To be adopted:

Proposed Changes in the B.S. Degree in Biological Sciences

Present

Bioinformatics and Genomics Track
1. Computer Science and Mathematics (16 units). These courses satisfy the related areas requirement.
   a) CS 010, CS 012, CS 014
   b) MATH 009C
2. Ethics and Science (4 units): At least one course from
   PHIL 117, PHIL 118, PHIL 161, RLST 170. This course may also satisfy a portion of the college's breadth requirements in Humanities.
3. Upper-division requirements (a minimum of 45 units)
   a) BCH 110A (recommended) or BCH 100
   b) BIOL 102, BIOL 105, BIOL 107A or BCH 110C, BIOL 119
   c) STAT 100A, STAT 100B, STAT 160A, STAT 160B
   d) Breadth electives (at least one course from each area)
      (1) Bioinformatics and Computational Biology (CS 141 and MATH 112 recommended): CS 141, CS 166, CS 170, CS 171, MATH 112, MATH 120, MATH 135A, STAT 160C, STAT 161, STAT 170A, STAT 170B
Note: Independent study or research in the field of bioinformatics or genomics is recommended.

Biology Track
1. Upper-division requirements [at least 36 units from the following, including two courses with laboratory or field component (indicated by *)]
   Note: Completion of BIOL 174 will be used to satisfy one requirement, either 1.b) or 1.c).
   a) Molecular/Cellular (minimum of one course from each category)
      (1) BCH 100 or both BCH 110A and BCH 110B
      (2) BIOL 102 or BIOL 115
      (3) BIOL 107A or BCH 110C, CBNS 101 or BIOL 113 or BIOL 114, BIOL 128/CBNS 128, BPSC 155/BIO 155
   b) Functional Biology of Organisms (minimum of two courses with lecture component)
      BIOL 121A/MCBL 121A, BIOL 121B/MCBL 121B, BIOL 121L/MCBL 121L*, BIOL 151*, BIOL 157*, BIOL 161A*, BIOL 161B*, BIOL 167*, BIOL 171*, BIOL 174, BIOL 175, BIOL 175L*, BIOL

Proposed

Bioinformatics and Genomics Track
1. No change
2. No change
3. No change
   a) No change
   b) No change
   c) No change
   d) No change
   (1) No change
(2) Genomics, Macromolecules, and Molecular Biology: BCH 185/BPSC 185, BIOL 107B, BIOL 108, BIOL 109 or BCH 162, BCH 153/BPSC 153 or BCH 162, BPSC 148/BIOL 148, CBNS 150/ENTX 150
Note: No change

Biology Track
1. No change
   a) No change
   b) Functional Biology of Organisms (minimum of two courses with lecture component)
      BIOL 121A/MCBL 121A, BIOL 121B/MCBL 121B, BIOL 121L/MCBL 121L*, BIOL 151*, BIOL 157*, BIOL 161A*, BIOL 161B*, BIOL 167*, BIOL 171*, BIOL 174, BIOL 175, BIOL 175L*, BIOL
1. Upper-division requirements [must include at least one laboratory course (indicated by *) from either category]

a) Required courses
   (1) BCH 110A and BCH 110B (recommended) or BCH 100
   (2) BIOL 102 or BIOL 115, BIOL 107A or BCH 110C, CBNS 101 or BIOL 113 or BIOL 114 or BPSC 135, BIOL 167* or BIOL 168 or CBNS 160*

b) Additional requirements (a minimum of 20 units from the following list)
   BCH 102*, BCH 120/BMSC 120, BCH 162*, BCH 183, BCH 184, BIOL 107B, BIOL 109*, BIOL 110, BIOL 119*, BIOL 121A/MCBL 121A, BIOL 121B/MCBL 121B, BIOL 121L/MCBL 121L*, BIOL 128/CBNS 128, BIOL 167* or CBNS 169*
   [whichever was not used to satisfy 1.a) above], BIOL 185G, BIOL 191, BPSC 143/Biol 143*, BPSC 148, BPSC 153/BCH 153/Biol 153*, BPSC 155/Biol 155, BPSC 185/BCH 185, CBNS 106, CBNS 116, CBNS 120/PSYC 120, CBNS 120L/PSYC 120L*, CBNS 125/PSYC 125, CHE 124, CHE 124L*, CHE 130*, ENTX 101, ENTX 150/CBNS 150, HNPG 024

