CHEMICAL and BIOMOLECULAR ENGINEERING

Four-Semester Transfer Sequence for UMCP

Note: This optimized transfer sequence DOES NOT satisfy the MC AS degree requirements.

UNIVERSITY of MARYLAND

Semester 1

ENES 100	Intro. to Engineering Design	3
MATH 140	Calculus I	4
CHEM 135/6	Gen Chemistry for Engineers	4
	Gen. Ed. Requirements**	3
Total Credits		14

Semester 2

CHBE 101	Intro to Chem & Biom. Eng.^	3
MATH 141	Calculus II	4
PHYS 161	Physics I	3
ENGL 101	Intro to Writing	3
BIOE 120	Biology for Engineers	3
Total Credits		16

Semester 3

MATH 241	Calculus III	4
CHEM 231/2	Organic Chemistry I/Lab	4
PHYS 260/1	Physics II/Lab	4
CHBE 250*	Comp. Methods in Chem.	3
CHBE 301*	Chem & Biom. Eng. Therm. I	3
Total Credits		18

Semester 4

MATH 246	Differential Equations	3
PHYS 270/1	Physics III/Lab	4
CHEM241/2	Organic Chemistry II/Lab	4
CHBE 302*	Chem & Biom. Eng. Therm. II	3
	Gen. Ed. Requirements**	3
Total Credits		17

GRAND TOTAL 65

UMCP BS Chemical and Biomolecular Curriculum

MONTGOMERY COLLEGE

CHEM 131	Principles of Chemistry I	4
ENGL 102	Critical Reading, Writing & Research	3
ENES 100	Intro. to Engineering Design	3
MATH 181	Calculus I	4
General Education Distribution Course**		3
Total Credits		17

CHEM 132	Principles of Chemistry II	4
MATH 182	Calculus II	4
PHYS 161	Physics I	3
General Education Distribution Course**		3
General Education Distribution Course**		3
Total Credits		17

Summer Term I

CHBE 101	Intro. Chem. & Biom. Eng. - MTAP*	3

CHEM 203	Organic Chemistry I	5
MATH 280	Multivariable Calculus	4
PHYS 262	Physics II	4
ENES 120	Biology for Engineers***	3
Total Credits		16

CHEM 204	Organic Chemistry II	5
MATH 282	Differential Equations	3
PHYS 263	Physics III	4
General Education Distribution Course**		3
Total Credits		15

GRAND TOTAL 68

MC AS Chemical Engineering Curriculum

* CHBE 101, 250, 301, and 302 for which MC has no equivalent, must be completed after transfer or throughMTAP.

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

*** ENES 120 Biology for Engineers (3) is the MC equivalent of BIOE120.

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.

CHEMICAL and BIOMOLECULAR 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[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	Tech. of Reading & Writing II	3
MATH 181	Calculus I	4
General Education Distribution Course		3
Total Credits		14

Semester 3

MATH 182	Calculus II	4
PHYS 161	Physics I	3
ENES 120	Biology for Engineers	3
General Education Distribution Course		3
Total Credits		13

Summer Term I

CHBE 101	Intro. Chem. & Biom. Eng.	3

Semester 4

CHEM 203	Organic Chemistry I	5
MATH 280	Multivariable Calculus	4
PHYS 262	Physics II	4
General Education Distribution Course		3
Total Credits		16

Semester 5

CHEM 204	Organic Chemistry II	5
MATH 282	Differential Equations	3
PHYS 263	Physics III	4
General Education Distribution Course		3
Total Credits		15

GRAND TOTAL **75****

Semester 1 Curriculum Prerequisites*

CHEM 099	Introductory Chemistry[2]	0
MATH 096	Intermediate 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 096/MA098.

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

[3]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.

*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.

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.