

**ASSOCIATE IN SCIENCE AND BS IN MATERIALS ENGINEERING**

Completion of the following curriculum will satisfy both the requirements for an Associate in Science at KCTCS as well as the requirements for the University of Kentucky's bachelor's degree in Materials Engineering.

Engineering Standing upon transfer is available to students who maintain an overall and pre-major GPA of 2.5. Pre-major courses considered in the standing for Materials Engineering include: CHE 105 + 111 (or equivalent), CHE 107 + 113 (or equivalent), MA 113 (or equivalent), MA 114 (or equivalent), MA 213 (or equivalent), PHY 231, PHY 241, CIS/WRD 110 (or equivalent).

KCTCS students planning to transfer to the University of Kentucky should work closely with the UK Transfer Advisor each semester to ensure both KCTCS and UK requirements are met.



<b>1<sup>st</sup> Semester</b>	
ENG 101: Writing I (3)	
CHE 170 + 175: General Chemistry I & Lab (5)	
MA 113, MAT 174, or MAT 175: Calculus I (4-5)	
CS 115 or CIT 144 or CIT 149 (3)	
<b>Semester Hours</b>	<b>15-16</b>

<b>2<sup>nd</sup> Semester</b>	
ENG 102: Writing II (3)	
MA 114, MAT 184, or MAT 185: Calculus II (4-5)	
CHE 180 + 185: General Chemistry II & Lab (5)	
*Heritage course (3)	
<b>Semester Hours</b>	<b>15-16</b>

<b>First Summer Option</b>	
<b>Semester Hours</b>	

<b>3<sup>rd</sup> Semester</b>	
PHY 231 + 241: University Physics I (5)	
MA 213, MAT 213, or MAT 275: Calculus III (4)	
*Social and Behavioral Science course (3)	
CHE 270: Organic Chemistry I (3)	
<b>Semester Hours</b>	<b>15</b>

<b>4<sup>th</sup> Semester</b>	
MA 214, MAT 214, or MAT 285: Calculus IV/Differential Equations (3)	
PHY 232: General University Physics II (4)	
*Humanities course (3)	
Oral Communication course (3)	
Elective course (3)	
*Social and Behavioral Science course (3)	
<b>Semester Hours</b>	<b>16</b>

Total Credit Hours: 61-63

**Notes:** \*One course must satisfy the Cultural Studies requirement.

The student must test out of the computer literacy requirement so that CS 115, CIT 144, or 149 can be used to satisfy the Bachelor's Degree requirement.



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Second Summer Option
Semester Hours

<b>5<sup>th</sup> Semester</b>
EGR 215 (3)
MSE 202 (1)
EM 221 (3)
STA 381 (3)
MSE 201 (3)
Semester Hours <span style="float: right;">13</span>

<b>6<sup>th</sup> Semester</b>
EM 302 (3)
MSE 351 (3)
MSE 301 (3)
EE 305 (3)
PHY 361 (3)
Semester Hours <span style="float: right;">15</span>

Third Summer Option
Semester Hours

<b>7<sup>th</sup> Semester</b>
MSE 401G (3)
MSE 404G (3)
MSE Technical Elective (3)
Semester Hours <span style="float: right;">9</span>

<b>8<sup>th</sup> Semester</b>
MSE 402G (3)
MSE 403G (3)
MSE 407 (3)
MSE 535 (3)
Technical Elective (3)
Semester Hours <span style="float: right;">15</span>

<b>9<sup>th</sup> Semester</b>
MSE 408 (3)
MSE 436 (3)
MSE 585 (3)
CME 200 (3)
Semester Hours <span style="float: right;">12</span>

<b>10<sup>th</sup> Semester</b>
MSE 480 (3)
MSE 538 (3)
Semester Hours <span style="float: right;">6</span>

Total Credit Hours: 70