# Program Worksheet for B.Sc. in Biochemistry

For students admitted into the Dept. of Biological Sciences in Fall 2016

Note: this document is for planning purposes only; please have a graduation audit completed at USC

120 Units; 72 units must be at 300-level or above

## 48 units as follows:

### First Year
- BIOL 241
- BIOL 243
- CHEM 201 or 211
- CHEM 203 or 213
- MATH 249, 265 or 275
- MATH 211, 213, 267 or 277
- PHYS 211 or 221
- PHYS 223

### Second Year
- BCEM 393
- BIOL 311
- BIOL 331
- BIOL 371
- CHEM 351
- CHEM 353
- CHEM 311
- CHEM 315

## 12 units chosen from courses offered by the Faculty of Science

- These may be courses from the field of Biochemistry

## 6 units in Options from any Faculty, but NOT from the field of Biochemistry

## 24 units in Non-Science options*, including:

- 6 units from Faculty of Arts
- 18 units any non-science courses

* check Table 1 in Faculty of Science pages in the Calendar, which lists the courses offered by other Faculties that are considered Science Options, rather than Non-Science options

## 12 units as follows:

- BCEM 401
- BCEM 403
- BCEM 431
- BCEM 471

## 18 units chosen from:

- BCEM 443, 543, 547, 551, 553, 555, 561, 575, 577 or CMMB 411
**2016/2017 Program Worksheet for B.Sc. in Biochemistry Honours**

For students admitted into the Dept. of Biological Sciences in Fall 2016

*Note: this document is for planning purposes only; please have a graduation audit completed at USC*

120 Units; 72 units must be at 300-level or above

### 48 units as follows:

**First Year**
- BIOL 241 ___
- BIOL 243 ___
- CHEM 201 or 211 ___
- CHEM 203 or 213 ___
- MATH 249, 265 or 275 ___
- MATH 211, 213, 267 or 277 ___
- PHYS 211 or 221 ___
- PHYS 223 ___

**Second Year**
- BCEM 393 ___
- BIOL 311 ___
- BIOL 331 ___
- BIOL 371 ___
- CHEM 351 ___
- CHEM 353 ___
- CHEM 311 ___
- CHEM 315 ___

### 12 units chosen from any courses offered by the Faculty of Science

- These may be courses from the field of Biochemistry

### 24 units Non-science options*, including:

- 6 units from Faculty of Arts
- 18 units any non-science courses

* check **Table 1** in Faculty of Science pages in the Calendar, which lists the courses offered by other Faculties that are considered Science Options, rather than Non-Science options

### 12 units as follows:

- BCEM 401 ___
- BCEM 403 ___
- BCEM 431 ___
- BCEM 471 ___

### 18 units chosen from:

- BCEM 443, 543, 547, 551, 555, 561, 575, 577 or CMMB 411

### 6 units BCEM 530 ___
2016/2017 Program Worksheet for B.Sc. in Biological Sciences
For students admitted into the Dept. of Biological Sciences in Fall 2016
Note: this document is for planning purposes only; please have a graduation audit completed at USC

120 Units; 72 units must be at 300-level or above

45 units as follows:

First Year
BIOL 241 ___
BIOL 243 ___
CHEM 201 or 211 ___
CHEM 203 or 213 ___
MATH 249, 265 or 275 ___
MATH 211, 213, 267 or 277 ___
GLGY 201 and 202 ___ OR
PHYS 211 or 221, and 223 ___ OR
CPSC 217 and 219; or CPSC 231 and 233, or CPSC 235 and option ___

Second Year
BCEM 393 ___
BIOL 311 ___
BIOL 313 ___
BIOL 331 ___
BIOL 371 ___
CHEM 351 ___
CHEM 353 or option ___

15 units options from field of Biological Sciences:

_______ _____
_______ _____
_______ _____
_______ _____
_______ _____

12 units Options from any Faculty

12 units Options, but NOT from the field of Biol. Sciences

24 units Non-Science options*, including:
- 6 units from Faculty of Arts
- 18 units any non-science courses

* check Table 1 in Faculty of Science pages in the Calendar, which lists the courses offered by other Faculties that are considered Science Options, rather than Non-Science options

12 units options from field of Biological Sciences at 400-level or higher:

