

# AEROSPACE ENGINEERING

Four-Semester Transfer Sequence for UMCP

<b>UNIVERSITY of MARYLAND</b>	<b>MONTGOMERY COLLEGE</b>
<i>Semester 1</i>	
ENAE 100 Aerospace Engineering Prof. 1	CHEM 135 Chem. for Engineers (or CHEM 132) 4
ENES 100 Intro. to Engineering Design 3	ENGL 102 Critical Reading, Writing & Research 3
MATH 140 Calculus I 4	ENES 100 Intro. to Engineering Design 3
CHEM 135 Gen. Chemistry for Engineers 3	MATH 181 Calculus I 4
ENGL 101 Intro to Writing 3	Gen. Ed. Humanities COMM 108 recommended** 3
<b>Total Credits 14</b>	<b>Total Credits 17</b>
<i>Semester 2</i>	
ENAE 202 Aerospace Computing 3	ENES 102 Statics 3
ENES 102 Mechanics I 3	MATH 182 Calculus II 4
MATH 141 Calculus II 4	PHYS 161 Physics I 3
PHYS 161 Physics I 3	CMSC 140 Introduction to Programming*** 3
Gen. Ed. Requirements** 3	General Education Distribution Course** 3
<b>Total Credits 16</b>	<b>Total Credits 16</b>
<i>Semester 3</i>	
ENES 220 Mechanics II 3	ENES 220 Mechanics of Materials 3
ENAE 283 Intro. to Aerosp. Systems* 3	MATH 280 Multivariable Calculus 4
MATH 241 Calculus III 4	PHYS 262 Physics II 4
PHYS 260/1 Physics II/Lab 4	ENES 206 MATLAB for Engineers*** 1
Gen. Ed. Requirements** 3	General Education Distribution Course** 3
<b>Total Credits 17</b>	<b>Total Credits 15</b>
<i>Semester 4</i>	
ENAE 200 The Aerospace Profession II* 1	MATH 284 Linear Algebra 4
ENME 232 Thermodynamics 3	ENES 232 Thermodynamics 3
MATH 461 Linear Algebra (or 240 [4]) 3	MATH 282 Differential Equations 3
MATH 246 Differential Equations 3	PHYS 263 Physics III 4
PHYS 270/1 Physics III/Lab 4	General Education Distribution Course** 3
Gen. Ed. Requirements** 3	
<b>Total Credits 17</b>	<b>Total Credits 17</b>
<b>GRAND TOTAL 64</b>	<b>GRAND TOTAL 65</b>

[UMCP BS Aerospace Engineering Curriculum](#)

[MC AS Aerospace Engineering Curriculum](#)

\* ENAE 200(1), and 283(3) for which MC has no equivalent, remain to be taken in UMCP. Students need to take ENAE 283 in order to achieve full junior standing upon transfer. This must be done in summer term prior to fall term transfer.

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

\*\*\* CMSC140 (3) and ENES240 (3) or ENES 206 (1) combined can be equivalent to ENAE 202 (3).

[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.

# AEROSPACE ENGINEERING

Suggested Five-Semester Transfer Sequence for UMCP

*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 050	Foundations of 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
CMSC 140	Intro Prog Concepts for Engr	3
Gen. Ed. Human. COMM 108	recommended	3
<b>Total Credits</b>		<b>17</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
General Education Distribution Course		3
<b>Total Credits</b>		<b>16</b>

*Semester 4*

MATH 284	Linear Algebra	4
MATH 280	Multivariable Calculus	4
PHYS 262	Physics II	4
ENES 206	MATLAB for Engineers	1
<b>Total Credits</b>		<b>13</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 050/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 050 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**

**76\*\***

\*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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