

Fall 2011 - Spring 2012 Freshman Course Matrix

Major	First Semester (if appropriate!)	Second Semester (if appropriate!)
Biomedical (BE)	CHE 107, MTH 141, EAS 140, 2 Gen Eds	MTH 142, PHY 107, CHE 108, EAS 202, 1-2 Gen Eds
Chemical (CE)	CHE 107, MTH 141, EAS 140, 2 Gen Eds	MTH 142, PHY 107, CHE 108, EAS 230, EAS 202, 1 Gen Ed
Civil (CIE)	CHE 107, MTH 141, EAS 140, 2 Gen Eds	MTH 142, PHY 107, CHE 108, MAE 177, EAS 202, 1 Gen Ed
Environmental (ENV)	CHE 107, MTH 141, EAS 140, 2 Gen Eds	MTH 142, PHY 107, CHE 108, MAE 177, EAS 202, 1 Gen Ed
Mech (ME)/Aero (ASE)	CHE 107, MTH 141, EAS 140, 2 Gen Eds	MTH 142, PHY 107, EAS 230, MAE 177, EAS 202, 1 Gen Ed
Industrial (IE)	CHE 107, MTH 141, EAS 140, 2 Gen Eds	MTH 142, PHY 107, CHE 108 (see #5), IE 101, EAS 202, 1-2 Gen Eds
Electrical (EE)	CHE 107, MTH 141, EAS 140, 2 Gen Eds	MTH 142, PHY 107, EE 101, EAS 202, 2 Gen Eds
Eng. Physics (EGP)	CHE 107, MTH 141, EAS 140, PHY 107, 1 Gen Ed	MTH 142, PHY 108/158, CHE 108, EAS 202, 1 Gen Ed
Computer Eng. (CEN)	CHE 107, MTH 141, CSE 115, 2 Gen Eds	MTH 142, PHY 107, CSE 116, 2 Gen Eds



Engineering Flowsheets

Some Helpful Generalities:

All engineering majors require:

- * MTH 141, 142, 241, and 306. Usually recommended in this order, with the exception of EE's and CEN's who take MTH 306 prior to MTH 241 because of EE 202 corequisite (MTH 306 should be taken at least at the same time as EE 202).
- * PHY 107, PHY 108/158 (except environmental engineers who don't need PHY 108/158)
- * CHE 107 (CHE 101 is an approved equivalent)
- * EAS 230 (except computer and environmental, although it can be a TE in environmental) (option between CSE 113 in CIE)

Notes Regarding Chemistry Requirement:

1. CHE 101 is OK for CHE 107; CHE102 is OK for CHE 108.
2. Biomedical, Chemical, Civil, Environmental, and Engineering Physics all require Chem I and II sequence.
3. Computer, Electrical, Industrial, Mechanical, and Aerospace Engineering only require first semester of CHE sequence.
4. Electrical will allow the second semester of the CHE sequence (CHE 108 or 102) to substitute for EE 101 requirement.
5. Industrial engineering students can choose between CHE 108, PHY 207/257, or BIO 201 to fulfill their science elective.
6. CHE 108 can satisfy one course from the Science and Mathematics track in Mechanical engineering.
7. BIO 201 (Cell Bio; Sp/Su) will satisfy the science elective for Industrial engineering (instead of CHE 108 or PHY 207/257); is required in Chemical engineering; is an approved technical elective for Environmental engineering; can satisfy the BE 202 requirement in Biomedical engineering; can satisfy one course from Science and Engineering track in Mechanical Engineering.

Students who want to leave their options completely open are advised to take CHE 108 unless they have ruled out serious interest in biomedical, chemical, civil, and environmental engineering, and engineering physics. CHE 108 can fulfill a requirement for all majors except computer engineering and aerospace engineering.

Notes Regarding Spring Only Offerings:

- * EE 101 and IE 101 are only offered in the spring and they don't have any prerequisites.
- * CHE 108 is only offered in the spring. CHE 102 is an acceptable alternative with one lecture offered every summer and fall.
- * CHE 101 is the only Chem I class offered in the spring. As noted above, this is acceptable for any CHE 107 requirement.

Note Regarding MAE 177 Requirement:

Students in Aerospace, Civil, Environmental, or Mechanical Engineering who have previously taken a course in Engineering Drawing, either in high school or in college, may petition for an exemption from the MAE177 requirement. If the petition is accepted, the student will not have to take MAE 177 and will not be required to replace the credit hours with another course. Complete the petition form available in 410 Bonner or online at:

<http://www.eng.buffalo.edu/undergrad/docs/MAE177.pdf>. Submit it to the undergrad director noted on the form. If approved, submit it to 410 Bonner Hall.

MAE 177 : Introduction To Engineering Drawing And CAD, 2 credits, Lec and Lab (NOT CHAINED TOGETHER!)

Semester: Spring only, and usually summer

Prerequisites/Corequisites: None

Provides a first exposure to mechanical design for engineers. Includes the nature and visual representation of mechanical components and principles of engineering drawing and sketching for mechanical design. Utilizes up-to-date computer-aided design software (such as AutoCad) for mechanical drawings and mechanical designs.

How to Register Step-by-Step Guide:

<http://www.buffalo.edu/hub/>

Select Web Based Tutorial for "Enroll in Classes"

Some keys to remember:

1. Click "View All" to see all course offerings.
2. Putting courses into the shopping cart is simply a holding place for desired courses. It does not check for requisites, day/time conflicts, personal holds on registering, etc. and it does not mean you are registered. You actually have to select courses from your shopping cart and then click "Enroll" and "Finish Enrolling" buttons in order to actually try registering in classes.
3. Check your enrollment appointment through HUB beginning Wed. October 19.
4. Make sure you don't have any holds that will prevent you from registering
5. Double check your readiness for the course/course requisites.

Academics & Study Skills: How to Register for Classes (<http://workshops.buffalo.edu/>)

This workshop will focus on the process of registering for courses. We will show how to use the Undergraduate Catalog as a planning tool for registration as well as how to find and register for courses using your HUB Student Center. We will also look at when this term's grades will be posted and discuss why schedules should possibly be adjusted based on grades.

24-Oct	4:00 pm-4:50 pm	275 Park
26-Oct	3:00 pm-3:50 pm	111 Norton
8-Nov	3:30 pm-4:20 pm	111 Norton
14-Nov	3:00 pm-3:30 pm	275 Park
16-Nov	4:00 pm-4:50 pm	111 Norton