EXECUTIVE COMMITTEE  
COLLEGE OF NATURAL AND AGRICULTURAL SCIENCES  
REPORT TO THE RIVERSIDE DIVISION  
MAY 27, 2014  

To be adopted:  
Proposed Changes to Biochemistry Undergraduate Program  
Bachelor of Science and Bachelor of Arts Degrees in Biochemistry

### PRESENT:

**Biography Emphasis**

1. Lower-division requirements (56-57 units)
   
   a) BCH 095 or equivalent

   b) BIOL 005A, BIOL 05LA, BIOL 005B, BIOL 005C

   c) CHEM 001A, CHEM 001B, CHEM 001C, CHEM 01LA, CHEM 01LB, CHEM 01LC

   d) MATH 008B or MATH 009A, MATH 009B, MATH 046

   e) PHYS 002A, PHYS 002B, PHYS 002C, PHYS 02LA, PHYS 02LB, PHYS 02LC

2. Statistics requirement (5 units): STAT 100A

3. Upper-division requirements (59–65 units)

   a) BCH 101, BCH 102, BCH 110A, BCH 110B, BCH 110C, BCH 184

   b) At least 7 units from BCH 111 BCH 120, BCH 153/BIOL 153/BPSC 153, BCH 162, BCH 180(E-Z), BCH 183/BPSC 183, BCH 186, BCH 187, BCH 210, BCH 211, BCH 212

   c) BIOL 102

   d) CHEM 109 or CHEM 110A; CHEM 112A

   e) Choose three biological science courses

### PROPOSED:

**Biography Emphasis**

1. No change

   a) No change

   b) No change

   c) No change

   d) No change

   e) No change

2. No Change

3. No Change

   a) BCH 101, BCH 110A, BCH 110B, BCH 110C, BCH 162, BCH 184

   b) At least 7 units from BCH 102, BCH 111

   c) No Change

   d) No Change

   e) Choose three biological science courses
from the following:  

(1) BCH 111, BCH 120, BCH 153/BIOL 153/BPSC 153, BCH 162, BCH 180A, BCH 180 (E-Z), BCH 183/BPSC 183, BCH 186, BCH 187, BCH 210, BCH 211, BCH 212  

(2) BIOL 105, BIOL 108, BIOL 114, BIOL 117, BIOL 121/MCBL 121, BIOL 121L/MCBL 121L, BIOL 123/MCBL 123/PLPA 123, BIOL 124/MCBL 124, BIOL 128/CBNS 128, BIOL 151, BIOL 155/BPSC 155, BIOL 157, BIOL 159/NEM 159, BIOL 160, BIOL 161A, BIOL 161B, BIOL 171, BIOL 171L, BIOL 173/ENTM 173, BIOL 175  

(3) BIOL 104/BPSC 104, BIOL 132/BPSC 132, BIOL 143/BPSC 143, BIOL 148/BPSC 148, BIOL 155/BPSC 155, BPSC 135  

(4) BIOL 100/ENTM 100, BIOL 173/ENTM 173, ENTM 128  

(5) CBNS 101, CBNS 106, CBNS 116, CBNS 120/PSYC 120, CBNS 120L/PSYC 120L, CBNS 124/PSYC 124, CBNS 125/PSYC 125, CBNS 150/ENTX 150, CBNS 169  

(6) ENSC 100  

(7) ENTX 101, CBNS 150/ENTX 150  

4. BCH 190 or BCH 197 are available as elective courses to juniors who have completed BCH 102 and to seniors. No more than 9 units of courses numbered 190-199 may be counted towards the major.

