

Biological Sciences—Major Requirements for BS Degree

Molecular & Cell Biology Emphasis Track

Effective Fall 2010

University of California, Merced

Anticipated Graduation Date (ex: May 2010) _____

Full Name: _____ ID: _____ Email: _____

Phone: _____

University Requirements

Requirement/ Course Dept #	Course Title	Grade	Units Required	Term Completed	Substitute Approved
UC Entry Level Writing (WRI 001 or ELWR)			n/a		
American History/Institutions			n/a		
World at Home I (CORE 001)			1 course		
College Composition (WRI 010)			1 course		

School Requirements

World at Home II (CORE 100 or replacement)			4		
Calculus I (MATH 011)			4		
Probability & Statistics (MATH 18 or 32 or PSY 10 or ENVE 105)			4		
Introduction to Physics I (PHYS 08 or 18)			4		
Computer Science Course (CSE 020 or CSE 005 or MATH 15)			2		
General Chemistry I (CHEM 02)			4		
Lower Division Arts/Humanities Elective			4		
Lower Division Social Science Elective			4		
UD Science Writing Course (WRI 116 or course approved by NS)			4		
UD Social Science/Humanities Elective			4		

Major/Core Requirements

Contemporary Biology (BIO 01)			4		
Contemporary Biology Lab (BIO 01L)			1		
The Cell (BIO 110)			4		
General Chemistry II (CHEM 10)			4		
Organic Chemistry (CHEM 08)			4		
Calculus II for Bio (MATH 12)			4		
Introduction to Physics II for Bio Sciences (PHYS 019)			4		
Upper Division Non-Bio Science or Engr Course			4		

Molecular & Cell Biology Emphasis

Introduction to Molecular Biology (BIO 02)			4		
Introduction to Molecular Biology Lab (BIO 02L)			1		
Genetics (BIO 140)			4		
Evolution (BIO 141)			4		

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Quantitative Biology Elective: Chose One (Bio 104, 105, 142,175,180,181,182 or 183)			4		
One Course from elective list below with Lab			5		
One Course from elective list below (w/o lab)			4		
One Course from elective list below (w/o lab)			4		
One Course from elective list below (w/o lab)			4		

Free Electives to Meet 120 Units

Molecular & Cell Biology Elective List:

- BIO 101 – Biochemistry I
- BIO 102 – Advanced Biochemistry and Molecular Biology
- BIO 104 – Biophysics
- BIO 104L – Biophysics Laboratory
- BIO 105-Enzymology
- BIO 105L-Enzymology Lab
- BIO 107-Physical Biochemistry
- BIO 111 – Cells, Tissues and Organs‡
- BIO 120 – General Microbiology
- BIO 120L – General Microbiology Laboratory
- BIO 103-Pathogenesis
- BIO 124 – Microbial Evolution
- BIO 130 – Plant Biology
- BIO 134-Marine Sciences Theory and Practice
- BIO 142 – Genome Biology
- BIO 143-Biodiversity
- BIO 144-Phylogenetics

- BIO 144L-Phylogenetics Lab
- BIO 150-Embryos, Genes and Development
- BIO 151 – Molecular Immunology
- BIO 151L – Molecular Immunology Laboratory
- BIO 152 – Cancer Genetics and Tumor Biology
- BIO 153 – Evolution and Development‡
- BIO 160 – Comparative Physiology
- BIO 160L – Comparative Physiology Laboratory
- BIO 161 – Human Physiology
- BIO 163 – Endocrinology
- BIO 170 – Neurobiology
- BIO 170L – Neurobiology Lab
- BIO 175- Biostatistics
- BIO 180– Mathematical Modeling for Biology
- BIO 181 – Introduction to Biomolecular Simulation
- BIO 182 – Bioinformatics
- BIO 183- Population Genetics

Academic Advisor for Biology Students (last name A-M):

Jesus Jimenez (jjimenez22@ucmerced.edu)
 Science & Engineering 370

Academic Advisor for Biology (last name N-Z) & **Pre-Health**

Erica Robbins (erobbins2@ucmerced.edu)
 Science & Engineering 370

Notes: _____

Student Signature: _____

Date: _____

Advisor Signature: _____

Date: _____

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