

### Biology Track

**MATHEMATICS**

((Same as Standard Program))

**COMPUTER SCIENCE**

((Same as Standard Program))

**MANAGEMENT SCIEN. & ENGIN.**

((Same as Standard Program))

**STATISTICS**

STATS 116

STATS 200

STATS/BIO141(Biostat) can replace STATS 191 or 203

**WRITING IN THE MAJOR (WIM)**

(Same as Standard Program)

**BIOLOGY TRACK ELECTIVES**

(9 Units)

Take 3 courses from Biol. Sci. Core:

- BIO 41 Genetics, Biochem, Molecular Biology
- BIO 42 Cell Biology& Animal Physiology
- BIO 43 Plant Biology, Evolution & Ecology

Or take two courses from core and one of the following:

- BIO 102 Demography
- BIO 136 Evolutionary Paleobiology
- BIO143 Evolution
- BIO144 Conservation Biology
- BIO160 Developmental Biology
- BIO183 Theoretical Population Genetics
- BIO230 Molecular & Cell. Immunology

Honors students should take the following:

- STATS 155 STATS. Methods in Computational Genetics
- BIO 113 Fundamentals of Molecular Evolution
- BIO 146 Population Studies

### Statistics Track (Total Units 85)

Take the same **MATHEMATICS, CS, MS&E** and **STATS** courses as in the Standard Program.

1. Add STATS 217 to required STATS courses.
2. Add an advanced MS&E class on stochastic applications such as MS&E 220 or MS&E 223.
3. Add an advanced CS such as CS246 (mining huge data sets).

**STATISTICS TRACK ELECTIVES**

Take 3 courses in STATS from MS level

Recommended classes include:

- STATS 202
- STATS 206
- STATS 207
- STATS 208
- STATS 216
- STATS 219
- STATS 270

* Track electives replace MCS program electives.  

### Engineering Track

**MATHEMATICS**

((28-31 Units))

With consent of an MCS advisor, MATH 51-52-53 series may be substituted for CME 100-102-104. Depending on the exact material taught in relevant years, an additional math course might be necessary. ✽

- MATH 104 "or" MATH 113 is required.

**COMPUTER SCIENCE**

((17-24 Units))

**MANAGEMENT SCIENCE & ENGIN.**

((7-11 Units))

**STATISTICS**

STATS 116 [or can be replaced with STATS 110]

STATS 200

STATS 202 [which can replace STATS 191/STATS 203]

**WRITING IN THE MAJOR (WIM)**

(3-4 Units)

Take one:

- MATH 109 (WIM)
- MATH 110 (WIM)
- MATH 120 (WIM)
- MATH 171 (WIM)
- CS 181W (WIM)

**ENGINEERING TRACK ELECTIVES**

(9 Units)

Take at least 1 course from following:

- MATH 106 Functions of Complex Variable
- MATH 116 Complex Analysis
- MATH 118 Mathematics of Computations
- MATH 132 Partial Differential Eqns.
- MATH 174 Calculus Variations
- PHIL 151 First Order Logic

Take 2 courses from the following:

- ENGR 15 [A,S] Dynamics
- ENGR 20 [S] Intro. Chemical Engin.
- ENGR 25B [S] Biotechnology
- ENGR 40 [A] Introductory Electronics
- ENGR 50 [S] Intro to Materials Science Nano-technology Emphasis
- ENGR 105 [W,S] Feedback Control Design

Any elective from M&CS program sheet (3-4 units)