Chemistry Emphasis

1. Lower-division requirements (61-62 units)
   a) BCH 095 or equivalent
   b) BIOL 005A, BIOL 05LA, BIOL 005B, BIOL 005C
   c) CHEM 001A, CHEM 001B, CHEM 001C

Chemistry Emphasis

1. No change
   a) No change
   b) No change
   c) No change
d) MATH 008B or MATH 009A, MATH 009B, MATH 046  

d) No change

e) PHYS 002A, PHYS 002B, PHYS 002C, PHYS 02LA, PHYS 02LB, PHYS 02LC  
e) No change

2. Statistics requirement (5 units): STAT 100A  
  2. No Change

3. Upper-division requirements (58–59 units) 

a) BCH 101, BCH 102, BCH 110A, BCH 110B, BCH 110C, BCH 184

b) At least 7 units from BCH 111, BCH 120, BCH 153/BIOL 153/BPSC 153, BCH 162, BCH 180 (E-Z), BCH 183, BCH 186, BCH 187, BCH 210, BCH 211, BCH 212,

b) At least 7 units from BCH 102, BCH 111, BCH 120, BCH 153/BIOL 153/BPSC 153, BCH 162, BCH 180 (E-Z), BCH 183, BCH 186, BCH 187, BCH 210, BCH 211, BCH 212,

c) BIOL 102  
c) No Change

e) CHEM 109 or CHEM 110A; CHEM 112A, CHEM 112B, CHEM 112C  
d) No Change

e) Two courses from CHEM 110B, CHEM 113, CHEM 125, CHEM 150A, CHEM 150B, CHEM 166 and other graduate courses may be substituted by students with a GPA of 3.00 or better with permission of the instructor and the faculty advisor.)  
e) No Change

4. BCH 190 or BCH 197 are available as elective courses to juniors who have completed BCH 102 and to seniors. No more than 9 units of courses numbered 190-199 may be counted towards the major.  
  4. No Change

Medical Sciences Emphasis

1. Lower-division requirements (54-55 units)  

a) BCH 095 or equivalent 

a) No change

b) BCH 096, BCH 098-I  
b) No change
c) BIOL 005A, BIOL 05LA, BIOL 005B, BIOL 005C  c) No change

d) CHEM 001A, CHEM 001B, CHEM 001C, CHEM 01LA, CHEM 01LB, CHEM 01LC  d) No change

e) MATH 008B or MATH 009A, MATH 009B  e) No change

f) PHYS 002A, PHYS 002B, PHYS 002C, PHYS 02LA, PHYS 02LB, PHYS 02LC  f) No change

2. Statistics requirement (5 units): STAT 100A  2. No Change

3. Upper-division requirements (59 units)  3. No Change

a) BCH 101, BCH 102, BCH 110A, BCH 110B, BCH 110C, BCH 120, BCH 184  a) BCH 101, BCH 110A, BCH 110B, BCH 110C, BCH 120, BCH 162, BCH 184

b) BIOL 102  b) No Change

c) CHEM 109 or CHEM 110A; CHEM 112A, CHEM 112B, CHEM 112C  c) No Change

d) CBNS 101  d) No Change

e) At least 8 units from: BIOL 121, BIOL 161A, BIOL 161B, BIOL 171, CBNS 106, CBNS 150/ENTX 150.  e) No Change

Graduate and upper-division courses can be substituted with permission of the instructor and the faculty advisor. Graduate courses require a GPA of 3.0 or greater in the sciences.

Students should be aware that CHEM 005 is often a requirement for admission to professional schools.

**JUSTIFICATION:**
Biology emphasis 3.a) & b) – e)1
Chemistry emphasis 3. a) & b)
Medical Science emphasis 3.a)

BCH 162 replacing BCH 102 as a requirement for a BCH degree
The material covered in BCH 162 is currently covered in BCH 102. Since establishing BCH 101, the content of BCH 102 has been significantly upgraded, so the need for BCH 102 is no more. We wish to utilize BCH 162 which has not been taught for some years.

**APPROVALS:**

Approved by the faculty of the Department of Biochemistry: February 21, 2013

Approved by the Executive Committee of the CNAS: February 18, 2014

Approved by the Committee on Educational Policy: April 22, 2014