_______ _____
_______ _____
_______ _____
Program Worksheet for B.Sc. in Biological Sciences Honours
For students admitted into the Dept. of Biological Sciences in Fall 2016
Note: this document is for planning purposes only; please have a graduation audit completed at USC

120 Units; 72 units must be at 300-level or above

45 units as follows:

First Year
BIOL 241 ___
BIOL 243 ___
CHEM 201 or 211 ___
CHEM 203 or 213 ___
MATH 249, 265 or 275 ___
MATH 211, 213, 267 or 277 ___
GLGY 201 and 202 ___ OR
PHYS 211 or 221, and 223 ___ OR
CPSC 217 and 219; or CPSC 231 and 233,
or CPSC 235 and option ___

Second Year
BCEM 393 ___
BIOL 311 ___
BIOL 313 ___
BIOL 331 ___
BIOL 371 ___
CHEM 351 ___
CHEM 353 or option ___

33 units (At least 9 units in each of three areas constituting the field of Biological Sciences; 18 units must be at 400-level or higher. These areas are defined by the lists of courses in each of the fields of Biochemistry, CMMB, Ecology, Plant Biology and Zoology; courses that are listed in more than one field can be applied to any of those fields, but only counted once):

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6 units BIOL 530 ___

12 units Options from any Faculty

24 units Non-Science options*, including:

• 6 units from Faculty of Arts
• 18 units any non-science

* check Table 1 in Faculty of Science pages in the Calendar, which lists the courses offered by other Faculties that are considered Science Options, rather than Non-Science options
2016/2017 Program Worksheet for B.Sc. in Cell, Molecular and Microbial Biology
For students admitted into the Dept. of Biological Sciences in Fall 2016
Note: this document is for planning purposes only; please have a graduation audit completed at USC

120 Units; 72 units must be at 300-level or above

45 units as follows:

First Year
BIOL 241 ___
BIOL 243 ___
CHEM 201 or 211 ___
CHEM 203 or 213 ___
MATH 249, 265 or 275 ___
MATH 211, 213, 267 or 277 ___
GLGY 201 and 202 OR
PHYS 211 or 221, and 223 OR
CPSC 217 and 219; or CPSC 231 and 233, or CPSC 235 and option ___

Second Year
BCEM 393 ___
BIOL 311 ___
BIOL 331 ___
BIOL 371 ___
CMMB 343 ___
CHEM 351 ___
CHEM 353 ___

9 units as follows:

BCEM 443 ___
CMMB 411 ___
CMMB 527 ___

6 units Options from the field of CMMB

_______ ___

_______ ___

12 units Options from any Faculty

12 units Options, but NOT from the field of CMMB

24 units Non-science options*, including:
• 6 units from Faculty of Arts
• 18 units any non-science courses

* check Table 1 in Faculty of Science pages in the Calendar, which lists the courses offered by other Faculties that are considered Science Options, rather than Non-Science options
2016/2017 Program Worksheet for B.Sc. in Cell, Molecular and Microbial Biology Honours
For students admitted into the Dept. of Biological Sciences in Fall 2016
(Note: this document is for planning purposes only; please have a graduation audit completed at USC)

120 Units; 72 units must be at 300-level or above

45 units as follows:

<table>
<thead>
<tr>
<th>First Year</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>BIOL 241</td>
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<td><strong>OR</strong></td>
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<tr>
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<td><strong>OR</strong></td>
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<tr>
<td>CPSC 217 and 219; or CPSC 231 and 233, or CPSC 235 and option</td>
<td></td>
</tr>
</tbody>
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<table>
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<tr>
<th>Second Year</th>
<th></th>
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</thead>
<tbody>
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<td></td>
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<td>BIOL 331</td>
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<td>CMMB 343</td>
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<td>CHEM 351</td>
<td></td>
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<tr>
<td>CHEM 353</td>
<td></td>
</tr>
</tbody>
</table>

12 units as follows:

|  |
| CMMB 451 |  |
| CMMB 507.95 |  |
| CMMB 530 |  |

18 FCE Options from any Faculty:

24 units Non-science options*, including:

- 6 units from Faculty of Arts
- 18 units any non-science courses

* check Table 1 in Faculty of Science pages in the Calendar, which lists the courses offered by other Faculties that are considered Science Options, rather than Non-Science options
2016/2017 Program Worksheet for B.Sc. in Ecology
For students admitted into the Dept. of Biological Sciences in Fall 201
Note: this document is for planning purposes only; please have a graduation audit completed at USC

