

Academic Minors for Engineering Students

Students have the opportunity to pursue a number of minors offered at Penn State Behrend. You should consult with your academic advisor if you are interested in pursuing a minor program of study. A complete listing of the available minors can be found in the Penn State Undergraduate Degree Programs Bulletin. Some of the more popular minors for our students are listed below, and the requirements listed on the following pages:

- Civic and Community Engagement
- Computer Engineering
- Computer Science
- Economics
- Management Information Systems
- Mathematics
- Management
- Operational and Supply Chain Management (a business minor specifically for engineers)
- Physics
- Technical Sales (a business minor specifically for engineers)

Civic and Community Engagement Minor *Intercollege Program (CIVCM)*

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES: (3 credits)

AYFCE 211 GS(3) (Sem: 5)

SUPPORTING COURSES AND RELATED AREAS: (15 credits)

at least 6 credits must be taken at the 400 level

Select 6-9 credits from Program List of public scholarship courses, of which at least 3 credits involve supervised field experience and of which 3-6 credits are public issues and democracy courses, or equivalents chosen in consultation with minor adviser (Sem: 5-8)

Select 3-6 credits in related areas in consultation with minor adviser (Sem: 5-8)

Select 3 credits of public scholarship capstone work at the 400 level in consultation with minor adviser (Sem: 7-8)

Computer Engineering Minor *Penn State Erie, The Behrend College (CENBD)*

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 24 credits

PRESCRIBED COURSES: (11 credits)

E E 210(4) (Sem: 1-4)

E E 310(4), E E 316(3) (Sem: 5-6)

ADDITIONAL COURSES: (13 credits)

Select 3 credits from CMPSC 201 GQ(3) or CMPSC 202 GQ(3) (Sem: 1-4)

Select 4 credits from CMPEN 271(3) and CMPEN 275(1) (Sem: 5-6)

Select 6 credits from CMPEN 411(3), CMPEN 352W(3), CMPEN 431(3), CMPEN 461(3), CMPEN 371 (3), SWENG 411(3), CMPEN 441(3), CMPSC 479(3), CMPSC 450(3)

Computer Science Minor *Penn State Erie, The Behrend College (CSCBD)*

A grade of C or better is required for all courses in the minor.

Scheduling recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 19-20 credits

PRESCRIBED COURSES: (10 credits)

CMPBD 127(1), CMPSC 122(3) (Sem: 3-4)

CMPBD 360(3), CMPSC 360(3) (Sem: 3-6)

ADDITIONAL COURSES: (3-4 credits)

Select 3-4 credits from CMPSC 102(3), CMPSC 201 GQ(3), CMPSC 202 GQ(3), or CMPSC 121 GQ(3) (Sem: 3-8)

SUPPORTING COURSES AND RELATED AREAS: (6 credits)

Select 6 credits of 400-level (below 490) CMPSC courses (Sem: 7-8)

Economics Minor *Penn State Erie, The Behrend College (ECNS)*

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES: (6 credits)

ECON 002 GS(3), ECON 004 GS(3) (Sem: 1-6)

SUPPORTING COURSES AND RELATED AREAS: (12 credits)

Select 6 credits from BECON, ECNS, or ECON courses (Sem: 3-6)

Select 6 credits of 400-level BECON, ECNS, or ECON courses (Sem: 3-8)

Management Information Systems Minor *Penn State Erie, The Behrend College (MISBD)*

The Management Information Systems minor can open new career options for the student, increase the student's market value, and improve the student's chances for advancement.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES: (9 credits)

MIS 204(3) (Sem: 3-4)

MIS 336(3), MIS 430(3) (Sem: 5-7)

SUPPORTING COURSES AND RELATED: (9 credits)

Select 6 credits from CMPSC or MIS courses (Sem: 5-6)

Select 3 credits from 400-level CMPSC or MIS (Sem: 7-8)

Mathematics Minor *Penn State Erie, The Behrend College (MTHBD)*

A grade of C or better is required for all courses in the minor.

Scheduling recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES: (4 credits)

MATH 311W(4) (Sem: 3-4)

SUPPORTING COURSES AND RELATED AREAS: (14 credits)

Select 8 credits of MATH courses at the level of MATH 140 GQ(4) or above (Sem: 1-6)

Select 6 credits of 400-level MATH courses (Sem: 7-8)

(No more than three credits from MATH 495 courses can be used to satisfy this requirement.)

Management Minor *Penn State Erie, The Behrend College (MANGT)*

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES: (12 credits)

MGMT 301(3), SCM 301(3) (Sem: 4-5)

MGMT 331(3), MGMT 341(3) (Sem: 6-8)

ADDITIONAL COURSES: (6 credits)

Select 6 credits of 400-level MGMT courses from MGMT 409(3), MGMT 410(3), MGMT 420(3), MGMT 432(3), MGMT 440(3), or MGMT 461 IL(3) (Sem: 6-8)

Operations & Supply Chain Management Minor *Penn State Erie, The Behrend College (OPSCM)*

A grade of C or better is required for all courses in the minor.
Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 19 credits

PRESCRIBED COURSES: (6 credits) MGMT 301(3), SCM 310(3) (Sem: 5)

ADDITIONAL COURSES: (13 credits)
SCM 200 GQ(4) or STAT 200 GQ(4) (Sem: 5)
Select 9 credits from the following list:
- SCM 465(3) (Sem: 6)
- SCM 455(3) or SCM 460(3) (Sem: 7)
- SCM 445(3), MGMT 409(3) (Sem: 8)

Physics Minor *Penn State Erie, The Behrend College (PHYBD)*

A grade of C or better is required for all courses in the minor.
Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 22 credits

PRESCRIBED COURSES: (15 credits)
PHYS 211 GN(4), PHYS 212 GN(4), PHYS 213 GN(2), PHYS 214 GN(2), PHYS 237(3) (Sem: 1-4)

SUPPORTING COURSES AND RELATED AREAS: (7 credits)
Select 7 credits from 400-level PHYS courses, excluding PHYS 494, PHYS 495, PHYS 496, and PHYS 497 courses (Sem: 5-8)

Technical Sales Minor *Penn State Erie, The Behrend College (TCHSL)*

A grade of C or better is required for all courses in the minor.
Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 19 credits
Students are required to have a technically-oriented major (i.e. engineering, engineering technology, physical sciences, or other major as approved).

PRESCRIBED COURSES: (9 credits)
MGMT 301(3) (Sem: 5)
MKTG 301(3), SCM 310(3) (Sem: 6)

ADDITIONAL COURSES: (10 credits)
SCM 200 GQ (4) or STAT 200 GQ (4) (Sem: 5)
MKTG 410(3) or marketing elective as approved (Sem: 7-8)
Select 3 credits from the following list: MGMT 409(3), MGMT 410(3), SCM 455(3), SCM 460(3) (Sem: 7-8)