

## Master of Science in Engineering

**Degree Codes:** ES MSE ENGR

**Concentration:** Microsystems Engineering

**Contact:** Professor Shengnian Wang

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>	MSE 501	Fundamentals of Microfabrication Processes	3	9	
	MSE 502	Microsystem Principles	3		
	MSE 504	Advanced Materials for Micro/Nano Devices and Systems	3		
				Total 14	

### Thesis Option (in addition to above)

Course Category	Number	Course Name		SCH
<b>Core Course</b>	ENGR 511	Eng. And Science Research Proposal Development	1	1
<b>Electives**</b>	Three courses (9 semester hours) approved by advisory committee with at least two MSE courses**			9
<b>Thesis</b>	ENGR 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 above)

Course Category	Number	Course Name		SCH
<b>Core Course</b>	ENGR 511	Eng. And Science Research Proposal Development	1	1
<b>Electives**</b>	Six courses (18 semester hours) approved by advisory committee with at least two MSE courses**			18
<b>Practicum</b>	ELEN 555	Practicum		3
				Total 36

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

Course Category	Number	Course Name		SCH
<b>Core Course</b>	ENGR 589A	Special Topics	1	1
<b>Electives**</b>	Five courses (15 semester hours) approved by advisory committee with at least two MSE courses**			15
<b>MATH/STAT</b>	One MATH and one [STAT course or INEN 514]			6
				Total 36

\*The concentration courses for the concentration in Microsystems 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).

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