

**MECHANICAL ENGINEERING PROGRAM  
COLLEGE OF ENGINEERING  
UNIVERSITY OF MASSACHUSETTS DARTMOUTH  
Catalog Years 2018-19 (Class of 2022) and beyond**

**FRESHMAN YEAR**

<u>First Semester</u>	<u>R</u>	<u>L</u>	<u>C</u>		<u>R</u>	<u>L</u>	<u>C</u>
ENL 101 Critical Writing & Reading I	3	0	3	ENL 102 Critical Writing & Reading II	3	0	3
CHM 151 Prin. Mod. Chemistry I <sup>1</sup>	3	0	3	MNE 101 Intro to Mech. Eng.	2	2	3
CHM 161 Intro. Appl. Chem. Lab	1	2	1	MTH 154 Calculus Appl. Science & Eng. II	4	0	4
EGR 111 Intro. To Eng. & Computing	3	2	3	PHY 113 Classical Physics I <sup>1</sup>	4	2	4
MTH 153 Calculus Appl Science & Eng. I	4	0	4				
University Studies Requirement <sup>2</sup>	3	0	3				
			<b>17</b>				<b>14</b>

**SOPHOMORE YEAR**

<u>First Semester</u>	<u>R</u>	<u>L</u>	<u>C</u>	<u>Second Semester</u>	<u>R</u>	<u>L</u>	<u>C</u>
EGR 241 Engineering Mechanics	3	0	3	EGR 242 Engineering Mechanics II	3	0	3
MNE 231 Materials Science	3	3	4	MTH 212 Diff. Equations for Engineering	3	0	3
MTH 213 Calculus Applied Science & Eng. III	4	0	4	MNE 220 Engineering Thermodynamics I <sup>3</sup>	3	0	3
PHY 114 Physics for Science & Engineering II <sup>1, 3, 4</sup>	2	2	4	MNE 252 Mechanics of Materials	3	3	4
			<b>15</b>	ENL 266 Technical Communications <sup>4</sup>	3	0	3
							<b>16</b>

**JUNIOR YEAR**

<u>First Semester</u>	<u>R</u>	<u>L</u>	<u>C</u>	<u>Second Semester</u>	<u>R</u>	<u>L</u>	<u>C</u>
EGR 301 Applied Engineering Math	3	1	4	EGR 302 Prin. & Appl. of Elec. Eng. <sup>5</sup>	3	3	4
EGR 303 Engineering Economics <sup>6</sup>	3	0	3	MNE 311 Heat Transfer	3	0	3
MNE 332 Fluid Mechanics	3 <sup>1/2</sup>	1 <sup>1/2</sup>	4	MNE 381 Design for Machine Elements	3	0	3
MNE 345 Design for Manufacturing	3 <sup>1/2</sup>	1 <sup>1/2</sup>	4	MNE 391 Systems Design & Controls Science Elective <sup>7</sup>	4	2	4
			<b>15</b>		3	0	3
							<b>17</b>

**SENIOR YEAR**

<u>First Semester</u>	<u>R</u>	<u>L</u>	<u>C</u>	<u>Second Semester</u>	<u>R</u>	<u>L</u>	<u>C</u>
MNE 497 ME Design Project I <sup>8</sup>	2	0	2	MNE 498 ME Design Project II <sup>8</sup>	2	0	2
MNE 421 Thermal Systems Design	3	2	4	Technical Elective <sup>9</sup>	3	0	3
Technical Elective <sup>9</sup>	3	0	3	Technical Elective <sup>9</sup>	3	0	3
Technical Elective <sup>9</sup>	3	0	3	University Studies Requirement <sup>2</sup>	3	0	3
University Studies Requirement <sup>2</sup>	3	0	3	University Studies Requirement <sup>2</sup>	3	0	3
			<b>15</b>				<b>14</b>

**Total Credits = 123**

R = Recitation & Lecture (hours) L = Laboratory (hours)

C = Number of Credits

<sup>1</sup> CHM 153, PHY 111, and PHY 112 can be used in place of CHM 151, PHY 113, and PHY 114, respectively.

<sup>2</sup> University Studies requirements (Clusters 3A, 3B, 4A, and 4B).

<sup>3</sup> These courses meet the University Studies Cluster 2 requirement: Scientific Inquiry and Understanding.

<sup>4</sup> This course meets the University Studies Cluster 1C requirement: Intermediate Writing.

<sup>5</sup> ECE 211 & ECE 251 may be used to meet this requirement.

<sup>6</sup> This course meets the University Studies Cluster 4C requirement: Nature of the Global Society.

<sup>7</sup> Must be taken from approved list of courses.

<sup>8</sup> These courses meet the University Studies Cluster 5 requirement: Integrating the UMD Experience.

<sup>9</sup> Must be taken from approved list of courses.