120 Units; 72 units must be at 300-level or above

45 units as follows:

First Year
BIOL 241 ___
BIOL 243 ___
CHEM 201 or 211 ___
CHEM 203 or 213 ___
MATH 249, 265 or 275 ___
MATH 211, 213, 267 or 277 ___
GLGY 201 and 202 ___ OR
PHYS 211 or 221, and 223 ___ OR
CPSC 217 and 219; or CPSC 231 and 233, or CPSC 235 and option ___

Second Year
BIOL 311 ___
BIOL 313 ___
BIOL 331 ___
BIOL 371 ___
BIOL 315 ___
CHEM 351 ___
CHEM 353 or option ___

3 units BIOL 401 ___

15 units as follows:

ECOL 413 ___
ECOL 425 ___
ECOL 429 ___
ECOL 439 ___
ECOL 501 ___

3 units either ECOL 417 or ECOL 419
ECOL ____  ____

6 units Options from field of Ecology:
______  ____

12 units Options from any Faculty:

12 units Options, but NOT from the field of Ecology

24 units Non-Science options*, including:
• 6 units from Faculty of Arts
• 18 units any non-science courses

* check Table 1 in Faculty of Science pages in the Calendar, which lists the courses offered by other Faculties that are considered Science Options, rather than Non-Science options
2016/2017 Program Worksheet for B.Sc. in Ecology Honours
For students admitted into the Dept. of Biological Sciences in Fall 2016
Note: this document is for planning purposes only; please have a graduation audit completed at USC

120 Units; 72 units must be at 300-level or above

45 units as follows:

First Year
BIOL 241 ___
BIOL 243 ___
CHEM 201 or 211 ___
CHEM 203 or 213 ___
MATH 249, 265 or 275 ___
MATH 211, 213, 267 or 277 ___
GLGY 201 and 202 ___ OR
PHYS 211 or 221, and 223 ___ OR
CPSC 217 and 219; or CPSC 231 and 233, or CPSC 235 and option ___

Second Year
BIOL 311 ___
BIOL 313 ___
BIOL 331 ___
BIOL 371 ___
BIOL 315 ___
CHEM 351 ___
CHEM 353 or option ___

3 units BIOL 401 ___

15 units as follows:

ECOL 413 ___
ECOL 425 ___
ECOL 429 ___
ECOL 439 ___
ECOL 501 ___

3 units either ECOL 417 or ECOL 419
ECOL ___ ___

6 units Options from field of Ecology:

_____ ___

6 units ECOL 530 ___

18 units Options from any Faculty:

24 units Non-science options*, including:

• 6 units from Faculty of Arts
• 18 units any non-science courses

* check Table 1 in Faculty of Science pages in the Calendar, which lists the courses offered by other Faculties that are considered Science Options, rather than Non-Science options
120 Units; 72 units must be at 300-level or above

45 units as follows:

First Year
BIOL 241 ___
BIOL 243 ___
CHEM 201 or 211 ___
CHEM 203 or 213 ___
MATH 249, 265 or 275 ___
MATH 211, 213, 267 or 277 ___
GLGY 201 and 202 ___ OR
PHYS 211 or 221, and 223 ___ OR
CPSC 217 and 219; or CPSC 231 and 233, or CPSC 235 and option ___

Second Year
BCEM 393 ___
BIOL 311 ___
BIOL 313 ___
BIOL 331 ___
BIOL 371 ___
CHEM 351 ___
CHEM 353 or option ___

15 units from the following:

BIOL 435 ___
BIOL 453 ___
PLBI 327 ___
PLBI 401 ___
PLBI 403 ___
PLBI 421 ___
PLBI 543 ___

6 units chosen from:
BCEM 561, BIOL 451, 505, PLBI 541
________
________

6 units Options from field of Plant Biology:
________
________

12 units Options from any Faculty:

12 units Options, but NOT from the field of Plant Biology

24 units Non-science options*, including:
• 6 units from Faculty of Arts
• 18 units any non-science courses

* check Table 1 in Faculty of Science pages in the Calendar, which lists the courses offered by other Faculties that are considered Science Options, rather than Non-Science options
2016/2017 Program Worksheet for B.Sc. in Plant Biology Honours
For students admitted into the Dept. of Biological Sciences in Fall 2016
Note: this document is for planning purposes only; please have a graduation audit
completed at USC