2. Additional courses in biological sciences (upper division) and related areas from the approved list to bring total units to 52. Must include at least 8 units not listed above.

   c) Ecology/Evolution/Systematics/Behavior (minimum of two courses)

2. Statistics/Computer Science requirement (two courses)
   CS 010, CS 012, CS 014, CS 061, CS 120A/EE 120A, CS 143/EE 143, STAT 100A, STAT 100B, STAT 120A, STAT 120B

3. Additional courses in biological sciences (upper division) and related areas from the approved list to bring total units to 52. Eight of these units may be from a declared minor in one of the science colleges, or additional lower-division science requirements for the teaching credential (advisor’s approval required).

Cell, Molecular, and Developmental Biology Track

1. Upper-division requirements [must include at least one laboratory course (indicated by *) from either category 1.b) or 2.]

a) Required courses
   (1) BCH 110A and BCH 110B (recommended) or BCH 100
   (2) BIOL 102, BIOL 107A, CBNS 101, CBNS 108

b) Additional requirements (a minimum of 20 units from the following lists)
   Note: Credit is awarded for only one of BIOL 109 or BPSC 153/BCH 153/BIO 153.
   (1) Cell Biology:
      BIOL 109*, BIOL 113, BIOL 114, BPSC 135, CBNS 116, CBNS 120/PSYC 120
   (2) Molecular Biology:
   (3) Developmental Biology:
      BIOL 168, CBNS 169*

2. Additional courses from the following to bring total units to 52.
Conservation Biology Track
1. Additional lower-division requirements
   a) ENSC 006/ECON 006

   b) GEO 002
2. Upper-division requirements
   a) BIOL 102
   b) ENSC 172
e) Breadth Electives: Courses in the disciplines important in Conservation Biology (one course from each of the following areas)
   (1) Evolution: BIOL 105, BIOL 108
   (2) Ecology: BIOL 117, BIOL 127/ENTM 127, BPSC 146
   (3) Systematics: ENTM 112/BIOL 112/BPSC 112, GEO 151*
   (4) Biodiversity: BIOL 151, BIOL 163, BPSC 104/BIOL 104, ENTM 100/BIOL 100, ENTM 109, PLPA 134/BIOL 134 and PLPA 134L/BIOL 134L, or other appropriate course that includes a laboratory and is approved by a faculty advisor
   (5) Abiotic and Landscape Studies: ENSC 100, GEO 160, GEO 162, GEO 168A
   (6) Applications: BPSC 165/BIOL 165, ENTM 124, ENTM 129, GEO 167
   (7) Human Issues: ANTH 110, ANTH 129, ANTH 132, ANTH 134, ECON 143A/ENSC 143A, ECON 143B/ENSC 143B, PHIL 117, SOC 184

   d) Specialization: 12 units of upper-division and/or substantive courses in an area of specialization chosen by the student in consultation with a faculty advisor. Only the following 190 series can be included in the specialization: No more than 4 units of BLCN 197/199 may be included, and BLCN 190 may be applied when used to study graduate level material.
   e) Conservation Internship Program (minimum of 2 units): BLCN 198-1
   f) Conservation Biology Seminar: BLCN 193 must be taken once.

Entomology Track
1. Upper-division required courses
   a) BCH 100
   b) BIOL 102, BIOL 151
   c) BPSC 104/BIOL 104
   d) ENTM 100/BIOL 100, ENTM 112/BIOL 112/BPSC

   120L/PSYC 120L*, CBNS 125/PSYC 125, CBNS 128/BIOL 128, CBNS 150/ENTX 150, ENTM 126L*, ENTX 101, MCBL 121A/BIOL 121A, MCBL 121B/BIOL 121B, MCBL 121L/BIOL 121L*, MCBL 123/BIOL 123/PLPA 123

