Biology - General

2011-2012 Core Curriculum

BIB 111. Old Testament Introduction........................................... 3
BIB 142. New Testament Introduction.......................................... 3
BIB 277. Christian Doctrine I .................................................... 3
BIB 278. Christian Doctrine II ................................................... 3
COR 100. The Christian Mind ..................................................... 2
COR 225. Cultural Heritage of the West I ..................................... 3
COR 226. Cultural Heritage of the West II ................................... 3
COR 325. Global Trends for the Twenty-First Century.................. 3
COR 337. Intercultural Experience .............................................. 1
COR 340. Christ and Culture Seminar .......................................... 1
ENG 111. English Composition .................................................... 3

Must be completed during first year at Covenant.

HIS 325. Twentieth-Century World History ................................ 3
PE 151. Concepts in Physical Education ....................................... 2
PE 152. Personal Aerobics and General Fitness ............................ 1
Fine Arts Distribution Requirement ........................................... 3
Foreign Language – First Semester ............................................. 4
Foreign Language – Second Semester ......................................... 4

Or proficiency in one year of an elementary-level foreign language.

Humanities Distribution Requirement ........................................ 3
Mathematics .............................................................................. 3

MAT 122. or above, AP Calculus or CLEP credit for College Algebra or above, or math placement 3 or higher.

Social Science Distribution Requirement .................................. 3

Total Core Curriculum Requirements ........................................... 54

Electives ..................................................................................... 3-7

Degree Total ..............................................................................126

Biology Elective Course Groupings

Group 1: BIO 220 (W), 221, 219, 242, 260 (W)

Group 2: BIO 320, 321, 323, 340, 345, 346, 391; CHE 423

Biochemistry, PE 431 Kinesiology, PE 433 Physiology of Exercise

Group 3: BIO 324, 326, 327, 331, 335, 361.

Major and Supporting Course Requirements*

BIO 111-112. General Biology I, II............................................ 8
BIO 242. Cellular and Molecular Biology .................................... 4
BIO 260. Ecology ‘W’ .............................................................. 4
BIO 291. Biological Perspectives .............................................. 3
BIO 311. Practicum in Biology .................................................... 0-2
BIO 490. Biology Seminar ‘S’ .................................................... 1
BIO 492-493. Senior Integration Paper I, II ............................. 2,1

Biology electives

Group 2 electives—two courses (see list below) ......................... 7-8
Group 3 electives—two courses (see list below) ......................... 7-8

CHE 121-122. General Chemistry I, II ....................................... 8
CHE 323-324. Organic Chemistry I, II ....................................... 8

Mathematics through MAT 142. Precalculus. If a math placement level of 4 or higher is received,
then one additional math course is required
(e.g. Calculus I, Elementary Statistical Methods) ....................... 4
PHY 131-132. General College Physics I, II ............................. 8

Total hours for the major and supporting courses ............... 65-69

* These requirements may include enough units in chemistry for a chemistry minor. If an additional minor is desired, the total number of units taken may exceed the 126 needed for graduation.
### Biology- Biomedical Concentration

#### 2011-2012 Core Curriculum

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>BIB 111</td>
<td>Old Testament Introduction</td>
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<td>COR 100</td>
<td>The Christian Mind</td>
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<td>COR 225</td>
<td>Cultural Heritage of the West I</td>
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<td>COR 226</td>
<td>Cultural Heritage of the West II</td>
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<td>COR 325</td>
<td>Global Trends for the Twenty-First Century</td>
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<td>COR 337</td>
<td>Intercultural Experience</td>
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<td>COR 340</td>
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<td>ENG 111</td>
<td>English Composition</td>
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<td>Concepts in Physical Education</td>
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<td>PE 152</td>
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<td>MAT 122</td>
<td>or above, AP Calculus or CLEP credit for College Algebra or above, or math placement 3 or higher.</td>
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<td>Social Science Distribution Requirement</td>
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<td>Total Core Curriculum Requirements</td>
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</table>

Electives ............................................................................... 3-7

#### Total Core Curriculum Requirements ................................ 54

#### Biology Elective Course Groupings

**Group 1**: BIO 220 (W), 221, 219, 242, 260 (W)

**Group 2**: BIO 320, 321, 323, 340, 345, 346, 391; CHE 423 Biochemistry, PE 431 Kinesiology, PE433 Physiology of Exercise

**Group 3**: BIO 324, 326, 327, 331, 335, 361.

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**Major and Supporting Course Requirements**

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<td>General Biology I, II</td>
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<td>BIO 242</td>
<td>Cellular and Molecular Biology</td>
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<td>BIO 260</td>
<td>Ecology ‘W’</td>
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<td>BIO 291</td>
<td>Biological Perspectives</td>
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<td>BIO 311</td>
<td>Practicum in Biology</td>
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<td>BIO 490</td>
<td>Biology Seminar ‘S’</td>
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<tr>
<td>BIO 492-493</td>
<td>Senior Integration Paper I, II</td>
<td>2,1</td>
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</tbody>
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**Biology electives**

- Group 2 electives—4 courses (see list below) ........ 14-16
- CHE 121-122. General Chemistry I, II .................. 8
- CHE 323-324. Organic Chemistry I, II ................. 8

Mathematics through MAT 142 Precalculus. If a math placement level of 4 or higher is received, then one additional math course is required (e.g. Calculus I, Elementary Statistical Methods) .......... 4

- PHY 131-132. General College Physics I, II .......... 8

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*These requirements may include enough units in chemistry for a chemistry minor. If an additional minor is desired, the total number of units taken may exceed the 126 needed for graduation.*
Biology- Environmental Concentration

