The following is the listing of potential courses that could be taken to meet the Department’s requirements. Before taking a course you should discuss with your advisor to see if they meet your curriculum plan. If a student’s advisor and supervisory committee wish to vary from the course requirements a formal petition must be submitted to the Graduate Studies Committee.

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| Core Courses |  |
| As part of the 15 CORE Credits, structural and geotechnical students should take at least one course from each one of the following areas. The requirement can be partially or fully waived if the student passed at least one of the courses (or equivalent) in undergraduate studies. The waiver will not reduce the minimum credit course requirements for the MS degree. |
| Structures Area | Historical Offering  |
| CVEEN 6210 | Structural Analysis II | Every Spring.  |
| CVEEN 6220 | Concrete Design II | Every Spring. |
| CVEEN 6230 | Steel Design II | Every Fall.  |
| CVEEN 6250 | Structural Dynamics | Every Fall.  |
| Geotechnics Area  |
| CVEEN 5305 | Intro to Foundation Engineering | Every Fall. |
| CVEEN 6310 | Foundation Engineering | Every Fall.  |
| CVEEN 6330 | Soil Dynamics and Geotechnical Earthquake Eng. | Every Spring.  |
| Core Courses |
| CVEEN 5305 \* | Intro to Foundation Engineering | Every Fall.  |
| CVEEN 6210 \* | Structural Analysis II | Every Spring.  |
| CVEEN 6220 \* | Concrete Design II | Every Spring.  |
| CVEEN 6230 \* | Steel Design II  | Every Fall. |
| CVEEN 6240 | Masonry/ Timber Design | Every Fall.  |
| CVEEN 6250 \* | Structural Dynamics  | Every Fall.  |
| CVEEN 6270 | Computer Aided Structural Analysis | Rarely offered.  |
| CVEEN 6310 \* | Foundation Engineering  | Every Fall.  |
| CVEEN 6330 \* | Soil Dynamics and Geotechnical Earthquake Eng. | Every Spring.  |
| CVEEN 6340 | Advanced Geotechnical Testing | Rarely offered.  |
| CVEEN 6510 | Highway Design | Every Spring |
| CVEEN 6525 | Highway and Traffic Engineering | Rarely offered.  |
| CVEEN 6570 | Pavement Design | Every Fall.  |
| CVEEN 6790 | Advanced Computer Aided Construction | Every Spring.  |
| CVEEN 7225 | Prestressed Concrete Design | Offered every ~3 yrs Fall (’18, ’21,’24). |
| CVEEN 7250 | Structural Earthquake Engineering | Offered every ~3 yrs Fall (’17, ’21,’24). |
| CVEEN 7255 | Advanced Dynamics of Structures | Offered every ~2 yrs Fall (’20, ’22) |
| CVEEN 7310 | Advanced Foundation Engineering | Rarely offered. |
| CVEEN 7360 | Advanced Soil Mechanics | Rarely offered. |
| CVEEN 7450 | Carbon Capture and Store Transportation | Rarely offered. Offered Sp ’24. |
| CVEEN 7520 | Transportation Safety | Rarely offered. |
| CVEEN 7560 | Advanced Construction Materials | Rarely offered. |
| \* Indicates the course is also listed above. |

(Reviewed by group, August 2022. Reviewed by advisor July 1, 2024.)

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| Elective Courses  |
| The following are courses that have been used as elective courses by students studying structural or geotechnical engineering. Other courses may be approved by the Supervisory Committee.\*\* NOTE: No more than 9 credits can be taken from outsider of the department (not a CVEEN course listing.) |
| CVEEN 6225 | Concrete Material Science |
| CVEEN 6235 | Bridge Design |
| CVEEN 6710 | Cost Estimating and Proposal Writing |
| CVEEN 6720 | Project Scheduling |
| CVEEN 6730 | Project Management and Contract Administration |
| CVEEN 6750 | Engineering Law & Contracts |
| CVEEN 7260 | Seismic Rehab. of Reinforced Concrete Buildings |
| CS 6300 | Artificial Intelligence |
| CS 6610 | Interactive Computer Graphics |
| GEO 5075 | Introduction to Geological Engineering |
| GEO 5150 | Geological Engineering Design |
| GEO 5200 | Depositional Environments |
| GEO 5210 | Seismology I: Tectonophysics and Elastic Waves |
| GEO 5220 | Seismology II: Seismic Imaging |
| GEO 5320 | Signal Processing in the Geosciences |
| GEO 6350 | Groundwater |
| GEO 6360 | Fluid Mechanics of Earth Materials |
| GEO 6370 | Enviro. Partitioning for Engineers and Scientists |
| GEO 6660 | Geochemistry |
| MATH 6420 | Partial Differential Equations |
| MATH 6610 | Analysis of Numerical Methods I |
| MATH 6620 | Analysis of Numerical Methods II |
| ME EN 6300 | Advanced Mechanics of Materials |
| ME EN 6400 | Vibrations |
| ME EN 6510 | Applied Finite Element Analysis |
| ME EN 6520 | Mechanics of Composite Materials |
| ME EN 7530 | Fracture and Fatigue |
| ME EN 7540 | Advanced Finite Elements |
| MET E 6300 | Alloy and Material Design |
| MET E 6450 | Mechanical Behavior of Metals |
| MET E 6600 | Corrosion Fundamentals and Minimization |
| MG EN 5150 | Mechanics of Materials  |
| MG EN 5270 | Landslides and Slope Stability |
| ME EN 5290 | Intro. to Finite Element and other Numerical Models in Geomechanics |
| MSE 6001 | Engineering Materials |