Soph & Junior Advising
Civil & Environmental Engineering
Winter 2019 for 2018-2019 AY
Professor M. G. McNally
Professor Diego Rosso

Some Definitions
• CEE: Civil and Environmental Engineering
• HSSOE: Henry Samueli School of Engineering
• BSCE: Bachelor of Science in Civil Engineering
• BSEnE: Bachelor of Science in Environmental Engineering
• Faculty Advising: An advising meeting with a faculty member
• Faculty Advisor Cohort: a designated group of faculty members who serve your faculty advisors during your program
• UG Advisor: a faculty member who manages the program
• HSSOE Counselors: school staff that help you develop and complete your academic program
• ABET: accreditation organization for our engineering programs

Soph & Junior Advising Process
• Faculty advising complements other forms of advising:
  – HSSOE Counselors, Peer Advising, Professional mentors
• Annual Process: every year!
• Format: Each entering class will keep the same group of faculty advisors throughout the degree program
• Either Group or Individual Advising is Mandatory
  – Group Advising: sessions for Freshmen in the Fall and separate sessions for Sophomores and for Juniors in the Winter
  – Individual Advising: select a faculty member by name, teaching and research area, or session format
• Sophs & Juniors are recommended to see a faculty advisor often, but this is optional starting Winter 2018.
• Penalty: Registration Hold (not a good thing!)

INDIVIDUAL ADVISING
• Individual faculty advising for sophomores & juniors is highly recommended (but optional, starting Winter 2018)
  
• If you wish to meet with a faculty advisor, contact one of the faculty from your advising cohort via email or stop by their weekly office hours (posted in CEE Office)

• You may select a faculty member by name, teaching and research area, or availability. If you wish, you can see a different faculty advisor reach time. See FAQs:
  http://www.its.uci.edu/~mmcnally/FAQ-advising.html
Advising FAQs

FAqs: CEE Faculty Advising Process [2018-2019]

Why
What
Where
How
When
Who
Other
Contacts

民用与环境工程

FAQs: CEE Faculty Advising Process [2018-2019]

• Email Notices on the Faculty Advising Process
Your email UCI email serves as the official email address for the Department of Civil and Environmental Engineering regarding the mandatory Faculty Advising Process, as well as other program matters. You are solely responsible for regularly checking your UCI email and responding as appropriate. No other media options are currently used.

• Why Do We Have Faculty Advising for Undergraduates?
The simplest answer is that annual faculty advising of undergraduate students is required for engineering degree program certification; a degree from an accredited engineering program is required for professional registration, and professional registration is required for engineering practice. The advising process is necessary for the most practical reasons. Our program requirements evolve through regular meetings with students and the best way to provide information on current programs and planned changes. In this regard, faculty advising complements but does not replace annual meetings with the School of Engineering (SSE) Committee to develop the Plan of Study. The faculty advising process also provides an opportunity for students to discuss a broad range of issues with program faculty, whether involving degree issues, specialization choices, career opportunities, or even problems in the program. It provides a good time to get advice on potential opportunities at a very low cost.

• What Is the CEE Faculty Advising Process?
Many academic programs assign freshmen to advisors with faculty members who will remain in that capacity as the student proceeds through the program. This fixed advisors are useful to many students who are questions throughout the year. We have chosen to assign newborns to a group of faculty advisors, providing a fixed group of advisors for the same group of students over the entire time that they are in the degree program. Each advisor will be assigned to a group of students based on their areas of interest (e.g., environmental, structural, water). Your faculty advisor will continue to advise you as long as you are in our CE program.

https://www.its.uci.edu/ -mcnalley/FAQ-advising.html

Advisers: Freshmen 2018-19 (Class of 2022)

Dr. Aghakouchak
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Water/Environmental
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Dr. Li
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Advisers: Sophomores 2018-19 (Class of 2021)

Dr. Jayakrishnan
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Transportation
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Water Resources
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Dr. Sanders
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Water/Environmental
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Dr. McNally, CE UG Advisor
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Dr. Rosso, EnE UG Advisor
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EG 4167
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Dr. Sorooshian
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CEE 176
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Dr. Lanning
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Advisers: Seniors 2018-19 (Class of 2019)

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Water/Environ
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Dr. Hyland
AIRB 4022
Transportation
CEE 110
hylandm@uci.edu

Dr. Adeyele
ET 516F
Water / Environ.
Adeyemi_adeyele@uci.edu

ABET Program Assessment

1. Stakeholders: students, faculty, alumni, and employers
2. Program Educational Objectives: accomplishments of graduates expected by a few years after graduation
3. Student Learning Outcomes: knowledge and skills to be attained by the time of graduation
4. Course Outcomes (or Performance Criteria) are restatements of Program Outcomes that define specific knowledge and skills to be attained in a specific course
5. Degree Requirements comprise core, specialization, labs, General Ed, and a capstone design experience

CE@UCI

CE Program Educational Objectives:

Describe the expected accomplishments of graduates during the first few years following graduation. Our graduates are expected to:

1. Establish a Civil Engineering career in industry, government, or academia and achieve professional licensure as appropriate.
2. Demonstrate excellence and innovation in engineering problem solving and design in a global and societal context.
3. Commit to lifelong learning and professional development to stay current in technology and contemporary issues.
4. Take on increasing levels of responsibility and leadership in technical and/or managerial roles.