2011-2012 Core Curriculum
BIB 111. Old Testament Introduction................................. 3
BIB 142. New Testament Introduction............................... 3
BIB 277. Christian Doctrine I ........................................... 3
BIB 278. Christian Doctrine II ........................................... 3
COR 100. The Christian Mind ............................................. 2
COR 225. Cultural Heritage of the West I ......................... 3
COR 226. Cultural Heritage of the West II ......................... 3
COR 325. Global Trends for the Twenty-First Century ....... 3
COR 337. Intercultural Experience .................................... 1
COR 340. Christ and Culture Seminar ................................ 1
ENG 111. English Composition ......................................... 3
Must be completed during first year at Covenant.
HIS 325. Twentieth-Century World History ....................... 3
PE 151. Concepts in Physical Education ............................ 2
PE 152. Personal Aerobics and General Fitness .................. 1
Fine Arts Distribution Requirement ................................... 3
Foreign Language – First Semester ................................. 4
Foreign Language – Second Semester ............................... 4
Or proficiency in one year of an elementary-level
foreign language.
Humanities Distribution Requirement ................................. 3
Mathematics ....................................................................... 3
MAT 122. or above, AP Calculus or CLEP credit for
College Algebra or above, or math placement 3 or higher.
Social Science Distribution Requirement ........................... 3
Total Core Curriculum Requirements ............................... 54

Electives ............................................................................. 3-5

Major and Supporting Course Requirements*
BIO 111-112. General Biology ............................................ 8
BIO 260. Ecology ‘W’ ......................................................... 4
BIO 291. Biological Perspectives ....................................... 3
BIO 311. Practicum in Biology ......................................... 0-2
BIO 490. Biology Seminar ‘S’ ........................................... 1
BIO 492-493. Senior Integration Paper ............................. 2,1
Biology electives
Group 1 elective—1 course (see list below)....................... 3-4
Group 2 and 3 electives-two courses (see list below) ....... 7-8
CHE 121-122. General Chemistry I, II ............................. 8
Either CHE 323-324. Organic Chemistry I, II or
PHY 131-132. General College Physics I, II ..................... 8
MAT 142. Precalculus Mathematics ................................... 4
STA 252. Elementary Statistics: Concepts and Methods .... 4
Summer courses at AuSable Institute (3 courses) .......... 12
Total hours for the major and supporting courses ....... 67-69
Degree Total ................................................................ 126

Biology Elective Course Groupings
Group 1: BIO 220 (W), 221, 219, 242, 260 (W)
Group 2: BIO 320, 321, 323, 340, 345, 346, 391; CHE 423
Biochemistry, PE 431 Kinesiology, PE433 Physiology of
Exercise
Group 3: BIO 324, 326, 327, 331, 335, 361.

* These requirements may include enough units in chemistry for a chemistry
minor. If an additional minor is desired, the total number of units taken may
exceed the 126 needed for graduation.
Requirements for Major in Biology- Health Professions Concentration

2011-2012 Core Curriculum

BIB 111. Old Testament Introduction.................... 3
BIB 277. Christian Doctrine I ............................ 3
BIB 278. Christian Doctrine II .................................. 3
COR 100. The Christian Mind .................................. 2
COR 225. Cultural Heritage of the West I .................. 3
COR 226. Cultural Heritage of the West II ................. 3
COR 325. Global Trends for the Twenty-First Century .... 3
COR 337. Intercultural Experience .......................... 1
COR 340. Christ and Culture Seminar ........................ 1
ENG 111. English Composition .................................. 3
HIS 325. Twentieth-Century World History ............ 3
PE 151. Concepts in Physical Education .................. 2
PE 152. Personal Aerobics and General Fitness ........... 1
Fine Arts Distribution Requirement .......................... 3
Foreign Language – First Semester .......................... 4
Foreign Language – Second Semester ....................... 4

Must be completed during first year at Covenant.

Must be completed during first year at Covenant.

Humanities Distribution Requirement .......................... 3
Mathematics .................................................................. 3
MAT 122. or above, AP Calculus or CLEP credit for
College Algebra or above, or math placement 3 or higher.
Total Core Curriculum Requirements .......................... 54

Electives .......................................................................... 7-11

Major and Supporting Course Requirements

BIO 111-112. General Biology I, II.......................... 8
BIO 242. Cellular and Molecular Biology ................. 4
BIO 291. Biological Perspectives .............................. 3
BIO 311. Practicum in Biology ................................. 0-2
BIO 490. Biology Seminar ‘S’ ................................. 1
BIO 492-493. Senior Integration Paper I, II .............. 2,1

Biology electives

Groups 1and 2 electives—4 courses (see list below -
one course must be designated a ‘W’ course) ......... 14-16
CHE 103-104. Introductory Chemistry I, II or
CHE 121-122. General Chemistry I, II ..................... 8
MAT 142. Precalculus Mathematics .......................... 4
PSY 100. General Psychology (to be taken to fulfill
the core social science distribution requirement) ........ 4
PSY 303. Developmental Psychology ........................ 4
PHY 131-132. General College Physics I, II ............. 8
STA 252. Elementary Statistics: Concepts and Methods .. 4

Total hours for the major and supporting courses ....... 65-69
Degree Total ......................................................... 126

Biology Elective Course Groupings

Group 1: BIO 220 (W), 221, 219, 242, 260 (W)
Group 2: BIO 320, 321, 323, 340, 345, 346, 391; CHE 423
Biochemistry, PE 431 Kinesiology, PE433 Physiology of
Exercise
Group 3 : BIO 324, 326, 327, 331, 335, 361.