

# Central Connecticut State University

1615 Stanley Street  
New Britain, Connecticut 06053-4010

Effective Fall 2006

Address: \_\_\_\_\_

Name: \_\_\_\_\_

I.D.# \_\_\_\_\_

email \_\_\_\_\_

# BS in Biochemistry

Departments of Biomolecular Sciences and Chemistry

## General Education

### Study Area I - Arts and Humanities (9)

|                          |            |   |
|--------------------------|------------|---|
| <input type="checkbox"/> | Literature | 3 |
| <input type="checkbox"/> |            | 3 |
| <input type="checkbox"/> |            | 3 |

### Study Area II - Social Sciences (9)

|                          |      |   |
|--------------------------|------|---|
| <input type="checkbox"/> | HIST | 3 |
| <input type="checkbox"/> |      | 3 |
| <input type="checkbox"/> |      | 3 |

### Study Area III - Behavioral Sciences (6)

|                          |  |   |
|--------------------------|--|---|
| <input type="checkbox"/> |  | 3 |
| <input type="checkbox"/> |  | 3 |

### Study Area IV - Natural Sciences(6-7)

|   |                       |   |
|---|-----------------------|---|
| X | PHYS 121 <sup>c</sup> | 4 |
| X | PHYS 122              | 4 |

### Skill Area I - Communication Skills (6)

|                          |                      |   |
|--------------------------|----------------------|---|
| <input type="checkbox"/> | ENG 110 <sup>a</sup> | 3 |
| <input type="checkbox"/> |                      | 3 |

### Skill Area II - Mathematical (6)

|   |                          |   |
|---|--------------------------|---|
| X | MATH 119 <sup>b, c</sup> | 4 |
| X | MATH 152                 | 4 |

### Skill Area III - Foreign Language

|                          |   |
|--------------------------|---|
| <input type="checkbox"/> | 3 sequential years of one foreign language at the high school level   |
| <input type="checkbox"/> | passed the foreign language exam.   |
| <input type="checkbox"/> | completed 112 or 114 foreign language courses   |
| <input type="checkbox"/> | completed above 112 or 114 foreign language course demonstration of native proficiency in a language other than English |

### Skill Area IV - Univ. Requirements (2-3)

|                          |                          |   |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | PE 144 Fitness/ Wellness | 2 |
|--------------------------|--------------------------|---|

## Major Requirements (54-57 cr)

### Core Requirements

|                          |                     |                               |   |
|--------------------------|---------------------|-------------------------------|---|
| <input type="checkbox"/> | BMS 102 & 103       | Intro to BMS w/Lab            | 4 |
| <input type="checkbox"/> | BMS 201             | Principles of Cell & Mol Biol | 4 |
| <input type="checkbox"/> | BMS 190 & 290       | Intro to Research I & II      | 1 |
| <input type="checkbox"/> | BMS 390 or CHEM 238 | Independent Research          | 1 |
| <input type="checkbox"/> | BMS 491 or CHEM 438 | Advanced Ind Research         | 1 |
| <input type="checkbox"/> | CHEM 161/162        | General Chemistry I           | 4 |
| <input type="checkbox"/> | CHEM 163/164        | General Chemistry II          | 4 |
| <input type="checkbox"/> | CHEM 210/211        | Organic Chemistry I           | 4 |
| <input type="checkbox"/> | CHEM 212/213        | Organic Chemistry II          | 4 |
| <input type="checkbox"/> | CHEM 301            | Analytical Chemistry          | 4 |
| <input type="checkbox"/> | CHEM 316            | Spec. I.D.                    | 3 |

### Biomolecular Electives\*

|                          |                       |        |
|--------------------------|-----------------------|--------|
| <input type="checkbox"/> | BMS 306 or 311 or 316 | 4      |
| <input type="checkbox"/> | BMS Elective*         | 3 to 4 |
| <input type="checkbox"/> | BMS Elective*         | 3 to 4 |

\* BMS 306, 311, 316, 415, 490, 495, 562, 570; or BIO 416, 449/450.

### Chemistry Electives<sup>†</sup>

|                          |      |        |
|--------------------------|------|--------|
| <input type="checkbox"/> | CHEM | 3 to 4 |
|--------------------------|------|--------|

<sup>†</sup> CHEM 402, 456, 459, or 485.

### Biochemistry Capstone

|                          |                             |                       |   |
|--------------------------|-----------------------------|-----------------------|---|
| <input type="checkbox"/> | BMS 496/497 or CHEM 454/455 | 4                     |   |
| <input type="checkbox"/> | CHEM 458                    | Advanced Biochemistry | 3 |

### Portfolio Requirement

met:  YES

### Related Requirements

|                          |                          |                    |   |
|--------------------------|--------------------------|--------------------|---|
| <input type="checkbox"/> | MATH 119 <sup>b, c</sup> | Pre-Calc with Trig | 4 |
| <input type="checkbox"/> | MATH 152                 | Calc I             | 4 |
| <input type="checkbox"/> | PHYS 121 <sup>c</sup>    | General Physics I  | 4 |
| <input type="checkbox"/> | PHYS 122                 | General Physics II | 4 |

## Graduation Requirements

### Six credit designated "international"

met:  YES

### First Year Experience requirement

met:  YES

### Electives (to complete the required 122)

|                          |  |
|--------------------------|--|
| <input type="checkbox"/> |  |
| <input type="checkbox"/> |  |
| <input type="checkbox"/> |  |
| <input type="checkbox"/> |  |
| <input type="checkbox"/> |  |
| <input type="checkbox"/> |  |
| <input type="checkbox"/> |  |

