

## Department of Civil and Environmental Engineering

## AY 2021-22 MASTER'S DEGREE PLAN OF STUDY STRUCTURAL ENGINEERING

| Name:                                      | Student ID Number: |
|--|--------------------|
| Qrt/Year Expected to Advance to Candidacy: | Email Address:     |
| Qrt/Year Expected to Graduate:             | GPA:               |
| Thesis or Non-Thesis Option:               | Thesis Advisor:    |
| Thesis of Non-Thesis Option.               | THESIS Advisor.    |

| Thesis or Non-Thesis Option:           |                  |       |       |        | Thesis Advisor:  | Thesis Advisor:  |  |
|--|------------------|-------|-------|--------|--|--|--|
| COURSE TITLE                           | COURSE<br>Number | UNITS | GRADE | QTR/YR | NON-THESIS OPTION<br>(48 Units Total)  | THESIS OPTION (48 Units Total)   |  |
|  |                  |       |       |        | Graduate Coursework: 40 units  | Graduate Coursework: 28 units  |  |
|  |                  |       |       |        | Students must fulfill a minimum of 40 units from graduate courses listed below (CEE = ENGRCEE):  | Students must fulfill a minimum of 28 units from graduate courses listed below (CEE = ENGRCEE):  |  |
|  |                  |       |       |        | CEE 231, CEE 232, CEE 240,<br>CEE 242, CEE 243, CEE 247,<br>CEE 249, CEE 250, CEE 252,<br>CEE 254, CEE 255, CEE 258,<br>CEE 281, CEE 283, CEE 298 <sup>¥</sup>   | CEE 231, CEE 232, CEE 240,<br>CEE 242, CEE 243, CEE 247,<br>CEE 249, CEE 250, CEE 252,<br>CEE 254, CEE 255, CEE 258,<br>CEE 281, CEE 283, CEE 298 <sup>‡</sup> |  |
|  |                  |       |       |        | See attached list for more information on course offerings.  | See attached list for more information on course offerings.  |  |
|  |                  |       |       |        | *Only approved CEE 298 courses are allowed. Please see page 2.   | MS Thesis Units: 10 units Students can fulfill a maximum of 10 units of CEE 296: MS Thesis Research.   |  |
| TOTAL UNITS FOR THI                    | IS SECTION:      |       |       | l      |  | ,  |  |
| COURSE TITLE                           | COURSE<br>Number | UNITS | GRADE | QTR/YR | Seminars/Other (8 out of 48 Units)   | Seminars/Other (10 out of 48 Units)  |  |
|  |                  |       |       |        | Required: 3 units of CEE 295: Seminars in CEE (Max. of 3 units apply to degree requirements).  | Required: 3 units of CEE 295: Seminars in CEE (Max. of 3 units apply to degree requirements).  |  |
|  |                  |       |       |        | Options for remaining 5 units:  1) Approved graduate-level coursework  2) CONTROLL IN THE PROPERTY OF THE PROP | Options for remaining 7 units:  1) Approved graduate-level coursework  2) CEE 299 Individual Research  |  |
| TOTAL UNITS FOR THI TOTAL UNITS FOR MS |                  |       |       |        | <ul> <li>2) CEE 299 Individual Research units</li> <li>3) Approved upper-division undergraduate units</li> </ul>   | <ul><li>2) CEE 299 Individual Research units</li><li>3) Approved upper-division undergraduate units</li></ul>  |  |

| SIGNATURES:                 |       | MS THESIS COMMITTEE MEMBERS: |
|-----------------------------|-------|------------------------------|
| CANDIDATE:                  | DATE: | CHAIR:                       |
| FOCUS AREA FACULTY ADVISOR: | DATE: | MEMBER:                      |
| CEE GRADUATE ADVISOR:       | DATE: | MEMBER:                      |

<u>NOTE:</u> Please submit this form to the Grad. Coordinator by the end of the FIRST quarter of enrollment. Any changes to this form MUST be approved by the Faculty Graduate Advisor, Professor Zareian: <u>zareian@uci.edu</u>.

## Structural Engineering Courses

| CEE Courses:   | Notes:  |
|--|---|
| ENGRCEE 231 Foundation Engineering (S) ENGRCEE 232 Geotech Earthquake Engineering (*) ENGRCEE 240 High Performance Materials (F) ENGRCEE 242 Advanced Strength of Materials (F) ENGRCEE 243 Mechanics of Composite Materials (*) ENGRCEE 247 Structural Dynamics (F) ENGRCEE 249 Earthquake Engineering (W) ENGRCEE 250 Finite Element Method in Structural Eng. (F) ENGRCEE 251 Performance Based Structural Engineering (S) ENGRCEE 252 Multiscale Modeling of Materials & Struct (W) ENGRCEE 254 Adv. Reinforced Concrete Behavior & Design (S) ENGRCEE 255 Adv. Behavior and Design of Steel Structures (W) ENGRCEE 258 Earthquake Resistant Structural Design (S) ENGRCEE 281 Structural Reliability (*) ENGRCEE 283 Mathematical Methods in Eng. Analysis (F) ENGRCEE 298 Micromechanics (W) | <ul> <li>Key:         <ul> <li>(F): Fall Quarter; (W): Winter Quarter; (S): Spring Quarter; (*): Not offered in 2021/2022.</li> </ul> </li> <li>For Non-CEE Courses, please check with your academic advisor and the Department for an approval prior to planning and/or registering for the course.</li> <li>Upper-division undergraduate courses and/or Non-CEE graduate courses can ONLY be included with the prior approval of the Graduate Advisor of the Structures program, Professor Farzin Zareian. Please email your request along with a description of the course to: zareian@uci.edu.</li> <li>Upon approval of the Graduate Advisor, thesis research units can be extended to 16 units. You must email your request to the Graduate Advisor of the Structures program, Professor Farzin Zareian.</li> </ul> |

## **Course sequence recommendations:**

No prerequisites are suggested in the description of our graduate courses to make sure the graduate program has the flexibility of catering to all graduate students (that come from a spectrum of educational and cultural backgrounds). The following list is prepared to guide students on what material is needed as background knowledge for successful completion of each graduate level course. Note: It is not expected students will enroll in the courses required for background knowledge, but it is expected students have a broad understanding of the material covered in these courses.

- 1. ENGRCEE 231: requires ENGRCEE 130.
- 2. ENGRCEE 232: requires ENGRCEE 130.
- 3. ENGRCEE 242: requires ENGRCEE 150, ENGRCEE 151A, ENGRCEE 283.
- 4. ENGRCEE 243: requires ENGRCEE 150.
- 5. ENGRCEE 240 High Performance Materials: requires ENGRCEE 150, ENGRCEE 151A.
- 6. ENGRCEE 247: requires MATH 3D, ENGRCEE 151A.
- 7. ENGRCEE 249: requires ENGRCEE 247.
- 8. ENGRCEE 250: requires ENGRCEE 150, ENGRCEE 151A, ENGRCEE 152.
- 9. ENGRCEE 251: Performance Based Structural Engineering: requires ENGRCEE 258, ENGRCEE 281.
- 10. ENGRCEE 254: requires ENGRCEE 151C, ENGRCEE 151A.
- 11. ENGRCEE 255: requires ENGRCEE 155, ENGRCEE 151A.
- 12. ENGRCEE 258: requires ENGRCEE 249.
- 13. ENGRCEE 281: requires ENGRCEE 11, ENGRCEE 21, ENGRCEE 151A.