BIOINFORMATICS - MASTER OF SCIENCE

Degree Road Map

- **For students with non-computing background**
  - Semester 1: Command Line bioinformatics, C S 458 R Programming I, A ST 505 Statistical Inference I
  - Semester 2: C S 453 Python Programming I, one elective course, C S 509 Bioinformatics Programming
  - Semester 3: C S 508 Introduction to Data Mining, Master's project/thesis/internship (3 credits), one elective
  - Semester 4: Master's project/thesis/internship (3 credits)
- **For students with Computer Science background**
- Semester 1: The course to cover the prerequisites to enter GENE 315 Molecular Genetics and BCHE 341 Survey of Biochemistry, A ST 505 Statistical Inference I, C S 508 Introduction to Data Mining
- Semester 2: C S 509 Bioinformatics Programming, GENE 315 Molecular Genetics, BCHE 341 Survey of Biochemistry
- Semester 3: Master's project/thesis/internship (3 credits), two electives
  - Semester 4: Master's project/thesis/internship (3 credits)

A Suggested Plan of Study for Students (with non-computing background)

It is only a suggested plan of study for students and is not intended as a contract. Course availability may vary from fall to spring semester and may be subject to modification or change.

Semester 1		Credits
C S 458	R Programming I	3
A ST 505	Statistical Inference I	4
Command Line Bioinformatics		3
	Credits	**10**
Semester 2		
C S 453	Python Programming I	3
C S 509	Bioinformatics Programming	3
Elective Course		3
	Credits	**9**
Semester 3		
C S 508	Introduction to Data Mining	3
Elective Course		3
Master's Project/thesis or internship		3
	Credits	**9**
Semester 4		
Master's project/thesis or internship		3
	Credits	**3**
	Total Credits	**31**

A Suggested Plan of Study for Students (with a Computer Science background)

It is only a suggested plan of study for students and is not intended as a contract. Course availability may vary from fall to spring semester and may be subject to modification or change.

Semester 1		Credits
C S 508	Introduction to Data Mining	3
C S 509	Bioinformatics Programming	3
BIOL 566	Advanced Bioinformatics and NCBI Database	3
	Credits	**9**
Semester 2		
C S 516	Bioinformatics	3
C S 570	Analysis of Algorithms	3
GENE 452	Applied Bioinformatics	3
	Credits	**9**
Semester 3		
C S 581	Advanced Software Engineering	3
C S 586	Algorithms in Systems Biology	3
Elective Course [1]		3
	Credits	**9**
Semester 4		
Master's project/thesis or internship		3
Elective Course [1]		3
	Credits	**6**
	Total Credits	**33**