**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.

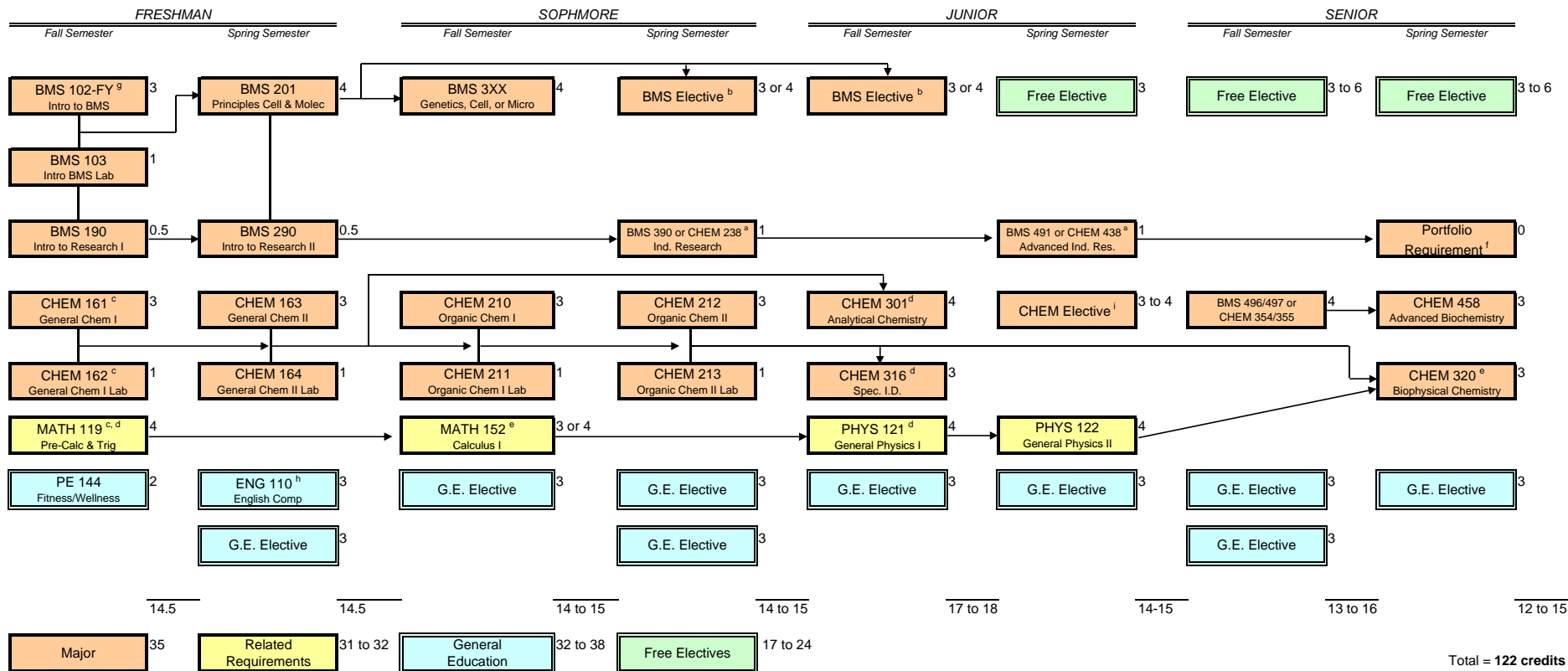
**Residency requirements:** A minimum of 45 cr. at CCSU with 15 cr. in the major and 9 cr. in the minor or concentration. Eligibility for high honors requires the student to earn 62 cr. in residence at CCSU.

<sup>a</sup> Students not completing ENG 110 prior to earning 61 cr. are required to take both ENG 110 and ENG 202.

<sup>b</sup> MATH 101 or the Mathematics Placement Exam is a prerequisite for CHEM 161/162, and for MATH 119.

<sup>c</sup> MATH 119 is a prerequisite for PHYS 121. Other appropriate courses may be substituted in Skill Area II if this requirement is already met.

# Bachelor of Science in Biochemistry



<sup>a</sup> BMS 390, 491, CHEM 238, and 438 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 biochemistry 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 may demand an earlier start.

<sup>b</sup> Biomolecular course electives : BMS 306, 311, 316, 415, 490, 495, 562, 570; BIO 416. (Pre-requisites may include 300-level BMS and/or CHEM courses.)

<sup>c</sup> MATH 101 or an appropriate score on the Mathematics Placement Exam is a prerequisite for CHEM 161/162 and for MATH 119.

<sup>d</sup> MATH 119, or an appropriate score on the Mathematics Placement Exam is a prerequisite for MATH 152, CHEM 301, CHEM 316, and PHYS 121. Other appropriate courses may be substituted in Skill Area II if this requirement is already met.

<sup>e</sup> MATH 152 is required for CHEM 320.

<sup>f</sup> The Portfolio Requirement is described in the Biomolecular Sciences section of the University Catalog.

<sup>g</sup> First-year students must take an FYE introductory course in the first semester.

<sup>h</sup> Students not completing ENG 110 prior to earning 61 cr. are required to take both ENG 110 and ENG 202.