

## B.S. CIVIL ENGINEERING CURRICULUM (2012-2013)

For detailed information on courses, including enrollment requirements and course offerings, please refer to the University Course Bulletin and Master Schedule available through Buckeye Link ([buckeyelink.osu.edu](http://buckeyelink.osu.edu)).

Mathematics		Credit Hours
1151	Calculus 1	5
1172	Engineering Math A	5
2177	Mathematical Topics for Engineers	4
<b>OR</b>	1161 Accelerated Calculus I	5
	2162 Accelerated Calculus II	5
	2177 Mathematical Topics for Engineers	4
<b>OR</b>	1151 Calculus 1	5
	1152 Calculus 2	5
	2153 Calculus 3	4
	2177 Mathematical Topics for Engineers	4

Engineering		
1100	Engineering Survey	1
<b>AND</b>	1181 Fundamentals of Engineering I	2
	1182 Fundamentals of Engineering II	2
<b>OR</b>	1188 Fundamentals of Engineering TI	1.5
	1186 Fundamentals of Engineering TII	1.5
	1187 Fundamentals of Engineering TIII	1
<b>OR</b>	1281H Fundamentals of Engineering I (FEH)	5
	1282H Fundamentals of Engineering II (FEH)	3

Physics		
1250	Physics I: Mechanics, Thermal Physics, Waves	5
1251	Physics II: Elec. & Mag., Optics, Modern Physics	5

Chemistry		
1250	Chemistry for Engineers	4

Science Elective ( <i>Choose one course from this section</i> )		
ENR 3000&3001	Soil Science	4
<b>OR</b>	Earth Sci1121 The Dynamic Earth	4
<b>OR</b>	Geog 2960 Intro to Physical Geography	4
<b>OR</b>	Biology 1113 Biological Science: Energy Transfer and Dev.	4

Programming and Graphics ( <i>Choose one course from this section</i> )		
CSE/ENGR 1221	Computer Programming: MATLAB	2
<b>OR</b>	CSE/ENGR 1222 Computer Programming: C++	3

Mechanical Engineering		
2010	Statics	2
2020	Mechanics of Materials	3
2030	Dynamics	3

Please refer to the CEG undergraduate website ([ceg.osu.edu/undergraduate](http://ceg.osu.edu/undergraduate)) for details on the Civil Engineering Curriculum, GE lists, admission requirements and deadlines, and other information to help plan your curriculum.

### Civil Engineering Core Courses

Required Core Courses:		Credit Hours
2050	Prob. & Data Analysis in CEE	3
2060	Numerical Methods for CEE	4
2090	Professional Aspects of CEE	1
3080	Economics and Optimization	3
3130	Fluid Mechanics	3
3310	Structural Engineering Principles	3
3510	Civil Engineering Materials	3
4000.01	Capstone Design I	2
4000.02	Capstone Design II	2

### Core Elective Courses (*Choose six courses from this section*):

2410	Intro to Geomatics/Surveying	3
2810	Construction Engineering and Management	3
3160	Water Resources Engineering	3
ENE 3200	Fundamentals of Environmental Engineering	3
3540	Geotechnical Engineering	3
3700	Transportation Engineering & Analysis	3
4320	Structural Steel Design	3
<b>OR*</b>	4350 Reinforced Concrete Design	3

\*Either CE 4320 or 4350 may be applied toward the core electives, but not both.

