

## Five-Year BS/MS Program in Mechanical Engineering

### Description and Background

With the growing need for graduate education to practice engineering at the professional level, the Department of Mechanical Industrial & Systems Engineering has created a new 5-year Mechanical Engineering program that combines our existing bachelor's (BS) and master's (MS) programs. The individual BS and MS pieces of the combination program are identical to our existing individual degrees. The program is designed for full-time study, and thus contains only the thesis option.

### Eligibility and Application Procedures

Eligibility for this combined program will require second semester junior status (completion of approximately 80 credits of our URI, BSME curriculum) with a minimum overall GPA of 3.0. Applications are made using the standard materials required by the Graduate School (see [www.uri.edu/gsadmis](http://www.uri.edu/gsadmis)), with at least two recommendation letters coming from URI MCISE faculty members. Applicants should explicitly indicate in the Statement of Purpose, their plans to do the combined BS-MS program. Application materials should be submitted during the second semester junior year by **March 31**, to allow for proper review and notification by the end of the semester.

### Program Details

The curricular program details and schedule (shown on the reverse side) are based on a student model who is a May graduate. Students, who complete their undergraduate work at another point in the year, will require program modification which could result in slightly more time to complete the combined program. Student applicants will be notified of their admission before the end of the second semester junior year. Successful applicants will receive a conditional admission from the Graduate School and be asked to attend an informational advising meeting to make appropriate plans to follow the combined curriculum starting in their senior year. They will then be able to complete both degrees in a single 5-year program including the summer between years four and five as shown.

Note that 5-year IEP students can also take part in this combined program with appropriate modifications.

**Please contact Professor Sadd for further information**

## FIVE YEAR BS\*/MS - MECHANICAL ENGINEERING

### Freshman Year - Fall

Course	Description	Cr
CHM 101	General Chem I Lecture	3
CHM 102	General Chem I Lab	1
EGR 105	Foundations of Engineering I	1
MTH 141	Intro Calculus w/Analytic Geometry	4
PHY 203	Elementary Physics I Lecture	3
PHY 273	Elementary Physics I Lab	1
	General Education Elective	3
		<b>16</b>

### Sophomore Year - Fall

ISE 240	Manufacturing Processes and Systems	3
MCE 201	Engineering Graphics	3
MCE 262	Statics	3
MTH 243	Calculus for Functions of Several Variables	3
PHY 205	Elementary Physics III Lecture	3
PHY 275	Elementary Physics III Lab	1
		<b>16</b>

### Junior Year - Fall

CHE 333	Engineering Materials	3
MCE 301	Applications of Mechanics in Design	3
MCE 341	Fundamentals of Thermodynamics	3
MCE 354	Fluid Mechanics	3
MCE 372	Engineering Analysis	3
	General Education Elective	3
		<b>18</b>

### Senior Year - Fall

MCE 401	Mechanical Engineering Capstone Design I	3
MCE 414	Mechanical Engineering Experimentation	3
	Professional Elective	3
	Professional Elective	3
	Graduate Course	3
		<b>15</b>

### Summer Term(s)

	Two General Education Electives	6
MCE 599	Thesis	3
		<b>9</b>

### Fifth Year - Fall

MCE 501	Graduate Seminar	1
	Three Graduate Courses	9
MCE 599	Thesis	3
		<b>13</b>

### Freshman Year - Spring

Course	Description	Cr
ECN 201	Principles of Microeconomics	3
EGR 106	Foundations of Engineering II	2
MTH 142	Intermed Calculus w/Analytic Geometry	4
PHY 204	Elementary Physics II Lecture	3
PHY 274	Elementary Physics II Lab	1
	General Education Elective	3
		<b>16</b>

### Sophomore Year - Spring

CVE 220	Mechanics of Materials	3
ELE 220	Passive and Active Circuits	3
MCE 263	Dynamics	3
MTH 244	Differential Equations	3
	General Education Elective	3
		<b>15</b>

### Junior Year - Spring

MCE 302	Design of Machinery	3
MCE 313	Introduction to Mechanical Engineering Ex	3
MCE 366	System Dynamics	3
MCE 448	Heat and Mass Transfer	3
	General Education Elective	3
	General Education Elective	3
		<b>18</b>

### Senior Year - Spring

MCE 402	Mechanical Engineering Capstone Design II	3
	Professional Elective	3
	Professional Elective	3
	Graduate Course	3
	Free Elective	3
		<b>15</b>

### Fifth Year - Spring

MCE 501	Graduate Seminar	1
	Two Graduate Courses	6
MCE 599	Thesis	3
		<b>10</b>

**TOTAL CREDIT HOURS 129 (BS\* - Class of 2011) + 30 (MS)**

For more information about the five year Mechanical Engineering BS/MS program, go to:

**[egr.uri.edu/mcise](http://egr.uri.edu/mcise)**