Conservation Biology Track
1. Additional lower-division requirements
   a) ENSC 006/ECON 006. This course also satisfies a portion of the breadth requirements in Social Sciences.
   b) No change
2. Upper-division requirements [at least 36 units from the following, including two courses with laboratory or field component (indicated by *)]
   a) BIOL 102
   b) BCH 100 or BCH 110A
   c) STAT 100A or STAT 120A
d) Breadth Electives (a minimum of one course from each of the following areas)
   (1) Evolution and Systematics: BIOL 105, BIOL 108, BPSC 144, ENTM 112/BIO 112/BPSC 112, GEO 151*
   (3) Biological Diversity: BIOL 151*, BIOL 161A*, BIOL 163*, BPSC 104/BIOL 104*, ENTM 100/BIOL 100*, ENTM 109*, ENTM 114* (may be applied either to Biological Diversity or to Applications), PLPA 134/BIO 134, PLPA 134L/BIOL 134L*
   (4) Biogeography and the Physical Environment: ENSC 100, GEO 152*, GEO 153, GEO 161*, GEO 162*, GEO 168*, GEO 169*
   (5) Applications: ANTH 134, ANTH 170/BPSC 170, BIOL 166*, BPSC 165/BIOL 165*, ENTM 114* (may be applied either to Biological Diversity or to Applications), ENSC 143A/ECON 143A, ENSC 143B/ECON 143B, ENSC 143C/ECON 143C, ENTC 172, ENSC 174, GEO 157*, GEO 167*

   3. Specialization: 12 units of upper-division and/or substantive courses in an area of specialization chosen in consultation with a faculty advisor. A maximum of 4 units of 190-series independent study courses may be used to satisfy a portion of the specialization requirement.
   4. Additional courses in biological sciences (upper division) and related areas from the approved list to bring total units to 52.
112, ENTM 127/BIOL 127, ENTM 173/BIOL 173

2. Additional upper-division requirements (at least 6 units from the following)
   ENTM 109, ENTM 114, ENTM 124, ENTM 126,
   ENTM 126L, ENTM 128, ENTM 129, ENTM 129L,
   ENTM 132, ENTM 133, ENTM 162/BIOL 162, ENTM
   190, ENTM 197 [no more than three units of ENTM
   190 and ENTM 197 (in combination) may be taken toward
   fulfilling this requirement]

3. Related areas (at least 7 units from the following)
   a) Agriculture: BPSC 143/BIOL 143, BPSC 150,
      BPSC 158, BPSC 166, ENSC 100, ENSC 131,
      NEM 120, NEM 159/BIOL 159, PLPA 120/BIOL
      120/MCBL 120, PLPA 134/BIOL 134, PLPA
      134L/BIOL 134L
   b) Evolution, Ecology, Behavior, Genetics: BIOL 105,
      BIOL 108, BIOL 114, BIOL 157, BIOL 160, BPSC
      144, BPSC 146, BPSC 148, GEO 167, GEO 168A,
      GEO 168B
   c) Cell, Molecular, and Organismal Biology: BIOL
      107A, BIOL 107B, BIOL 109, BIOL 113, BIOL
      114, BIOL 121A/MCBL 121A, BIOL 121B/MCBL
      121B, BIOL 121L/MCBL 121L, BIOL 174, BIOL
      175, BIOL 175L, BIOL 176, BIOL 176L, BIOL 178,
      CBNS 101

4. Additional courses in biological sciences (upper division)
   and related areas from the approved list to bring total
   units to 52.

Environmental Toxicology Track
1. Upper-division required courses
   a) BCH 100 or both BCH 110A and BCH 110B
   b) BIOL 102, BIOL 107A or BCH 110C, CBNS 101 or
      BIOL 113 or BIOL 114, BIOL 117
   c) ENSC 101 or ENSC 136/ENTX 136/CHEM 136,
      ENSC 102
   d) ENTX 101, ENTX 150/CBNS 150, ENTX 154
2. Additional upper-division requirements (four courses
   from the following, with at least one from Chemical Fate
   and one from Health/Ecology)
   a) Chemical Fate: CHEM 005, CHEM 109, CHEM
      125, CHEM 150A, CHEM 150B, ENSC 100, ENSC
      100L, ENSC 127, ENSC 131, ENSC 135/CHEM
      135/ENTX 135, ENSC 140/SWSC 140, ENSC 141,
      ENSC 142, ENSC 142L, ENSC 144/ENV 144,
      ENSC 155, ENSC 163, ENSC 172, ENSC 174,
      ENSC 176/SWSC 176, SWSC 104/ENSC 104,
      SWSC 107/ENSC 107, SWSC 111
   b) Health/Ecology: BCH 102, BCH 184, BIOL 108,
      BIOL 109, BIOL 115, BIOL 121A/MCBL 121A,
      BIOL 121B/MCBL 121B, BIOL 121L/MCBL
      121L, BIOL 128/CBNS 128, BIOL 161A, BIOL
      161B, BIOL 167, BIOL 168, BIOL 171, BPSC
      153/BCH 153, CBNS 106, CBNS 169, ENTM 126,
      ENTM 128
3. Additional courses in biological sciences (upper division)
   and related areas from the approved list to bring total
   units to 52.
Evolution and Ecology Track

