



## Civil Engineering

### A. Orientation

COE 5000 - DLSU Orientation

### B. Basic Subjects

COE 5200 – Methods of Research

### C. Advanced Mathematics (Required 6 units)

COE 5100 – Statistical Design

COE 5320 – Numerical Methods

COE 5330 – Advanced Mathematical Methods

### D. Foundation Subjects (Required 12 units for MEng)

### E. Major Subjects (Required 15 units for MS)

#### Structural Engineering

CIV 5700 – Finite Element Methods for Civil Engineering

CIV 5710 - Analysis and Design of Highway Bridges

CIV 5720 - Matrix Theory of Structures

CIV 5730 - Structural Dynamics

CIV 5740 – Seismic Analysis and Design of Buildings

CIV 5750 – Earthquake Disaster Mitigation

CIV 5760 – Analysis and Design of Plates and Shells

CIV 5770 – Plastic Structural Analysis and Design

CIV 6010 – Advanced Reinforced Concrete Design

CIV 6020 – Advanced Earthquake Engineering

CIV 6030 – Advanced Mechanics of Materials

CIV 6040 – Advanced Prestressed Concrete Design

CIV 6050 – Advanced Structural Analysis

CIV 6060 – Advanced Steel Design

CIV 6070 – Advanced Topics in Earthquake Engineering and Structural Dynamics Construction Technology and Management

CIV 6200 – Advanced Construction Engineering

CIV 6210 – Advanced Concrete Technology

CIV 6220 – Construction and Development

CIV 6230 – Construction Problems

CIV 6240 – Construction Administration

CIV 6250 – Construction Scheduling and Estimating

CIV 6260 – Concrete and Steel Construction

CIV 6270 – Asphalt and Asphalt Mixtures

CIV 6280 – Advanced Topics in Construction Technology and Management Hydraulics and Water Resources

CIV 6400 – Advanced Hydraulics

CIV 6410 – Advanced Hydrology

CIV 6420 – Advanced Fluid Mechanics

CIV 6430 – Hydraulic Structures Design

CIV 6440 – Soil Erosion and Sedimentation

CIV 6450 – Free Surface Flow

CIV 6500 – Fundamentals of Water Resources Engineering

CIV 6510 – River Engineering

CIV 6520 – Ground Development

CIV 6530 - Water Distribution and Water Treatment Plant Design

CIV 6540 – Rural Water Supply and Sanitation



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### **Transportation Engineering**

CIV 6700 – Mathematical Methods in Transportation Engineering  
CIV 6710 – Traffic Analysis and Forecasting  
CIV 6720 – Transport System Management  
CIV 6730 – Transport Planning  
CIV 6740 – Highway Geometric Design  
CIV 6750 – Airport Engineering

### **Geotechnical Engineering**

CIV 6900 – Advanced Geology  
CIV 6910 – Foundation Engineering  
CIV 6920 – Earth Structures  
CIV 6930 – Soil Improvement for Foundation Engineering  
CIV 6940 – Soil and Rock Dynamics