

Civil Engineering - Semester Plan

| First Year | | | | | |
|-------------------------|---|---|------------|-------------|---------------------|
| Fall Semester | | | | | |
| Code | Course Title | Prerequisites | ECTS | Contc. Hrs. | Instructor |
| GE 100 | Academic Techniques | N/A | 6 | 34 | Maia Rogava |
| CS50 | Introduction to Programming | N/A | 6 | 80 | |
| GE/LAN 100 | Practical Course of Georgian (German/English) | ISU Test | 6 | 52 | Maia Rogava |
| MATH 150 | Calculus I | | 6 | 62 | Nino Manjavidze |
| CHEM 100 | Introduction to General Chemistry (Including Lab) | N/A | 8 | 62 | Ketevan Kupatadze |
| CIVE 100 | Introduction to Civil Engineering | N/A | 2 | 17 | Vakhtang Balavadze |
| Total | | | 34 | | |
| Spring Semester | | | | | |
| Code | Course Title | Prerequisites | ECTS | | |
| GE 102 | Introduction to Modern Thought I | N/A | 6 | 31 | Tamar Tolordava |
| GE/LAN 200 | Practical Course of Georgian (German/English) | Practical Course of Foreign language I | 6 | 50 | Maia Rogava |
| MATH 151 | Calculus II | MTH150 Calculus I | 6 | 62 | Nino Manjavidze |
| PHYS 195 | Basics of Physics I (Including Lab) | MTH150 Calculus I | 8 | 77 | Giorgi Dalakishvili |
| CIVE 121 | Computer Graphics for the Built Environment | N/A | 6 | 62 | Ia Kupatadze |
| Total | | | 32 | | |
| Cumulative Total | | | 66 | | |
| Second Year | | | | | |
| Fall Semester | | | | | |
| Code | Course Title | Prerequisites | ECTS | | |
| GE | Approved Elective (Natural Science) | | 8 | | |
| PHYS 196 | Basics of Physics II | PYS 195 Basics of Physics I (Including Lab) | 6 | 47 | Giorgi Dalakishvili |
| MATH 252 | Calculus III | MTH151 Calculus II | 6 | 62 | Nino Manjavidze |
| CIVE 220 | Civil Engineering Computer Applications (GIS) | MTH150 Calculus I | 6 | 47 | Mikheil Elashvili |
| ME 101 | Applied mechanics I (Statics) | PYS195 & MTH 151 | 6 | 47 | Tatin Supatashvili |
| Total | | | 32 | | |
| Spring Semester | | | | | |
| Code | Course Title | Prerequisites | ECTS | | |
| GE | Approved Elective (Business Administration) | | 6 | | |
| AE 280 | Numerical Analysis | MTH151 Calculus II | 6 | 47 | Davit Tutberidze |
| CIVE 218 | Surveying for Civil Engineering and Construction | MTH151 Calculus II | 6 | 47 | Mikheil Elashvili |
| STAT 250 | Probability and Statistics | MTH252 Calculus III | 6 | 45 | Nato Jorjashvili |
| ME 201 | Applied mechanics II (Dynamics) | ME 101 Applied mechanics I (Statics) | 6 | 47 | Tatin Supatashvili |
| Total | | | 30 | | |
| Cumulative Total | | | 62 | | |
| Third Year | | | | | |
| Fall Semester | | | | | |
| Code | Course Title | Prerequisites | ECTS | | |
| Biol 100 | Biology for Engineers | N/A | 6 | 32 | Elene Zhuravliova |
| ME 340 | Fluid Mechanics | MTH151, ME 201 | 6 | 47 | Tatin Supatashvili |
| CIVE 301 | Introduction to Solid Mechanics (Including Lab) | ME101 | 8 | 77 | Irakli Salukvadze |
| CONE 330 | Principles of Engineering Economy | MTH151 Calculus II, STAT 250 Probability and Statistics | 6 | 47 | Vakhtang Balavadze |
| ME 240 | Introduction to Engineering Materials | CHEM 100, ME 101 | 6 | 47 | |
| Total | | | 32 | | |
| Spring Semester | | | | | |
| Code | Course Title | Prerequisites | ECTS | | |
| | Elective 1 | N/A | 4 | | |
| CIVE 321 | Structural Analysis I | CIVE 301 | 6 | 47 | Nino Tabatadze |
| CIVE 444 | Applied Hydraulics (Including lab) | AE 340 Fluid Mechanics | 8 | 77 | Nika Tsitelashvili |
| CIVE 481 | Introduction to Transportation Engineering | CIVE 218, CIVE 121 | 6 | 47 | Vakhtang Jghamaia |
| ENVE 355 | Environmental Engineering | CHEM 100 & Biol 100 | 6 | 48 | Luiza Bubashvili |
| Total | | | 30 | | |
| Cumulative Total | | | 62 | | |
| Fourth Year | | | | | |
| Fall Semester | | | | | |
| Code | Course Title | Prerequisites | ECTS | | |
| CONE 101 | Construction and Culture | N/A | 6 | 47 | Vakhtang Balavadze |
| CIVE 421 | Reinforced Concrete Design | CIVE 321 | 6 | 47 | Igor Timchenko |
| CIVE 462 | Geotechnical Engineering (Including lab) | CIVE 301 | 8 | 92 | Archil Magalashvili |
| | Approved Elective 1 (Major) | | 6 | | |
| | Approved Elective 2 (Major) | | 6 | | |
| Total | | | 32 | | |
| Spring Semester | | | | | |
| Code | Course Title | Prerequisites | ECTS | | |
| CIVE 495 | Senior Design Project | CIVE321, CIVE444, CIVE462, CIVE481, ENVE355, CONE 3 | 6 | 35 | |
| | Approved Elective 3 (Major) | | 6 | | |
| | Approved Elective 4 (Major) | | 6 | | |
| | Approved Elective 5 (Major) | | 6 | | |
| CIVE 401 | Civil Engineering and Society | N/A | 2 | 17 | Vakhtang Balavadze |
| | Elective 2 | N/A | 4 | | |
| Total | | | 30 | | |
| Cumulative Total | | | 62 | | |
| SUM | | | 252 | | |

