



# Bachelor of Mechanical Engineering

Course Requirements Guide (as of 05/12/2017)

Total program credits = 136 + 7 (co-op) = 143

(designations in parentheses indicate core curriculum attributes)

<p><b>Freshman - Fall</b> 17 credits</p> <p><b>ENGR 1020</b> Basic Eng Graphics &amp; CAD  <b>ENGR 1023</b> Eng Computing  <b>ENGR 1234</b> Math for Engineers  <b>MTH 1410</b> Calc I (B1)  <b>CHM 1070</b> Gen Chem I  <b>CHM 1100</b> Chem Lab I  <b>ENL 1310</b> Academic Writing (A2)  <b>ENGR 3000</b> Coop Prep (IT5)</p>	<p><b>Freshman - Winter</b> 16 credits</p> <p><b>ENGR 1080</b> Fund Eng Design (IT1)  <b>PHL 1000</b> Intro to Philosophy (D1)  <b>PHY 1600</b> Gen Physics I (C1, IT2)  <b>PHY 1610</b> Phys Lab I (C1, IT2)  <b>MTH 1420</b> Calc II  <b>CST 1010</b> Speech (A1)</p>	<p><b>Summer</b> 2 credits</p> <p><b>CTA 3010</b> Coop I (IT5)</p>
<p><b>Sophomore - Fall</b> 17 credits</p> <p><b>ENGR 1021</b> Intermediate Eng Graphics &amp; CAD  <b>ENGR 3120</b> Statics  <b>PHY 1620</b> Physics II  <b>PHY 1630</b> Phys II Lab  <b>MTH 2410</b> Calc III  <b>ENGR 1000</b> Eng Ethics (F1, IT6)  <b>RELS course</b> (D2)*</p>	<p><b>Sophomore - Winter</b> 18 credits</p> <p><b>ENGR 3130</b> Dynamics  <b>ENGR 3260</b> Mech of Matls  <b>ENGR 3270</b> Mech of Matls Lab  <b>ENGR 3240</b> Eng Econ  <b>MTH 3720</b> Differential Eq &amp; Linear Alg  <b>CSSE 1710</b> Intro to Programming  <b>CSSE 1711</b> Intro to Programming Lab</p>	<p><b>Summer</b> 2 credits</p> <p><b>CTA 3020</b> Coop II (IT5)</p>
<p><b>Junior - Fall</b> 18 credits</p> <p><b>ENGR 3170</b> Mat Science  <b>ENGR 3150</b> Thermo I  <b>MTH 4270</b> Prob &amp; Stats (B2)  <b>ENGR 3200</b> Princ of EE  <b>ENGR 3210</b> Princ of EE Lab  <b>ENGR 3110</b> Prof Practice of Eng (C2, IT3)  <b>History course</b> (E1)</p>	<p><b>Junior - Winter</b> 18 credits</p> <p><b>MENG 4920</b> CAE  <b>MENG 3900</b> Int Mech of Matls  <b>MENG 3610</b> Mech Measurements  <b>ENGR 3140</b> Fluid Mechanics  <b>ENGR 3190</b> Fluid Mechanics Lab  <b>MENG 3800</b> Thermo II  <b>RELS or PHL course</b> (D3)*</p>	<p><b>Summer</b> 2 credits</p> <p><b>CTA 3030</b> Coop III</p>
<p><b>Senior - Fall</b> 16 credits</p> <p><b>MENG 4930</b> Prototype Design I  <b>MENG 3920</b> Machine Design  <b>ENGR 3400</b> Heat Transfer  <b>ENGR 3410</b> Heat Transfer Lab  <b>MENG 3820</b> Manufacturing Processes  <b>MENG 3830</b> Manufacturing Processes Lab  <b>Technical Elective</b></p>	<p><b>Senior - Winter</b> 16 credits</p> <p><b>MENG 4950</b> Prototype Design II  <b>ENGR 4220</b> Control Systems  <b>ENGR 3112</b> Fund of Eng Practice  <b>Technical Elective</b>  <b>Literary course</b> (E2)  <b>Aesthetics course</b> (E3)</p>	

\*One D2 or D3 course must also fulfill knowledge area IT4.

The table below shows how the BME program meets the new core knowledge areas.

Knowledge Area	Required courses
A1	CST 1010
A2	ENL 1310
B1	MTH 1410 or MTH 1420
B2	MTH 4270
C1	CHM 1070 or PHY 1600/1610
C2	ENGR 3110
D1	PHL 1000
D2	Any approved course with limitation*
D3	Any approved course with limitation*
E1	Any approved course
E2	Any approved course
E3	Any approved course
F1	ENGR 1000
IT1	ENGR 1080
IT2	PHY 1600/1610 or ENGR 3150
IT3	ENGR 3110
IT4	Any RELS or PHL course that meets both IT4 and (D3 or D2)
IT5	(ENGR 3000 + CTA 3010 + CTA 3020)
IT6	ENGR 1000

\* One D2 or D3 course must also fulfill knowledge area IT4.