MECHANICAL ENGINEERING

Four-Semester Transfer Sequence for UMCP

UNIVERSITY of MARYLAND			MONTGOMERY COLLEGE		
Semester 1					
ENES 100	Intro. to Engineering Design	3	CHEM 135	Chemistry for Engineers	4
MATH 140	Calculus I	4		(or CHEM 132 Prin. of Chemistry II)	
CHEM 135	Gen. Chemistry for Engineers	3	ENGL 102	Critical Reading, Writing & Research	3
ENGL 101	Intro to Writing	3	ENES 100	Intro. to Engineering Design	3
	Gen. Ed. Requirements**	3	MATH 181	Calculus I	4
Total Credits		16	Total Credits		14
Semester 2					
ENES 102	Mechanics I	3	ENES 102	Statics	3
MATH 141	Calculus II	4	MATH 182	Calculus II	4
PHYS 161	Physics I	3	PHYS 161	Physics I	3
ENME 272	Introduction to CAD***	2	Gen. Ed. Humanities COMM 108 recommended**		3
	Gen. Ed. Requirements**	3	General Education Distribution Course**		3
Total Credits		15	Total Credits		16
Semester 3					
ENES 221	Dynamics	3	ENES 220	Mechanics of Materials	3
ENME 202	Computing Fund. for Eng.	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	Introduction to MATLAB*	1
	Gen. Ed. Requirements**	3	ENES 272	Introduction to CAD***	2
			General Education Distribution Course**		3
Total Credits		17	Total Credits		17
Semester 4					
ENES 220	Mechanics II	3	ENES 232	Thermodynamics	3
ENES 232	Thermodynamics	3	ENES 221	Dynamics	3
MATH 246	Differential Equations	3	MATH 282	Differential Equations	3
PHYS 270/1	Physics III/Lab	4	PHYS 263	Physics III	4
	Gen. Ed. Requirements**	3	General Education Distribution Course**		3
Total Credits		16	Total Credits		16
GRAND TOTAL		**64**	**GRAND TOTAL**		**63**

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 ENES/MATH 206 requirement. MC CMSC 140 + MC ENES 206 (or ENES 240) are accepted as equivalent to UMCP ENME 202.

** Follow this link for information about the 4-year programs General Education requirements at UMCP.

*** MC now offers 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

Semester 1

CHEM 131	Principles of Chemistry I[1]	4
ENGL 101	Intro. to College Writing	3
ENES 100	Intro. to Engineering Design	3
MATH 165	Precalculus	4
Total Credits		14

Semester 2

CHEM 132	Principles of Chemistry II[1]	4
ENGL 102	Crit. Read., Writ. & Research	3
MATH 181	Calculus I	4
Gen. Ed. Humanities COMM 108		3
Total Credits		14

Semester 3

MATH 182	Calculus II	4
PHYS 161	Physics I	3
ENES 102	Statics	3
ENES 272	Introduction to CAD***	2
General Education Distribution Course		3
Total Credits		15

Semester 4

ENES 220	Mechanics of Materials	3
MATH 280	Multivariable Calculus	4
PHYS 262	Physics II	4
ENES 206	Introduction to MATLAB	1
General Education Distribution Course		3
Total Credits		15

Semester 5

ENES 232	Thermodynamics	3
ENES 221	Dynamics	3
MATH 282	Differential Equations	3
PHYS 263	Physics III	4
General Education Distribution Course		3
Total Credits		16

Semester 1 Curriculum Prerequisites*

CHEM 099	Introductory Chemistry[2]	0
MATH 050	Foundations of Algebra[3]	0
MATH 098	Intro to Trigonometry[3]	0

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

Advising Notes

[1]CHEM 131/132 may be more appropriate than CHEM 135 for students who are taking MATH 050/MA098.

[2]CHEM 099 or a passing score on the Chemistry placement exam is required for CHEM 131 or CHEM135.

[3]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 **74****

*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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