| Approved Elective (Major) Courses | | | | | |
|---|---|----------------------------------|------|-------------|------------------------------------|
| Code | Course Title | Prerequisites | ECTS | Contc. Hrs. | Instructor |
| Structural engineering | | | | | |
| CIVE 521 | Structural Analysis II | CIVE 321 Structural Analysis I | 6 | 47 | Nino Tabatadze |
| CIVE 525 | Design of Steel Structures | CIVE 321 Structural Analysis I | 6 | 47 | Nino Tabatadze |
| Geotechnical engineering | | | | | |
| CIVE 465 | Foundation Eng. And Earth Retaining Structures | CIVE 462 Geotechnical Eng. | 6 | 47 | Igor Timchenko |
| Transportation engineering | | | | | |
| CIVE 482 | Highway Engineering | CIVE 481 Intro to Transpor. Eng. | 6 | 47 | Vakhtang Jghamaia |
| CIVE 580 | Traffic Engineering Design | CIVE 481 Intro to Transpor. Eng. | 6 | 47 | Vakhtang Jghamaia |
| Construction engineering | | | | | |
| CONE 401 | Construction Planning and Scheduling | CIVE 321, STAT 250 | 6 | 77 | Vakhtang Balavadze, Giorgi Kaladze |
| Water resources engineering | | | | | |
| CIVE 445 | Applied Hydrology | CIVE 444 Applied Hydraulics | 6 | 62 | Nika Tsitelashvili |
| Environmental engineering | | | | | |
| EN441 | Water Treatment Engineering (incl. Wastewater) | ENV 355, CIVE 444 | 6 | 47 | Elina Bakradze |
| Surveying and Geospatial engineering | | | | | |
| CIVE403 | Applied Drone Photogrammetry for Architectural Su | N/A | 6 | 48 | Giorgi Kirkitadze |

Elective Courses

| Code | Course Title | Prerequisites | ECTS | Contc. Hrs. | Instructor |
|--|----------------------------------|----------------------------|------|-------------|-------------------------------------|
| Natural Sciences | | | | | |
| Ecol 100 | Ecology - ecosystem | N/A | 8 | 48 | Archil Magalashvili |
| Geol 100 | Geology | N/A | 8 | 48 | Archil Magalashvili |
| CHEM 200 | General Chemistry II | CHEM 100 General Chemistry | 8 | 62 | Ketevan Kupatadze |
| Business Administration | | | | | |
| 1 | Business Communications | N/A | 6 | 32 | |
| 2 | Essentials of Management | N/A | 6 | 32 | |
| 3 | Introduction to Marketing | N/A | 6 | 32 | |
| 4 | Basics of Business | N/A | 6 | 32 | |
| Management and Finance for future engineers | | | | | |
| 1 | Economic thinking | N/A | 4 | 32 | Lasha Tabatadze, Vakhtang Balavadze |
| 2 | Innovation and Urban Economics | N/A | 4 | 32 | Lasha Tabatadze, Vakhtang Balavadze |
| 3 | Project Management for Engineers | N/A | 4 | 32 | Vakhtang Balavadze |