

The Ohio State University
College of Engineering
Department of Chemical and Biomolecular Engineering
Petroleum Engineering Minor (PETRENG-MN)

Department of Chemical and Biomolecular Engineering
616 CBEC Building; 151 W Woodruff Ave.
Academic Advisor: Brian Endres (endres.10@osu.edu)

Petroleum Engineering is the science of dealing with the oil and gas industry in three different sectors: Upstream, midstream, and downstream.

Students in the Petroleum Engineering minor will be exposed to each of these sectors, especially the upstream sector (exploration and production activities). They will be equipped with an understanding of the vocabulary and engineering fundamentals needed to succeed in the oil and gas industry. They will also increase their involvement in the petroleum industry (including field trips/facilities visits) and build knowledge about the current practices and issues related to the petroleum industry for conventional and unconventional resources, with special attention to the Utica and Marcellus Shales.

The minor requires successful completion of 15 credit hours.

Required prerequisites (10-14 courses; 35-52 CH)

Please Note: The following list reflects prerequisites for the minor's required core courses. Some prerequisites, especially those marked with an "*", may be waived for students who have sufficient experience in the mathematical and physical sciences and a declared minor in Petroleum Engineering. Please see an advisor in the Department of Chemical and Biomolecular Engineering for more information

1. Complete **one** of the following chemistry sequences:
 - a. CHEM 1206 (3), 1208 (5), and 1220 (5)
 - b. CHEM 1210 (5) and 1220 (5)
 - c. CHEM 1250 (4) and CHEM 1220 (5)
 - d. CHEM 1610 (5) and CHEM 1220 (5) (~~-or-~~ 1620 (5))
 - e. CHEM 1910H (5) and CHEM 1220 (5) (~~-or-~~ 1620 (5) ~~-or-~~ 1920H (5))
2. Complete **one** of the following calculus sequences:
 - a. MATH 1151 (5) (~~-or-~~ 1156 (5) ~~-or-~~ 1161.xx ~~-or-~~ 1140 (4) & 1141 (4)) and 1172 (5)
 - b. MATH 1151 (5) (~~-or-~~ 1156 (5) ~~-or-~~ 1161.xx ~~-or-~~ 1140 (4) & 1141 (4)), 1152 (5) (~~-or-~~ 1172 (5), 1181H (5), 4181H) and 2153 (4)
3. Complete **one** of the following engineering sequences:
 - a. ENGR 1181.xx (2) and 1182.xx (2)*
 - b. ENGR 1281.xxH (5) and 1282.xx (5)*
 - c. ENGR 1281.xxH (5) and 1182.xx (2)*
4. Complete the following Chemical & Biomolecular Engineering course:
 - a. CBE 2200 (3)*
5. Complete **one** of the following Earth Sciences courses/sequences:
 - a. EARTHSC 1100 (4)*
 - b. EARTHSC 1200 (1) ~~-AND-~~ 1105 (3), 1108 (3), 1110(H) (3), 1121 (3), 1151 (3), 2203 (3), 2204 (3), 2205 (3), 2206 (3), or 2206S (3)
 - c. EARTHSC 1121(H) (3)*
6. Complete **both** of the following Earth Sciences courses:
 - a. EARTHSC 2122 (H) (4)*
 - b. EARTHSC 4502 (4)*

Required core courses (4 courses; 12 CH)

EARTHSC 5661: Petroleum Geology (3)
CBE 5200: Introduction to Petroleum Engineering (3)
CBE 5210: Petroleum Reservoir Engineering (3)**
CBE 5230: Petroleum Drilling and Production Engineering (3)
*** Enrollment in CBE 5210 is limited to students with a declared major in the College of Engineering or the School of Earth Sciences. Students outside of those programs who are pursuing a minor in Petroleum Engineering must contact Brian Endres.10 to enroll in the course.*

Electives (1 course; 3 CH)

Choose one course from the list below. Some courses may have prerequisites beyond those required for the minor. Please consult the Course Catalog before enrolling.

EARTHSC 5751: Quantitative Reservoir Modeling (3)

EARTHSC 5687: Energy Geophysics (3)

CBE 5260: Petroleum Project Evaluation (3)

Petroleum Engineering Minor program guidelines

Credit hours required A minimum of 15 credit hrs. 1000 level courses shall not be counted in the minor. At least 6 credit hours must be upper-division courses (3000 level or above) as defined by the College of Engineering.

Transfer and EM credit hours allowed A student is permitted to count up to 6 total hours of transfer credit and/or credit by examination.

Overlap with the GE A student is permitted to overlap up to 6 credit hours between the GE and the minor.

Overlap with the major and additional minor(s)

- The minor must be in a different subject than the major.
- The minor must contain a minimum of 12 hours distinct from the major and/or additional minor(s).

Grades required

- Minimum C- for a course to be listed on the minor.
- Minimum 2.00 cumulative GPA for all minor course work
- Course work graded Pass/Non-Pass cannot count toward the minor.
- No more than 3 credit hours of course work graded Satisfactory/Unsatisfactory may count toward the minor.

X193 credits No more than 3 credit hours

Declaring the minor

In order to declare the minor, students must meet with an academic advisor in the department of Chemical and Biomolecular Engineering prior to the filing of the graduation application. Please email Brian Endres.10 to make an appointment.

Approval of Coursework

Initial approval of the minor coursework:

Students who complete the minor following the guidelines on this sheet need only verify with their academic advisor that the minor appears complete on the degree auditing system. No approval from the Department of Chemical and Biomolecular Engineering is required.

Approval for courses not listed on this form to apply to the minor program:

Students may not request alternatives to the listed coursework for this program; all students must adhere to the guidelines and policies outlined on this form.

College of Arts and Sciences
Curriculum and Assessment Services
306 Dulles Hall, 230 Annie & John Glenn Ave.
<http://artsandsciences.osu.edu>
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