

Department of Civil Engineering

Curriculum for the Degree of Master of Eng. in Civil Engineering, Major: *Structural Engineering*

Semester I (Fall)

1610500	Engineering Mathematics	3
1612525	Theory of Elasticity	3
1612526	Matrix Analysis of Structures	3
1612534	Advanced Steel Structures	3

Semester II (Spring)

1612527	Dynamics of Structures	3
1612529	Finite Element Methods	3
1612528	Theory of Plates & Shells	3
1612537	Advanced Concrete	3

1 Elective Courses From

1612530	Stability of Structures	3
1612531	Pre stressed Concrete	3
1612540	Reliability of Structures	3
1612532	Design of Bridge	3
1612538	Plastics Analysis & Design of Structures	3
1612537	Advanced Concrete	3

Semester III (Fall)

9031216	Seminar	2
9010606	M.Sc. Project	6

Semester IV(Spring)

9010606	M.Sc. Project (Continue)	0
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Department of Civil Engineering

Curriculum for the Degree of Master of Eng. in Civil Engineering, Major: *Water Engineering*

COURSE CODE	COURSE TITLE	CREDITS
Semester I (Fall)		
1610500	Engineering Mathematics	3
1614575	Advanced Hydraulics	3
1614576	Advanced Hydrology	3
1614577	Hydrodynamics	3
Semester II (Spring)		
4 Elective Courses From		
1614578	Numerical Methods in Water Engineering	3
1614580	Water Resources Quality Control	3
1616577	Earth Dams	3
1614581	Advanced Groundwater	3
1614598	Hydraulic Structures	3
1614487	River Engineering	3
Semester III (Fall)		
9031416	Seminar	2
9010606	M.Sc. Project	6
Semester IV(Spring)		
9010606	M.Sc. Project (Continue)	0

Department of Civil Engineering

Curriculum for the Degree of Master of Eng. in Civil Engineering, Major: *Soil & Foundation*

COURSE CODE	COURSE TITLE	CREDITS
Semester I (Fall)		
1610500	Engineering Mathematics	3
1616557	Earth Dams	3
1616551	Advanced Soil Mechanics	3
1610502	Continuum Mechanics	3
Semester II(Spring)		
1616550	Soil and Foundation Dynamics	3
1616554	Advanced Foundation Engineering	3
2 Elective Courses From		
1616552	Theory of Plasticity in Soil	3
1616553	Rock Mechanics	3
1616555	Numerical Methods in Soil Mechanics	3
1610501	Advanced Engineering Geology	3
1614581	Ground Water Resources	3
Semester III (Fall)		
9031616	Seminar	2
9010606	M.Sc. Project	6
Semester IV(Spring)		
9010606	M.Sc. Project (Continue)	0

Department of Civil Engineering

Curriculum for the Degree of Master of Eng. in Civil Engineering

Major: *Environmental Engineering*

Semester I (Fall)

1610500	Engineering Mathematics	3
1614590	Air Pollution & Its Control	3
1614586	Water Treatment	3
1614589	Wastewater Treatment	3

Semester II (Spring)

4 Elective Courses From

1614580	Water Resources Quality Control	3
1614591	Industrial Wastewater Treatment	3
1614581	Groundwater Modeling	3
1614592	Solid Waste	
1614588	Wastewater Collection Networks	3
1614585	Drinking Water Distribution	3

Semester III (Fall)

9031416	Seminar	2
9010606	M.Sc. Project	6

Semester IV(Spring)

9010606	M.Sc. Project (Continue)	0
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Department of Civil Engineering

Curriculum for the Degree of Master of Eng. in Civil Engineering

Major: *Highway Engineering*

COURSE CODE	COURSE TITLE	CREDITS
Semester I (Fall)		
1610500	Engineering Mathematics	3
1616560	Advanced Traffic Eng.	3
1616551	Advanced Soil Mechanics	3
1616556	Advanced Pavement Design	3
Semester II (Spring)		
1616562	Advanced Highway Design	3
3 Elective Courses From		
1330577	Demand in Transportation	3
1612532	Bridge Design	3
1612704	Advanced Concrete Technology	3
1616566	Railway Engineering	3
1310250	Operation Research	3
Semester III (Fall)		
9031616	Seminar	2
9010606	M.Sc. Project	6
Semester IV (Spring)		
9010606	M.Sc. Project (Continue)	0

Department of Civil Engineering

Curriculum for the Degree of Master of Eng. in Civil Engineering, Major: *Hydraulic Structures Engineering*

COURSE CODE	COURSE TITLE	CREDITS
Semester I (Fall)		
1610500	Engineering Mathematics	3
1614575	Advanced Hydraulics	3
1614600	Concrete Dams	3
1614577	Hydrodynamics	3
Semester II (Spring)		
1612529	Finite Element Method	3
1614598	Hydraulic Structures	3
2 Elective Courses From		
1614578	Numerical Methods in Water Engineering	3
1614602	Hydraulic Models	3
1616557	Earth Dams	3
1612528	Theory of Plates and Shells	3
1612527	Dynamics of Structures	3
1614604	Marine Structures	3
Semester III (Fall)		
9031416	Seminar	2
9010606	M.Sc. Project	6
Semester IV(Spring)		
9010606	M.Sc. Project (Continue)	0