120 Units; 72 units must be at 300-level or above

45 units as follows:

First Year
BIOL 241 ___
BIOL 243 ___
CHEM 201 or 211 ___
CHEM 203 or 213 ___
MATH 249, 265 or 275 ___
MATH 211, 213, 267 or 277 ___
GLGY 201 and 202 ___ OR
PHYS 211 or 221, and 223 ___ OR
CPSC 217 and 219; or CPSC 231 and 233,
or CPSC 235 and option ___

Second Year
BCEM 393 ___
BIOL 311 ___
BIOL 313 ___
BIOL 331 ___
BIOL 371 ___
CHEM 351 ___
CHEM 353 or option ___

15 units from the following:

BIOL 435 ___
BIOL 453 ___
PLBI 327 ___
PLBI 401 ___
PLBI 403 ___
PLBI 421 ___
PLBI 543 ___

6 units chosen from:
BCEM 561, BIOL 451, 505, PLBI 541

6 units PLBI 530 ___

18 units Options from any Faculty:

24 units Non-science options*, including:
6 units from Faculty of Arts
18 units any non-science

• 6 units from Faculty of Arts
• 18 units any non-science courses

* check Table 1 in Faculty of Science
pages in the Calendar, which lists the
courses offered by other Faculties that
are considered Science Options, rather
than Non-Science options

6 units Options from field of Plant
Biology:
2016/2017 Program Worksheet for B.Sc. in Zoology
For students admitted into the Dept. of Biological Sciences in Fall 2016
Note: this document is for planning purposes only; please have a graduation audit completed at USC

120 Units; 72 units must be at 300-level or above

51 units as follows:

**First Year**
- BIOL 241 ___
- BIOL 243 ___
- CHEM 201 or 211 ___
- CHEM 203 or 213 ___
- MATH 249, 265 or 275 ___
- MATH 211, 213, 267 or 277 ___
- PHYS 211 or 221, and 223 ___ OR
- GEOL 201 and 202 ___

**Second Year**
- BCEM 393 ___
- BIOL 311 ___
- BIOL 313 ___
- BIOL 331 ___
- BIOL 371 ___
- CHEM 351 ___
- CHEM 353 or option ___
- ZOOL 375 ___
- ZOOL 379 ___

12 units Options from any Faculty:

12 units Options, but NOT from the field of Zoology:

24 units Non-Science options*, including:
- 6 units from Faculty of Arts
- 18 units any non-science courses

* check Table 1 in Faculty of Science pages in the Calendar, which lists the courses offered by other Faculties that are considered Science Options, rather than Non-Science options

12 units as follows:

- BIOL 315 ___
- ZOOL 461 ___
- ZOOL 463 ___
- CMMB 403 ___

6 units from BIOL 401 or any ZOOL courses at 400-level or above (except ZOOL 461 and 463):

__________________________
__________________________

3 units options from field of Zoology at 400-level or above:

__________________________
2016/2017 Program Worksheet for B.Sc. in Zoology Honours
For students admitted into the Dept. of Biological Sciences in Fall 2016
Note: this document is for planning purposes only; please have a graduation audit completed at USC

120 Units; 72 units must be at 300-level or above

51 units as follows:

First Year
BIOL 241 ___
BIOL 243 ___
CHEM 201 or 211 ___
CHEM 203 or 213 ___
MATH 249, 265 or 275 ___
MATH 211, 213, 267 or 277 ___
PHYS 211 or 221, and 223 ___ OR
GEOL 201 and 202 ___

Second Year
BCEM 393 ___
BIOL 311 ___
BIOL 313 ___
BIOL 331 ___
BIOL 371 ___
CHEM 351___
CHEM 353 or option ___
ZOOL 375 ___
ZOOL 379 ___

12 units as follows:

BIOL 315 ___
ZOOL 461 ___
ZOOL 463 ___
CMMB 403 ___

6 units from BIOL 401 or any ZOOL courses at 400-level or above (except ZOOL 461 and 463): ___

3 units options from field of Zoology at 400-level or above:

6 units ZOOL 530 ___

18 units Options from any Faculty:

24 units Non-science options*, including:
• 6 units from Faculty of Arts
• 18 units any non-science courses

* check Table 1 in Faculty of Science pages in the Calendar, which lists the courses offered by other Faculties that are considered Science Options, rather than Non-Science options