Note: EnE PEOs are virtually identical

CE@UCI

2018
**CE and EnE Student Outcomes (ABET 1-7):**

By graduation, students must have the ability to:

1. to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics;
2. to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors;
3. to communicate effectively with a range of audiences;
4. to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts;
5. to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives;
6. to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions;
7. to acquire and apply new knowledge as needed, using appropriate learning strategies.

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**HSSOE Advising Requirements:**

1. All students are required to meet annually with their designated faculty for advising and mentoring and to have an academic plan on file with the Student Affairs Office which has been approved by their academic counselor.
2. Students who do not have a plan on file, or deviate from this plan without approval from an academic counselor will be subject to probation. Students on probation for two consecutive quarters who do not have a plan on file, or deviate from this plan without approval from an academic counselor will be subject to disqualification. Students who fail to meet with a faculty advisor each year will be subject to disqualification.
CE Course Requirements 1

Mathematics and Basic Science (48 units)
• Math2A-B-D-E, 3A-D
• Phys7C-D and 7LC-D, Chem 1A-B
• Science Elective (one BioSci or ESS course from GE2)
• Elective (two from Chem1LE, ENGR7A-B, LDEE)
  [LDEE is one of (EECS70A, Engr54, MAE80, MAE91)]

General Education Requirements (44+ units)
• Provides flexibility, overlaps encouraged, etc.
• Engineering Professional Topics include Econ 20A-B and CEE60 (or SocEcol E8), E190W UD Writing

CE Course Requirements 2

Engineering Topics Courses (77 units):
• LD Core: CEE 11, 20, 21, 30, 81A-B
• UD Core: CEE 110, 111, 121, 130, 130L, 150, 150L, 151A, 151C, 160, 170, and 171
• Elective (two from Chem1LE, ENGR7A-B, LDEE)
  where LDEE is one of (EECS70A, Engr54, MAE80, MAE91)
• Engr Design Elective (one of 155, 172, 122 or 123)
  (Eliminated: now part of specializations)
• Senior Design Practicum: CEE 181A-B-C

Specialization (16 units)
• Must complete senior design project in same area

Summary: A nominal total of 184 units (22+ design units)

BSCE: Freshman

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BSCE: Sophomore

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* Science Elective: BioSci or ESS (NOT chemistry or physics)
* Engr7A-B Option (Lower Division only)
### BSCE: Junior

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- Civil Engineering “core”; *pre-requisites are important!*

2018-2019

### BSCE: Senior

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- **Engr Design** Elective (eliminated in Fall 2018)
- **Specialization Elective**: flexibility with 4th course!

2018-2019

### Specializations 1

**General Civil Engineering:**
Requires four *(three)* courses from CEE122 or CEE123; CEE149, CEE152, CEE151B, CEE155, or CEE156; CEE162, CEE163, CEE165, or CEE169; CEE172, CEE173, CEE176, or CEE178; or CEE55 or courses from an approved list.

**Environmental Hydrology & Water Resources:**
Requires four *(three)* courses from CEE163, 164, 165, 169, CEE172, 173, 176, or 178, or courses from an approved list.

2018-2019

### Specializations 2

**Structural Engineering:**
Requires CEE155, and three *(two)* courses from CEE149, CEE151B, CEE152, CEE156, MAE157, or courses from an approved list.

**Transportation Systems Engineering:**
Requires CEE122 and CEE123, and two *(one)* courses from CEE124, CEE125, Engr189, EECS70A, or courses from an approved list.

**Note:** 4th course may be any UD HSSOE technical elective

2018-2019
Key Pre-requisites

EnE Course Requirements 1

Mathematics and Basic Science (68 units)
- Math 2A-B-D-E, 3A-D, CEE11
- Phys 7C-D, 7LC-D
- Chem 1A-B-C, 1LC-D, 51A
- 4 units of Earth System Science and 4 units of Biological Sciences (any GE 2 course in Fall 2018)

General Education Requirements (44+ units)
- Engineering Professional Topics Courses include:
- Economics 20A-B and CEE60 (or Soc Ecol E8)
- E190W for Upper Division Writing

EnE Course Requirements 2

Engineering Topics Courses (78+ units):
- LD Core: CEE 20, 21, 30, 81A, 81B, MAE91
- UD Core: CEE 110, 130, 130L, 150, 150L, 160, 162, 170
- Engr Sci Elective (Engr7A-B, EECS70A, Engr54, MAE80)
- Senior Design Practicum: CEE 181A-B-C
- Engineering Electives (2 from 2 areas/1 from other):
  - Water Supply and Resources (CEE171, 172, 173, 176, 178, ESS132)
  - Environmental Processes (CEE163, 165, 167)
  - Atmos Systems & Air Poll Control (MAE110, 115, 164, ESS 112)