1. Upper-division requirements [at least 36 units from the following, including one course with laboratory or field component (indicated by *)]
   a) Required courses
      (1) BCH 100
      (2) BIOL 102
      (3) At least three courses from BIOL 105, BIOL 108, BIOL 117, BIOL 160, ENTM 112/BPSC 112/BIOL 112. Courses not used to meet this requirement can be applied to additional requirements.
   b) Additional requirements (at least one course from each of the following areas)
      (1) Biological Diversity: BIOL 151*, BIOL 157*, ENTM 100/BIOL 100*, ENTM 114*, PLPA 134/BIOL 134, PLPA 134L/BIOL 134L*

2. Statistics requirement (minimum of one course): STAT 100A, STAT 100B, STAT 120A, STAT 120B

3. Additional courses in biological sciences (upper division) and related areas from the approved list to bring total units to 52.

Medical Biology Track

1. Upper-division requirements [at least 52 units from the following, including two courses with laboratory or field component (indicated by *)]
   a) Cell/Molecular
      (1) Required courses: BCH 100 or both BCH 110A and BCH 110B, BIOL 102 or BIOL 115, CBNS 101 or BIOL 113 or BIOL 114, BIOL 107A or BCH 110C
      (2) Elective options: BCH 102*, BCH 110B, BCH 110C, BIOL 107B, BIOL 109*, BPSC 155/BIOL 155
   b) Physiology/Anatomy (minimum of two courses with lecture component): BCH 120, BIOL 161A*, BIOL 161B*, BIOL 171*, BIOL 174, BIOL 175, BIOL 175L*, BIOL 178
   c) Neuroscience/Pharmacology (minimum of one course with lecture component): BIOL 176, BIOL 176L*, CBNS 106, CBNS 116, CBNS 120/PSYC 120, CBNS 120L/PSYC 120L*, CBNS 124/PSYC 124, CBNS 127/PSYC 127, ENTX 101, PSYC 125/CBNS 125, PSYC 126/CBNS 126
   d) Pathogenesis (minimum of two courses with lecture component)

   units to 52.

Evolution and Ecology Track

1. No change
   a) Required courses
      (1) No change
      (2) No change
      (3) At least three courses from BIOL 105, BIOL 108, BIOL 116, BIOL 160, ENTM 112/BPSC 112/BIOL 112. Courses not used to meet this requirement can be applied to additional requirements.
   b) No change

   (1) No change

   (2) No change


2. No change

3. No change

Medical Biology Track

1. Upper-division requirements [at least 52 units from the following, including two courses with laboratory or field component (indicated by *)]
   a) No change
   b) No change

   c) Neuroscience/Pharmacology (minimum of one course with lecture component): CBNS 106, CBNS 116, CBNS 120/PSYC 120, CBNS 120L/PSYC 120L*, CBNS 124/PSYC 124, CBNS 127/PSYC 127, ENTX 101, PSYC 125/CBNS 125, PSYC 126/CBNS 126
1. Upper-division core requirements
   a) BIOL 102
   b) BPSC 104/BIOL 104
   c) Three courses from the following: BIOL 107A, BPSC 132/BIOL 132, BPSC 135, BPSC 138/BIOL 138, BPSC 143/BIOL 143, BPSC 146