### Technical Electives

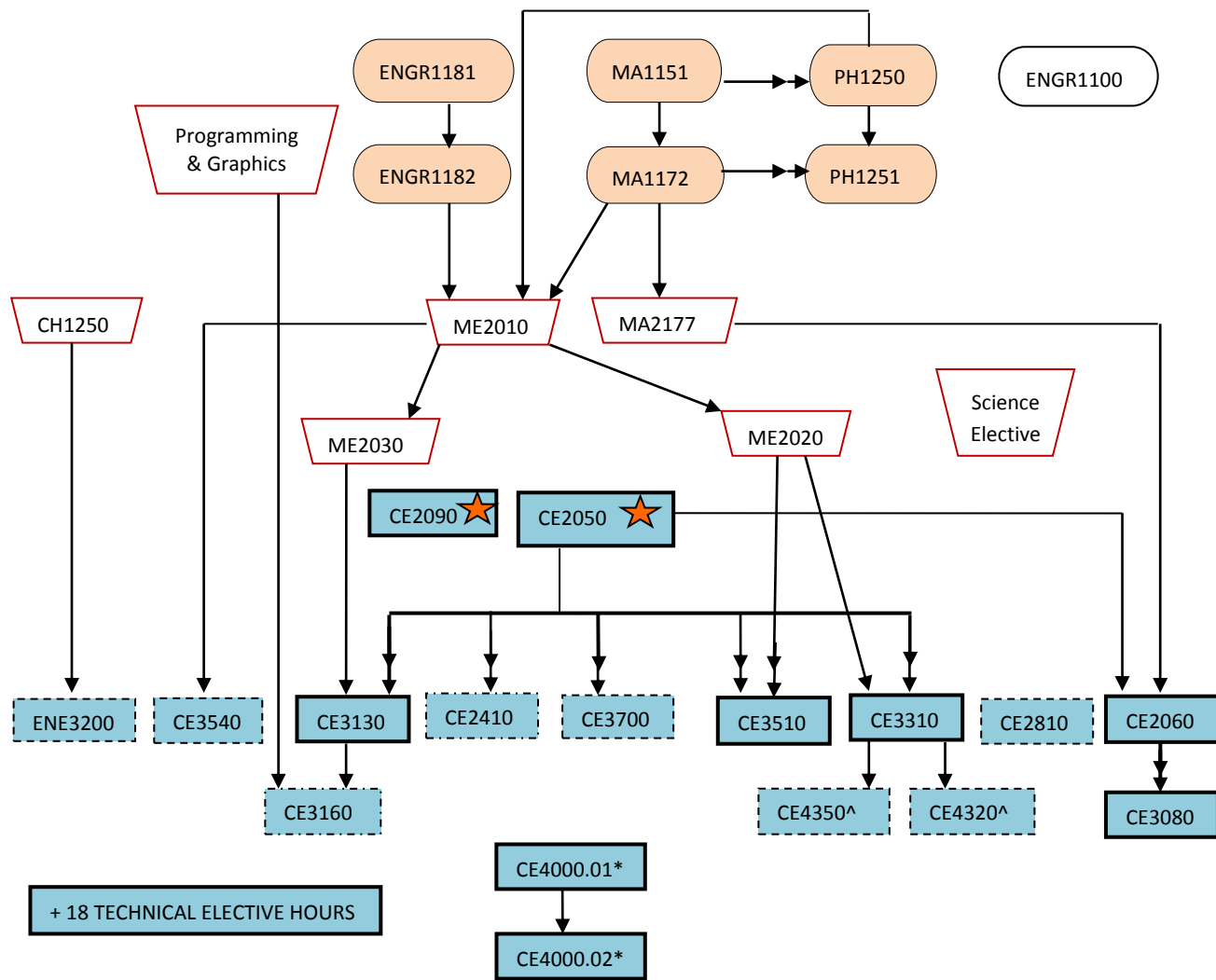
Students are required to complete a Technical Elective package which will be determined under the guidance of a faculty advisor upon admission to the major and chosen from an approved list. Students will complete a minimum of 18 credit hours with at least one course in Infrastructure; Transportation & Geodetic Engineering; Water Resources and Environmental Engineering. Students may not double count Core Electives and Technical Electives.

### General Education (GE)

Students are required to complete a minimum of 24 credit hours and must follow the GE requirements for the year in which they entered OSU. **Economics 2001.xx** is required and will meet a Social Science GE requirement. **English 1110.xx** is required for admission to the major and will meet the First Writing Course requirement. Please refer to the CEG website for the College of Engineering GE lists of courses.

*General curriculum guideline for students starting at OSU during the 2012-2013 academic year.*

# CIVIL ENGINEERING CURRICULUM FLOWCHART



**Pre-Civil Engineering Academic Standards:** Monitored courses include all courses in the orange boxes. A minimum Eligibility Point Hour Ratio (EPHR) of at least 2.0 must be maintained from these courses.

**Acceptance into Major:** Admission requires a formal application. Please review the [CEG Admission](#) website for details and deadlines. Requirements include a minimum 2.0 Cumulative Point Hour Ratio (CPHR), 2.0 EPHR, have completed both English 1110 and ENGR1100 (or another University Survey), Math 1151 and 1172, Physics 1250 and 1251, and Engineering 1181 and 1182.

**Civil Engineering Academic Standards:** All courses listed, with the exception of those in orange boxes and the survey course will be factored into your Major Point-Hour Ratio (MPHR). A minimum MPHR of at least 2.0 must be maintained in all coursework required for the major.

**Civil Engineering Courses:** Includes courses in blue boxes. These courses cannot be taken until admitted to the major.

- Legend:**
- CE = Civil Engineering
  - CH = Chemistry
  - ENE = Environmental Engineering
  - ENGR = Engineering
  - ENR = Environment & Natural Resources
  - MA = Math
  - ME = Mechanical Engineering
  - PH = Physics

- Prerequisite (Must be taken before)
- → Prerequisite or concurrent (Must be taken before or at the same time)
- ★ CE2050 must be taken the first semester in the major. CE2090 should be taken as soon as possible upon admission to major.
- ^ Either CE4350 or CE4320 may be used towards the core elective requirement.
- Courses in ovals are required for admission to major; these courses are monitored in EPHR (excluding ENGR 1100)
- ▭ Courses in trapezoids may be taken prior to admission and are monitored in MPHR
- ▭ Courses in Blue shaded boxes with solid lines are Required Core courses and monitored in MPHR
- ▭ Courses in Blue shaded boxes with dotted lines are Core Elective options and monitored in MPHR (choose 6)
- \* CE 4000.01 and 4000.02 (Capstone) are to be taken consecutively the last two semesters of enrollment.