Semester-by-Semester Distribution of Courses in the Five-Year Dual BSMS Program in ME

(Jointly Developed by the ME Undergraduate and Graduate Committees)

First Semester

ENGR 195	Introduction to Engineering Profession	1
ENGR 196	Introduction to Engineering	3
CHEM C105	Chemical Science I	3
COMM R110	Fundamentals of Speech Communication	3
MATH 163	Integrated Calculus and Analytic Geometry	5
	Total	**15**

Second Semester

ENGR 197	Introduction to Programming Concepts	3
ENG W131	Elementary Composition I	3
MATH 164	Integrated Calculus and Analytic Geometry II	5
PHYS 152	Mechanics	4
Science Elective		3
	Total	**18**

Third Semester

ME 200	Thermodynamics I	3
ME 270	Basic Mechanics I	3
ECON E201	Introduction to Microeconomics	3
MATH 261	Multivariate Calculus	4
PHYS 251	Heat, Electricity, and Optics	5
	Total	**18**

Fourth Semester

ME 262	Mechanical Design I	3
ME 274	Basic Mechanics II	3
EE 201	Linear Circuit Analysis I	3
EE 207	Electronic Measurement Techniques	1
MATH 262	Linear Algebra and Differential Equations	4
Gen Ed Elective		3
	Total	**17**

Fifth Semester

ME 272	Mechanics of Materials	4
ME 310	Fluid Mechanics	4
ME 330	Modeling and Analysis of Dynamic Systems	3
ME 344	Introduction to Engineering Materials	3
Gen Ed Elective		3
	Total	**17**

Sixth Semester

ME 314	Heat and Mass Transfer	4
ME 340	Dynamic Systems and Measurements	3
Gen. Ed Elective		3
ME 372	Mechanical Design II	4
Restricted Elective	Restricted to Probability and Statistics courses	3
	Total	**17**

Seventh Semester

ME 414	Thermal-Fluid Systems Design	3

TCM 360	Communication and Engineering Practice	2
ME Elective (ME 5XX)	ME Primary/Related Area Course	3
ME Elective (ME 5XX)	ME Primary/Related Area Course	3
Gen Ed Elective		3
	Total	**14**

Eighth Semester

ME 401	Engineering Ethics and Professionalism	1
ME 462	Engineering Design	4
ME 482	Control Systems Analysis and Design	3
ME Elective (ME 5XX)	ME Primary/Related Area Course	3
Free Elective (ME 5XX or MATH 5XX)	ME Primary/Related Area Course	3
	Total	**14**

Summer

ME 698 (thesis option) ME 5XX or ME 597 (non-thesis option)	Thesis ME Primary/Related/ Area Course	3
	Total	**3**

Ninth Semester

ME 5XX	ME Primary Area Course	3
ME 5XX	ME Related Area Course	3
ME 698 (thesis option) ME 5XX (non-thesis option)	Thesis ME Primary Area Course	3
	Total	**9**

Tenth Semester

ME 5XX	ME Related Area Course	3
ME 698 (thesis option) ME 5XX (non-thesis option)	Thesis ME Related Area Course	3
	Total	**6**

Total: 148 credit hours

Notes:

1. Students who want to do thesis or an independent project are advised to take *ME 698 MS Thesis Research* or *ME 597 Mechanical Engineering Project I* during the summer following the eighth semester to reduce their work load in the last semester.

2. Depending on the thesis topic, the thesis options may take longer than five years.

3. Two math courses are required as the related area courses. At least one of these courses must be a graduate mathematics course offered by the mathematics department, the other may a graduate course with strong math content from ME or another department, as approved by the graduate committee.

4. It is to be noted that very few undergraduates take 500 level courses as ME electives currently in the program. They usually take 400 level courses. However, students in the proposed dual program will be required to take 500 level courses as ME electives, since they are expected to achieve more because of their commitment to the graduate program.

5. Taking a general education course during the summers of second and third years may reduce the course load in the senior year, hence increase chances of success in the, where graduate courses will be taken.