Master of Science in Engineering

Degree Codes: <u>ES MSE ENGR</u>

Concentration: Civil Engineering

Overall requirements for the specific options are as follows:

Contact: Prof. Nazimuddin Wasiuddin

Requirements for all degree types

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Core Courses ENGR 510 Introduction to Engineering and Science Research Methods 2 Engineering Mathematics: select one of the following two courses ENCP 541 A dwared Methods for Engineering and Physics 2	Course Category	Number	Course Name		SCH
Engineering Mathematics: select one of the following two courses	Core Courses	ENGR 510	Introduction to Engineering and Science Research Methods		5
ENCD 541 Advanced Mathematical Matheda for Engineering and Dhysica 2		Engineering Mathematics: select one of the following two courses			
ENGK 541 Advanced Mathematical Methods for Engineering and Physics 3		ENGR 541	Advanced Mathematical Methods for Engineering and Physics	3	
ENGR 592Engineering Computational Methods3		ENGR 592	Engineering Computational Methods	3	

Total 5

Thesis Option (in addition to above)

Course Category	Number	Course Name		SCH
Core Course	ENGR 511	Eng. And Science Research Proposal Development	1	1
Concentration Course*	Four courses (12 SCH) from the list given below*		12	
Electives**	Two courses (6 SCH) approved by the Advisory Committee**			6
Thesis	CVEN 551	Research & Thesis (taken twice)		6
				Total 30

Practicum Option (in addition to above)

Course Category	Number	Course Name		SCH
Core Course	ENGR 511	Eng. And Science Research Proposal Development	1	1
Concentration Course*	Five courses (15 SCH) from the list given below*			15
Electives**	Four courses (12 SCH) approved by the Advisory Committee**			12
Practicum	CVEN 555	Practicum in Civil Engr.		3
ſ				Total 36

Coursework Only Option (in addition to above)

Course Category	Number	Course Name		SCH
Core Course	ENGR 589A	Special Topics	1	1
Concentration Course*	Five courses (15 SCH) from the list given below*			15
Electives**	Three courses (9 SCH) approved by the Advisory Committee**			9
MATH/STAT	One MATH and one [STAT course or INEN 514]			6
				Total 36

*The concentration courses for the concentration in Civil Engineering from the list below. Approved Concentration Courses

CVEN	CVEN	МЕМТ
CVEN 502 Infrastructure Management	CVEN 514 Bituminous Mixture Design	MEMT 508 Finite Element Analysis
CVEN 505 Buried Structures-Rehabilitation	CVEN 515 Advanced Cementitious Materials	MEMT 511 Modern Engineering Materials
and Management	CVEN 517 Advanced Pavement Design	MEMT 517 Advanced Durability of Materials
CVEN 506 Above-ground Structures:	CVEN 540 Advanced Foundation Engineering	MEMT 577 Advanced Mechanics of Materials
Assessment and Rehabilitation	CVEN 557 [△] Introduction to Non-Destructive	MEMT 588 Inelastic Deformation
CVEN 510 Advanced Soil Mechanics	Testing Methods for Civil Engineers	
CVEN 523 Advanced Asphalt Technology	CVEN 557 [△] Topics in Bridge Engineering	
CVEN 542 Sustainable Construction	CVEN 580 Trenchless Technology	
CVEN 561 Traffic Engr Characteristics		
CVEN 562 Adv. Reinforced Concrete		
Design		
CVEN 566 Adv. Structural Steel Design		

^ΔSpecial topics courses.

**The maximum number of variable credit Directed Study courses that can be applied towards the degree is 6 SCH.

Plan of Study Important Information: When entering information in the plan of study, it is important to note that <u>only</u> core courses and <u>all</u> core courses need to be put in section 1.1, while all others are put in section 1.2 (i.e. special topics, seminar, and research courses). See <u>http://coes.latech.edu/grad-programs/plan-of-study-instructions.pdf</u> for plan of study instructions.

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