- A nominal total of 191 units
- Must verify Program of Study and unit counts with UG Office

Program Educational Objectives:

Describe the expected accomplishments of graduates during the first few years following graduation. Our graduates are expected to:

1. Establish an Environmental Engineering career in industry, government, or academia and achieve professional licensure as appropriate.
2. Demonstrate excellence and innovation in engineering problem solving and design in a global and societal context.
3. Commit to lifelong learning and professional development to stay current in technology and contemporary issues.
4. Take on increasing levels of responsibility and leadership in technical and/or managerial roles.
### BS EnE: Freshman

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- Gen Ed Recommendation: WR39B-C or CEE60
- * Engr 7A-B option in F/W for lower division only
- 52 units

### BS EnE: Sophomore

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- Gen Ed Recommendation: CEE60
- LD Engr Elect: Engr 7A-B, ENGR54, MAE80, etc.
- 51 units

### BS EnE: Junior

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- Consider pre-requisites!
- Science Electives: 1 each in Bio Sci and Earth Systems Sci
- 50 units

### BS EnE: Senior

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- Spread Gen Ed (include Econ 20A-B, UD Writing)
- Consider pre-requisites for Science and Engineering Electives
- 38 units (nominal total units = 191)
General Education Requirements

1. General Education requirements:
   • Writing (3 courses: 2 LD and 1 UD)
   • Arts and Humanities (3 courses)
   • Social and Behavioral Sciences (CE/EnE reqs.)
   • Multicultural Studies / International Issues (1)
2. BSCE and BSEnE already cover:
   • Science and Technology
   • Quantitative, Symbolic, Computational Reasoning
3. Need to consult with HSSoE counselors

Academic Honesty

• Civil and Environmental Engineering is perhaps at the pinnacle of the practice of, and the need for, ethical behavior.
• At you progress through the program, any form of cheating has reduced benefit (on grades) and increased cost (of not finishing your degree).
• The UCI Policy on Academic Honesty is defined at: http://www.senate.uci.edu/senateweb/default2.asp?active_page_id=754
• Take note of the descriptions of cheating, dishonest conduct, plagiarism, and collusion.
• Ask your instructors to discuss course policies on Academic Honesty, including policies on joint work on HW, labs, or other required tasks.
• Full details are posted on-line at: http://honesty.uci.edu/

Department Scholarships

Civil and Environmental Engineering offers annual scholarship opportunities for qualified undergraduate students:
• Emeriti Scholarships, supported by the UCI CEE Affiliates:
  – Jan Scherfig Scholarship: for freshmen returning in the fall
  – Gary Guymon Scholarship: for sophomores returning in the fall
  – Robin Shepherd Scholarship: for juniors returning in the fall
• Huit Zollars Civil Engineering Scholarship:
• Applications for the $1,000 scholarships are submitted online in Winter Quarter (check your UCI email!)
• Other HSSOE and UCI Scholarships:
  http://www.ofas.uci.edu/content/Scholarships.aspx

Professional Registration

1. Profession Registration: licensure as a professional engineer is required to practice as a civil or environmental engineer.
2. Steps Toward Licensure: First…
   a. Complete a BS from an accredited institution (UCI!)
   b. Successfully complete the Fundamentals of Engineering (FE) exam (material covered includes physics, chemistry, thermo, circuits, mathematics, statics & dynamics, engineering economics, fluids, engineering ethics, strength of materials, computers, etc.)
3. Steps Toward Licensure: Then…
   a. After 2 years of work under professional engineers …
   b. … soon 30 units of post-graduate continuing education
   c. Successfully pass the Principles and Practice of Engineering (PE)
   d. http://www.ncees.org/exams/professional/
HSSOE UG Office

HSSOE UG Office

CEE Home Page

CEE Home Page

Study Abroad Program

Study Abroad Program

Student Clubs

Student Clubs
Summary

1. Academic Honesty…
2. Faculty Advising, HSSOE Counselors
3. ABET evaluations versus UCI course evaluations
4. Petitions: substitutions, variations, and related issues
5. Student Clubs? [G-E-T  I-N-V-O-L-V-E-D]
6. Research Opportunities, Internships, Jobs
7. Careers: Graduate School? (GRE)
8. Careers: Professional Practice (FE, PE)

Contact Information

HSSOE UG Affairs Office:
1. UG Counselors in REC 305  (824-4334)

Civil & Environmental Engineering:
1. Department Office in EG 4130 (824-5333)
2. CEE web site: http://www.eng.uci.edu/dept/cee/
3. CE Advisor: Professor McNally <mmcnally@uci.edu>
4. EnE Advisor: Professor Rosso <bidui@uci.edu>

UCI General Catalogue: Your contract with UC
http://www.editor.uci.edu/catalogue/engr/engr.6.htm