Department of Biomolecular Sciences

Central Connecticut State University
New Britain, Connecticut 06053

Effective: Spring 2005

Name: _____

ID #: _____

Major: **B.S. Biomolecular Sciences**

Specialization: **General (non-teaching)**

Advisor: _____

General Education

Study Area I -
Arts and Humanities (9 cr.)

- ☐ Lit. (3)
- ☐ _____ ( )
- ☐ _____ ( )

Study Area II -
Social Sciences (9 cr.)

- ☐ HIST (3)
- ☐ _____ ( )
- ☐ _____ ( )

Study Area III -
Behavioral Sciences (6 cr.)

- ☐ _____ ( )
- ☐ _____ ( )

Study Area IV -
Natural Sciences (6-7 cr.)

- ☒ CHEM 121 [b] (4)
- ☒ CHEM 122 (4)

Skill Area I -
Comm. Skills *(6 cr.)*

- ☐ ENG 110 [a] (3)
- ☐ _____ ( )

Skill Area II -
Mathematics *(6 cr.)*

- ☒ MATH 124 [b] (4)
- ☐ _____ ( )

Skill Area III -
Foreign Language Proficiency *(0-6 cr.)*

___3 sequential years of one foreign language at the high school level, or
___passing the foreign language exam, or
___completion of a 112 or 114 foreign language course, or
___completion of a foreign language course at a level higher than 112 or 114, or
___demonstration of native proficiency in a language other than English.

Skill Area IV -
University Req. *(2-3 cr.)*

- ☐ _____ ( )

Major (35 cr.)

- ☐ BMS 102 (190) (3.5)
- ☐ BMS 201 (290) (4.5)
- ☐ BMS 390 (1)
- ☐ BMS 491 ( )

- ☐ BMS 306 (4)
- ☐ BMS 311 (4)
- ☐ BMS 316 (4)

Biomolecular Electives* to complete 35 cr. in the Major:

- ☐ _____ (4)
- ☐ _____ ( )
- ☐ _____ ( )
- ☐ _____ ( )

*BMS 318, 319, 320, 391, 412/413,414, 415, 490, 491, 495, 496, 497, 499, 562, 570;
CHEM 320, 454/455, 456;
or BIO 401, 449/450 & 530.

- ☐ **Portfolio Requirement**

Related Requirements

- ☐ CHEM 121 [b] (4)
- ☐ CHEM 122 (4)
- ☐ CHEM 311 (4)
- ☐ CHEM 312 (4)
- ☐ MATH 124 [b] (4)
- ☐ PHYS 121 [c] (4)
- ☐ PHYS 122 (4)

Graduation Requirements

- ☐ **Six credits designated "International"**
- ☐ **First Year Experience requirement**
- ☐ **Minor**[d]

_____ ( )
_____ ( )
_____ ( )
_____ ( )
_____ ( )
_____ ( )

- ☐ **Electives to complete the required 122 cr. of study.**

_____ ( )
_____ ( )
_____ ( )
_____ ( )
_____ ( )
_____ ( )

Double-counting restriction: Of the courses taken in the major and minor/concentration, a total of two courses may be counted to fulfill the Study Areas portion of the general education program.

Residency requirements: A minimum of 45 cr. at CCSU with 15 cr. in the major and 9 cr. in the minor or concentration. Eligibility for high honors requires the student to earn 62 cr. in residence at CCSU.

[a] Students not completing ENG 110 prior to earning 61 cr. are required to take both ENG 110 and ENG 202.

[b] MATH 101 or the Mathematics Placement Exam is a prerequisite for CHEM 121, and for MATH 115, 124, and 125.

[c] MATH 124 or MATH 115 & 125 are prerequisites for PHYS 121. Other appropriate courses may be substituted in Skill Area II if this requirement is already met.

[d] A minor in Science, B.S., may be elected with a C- or better in related requirement courses CHEM 121, 122; and PHYS 121, 122. Note that a minor must be declared.

