



## Bioinformatics Track Curriculum in the iPQB Program\* - 2007

\*Changes Pending, Curriculum developments underway, updates forthcoming

To maintain in good standing with the University of California, all students must take a minimum of eight (8) units per quarter.

### REQUIRED COURSES BY YEAR:

#### Year One:

BMI 220/BP 220	Research seminars presented by visiting scientists – (1 unit; Fa, Wi, Sp)
BMI 221	Lab Rotations (1 Per Quarter; Fa, Wi, Sp) – (1-8 units)
BMI 222	2nd Year Student Research Presentations (attendance required) – (1 unit; Sp*)
BMI 223	BBC (Biophysics, Bioinformatics, Chemistry & Chemical Biology) Journal Club – (1 unit; Fa, Wi, Sp)
BMI 224	Graduate Research Opportunities – (1 unit; Fa, Wi, Sp)
BMI 203	Introduction to Biocomputing Algorithms – (3 units; Sp)
BMI 206	Physical principles & Bioinformatics – (4 units; Wi)
BP 205	Systems & Cells – (4 units; Sp)
Biophys 204A	Macromolecular Structure & Interaction I – (3 units; F)
Biophys 204B	Macromolecular Structure & Interaction II - (3 units; W)
Chem 241	Statistical Mechanics/Molecular Thermodynamics (5 units; F)

#### Additional Requirements:

- Bootcamp and Team Challenges are required program activities that do not hold course numbers.
- At the end of year one, you will need to pick a research advisor and lab to join

#### Year Two:

BMI 220/BP 220	Research seminars presented by visiting scientists
BMI 223	BBC Journal Club – (1 unit; Fa, Wi, Sp)
BMI 250	Research – (1-8 units)
Biochem 212	Becoming Effective Science Teachers (BEST): Theory and Practice – (Fa)
Biochem 244	Ethical Conduct of Science – (1 unit; Sp)
BMI 222 *	2nd Year Research Seminar Presentation (PI and another faculty member must evaluate your talk)

\* 2nd year student talks may take place in any quarter, but for registration purposes, students should sign up for this in Spring quarter only.

#### Additional Requirements:

- Any remaining required courses from Year One
- Elective pertinent to your research
- One Quarter Teaching Assistantship



**Graduate Program in Bioinformatics**

Box 2280  
University of California, San Francisco  
San Francisco, CA 94158

<http://bioinformatics.ucsf.edu>  
415 514 0249

**Year Three:**

BMI 220/BP 220	Research seminars presented by visiting scientists
BMI 250	Research – (1-8 units)
BMI 222	2nd Year Student Research Presentations (attendance required) – (1 unit; Sp)

Additional Requirements:

- Oral Qualifying Exam
- Advancement to Candidacy
- Form Thesis Committee

**Year Four:**

BMI 220/BP 220	Research seminars presented by visiting scientists
BMI 250	Thesis (1-8) Units
BMI 222	2nd Year Student Research Presentations (attendance required) – (1 unit; Sp)

Additional Requirements:

- Meet and update Thesis Committee

**Year Five:**

BMI 220/BP 220	Research seminars presented by visiting scientists
BMI 250	Research – (1-8 units)
BMI 299	Thesis (0 units) during Filing Fee Quarter ONLY
BMI 222	2nd Year Student Research Presentations (attendance required) – (1 unit; Sp)

Additional Requirements:

- Meet and update Thesis Committee
- Last quarter apply for Filing Fee Status
- Submit Thesis
- Thesis Exit Seminar



## Graduate Program in Bioinformatics

Box 2280  
University of California, San Francisco  
San Francisco, CA 94158

<http://bioinformatics.ucsf.edu>  
415 514 0249

### Example Elective Courses:

BMI 209	Statistical Methods in Bioinformatics: Case Studies (Fall 1 unit)
BMI 280	Scientific Software Development (Spring 1 unit)
Biochem 200A	Macromolecules (Fall 3 units)
Biochem 201A	Biological Regulatory Mechanisms (Winter 4 units)
Biochem 246	Developmental Biology (Spring 3 units)
BMS 260	Cell Biology (Fall 4 units)
Chem 242	Physical Organic Chemistry (Winter 3 units)
Chem 243	Chemical Biology (Spring 5 units)
Chem 244	Reaction Mechanisms (Fall 3 units)
Genetics 200A	Genetics and Development (Fall 3 units)
Neuroscience 201A	Basic Concepts in Cellular and Molecular Neuroscience (Fall 4 units)
Neuroscience 201B	Basic Concepts in Systems Neuroscience (Winter 4 units)
PSPG 245A	Basic Principles of Pharmaceutical Sciences (Fall 3 units)
PSPG 245B	Basic Principles of Pharmaceutical Sciences (Winter 3 units)
PSPG 245C / BPS 135	Principles of Pharmacogenomics (Spring 2-3 Units)
PC 204 / BMI 204	Introduction to Object-Oriented Programming (Fall 2 units)
PC 219	Enzyme Mechanisms (Spring 3 units)