### General Education

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

- Literature 3
- Literature 3
- Literature 3

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

- HIST 3
- HIST 3
- HIST 3

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

- 3
- 3
- 3

**Study Area IV - Natural Sciences(5-7)**

- PHYS 121 4
- PHYS 121 4
- PHYS 122 4

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

- ENG 110 a 3
- ENG 110 a 3
- ENG 110 a 3

**Skill Area II - Mathematical (6)**

- MATH 119 b, c 4
- MATH 119 b, c 4
- MATH 152 4

**Skill Area III - Foreign Language**

- 3 sequential years of one foreign language at the high school level
- passed the foreign language exam.
- completed 112 or 114 foreign language courses
- 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)**

- PE 144 Fitness/Wellness 2

### Major Requirements (54-57 cr)

#### Core Requirements

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

#### Biomolecular Electives*

- BMS 306 or 311 or 316 4
- BMS Elective* 3 to 4
- BMS Elective* 3 to 4

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

#### Chemistry Electives†

- CHEM 402, 456, 459, or 485.

#### Biochemistry Capstone

- BMS 496/497 or CHEM 454/455 4
- CHEM 458 Advanced Biochemistry 3

### Graduation Requirements

**Six credit designated “international”**

- met: ☐  ns

**First Year Experience requirement**

- met: ☐  ns

**Electives (to complete the required 122)**

- X PHYS 121 c 4
- X PHYS 122 4
- X MATH 119 b, c Pre-Calc with Trig 4
- X MATH 152 Calc I 4
- PHYS 121 c General Physics I 4
- PHYS 122 General Physics II 4

**BS in Biochemistry**

**Departments of Biomolecular Sciences and Chemistry**

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**Core Requirements**

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- BMS 201 Principles of Cell & Mol Biol 4
- BMS 190 & 290 Intro to Research I & II 1
- BMS 390 or CHEM 238 Independent Research 1
- BMS 491 or CHEM 438 Advanced Ind Research 1
- CHEM 161/162 General Chemistry I 4
- CHEM 163/164 General Chemistry II 4
- CHEM 210/211 Organic Chemistry I 4
- CHEM 212/213 Organic Chemistry II 4
- CHEM 301 Analytical Chemistry 4
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**Biomolecular Electives**

- BMS 306 or 311 or 316 4
- BMS Elective* 3 to 4
- BMS Elective* 3 to 4

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

**Chemistry Electives**

- CHEM 402, 456, 459, or 485.

**Biochemistry Capstone**

- BMS 496/497 or CHEM 454/455 4
- CHEM 458 Advanced Biochemistry 3

**Portfolio Requirement**

- met: ☐  ns

**Related Requirements**

- MATH 119 b, c Pre-Calc with Trig 4
- MATH 152 Calc I 4
- PHYS 121 c General Physics I 4
- PHYS 122 General Physics II 4

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**Central Connecticut State University**

1615 Stanley Street
New Britain, Connecticut 06053-4010

Effective Fall 2006
Bachelor of Science in Biochemistry

**FRESHMAN**
- Fall Semester: BMS 102-FY (Intro to BMS)
- Spring Semester: BMS 201 (Principles Cell & Molec)
- Fall Semester: BMS 103 (Intro to BMS Lab)
- Spring Semester: BMS 390 or CHEM 238 (Intro Research)
- Fall Semester: CHEM 161 (General Chem I)
- Spring Semester: CHEM 163 (General Chem II)
- Fall Semester: CHEM 162 (General Chem II Lab)
- Spring Semester: MATH 119 (Pre-Cal & Trig)
- Fall Semester: ENG 110 (English Comp)
- Spring Semester: G.E. Elective

**SOPHMORE**
- Fall Semester: BMS 201 (Principles Cell & Molec)
- Spring Semester: BMS Elective
- Fall Semester: CHEM 210 (Organic Chem I)
- Spring Semester: CHEM 211 (Organic Chem II Lab)
- Fall Semester: CHEM 212 (Organic Chem II)
- Spring Semester: CHEM 213 (Organic Chem II Lab)
- Fall Semester: CHEM 316 (Spec. I.D.)
- Spring Semester: PHYS 121 (General Physics I)
- Fall Semester: Math Elective
- Spring Semester: G.E. Elective

**JUNIOR**
- Fall Semester: BMS Elective
- Spring Semester: Free Elective
- Fall Semester: CHEM 301 (Analytical Chemistry)
- Spring Semester: CHEM Elective
- Fall Semester: BMS 496/497 or CHEM 354/355 (CHEM 354/355)
- Spring Semester: Portfolio Requirement

**SENIOR**
- Fall Semester: Free Elective
- Spring Semester: Free Elective

**Total = 122 credits**

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* 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.

* 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.)

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

* 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.

* MATH 152 is required for CHEM 320.

* The Portfolio Requirement is described in the Biomolecular Sciences section of the University Catalog.

* First-year students must take an FYE introductory course in the first semester.

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