

## MEng in Civil Engineering Curriculum Table

### Instructions:

- 1) Choose an Area of Specialization. Select 15 hours of coursework within the area, including required courses in that area, following rules as noted in the table below.
- 2) Articulation courses should be taken first, if not already taken during the undergrad program. Graduate courses can be taken in any order.
- 2) Complete the Plan of Study form considering the course frequency. **At least 15 hours from combined specialty area courses and supplementary electives should be taken from the Civil Engineering Department.**
- 3) Course numbers without titles are all CEE graduate courses. Their titles can be found from the department web page (<https://eng.famu.fsu.edu/cee/graduate/courses>).
- 4) If you are missing a pre-requisite of a course, contact the instructor to discuss the possibility of a waiver. Waivers are applicable to graduate courses only.
- 5) This table applies only to MEng students. MS and PhD students may use this document as a guide to available courses but should see the Graduate Handbook for detailed requirements.
- 6) MEng students may be allowed to replace a required specialty course with an alternative course under certain circumstances that are beyond student control (e.g., certain courses may not be offered with the expected frequency). Students should consult with the department if they are not able to take the required specialty course.

**Legend:** required course    online course    typically offered once a year vs. typically offered once in two years

Area of Specialization	Articulation Courses (If Applicable)	Specialty Area (15 hours)	Supplementary Electives (12 hours)	Math and Quantitative (3 hours)
Transportation Engineering	1) TTE 3004 Transportation Eng.; 2) TTE 4201 Traffic Eng. or TTE 4804 Highway Geometric Design	( <span style="color: red;">TTE 5256 or TTE 5270</span> ), ( <span style="color: red;">TTE 5305 or TTE 5501</span> ), ( <span style="color: red;">TTE 5074 or EGN 5465</span> ), TTE 5206, TTE 5606, CEG 5127, EGN 5480	<ul style="list-style-type: none"> <li>• <b>Any CEE course</b> (both within and outside the Area of Specialization)</li> <li>• <span style="background-color: #e0e0e0;">COM 5450</span> Intro to Project Management</li> <li>• <span style="background-color: #e0e0e0;">ENT 5216</span> Foundations of Entrepreneurship &amp; Leadership</li> <li>• EGN 5950 Research Methods in Eng.</li> <li>• ISC 5236 Applied Groundwater Modeling</li> <li>• ISC 5226 Numerical Methods in Earth &amp; Env Sciences</li> <li>• ISC 5935 Uncertainty Analysis &amp; Risk Management in Earth &amp; Env Sciences</li> <li>• OCC 5930 Environmental Modeling</li> <li>• PAD 5388 Disaster Recovery and Mitigation</li> <li>• <span style="background-color: #e0e0e0;">PAD 5395</span> Critical Infrastructure Protection</li> <li>• <span style="background-color: #e0e0e0;">PAD 5397</span> Foundations of Emergency Management</li> <li>• Any other 5000- or 6000-level course that meets the career interest of the student, with the advisor's approval</li> </ul>	<ul style="list-style-type: none"> <li>• EGN 5444 Big Data Analytics in Engineering</li> <li>• <span style="background-color: #e0e0e0;">EGN 5458</span> Statistical Applications for Engineers</li> <li>• STA 5126 Introduction to Applied Statistics</li> <li>• STA 5206 Analysis of Variance and Design of Experiments</li> <li>• STA 5207 Applied Regression Methods</li> <li>• MAD 5420 Numerical Optimization</li> <li>• CGS 5466 Programming for Non-Majors</li> <li>• CAP 5771 Data Mining</li> <li>• ISC 5307 Scientific Visualization</li> <li>• ISC 5314 Verification and Validation in Computational Science</li> <li>• ISC 5935 Machine Learning</li> <li>• Any other 5000- or 6000-level course in math, statistics, or computation with the advisor's approval</li> </ul>
Construction Engineering	1) CCE 3101 Construction Materials; 2) CCE 4004 Construction Eng. or CES 3100 Structural Analysis	<span style="background-color: #e0e0e0;">CCE 5036</span> , <span style="background-color: #e0e0e0;">CCE 5212</span> , <span style="background-color: #e0e0e0;">CCE 5020</span> , <span style="background-color: #e0e0e0;">CCE 5510</span> CGN 5301, CGN 5307, <span style="background-color: #e0e0e0;">CGN 5615</span>		
Geotechnical Engineering	1) CEG 3011 Soil Mechanics; 2) CEG 4801 Geotechnical Design or CEG 4111 Foundation Eng.	CEG 5015, <span style="color: red;">CEG 5115</span> , <span style="color: red;">CEG 5515</span> , <span style="color: red;">CEG 5705</span> , <span style="background-color: #e0e0e0;">CEG 5865</span> OCC 5930, ISC 5226, ISC 5236, ISC 5935		
Structural Engineering	1) CES 3100 Structural Analysis; 2) CES 4605 Steel Design; 3) CES 4702 Concrete Design	<span style="color: red;">CES 5105</span> , <span style="background-color: #e0e0e0;">CES 5106</span> , CES 5209, <span style="background-color: #e0e0e0;">CES 5585</span> , CES 5606, <span style="background-color: #e0e0e0;">CES 5706</span> , CES 5715, <span style="background-color: #e0e0e0;">CES 5835</span> , CES 6116		
Environmental and Water Resources Engineering	1) EES 3040 Intro to Environmental Eng.; 2) CWR 3201 Hydraulics; 3) ENV 4001 Environmental Eng.	<span style="background-color: #e0e0e0;">ENV 5015</span> , <span style="background-color: #e0e0e0;">ENV 5076</span> , <span style="color: red;">ENV 5030</span> , ENV 5055, <span style="color: red;">ENV 5565</span> , ENV 5617 <span style="color: red;">CWR 5205</span> , <span style="color: red;">CWR 5305</span> , <span style="color: red;">CWR 5824</span> GLY 5827 Principles of Hydrology (Required: take 2 out of 4 listed)		