing
TECH 377A - Microprocessors and Interfacing Lab

Two of the following

TECH 409 - Internship
TECH 425 - Programmable Electronic Controllers
TECH 426 - Electric Systems Applications for Alternative Energy
TECH 430 - Microcontrollers Interfacing and Applications
TECH 473 - Advanced Digital Design

Environmental Health and Safety

TECH 231 - Safety Programs
TECH 245 - Pollution, Pestilence, Prevention, & the Cost of Doing Business
TECH 436 - Design and Administration of Ind Safety Programs
TECH 437 - Fundamentals of Industrial Hygiene
TECH 441 - Hazard Control in Industrial Operations
TECH 481 - Ergonomics

Two of the following

TECH 409 - Internship
TECH 411 - Greening Industrial Operations
TECH 432 - Disaster Preparedness
TECH 433 - Toxicology for Industry
TECH 435 - Legal Aspects of Safety
TECH 485 - Risk Management

Notes:

→ A Technical elective course may be any course offered within the Department of Technology, as determined with consent of the faculty advisor.

→ A general elective course may be any course offered from any department on campus.

Note: Semester offering and prerequisites may change, the current bulletin and schedule should be consulted

Legend - p - prerequisite e-corequisite f - fall semester s - spring semester

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|---|---|--|
| <input type="checkbox"/> Engl 103
Composition I - (f,s) | <input type="checkbox"/> Chem 110 and 111
Chemistry - (f,s) | <input type="checkbox"/> Math 155 - p:Math110
Trigonometry - (f,s) - Note - must have C or better |
| <input type="checkbox"/> Engl 203 - p: Engl 103
Composition II - (f,s) | <input type="checkbox"/> Stat 208
Statistics - (f,s) | <input type="checkbox"/> Mgmt 346 - p: Engl104, Coms1 or Engl 308
Bus Comm - (f,s) Tech Writing (f,s) |
| <input type="checkbox"/> Coms 100
Communications - (f,s) | <input type="checkbox"/> Phys 150A or (Phys 210 p: Math 155)
Physics - (f,s) | <input type="checkbox"/> Accy 206 or Accy 288
Intro Financial Accy - (f,s) Fund of Accy - (f,s) |

Required Technology Courses

- | | |
|---|---|
| <input type="checkbox"/> Tech 175 - p:Math155, Phys150A
Elect Fund - (f,s) | <input type="checkbox"/> Tech 406
Facilities Management Technology |
| <input type="checkbox"/> Tech 175A - crq :TECH 175
Elect Fund Lab - (f,s) | <input type="checkbox"/> Tech 415 p: M155, Stat 208
App Ind Experimental Analysis (f) |
| <input type="checkbox"/> Tech 211
CAD/Comp-Aided Modeling - (f,s) | <input type="checkbox"/> Tech 429 p: M155 & T265
Plt Layout & Mats Hndl - (f) |
| <input type="checkbox"/> Tech 265 prq:Math 155
Manuf Procs - (f,s) | <input type="checkbox"/> Tech 434
Human Factors in Ind Acc Prev (f,s) |
| <input type="checkbox"/> Tech 391 prq: Math 155 & Stat 208
Ind Qual Cont - (f,s) | <input type="checkbox"/> Tech 492 p: M155, T265, Stat208
Manufacturing Dist Apps - (f) |
| <input type="checkbox"/> Tech 404
Supervision in Ind - (f,s) | <input type="checkbox"/> Tech 496
Industrial Project Mgmt - (f,s) |
- prq: Tech 429, Tech 415 and Engl 308 or Mgmt 346; Senior Status (90 hrs)

Choose 2 - from this category

- Tech 305 - p: Math 155, Chem 110
Green Technologies - (f,s)
- Tech 402
Ind Training and Eval (f)
- Tech 442 p: Math 155 & Tech 265
Work Simplification & Measurement (f)
- Tech 443 - p: Math155
Engineering Economy (f,s)
- Tech 444 - p: Tech265, Math155
Production control Systems (s)
- Tech 484 - p: Math155
Energy Management (s)

Technology Area of Study - Select one

CAD

- Tech 262 p: Tech 211
Mach Prod Procs - (f,s)
- Tech 311 p: Tech 211 C or better
Comp-Aided Modeling - (s)
- Tech 312 p: T211 & (T260 or T265)
Dsn Dim & Tolnce - (s)
- Tech 313 p: M155, T311, T265
Product Design for Manufact - (f)
- Tech 365 p:Math155, Tech211
Metrology - (f)
- Tech 414 p: T311, T265, Phys150A
Comp-Aided Mach Dsn - (f)