2. Additional upper-division requirements (24 units must come from one of the following four areas of specialization)
   a) Plant Cellular, Molecular, and Developmental Biology (Genetics, Biotechnology)
      BCH 102, BCH 110A, BCH 110B, BCH 110C or BIOL 107A, BCH 162, BCH 183, BCH 184, BIOL 105, BIOL 107B, BIOL 108, BIOL 115, BIOL 121A/MCBL 121A, BIOL 121B/MCBL 121B, BIOL 121L/MCBL 121L, BIOL 128/CBNS 128, BPSC 135, BPSC 144, BPSC 148, BPSC 150, BPSC 153/BIOL 153 or BIOL 109, BPSC 155/BIOL 155, BPSC 185/BCH 185, CBNS 101, CHEM 109, ENT 100/BIO 100, ENTM 112/BIO 112/BPSC 112, ENSC 100, ENSC 100L, ENTX 150/CBNS 150, NEM 120, NEM 159/BIOL 159, PLPA 120/BIO 120/MCBL 120, PLPA 134/BIO 134, PLPA 134L/BIO 134L, STAT 120A, STAT 120B, SWSC 100L
   b) Organismal Botany and Plant Sciences (Anatomy, Biochemistry, Development, Morphology, Physiology, Horticulture, Agronomy, Botany)
      BCH 102, BCH 183, BIO 107A, BIO 107B, BIO 121A/MCBL 121A, BIO 121B/MCBL 121B, BIO 121L/MCBL 121L, BPSC 135, BPSC 144, BPSC 153/CH 153, BPSC 155 or BIOL 109, BPSC 185/BCH 185, CBNS 101, CHEM 109, ENSC 100, STAT 100B or STAT 120B

2. Additional elective courses to bring total units to 52:
   BIOL 105, BIOL 108, BIOL 110, BIOL 117, BIOL 151*, BIOL 160, BIOL 160L*, BPSC 104/BIOL 104*, BPSC 170/ANTH 170, ENTM 100/BIO 100*, CHEM 109, CS 010, STAT 100B or STAT 120B

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Plant Biology Track

Note: BCH 110A and STAT 120A are strongly recommended.

1. Upper-division core requirements
   a) BIOL 102
   b) BPSC 104/BIOL 104
   c) Three courses from the following: BIOL 107A, BPSC 132/BIOL 132, BPSC 135, BPSC 138/BIOL 138, BPSC 143/BIOL 143, BPSC 146

2. Additional upper-division requirements (24 units must come from one of the following four areas of specialization)
   a) Plant Cellular, Molecular, and Developmental Biology (Genetics, Biotechnology)
      BCH 102, BCH 110A, BCH 110B, BCH 110C or BIOL 107A, BCH 162, BCH 183, BCH 184, BIOL 105, BIOL 107B, BIOL 108, BIOL 115, BIOL 121A/MCBL 121A, BIOL 121B/MCBL 121B, BIOL 121L/MCBL 121L, BIOL 128/CBNS 128, BPSC 135, BPSC 144, BPSC 148, BPSC 150, BPSC 153/BIOL 153 or BIOL 109, BPSC 155/BIOL 155, BPSC 185/BCH 185, CBNS 101, CHEM 109, ENT 100/BIO 100, ENTM 112/BIO 112/BPSC 112, ENSC 100, ENSC 100L, ENTX 150/CBNS 150, NEM 120, NEM 159/BIOL 159, PLPA 120/BIO 120/MCBL 120, PLPA 134/BIO 134, PLPA 134L/BIO 134L, STAT 120A, STAT 120B, SWSC 100L
   b) Organismal Botany and Plant Sciences (Anatomy, Biochemistry, Development, Morphology, Physiology, Horticulture, Agronomy, Botany)
      BCH 102, BCH 183, BIO 107A, BIO 107B, BIO 121A/MCBL 121A, BIO 121B/MCBL 121B, BIO 121L/MCBL 121L, BPSC 135, BPSC 144, BPSC 153/CH 153, BPSC 155 or BIOL 109, BPSC 185/BCH 185, CBNS 101, CHEM 109, ENSC 100, STAT 100B or STAT 120B

