

# MECHANICAL ENGINEERING

## Four-Semester Transfer Sequence for UMCP

**Note:** This optimized transfer sequence **DOES NOT** satisfy the [MC AS degree requirements](#).

UNIVERSITY of MARYLAND		
<i>Semester 1</i>		
ENES 100	Intro. to Engineering Design	3
MATH 140	Calculus I	4
CHEM 135	Gen. Chemistry for Engineers	3
ENGL 101	Intro to Writing	<u>3</u>
<b>Total Credits</b>		<b>13</b>
<i>Semester 2</i>		
ENES 102	Mechanics I	3
MATH 141	Calculus II	4
PHYS 161	Physics I	3
	Gen. Ed. Requirements**	3
	Gen. Ed. Requirements**	<u>3</u>
<b>Total Credits</b>		<b>16</b>
<i>Semester 3</i>		
ENES 220	Mechanics II	3
ENES 221	Dynamics	3
MATH 241	Calculus III	4
MATH 206	Introduction to MATLAB*	1
PHYS 260/1	Physics II/Lab	<u>4</u>
<b>Total Credits</b>		<b>15</b>
<i>Semester 4</i>		
ENES 232	Thermodynamics	3
ENME 272	Introduction to CAD***	2
MATH 246	Differential Equations	3
PHYS 270/1	Physics III/Lab	4
	Gen. Ed. Requirements**	<u>3</u>
<b>Total Credits</b>		<b>15</b>
<b>GRAND TOTAL</b>		<b>59</b>

MONTGOMERY COLLEGE		
CHEM 135	Chemistry for Engineers (or CHEM 132 Prin. of Chemistry II)	4
ENGL 102	Critical Reading, Writing & Research	3
ENES 100	Intro. to Engineering Design	3
MATH 181	Calculus I	<u>4</u>
<b>Total Credits</b>		<b>14</b>
ENES 102	Statics	3
MATH 182	Calculus II	4
PHYS 161	Physics I	3
	General Education Distribution Course**	3
	General Education Distribution Course**	<u>3</u>
<b>Total Credits</b>		<b>16</b>
ENES 221	Dynamics	3
MATH 280	Multivariable Calculus	4
PHYS 262	Physics II	4
ENES 206	Introduction to MATLAB*	1
	General Education Distribution Course**	<u>3</u>
<b>Total Credits</b>		<b>15</b>
ENES 232	Thermodynamics	3
ENES 220	Mechanics of Materials	3
MATH 282	Differential Equations	3
PHYS 263	Physics III	4
	General Education Distribution Course**	<u>3</u>
<b>Total Credits</b>		<b>16</b>
<b>GRAND TOTAL</b>		<b>61</b>

[UMCP BS Mechanical Engineering Curriculum](#)

[MC AS Mechanical Engineering Curriculum](#)

\* MC ENES 206 (1) is accepted as an equivalent to MATH 206 (1) at UMCP. ENES 240 Scientific and Engineering Computation (3) IS NOT required for the MC AS Mechanical Engineering degree, but will fulfill the MATH 206 requirement.

\*\* Follow this link for information about the 4-year programs [General Education](#) requirements at UMCP.

\*\*\* MC does not offer an equivalent to ENME 272 Introduction to CAD. Students could take this course through MTAP.

[Maryland Transfer Advantage Program \(MTAP\)](#): Students planning transfer to UMCP should enroll in MTAP as soon as possible. Benefits include access to advising transfer advising at UMCP and tuition discounts on courses taken through MTAP at UMCP.

# MECHANICAL ENGINEERING

Suggested Five-Semester Transfer Sequence for UMCP

**Note:** This optimized transfer sequence DOES NOT satisfy the [MC AS degree requirements](#).

*Semester 1*

CHEM 131	Principles of Chemistry I <sup>1</sup>	4
ENGL 101	Intro. to College Writing	3
ENES 100	Intro. to Engineering Design	3
MATH 165	Precalculus	4
<b>Total Credits</b>		<b>14</b>

**Semester 1 Curriculum Prerequisites\***

CHEM 099	Introductory Chemistry <sup>2</sup>	0
MATH 096	Intermediate Algebra <sup>3</sup>	0
MATH 098	Intro to Trigonometry <sup>3</sup>	0

*Semester 2*

CHEM 132	Principles of Chemistry II <sup>1</sup>	4
ENGL 102	Crit. Read., Writ. & Research	3
MATH 181	Calculus I	4
General Education Distribution Course		3
<b>Total Credits</b>		<b>14</b>

**Courses Usually Offered During Summer Terms\***

CHEM 131	Principles of Chemistry I	4
CHEM 132	Principles of Chemistry II	4
ENGL 102	Critical Reading, Writing & Research	3
ENES 100	Introduction to Engineering Design	3
MATH 181	Calculus I	4
MATH 182	Calculus II	4
MATH 280	Multivariable Calculus	4
MATH 282	Differential Equations	3
PHYS 161	Physics I	3

*Semester 3*

MATH 182	Calculus II	4
PHYS 161	Physics I	3
ENES 102	Statics	3
General Education Distribution Course		3
<b>Total Credits</b>		<b>13</b>

*Semester 4*

ENES 221	Dynamics	3
MATH 280	Multivariable Calculus	4
PHYS 262	Physics II	4
ENES 206	Introduction to MATLAB	1
General Education Distribution Course		3
<b>Total Credits</b>		<b>15</b>

*Semester 5*

ENES 232	Thermodynamics	3
ENES 220	Mechanics of Materials	3
MATH 282	Differential Equations	3
PHYS 263	Physics III	4
General Education Distribution Course		3
<b>Total Credits</b>		<b>16</b>

**Advising Notes**

<sup>1</sup>CHEM 131/132 may be more appropriate than CHEM 135 for students who are taking MATH 096/MA098.

<sup>2</sup>CHEM 099 or a passing score on the Chemistry placement exam is required for CHEM 131 or CHEM135.

<sup>3</sup>MATH 096 and MATH 098 or equivalents are prerequisites for MATH 165.

Students taking the American English Language Writing (AELW)/American English Language Reading (AELR) course sequence should meet with an engineering advisor to determine appropriate math, physics, and engineering course enrollments.

**GRAND TOTAL**

**72\*\***

\*Students may meet prerequisites for first-semester curriculum courses by either successfully completing appropriate coursework in high school or achieving qualifying scores on SAT, AP, IB, or Accuplacer assessments. Students needing to complete prerequisites to first-semester curriculum may consider taking summer term courses.

\*\*Note: ENGL 101 and MATH 165 do not transfer as part of the BS engineering degree requirements at UMCP.

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