



Master of Engineering Program in Civil Engineering



Research Focus

- Water Resource Engineering
- Structural Engineering
- Construction Engineering
- Transportation Engineering
- Geotechnical Engineering

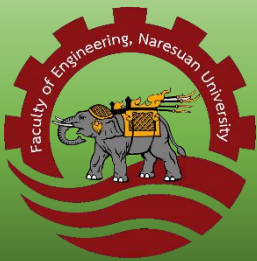
Structure of the Program

*Credit Requirements **

Requirements	Type A2
1. Coursework	24
1.1 Core Courses	3
1.2 Electives	21
2. Thesis	12
3. Required Non-credit Courses	5
Total	36

Core Courses

Requirements	Type A2	
	Course No	Cr
Applied Mathematics for Engineers	304501	3
Total		3



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Electives Courses

➤ Structural Engineering

Requirements	Type A2	
	Course No	Cr
Advanced Structural Analysis	304511	3
Advanced Mechanics of Materials	304512	3
Stability of Structures	304513	3
Structural Dynamics	304514	3

➤ Construction Engineering

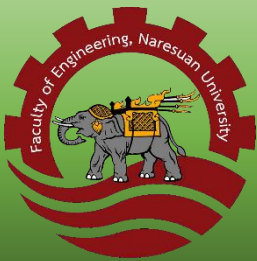
Requirements	Option Type A 2	
	Course No	Cr
Construction Planning	304521	3
Cost and Economics in Design and Construction	304522	3
Probability Statistics and Decision for Civil Engineering	304523	3
Construction Monitoring, Inspection and Control Process	304524	3

➤ Transportation Engineering

Requirements	Option Type A 2	
	Course No	Cr
Travel Demand Forecasting	304531	3
Traffic Design and Operations	304532	3
Road Safety Engineering	304533	3
Economic Analysis for Transportation Engineering	304534	3

➤ Water Resource Engineering

Requirements	Option Type A 2	
	Course No	Cr
River Hydraulics	304541	3
Water Resources Development and Management	304542	3
Advanced Hydrology	304543	3
Water Resources Systems Analysis	304544	3



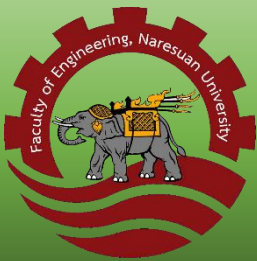
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➤ Geotechnical Engineering

Requirements	Option Type A 2	
	Course No	Cr
Advanced Soil Mechanics	304551	3
Advanced Foundation Engineering	304552	3
Soil Dynamics	304553	3
Soil Dynamics	304554	3

Elective Course

Requirements	Option Type A 2	
	Course No	Cr
Numerical Methods in Civil Engineering	304502	3
Finite Element Method 1	304504	3
Finite Element Method 2	304505	3
Advanced Civil Engineering Materials	304510	3
Advanced Reinforced Concrete Structures	304515	3
Behavior of Steel Structures	304516	3
Plate and Shell Structures	304517	3
Reliability of Structures	304518	3
Theory of Elasticity	304519	3
Safety and Environmental Issues in Construction	304525	3
Organization Management in Construction	304526	3
Real Estate Development	304527	3
Advanced Concrete Technology	304529	3
Pavement Structure	304535	3
Public Transportation	304536	3
Application of Remote Sensing and Geographic Information Systems for Engineers	304537	3
Hydropower Engineering	304545	3
Groundwater Hydraulics	304546	3
Flood Protection and Drainage	304547	3
Advanced Fluid Mechanics	304548	3
Physical and Chemical Properties of Soils	304555	3
Soil Quality Improvement	304556	3
Tunneling Engineering	304557	3



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Elective Course

Requirements	Option Type A 2	
	Course No	Cr
Advanced Soil Testing and Laboratory	304558	3
Selected Topics in Civil Engineering	304583	3
Special Problems in Civil Engineering	304584	3
Global Warming and Impact Mitigation	307535	3
Stakeholders Participation and Environment Impact Assessment	310504	3
Construction Management Techniques	313521	3
Information Technology in Construction	313523	3
Law and Contracting in Construction	313524	3
Construction Equipment and Methods	313525	3
Climate Change Adaptation and Mitigation	314518	3
Total		≥9

Thesis Credit Requirements

Requirements	Type A 2	
	Course No	Cr
Thesis 1, Type A 2	304591	3
Thesis 2, Type A 2	304592	3
Thesis 3, Type A 2	304593	6
Total		12

Required Non-credit Courses

Requirements	Type A1, A 2	
	Course No	Cr
Research Methodology in Science and Technology	304503	3
Seminar 1	304581	1
Seminar 2	304582	1
Total		5