Soph & Junior Advising
Civil & Environmental Engineering
Winter 2018 for 2017-2018 AY
Professor M. G. McNally
Professor Diego Rosso

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 optional, starting Winter 2018.

- If you wish to meet with a faculty advisor, you may contact one of the faculty from your advising cohort via email or stop by their posted office hours.

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

Advising FAQs
CEE Chair and UG Advisers

Dr. Jiang, Chair
AIRB 4055
Environmental
CEE 160
sjiang@uci.edu

Dr. McNally, CE UG Advisor
AIRB 4048
Transportation
CEE 123
mmcnally@uci.edu

Dr. Rosso, EnE UG Advisor
ET 844F
Environmental
CEE163, CEE165
bidui@uci.edu

Advisers: Freshmen 2017-18 (Class of 2021)

Dr. Jayakrishnan
AIRB 4055
Transportation
CEE 81A
rjayakri@uci.edu

Dr. Hsu
EH 5320
Hydrologic Modeling
CEE30
kuolinh@uci.edu

Dr. Qomi
EG 4151
Structures
CEE 151a
mjpi@uci.edu

Dr. Mosallam
EG 4167
Structures
CEE 150
mossalam@uci.edu

Advisers: Sophomores 2017-18 (Class of 2020)

Dr. Davis
ET 544E
Coastal Engineering
CEE 21, CEE 178
davis@uci.edu

Dr. Jin
AIRB 4038
Transportation
CEE 110
wlin@uci.edu

Dr. Soooshian
EH 5308
Hydrologic Systems
CEE 176
soroosh@uci.edu

Dr. Grant
ET 544F
Environmental
CEE11
sbgrant@uci.edu

Advisers: Juniors 2017-18 (Class of 2019)

Dr. Farzin Zareian
EG 4141
Structures
CEE150
zareian@uci.edu

Dr. Russ Detwiler
ET 716E
Water/Environ
CEE171, CEE172
detwiler@uci.edu

Dr. Ritchie
AIRB 4014
Transportation
CEE121, CEE124
saphores@uci.edu

Dr. Lanning
EG
Structures
CEE 155, CEE 181
bsanders@uci.edu
Advisers: Seniors 2017-18 (Class of 2018)

- Dr. Amir Aghakouchak
  - ET 506A
  - Water/Environmental
  - CEE81B, CEE173
  - amir.a@uci.edu

- Dr. Will Recker
  - AIRB 4074
  - Transportation
  - CEE 111
  - wwillrecker@uci.edu

- Dr. Mo Li
  - EG 4145
  - Structures
  - CEE30
  - Mo.li@uci.edu

- Dr. Sanders
  - ET 844D
  - Water/Environment
  - CEE 170
  - bsanders@uci.edu

- Dr. Lizhi Sun
  - EG 4139
  - Structures
  - CEE 30, CEE 152
  - lsun@uci.edu

- Dr. Sanders
  - ET 844D
  - Water/Environment
  - CEE 170
  - bsanders@uci.edu

- Dr. Lizhi Sun
  - EG 4139
  - Structures
  - CEE 30, CEE 152
  - lsun@uci.edu

Soph & Junior Issues

- Academic Program:
  - Faculty Advising Changes
  - E190W – upper division writing
  - Science Elective (any GE II from BioSci or ESS)
  - Engineering Design Elective (EDE) is eliminated Fall 2018; provides room to consider graduate courses

- Grades and pre-requisites … letter grades!

- Student Clubs & Professional Associations

- E-Week: February 2018 – Get Involved

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

BS Degree Programs

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 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 and EnE Student Learning Outcomes:**

Describe what students are expected to know or be able to do by graduation (a-k)

a. An ability to apply knowledge of mathematics, science, and engineering.

b. An ability to design and conduct experiments, as well as to analyze and interpret data

c. An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability

d. An ability to function on multidisciplinary teams

e. An ability to identify, formulate, and solve engineering problems

http://plaza.eng.uci.edu/course/outline/engrcee/
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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<tr>
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<th>Fall</th>
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<td>Math 2A</td>
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<td>Chem 1A</td>
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<tr>
<td>Gen. Ed.</td>
<td>2-4</td>
<td>2-3</td>
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<tr>
<td>Engr 7A</td>
<td>2-4</td>
<td>Or Engr 7B</td>
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|         | 34-16 | 15-16 | 16     |

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

BSCE: Sophomore

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<td>CEE 30</td>
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<td>CEE 20</td>
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<tr>
<td>Gen. Ed.</td>
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|         | 16    | 15     | 16     |

- Gen Ed Recommendation: Econ 20A-B, CEE60
- LD Engr Elective: EECS70A, Engr54, MAE80, MAE91
BSCE: Junior

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<td>CEE 151</td>
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<td>CEE 170</td>
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<td>CEE 171</td>
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<td>CEE 121</td>
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<td>E190W</td>
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<td>Gen. Ed.</td>
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- Civil Engineering “core”; *pre-requisites are important!

2017-2018

BSCE: Senior

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<td>Gen. Ed.</td>
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<td>Gen. Ed.</td>
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- *Engr Design* Elective (eliminated in Fall 2018)
- Can not double count the EDE!
- *Specialization Elective*: flexibility with 4th course!

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, 165, 169, CEE172, 173, 176, or 178, or courses from an approved list.

2017-2018

Specializations 2

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

**Transportation Systems Engineering:**
Requires CEE122 and CEE123, and two *(one)* courses from CEE124, CEE125, E189, EECS70A, or courses from an approved list.

**Note:** the 4th course is any UD HSSOE technical elective

2017-2018
Key Pre-requisites

BSCE Prerequisite Chains for CEE181ABC (2016-2017)

EnE Course Requirements 1

Mathematics and Basic Science (64 units)
- Math 2A-B-D-E, 3A-D
- 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 (81+ units):
- LD Core: CEE 11, 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 189 units
- Must verify Program of Study and unit counts with UG Office
### BS EnE: Freshman

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- Gen Ed Recommendation: WR39B-C or CEE60
- EECS10 and CEE20 replaced by CEE20 & CEE21 in Fall ‘13
- Engr 7A-B option in F/W for lower division only

### BS EnE: Sophomore

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<td>CEE 30</td>
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- Gen Ed Recommendation: CEE60
- Engr Science Elective: EECS70A, ENGR54, MAE80, etc.

### BS EnE: Junior

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

### BS EnE: Senior

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- Spread Gen Ed (include Econ 20A-B, UD Writing)
- Consider pre-requisites for Science and Engineering Electives
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

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

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/

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/
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