CENTRAL CONNECTICUT STATE UNIVERSITY
Department of Biomolecular Sciences

PLAN OF STUDY

B.S. Biomolecular Sciences

REQUIREMENTS: The B.S. in Biomolecular Sciences program requires a minimum of 35 cr. including BMS 102, 190, 201, 290, 390[a] and 491[a]; BMS 306, 311, and 316 (each includes a laboratory component); and additional biomolecular science courses (at least one with lab) to complete 35 credits in the major, chosen from BMS 318, 319,320,391, 412/413, 414,415, 490, 495, 496/497, 499, 500, 562, 570; CHEM 320, 454/455, 456; BIO 401, 449/450, or 530. In addition, the student must take CHEM 121[c], 122, 311, 312; PHYS 121[d], 122; and MATH 124 (or 115 and 125)[c,d]; and maintain a Student Portfolio[e].

While there are numerous ways to complete this B.S. program within a four-year period, one possible four-year plan is shown below as a model. As early as possible, each student electing this major should work with a BMS faculty advisor to plan an individualized plan of study.

SAMPLE PLAN OF STUDY

FALL SEMESTER			SPRING SEMESTER		
Course #	Title	Credits	Course #	Title	Credits
FIRST YEAR:					
BMS 102	Intro. to Biomolecular Sci.	3	BMS 201	Principles of Cell & Mol. Biol.	4
BMS190	Intro. to Research I	0.5	BMS 290	Intro. to Research II	0.5
CHEM 121	General Chemistry I [c]	4	CHEM 122	General Chemistry II	4
MATH 124	Applied Calculus I with Trig.[c,d]	4		G.E. Elective	3
	G.E. Elective	3	ENG 110	Freshman Composition	3 [h]
PE 244	Fitness/Wellness Ventures	2 [f]			14.5
		16.5			
SECOND YEAR:					
BMS 3##	306, 311, or 316	4	BMS 3##	306, 311, or 316	4
CHEM 311	Organic Chemistry I	4	CHEM 312	Organic Chemistry II	4
	G.E. Elective	3		G.E. Elective	3
	G.E. Elective	3		G.E. Elective	3
		14			14
THIRD YEAR:					
BMS 3##	306, 311, or 316	4		Biomolecular Science Elective[b]	4
PHYS 121	General Physics I [d]	4	PHYS 122	General Physics II	4
	G.E. Elective	3		G.E. Elective	3
	G.E. Elective	3		G.E. Elective	3
	Free Elective	3		Free Elective	3
		17			17
FOURTH YEAR:					
	Biomolecular Science Elective[b]	3-4		Biomolecular Science Elective[b]	1-3
	Biomolecular Science Elective[b]	3-4	BMS 491	Advanced Ind. Res. in BMS[a]	1-3
BMS 390	Independent Research in BMS[a]	1		Free Electives	8-12
	Free Electives	6-8			12-16
		13-17			For a total of 122 cr

[a] BMS 390 and 491 give each student the opportunity to work with an individual faculty member on a research project. Students are welcomed and encouraged to discuss research opportunities with any faculty member as early as their first semester. While the required (2 cr.) project may be completed as late as the senior year, more in-depth research experiences, which may culminate in an undergraduate thesis (BMS 499), may demand an earlier start.

[b] Biomolecular course electives: BMS 318, 319, 320, 391, 412/413, 414, 415, 490, 491, 495, 496/497, 499, 500, 562, 570; CHEM 320, 454/455, 456; BIO 401, 449/450, 530.

[c] MATH 101 or the Mathematics Placement Exam is a prerequisite for CHEM 121, and for MATH 115, 124, and 125.

[d] Either MATH 124 (4 cr.) or both MATH 115 & 125 are prerequisites for PHYS 121. Other appropriate courses may be substituted in Skill Area II if this requirement is already met.

[e] The Portfolio Requirement is described in the Biomolecular Sciences section of the University Catalog.

[f] Or other Skill Area IV course (2-3 cr.).

[g] First-year students must take an FYE introductory course in the first semester.

[h] Students not completing ENG 110 prior to earning 61 cr. are required to take both ENG 110 and ENG 202. (Effective 1/ 2005)