

Master of Science in Engineering

Degree Codes: ES MSE ENGR

Concentration: Industrial Engineering

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Overall requirements for the specific options are as follows:

Requirements for all degree types

Course Category	Number	Course Name		SCH
Core Courses	ENGR 510	Introduction to Engineering and Science Research Methods	2	5
	ENGR 592	Engineering Computational Methods	3	
				Total 5

Thesis Option (in addition to the courses above)

Course Category	Number	Course Name		SCH
Core Courses	ENGR 511	Engineering and Science Research Proposal Development	1	1
Concentration Courses	Three courses (9 semester hours) chosen from the concentration list*			9
Electives**	Three courses (9 semester hours) from electives list or others approved by advisory committee**			9
Thesis	INEN 551	Research & Thesis (6 SCH are required with at least 3 SCH taken in the quarter the thesis is reviewed and approved)		6
				Total 30

Practicum Option (in addition to the courses above)

Course Category	Number	Course Name		SCH
Core Courses	ENGR 511	Engineering and Science Research Proposal Development	1	1
Concentration Courses	All six courses (18 semester hours) from the concentration list*			18
Electives**	Three courses (9 semester hours) from electives list or others approved by advisory committee**			9
Practicum	INEN 555	Practicum		3
				Total 36

Coursework Only Option (in addition to the courses above)

Course Category	Number	Course Name		SCH
Core Courses	ENGR 589A	Professional Development Seminar	1	1
Concentration Courses	All six courses (18 semester hours) from the concentration list*			18
Electives**	Four courses (12 semester hours) from electives list or others approved by advisory committee**			12
				Total 36

*The concentration courses for the concentration in Industrial Engineering.

Approved Concentration Courses

INEN 566	Six Sigma and Quality Control	3	INEN 509	Economics and Decision Making	3
INEN 502	Operations Research	3	INEN 511	Facilities Planning	3
INEN 505	Manufacturing and Operations Analysis	3	INEN 514	Statistical Analysis for Six Sigma	3

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

Suggested Electives

Industrial Engineering			Statistics		
INEN 504	Simulation	3	STAT 506	Regression Analysis	3
INEN 507	Engineering Administration	3	STAT 507	Design and Analysis of Experiments	3
INEN 512	Reliability Engineering	3	STAT 510	Advance Stats for Quality Improvement	3
INEN 515	Logistics Planning	3	STAT 520	Theory of Probability	3
INEN 518	Project Management	3	STAT 521	Theory of Statistics	3
INEN 557	Six Sigma Black Belt Project	3	INEN 530	Advanced Topics in Manufacturing	3

Plan of Study Important Information: When entering information in the plan of study, it is important to note that only core courses and all 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 <http://coes.latech.edu/grad-programs/plan-of-study-instructions.pdf> for plan of study instructions.

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