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No change
ENSC 100L, NEM 159/BIOL 159, PLPA 120/BIOL 120/MCBL 120, PLPA 123/BIOL 123/MCBL 123, PLPA 134/BIOL 134, PLPA 134L/BIOL 134L, STAT 120A, STAT 120B, SWSC 100L, SWSC 104/ENSC 104, SWSC 111, SWSC 124, SWSC 134/BPSC 123, PLPA 134/BIOL 134, PLPA 134L/BIOL 134L, STAT 120A, STAT 120B, SWSC 100L, SWSC 104/ENSC 104, SWSC 111, SWSC 124, SWSC 134/BPSC 134/ENSC 134

c) Ecology, Evolution, and Systematics (Agriculture and Natural Resources, Agroecology, Ethnobotany, Population Biology, Taxonomy)
ANTH 110, ANTH 111, ANTH 129, BCH 102, BCH 183, BIOL 105, BIOL 108, BIOL 117 or ENTM 127/BIOL 127, BIOL 118, BPSC 144, BPSC 146, BPSC 158, BPSC 165/BIOL 165, BPSC 166, BPSC 170/ANTH 170, ENTM 112/BIOL 112/BPSC 112, ENSC 100, ENSC 100L, GEO 151, NEM 159/BIOL 159, PLPA 120/BIOL 120/MCBL 120, PLPA 120L/BIOL 120L/MCBL 120L, PLPA 123/BIOL 123/MCBL 123, PLPA 134/BIOL 134, PLPA 134L/BIOL 134L, STAT 120A, STAT 120B, SWSC 100L, SWSC 104/ENSC 104, SWSC 111, SWSC 124, SWSC 134/BPSC 134/ENSC 134

d) Pest Management, Plant Pathology, and Nematology
BCH 183, BIOL 121A/MCBL 121A, BIOL 121B/MCBBL 121B, BIOL 121L/MCBL 121L, BPSC 146, BPSC 150, BPSC 158, BPSC 165/BIOL 165, BPSC 166, BPSC 170/ANTH 170, ENTM 112/BIOL 112/BPSC 112, ENSC 100, ENSC 100L, GEO 151, NEM 159/BIOL 159, PLPA 120/BIOL 120/MCBL 120, PLPA 120L/BIOL 120L/MCBL 120L, PLPA 123/BIOL 123/MCBL 123, PLPA 134/BIOL 134, PLPA 134L/BIOL 134L, STAT 120A, STAT 120B, SWSC 100L, SWSC 104/ENSC 104, SWSC 111

3. Additional upper-division courses in biological sciences and related areas from any of the above lists, and students may apply a maximum of six units of BPSC 190 and/or BPSC 197 (alone or in combination) to bring total units to 52.

JUSTIFICATIONS:

Bioinformatics and Genomics Track
3. d) (2):
BCH 153/BIOL 153/BPSC 153 is moved to follow BIOL 109, and an “or” is inserted between them. The catalog description for these courses includes the statement, “Credit is awarded for only one of BCH 153/BIOL 153/BPSC 153 or BIOL 109.”
BIOL 148 is cross listed with BPSC 148.

Biology
1. b): BIOL 176, BIOL 176L, BIOL 177 are deleted because no instructors are available.
1.c): BIOL 118 is deleted and replaced with new courses BIOL 116, BIOL 116L, BIOL 116M/BPSC 116M. The inclusion of lab courses BIOL 116L and BIOL 116M/BPSC 116M makes it necessary to insert the statement, “with lecture component.”

Cell, Molecular, and Development Biology Track
The extensive changes introduced in the CMDB track curriculum are the result of the work performed by a committee appointed by Chair Carol Lovatt to revise the CMDB track requirements. We have introduced a requirement for 4 gateway courses, one each in Cell Biology, Molecular Biology, Developmental Biology, and a basic course in Genetics [item 1.a) (2)]. These gateway courses will prepare the students for the more advanced courses in the track [item 1.b)]. To broaden their education, the students are then required to complete additional courses from a list that will expand their knowledge in the field of Biological Sciences [item 2.].

**Conservation Biology Track**

The Conservation Biology track in the Biological Sciences major was created after the major in Conservation Biology was closed to future enrollment and had retained many requirements from the major in Conservation Biology. Whereas, broad requirements of course subjects are appropriate for a 4-year major in Conservation Biology, such requirements are not well suited for the Biological Sciences major in which a 2-year program of specialization is taken following completion of the Life Sciences Core Curriculum. Ideally, the tracks in the Biological Sciences major should be designed to fulfill the course requirements of juniors and seniors who have completed the Life Sciences core without a preconception of enrolling in a particular track. It is inconsistent with this expectation to require students to fulfill prerequisites (other than those of the general College/University requirements) for an exceedingly diverse group of courses before the junior year. The track requirements have been revised to make the Conservation Biology track amenable for juniors who have completed the Life Sciences core requirements as freshmen and sophomores. The revisions in the track requirements place the focus of the track in the Biological Sciences yet address the multidisciplinary nature of Conservation Biology and permit students greater flexibility in course selection.

