

## Master of Science in Engineering

**Degree Codes:** ES MSE ENGR

**Concentration:** Chemical Engineering

**Contact:** Dr. Daniela Mainardi

Overall requirements for the specific options are as follows:

### Requirements for all degree types

Course Category	Number	Course Name		SCH	
<b>Core Courses</b>	ENGR 510	Introduction to Engineering and Science Research Methods	2	5	
	Engineering Mathematics: select one of the following two courses				
	ENGR 541	Advanced Mathematical Methods for Engineering and Physics	3		
	ENGR 592	Engineering Computational Methods	3		
<b>Concentration Courses*</b>	CMEN 504	Advanced Chemical Engineering Kinetics	3	9	
	CMEN 513	Transport Phenomena	3		
	CMEN 522	Advanced Thermodynamics	3		
				Total 14	

### Thesis Option (in addition to the courses above)

Course Category	Number	Course Name		SCH
<b>Core Courses</b>	ENGR 511	Engineering and Science Research Proposal Development	1	1
<b>Electives**</b>	Three courses (9 semester hours) approved by the student's advisory committee			9
<b>Thesis</b>	CMEN 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
<b>Core Courses</b>	ENGR 511	Engineering and Science Research Proposal Development	1	1
<b>Electives**</b>	Six courses (18 semester hours) approved by the student's advisory committee			18
<b>Practicum</b>	CMEN 555	Practicum		3
				Total 36

### Coursework Only Option (in addition to courses above)

Course Category	Number	Course Name		SCH
<b>Core Courses</b>	ENGR 589A	Professional Development Seminar	1	1
<b>Electives**</b>	Five courses (15 semester hours) approved by the student's advisory committee			15
<b>MATH/STAT</b>	One MATH and one [STAT course or INEN 514]			6
				Total 36

\*The concentration courses for the concentration in Chemical Engineering.

\*\*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 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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