Manufacturing

- Tech 260 p:Tech211 & Math155
Metal Fab Procs - (f)
- Tech 262 p:Tech 211
Mach Prod Procs - (f,s)
- Tech 311 p: Tech211 C or better
Comp-Aided Modeling - (s)
- Tech 313 p: M155, T211, T265
Product Design for Manufact - (f)
- Tech 365 p: Math 155, Tech 211
Metrology - (f)
- Tech 420 p:T175/A, 211,265
Comp. Integ Manuf - (f)

Choose two of the following

- Tech 260 p:Tech211 & Math155
Metal Fab Procs - (f)
- Tech 344 p: M155, T265, C110
Mats & Procs in Plast - (f)
- Tech 409 p: Junior standing
Internship
- Tech 417 p: M155, Phys150A
Design for Energy Efficiency & Green Mats
- Tech 420 p:T175/A, T211,T265
Comp. Integ Manuf - (f)
- Tech 427 p: T 265, Chem 110, Engl 308
Test Meth, Procedures & Selection of Sustain Plastics - (f)

Choose two of the following

- Tech 312 p: T211 & (T260 or T265)
Dsn Dim & Tolnce - (s)
- Tech 344 p: M155, T265, C110
Mats & Procs in Plast - (f)
- Tech 409 p: Junior standing
Internship
- Tech 417 p: M155; Phys150A
Design for Energy Eff & Green Mats - (f)
- Tech 427 p: T 265, Chem 110, Engl 308
Test Meth, Procedures & Selection of Sustain Plastics - (f)

Environmental health and Safety

- Tech 231
Safety Programs - (f)
- Tech 245
Pollution, Pestilence, Prevention - (s)
- Tech 436 p:T231 or 245; T434
Dsn and Admin of Ind Sfty Procs - (s)
- Tech 437 p: T231; M155; Chem 110/111
Fund of Ind Hyg - (f)
- Tech 441 p: M155, Phys150A, T231 & T245
Hazard Cont in Ind Ops - (f)
- Tech 481 p:M155, Phys150A, T434
Ergonomics - (f)

Choose two of the following

- Tech 409 p: Junior standing
Internship
- Tech 411 p: Tech 245 or Tech 305
Greening in Ind Operations - (f)
- Tech 432
Disaster Preparedness - (f,s)
- Tech 433 p:Chm110, M155, T434 & 437
Toxicology for Industry - (s)
- Tech 435
Legal Aspects of Safety - (s)
- Tech 485 p: M155, Phys150A, T231, T245, T434
Risk Management

Electronics Technology

- Tech 270 p:Math155, TECH175 & 175A
ELECT FUND AND CIRCUIT ANAL 1 - (f)
- Tech 270A e:TECH270
ELECT FUND AND CIRC ANAL 1 LAB - (f)
- Tech 276 p:TECH270 e:Math229 & T276A
ELECTRONICS I - (s)
- Tech 276A e:TECH276
ELECTRONICS I LAB - (s)
- Tech 277 p:TECH175 & 175A e: T277A
DIGITAL LOGIC DESIGN - (f)
- Tech 277A e:TECH277
DIGITAL LOGIC DESIGN LAB - (f)
- Tech 295 or Csci 215 p: Math 110
p: Math 155, Tech 265
Mfg Comp Apps (f) or Visual Basic

- Tech 377 p:TECH277 & 277A e: T377A
MICROPROC AND INTERFACING - (s)
- Tech 377A e: TECH377
MICROPROC AND INTERFACING LAB - (s)

Choose two of the following

- Tech 409 p: Junior standing
INTERNSHIP
- Tech 425 p:T265; T175/175A; T295 or Csci 215 or :
PROG ELECT CONTROLLERS - (f) or Csci 240
- Tech 426 p:Math 155; Tech 175/A or Phys 211
ELECTRIC SYS APPS FOR ALT ENERGY
- Tech 430 p: TECH 377 & 377A

Electives - 2 courses must be Technology Department courses (Choose 4 courses in total)

- | | |
|------------------------------------|------------------------------------|
| <input type="checkbox"/> _____ (3) | <input type="checkbox"/> _____ (3) |
| <input type="checkbox"/> _____ (3) | <input type="checkbox"/> _____ (3) |

General Education Knowledge Domain Courses - See CEET website or online Undergraduate Catalog

Creativity & Critical Analysis - 2 courses

- _____ (3)
- _____ (3)

Society & Culture - 2 courses

- _____ (3)
- _____ (3)

From any of the Knowledge Domain Areas

- _____ (3)