The Conservation Biology Track Committee made the following changes: (1) To enhance hands-on training and encourage participation in courses offering experience in the field, a requirement that students complete two upper division courses with a laboratory or field component was added to the track. (2) ENSC 172 has been eliminated as a required upper division course. This course and its prerequisites locked in students to a very strict schedule through Winter Quarter of the junior year. Failure to adhere to this very strict schedule of courses would have extended the normative time to graduation beyond four years. (3) Biochemistry and statistics were added as required upper division course requirements. Because these courses are part of the Life Sciences Core Curriculum, listing these courses emphasizes their importance and indicates that they satisfy upper division unit requirements. (4) The number of breadth elective categories was reduced from 7 to 5. "Human Issues" was deleted because the courses in the breadth category create several problems for students who have completed the Life Sciences core, such as not being able to receive credit for courses that are prerequisites for courses in this group. Moreover, because of the multi-disciplinary aspects of the track and the need to fulfill prerequisite requirements for existing required courses, students in the track would have been required to maintain fairly strict adherence to a set schedule of courses with no room for error and very little flexibility in course selection. "Abiotic and Landscape Studies" was changed to "Biogeography and the Physical Environment" with a concomitant increase in the course list. "Evolution" and "Systematics" were combined into one category. (5) In order to provide more flexibility for students, the number of classes in each of the breadth elective category was increased. (6) All requirements for courses in Conservation Biology, including the internship program, the seminar and independent study courses (BLCN 190 series), were eliminated as requirements for the Conservation Biology track. (7) A 4-unit limit on 190-series courses was made clear. The 190-series courses may be taken in the earth/environmental sciences or any life sciences department offering such courses.

**Entomology Track**

3. a): ENSC 120/SWSC 120 are cross listed with NEM 120.  
3. b): BIOL 118 is deleted and replaced with new course BIOL 116. BIOL 148 is cross listed with BPSC 148.

**Environmental Toxicology Track**

1. b): BIOL 117 has revised its prerequisites to include new course BIOL 116. BIOL 117 is deleted and replaced with BIOL 116.  
2. b): BIOL 117 is an appropriate course for this category and is included as an option.

**Evolution and Ecology Track**

1. a) (3): BIOL 117 has revised its prerequisites to include new course BIOL 116. BIOL 117 is deleted and replaced with BIOL 116.  
1. b) (3):  
  - BIOL 118 is deleted and replaced with new course BIOL 116.  
  - BIOL 116L*, BIOL 116M/BPSC 116M*, and BIOL 166* are new courses appropriate for this category.  
  - BIOL 148 is cross listed with BPSC 148.

**Medical Biology Track**

1. c): BIOL 176, BIOL 176L are deleted because no instructors are available.  
1. e): BCH 153/BIOL 153/BPSC 153 is moved to follow BIOL 109, and an “or” is inserted between them. The catalog description for these courses includes the statement, “Credit is awarded for only one of BCH 153/BIOL 153/BPSC 153 or BIOL
109."

2. BIOL 117 is deleted and replaced with new courses BIOL 116, BIOL 116L, BIOL 116M/BPSC 116M.

Plant Biology Track
2. a): BIOL 148 is cross listed with BPSC 148. ENSC 120/SWSC 120 are cross listed with NEM 120.
2. b): BPSC 150, Principles of Plant Breeding, is an appropriate course for this category and is included as an option.
2. c): BIOL 118 is deleted and replaced with new courses BIOL 116, BIOL 116L, BIOL 116M/BPSC 116M.
   BPSC 150, Principles of Plant Breeding, is an appropriate course for this category and is included as an option.
2. d): ENSC 120/SWSC 120 are cross listed with NEM 120.
3.: New course BPSC 198I is included as an option.

Effective: Fall 2003

Approved by the Committee in Charge of the Biological Sciences Major: March 19, 2003
Approved by the CNAS Executive Committee: April 2, 2003
Approved by the Committee on Educational Policy: April 10, 2003