

**California State University
Channel Islands
Masters of Science in Biotechnology
Biomedical Engineering Emphasis**

Advising Form: 2019-2020

Name: _____ ID Number: _____

Term Admitted: _____ Last Updated: _____

The MS Biotechnology degree with Biomedical Engineering (BME) Emphasis consists of 3 parts: MS Biotechnology Core Courses (12 units), BME Emphasis requirements (15-16 units), and Electives (7-8 units) for a total of 35 minimum units required.

Students must obtain a grade of C or better in order for courses to be applied to the MS in Biotechnology degree. Students must receive a grade of B or better in BINF 500 to satisfy the Graduate Writing Assessment requirement (GWAR) necessary for graduation

MS Biotechnology Curriculum	Units	Instit.	Course	Units	Grade	Term	Comments
MS Biotechnology Common Core Courses (12 units)							
BINF 500 DNA and Protein Sequence Analysis	3						
BIOL 502 Techniques in Genomics and Proteomics	3						
BIOL 503 Biotechnology Law and Regulation	3						
BIOL 504 Molecular Cell Biology	3						
Biomedical Engineering Emphasis Required Courses (15-16 units)							
BIOL 601 Seminar in Biotechnology	1						
BIOL 604: Biotechnology Across National Boundaries	2						
BME 500 Biological Systems and Biomechanics	3						
BME 501 Fundamentals of Tissue Engineering and Biomaterials	3						
BME 502 Biomedical Instrumentation and Devices	3						
Select one:							
BIOL 600 Team Project	4						
BIOL 603 Biotechnology Internship	3						If desired, may be taken as elective credit instead.

Electives (Minimum 7-8 units)

Elective units dependent on required final course taken to total 23 units in emphasis (not including BINF 500, BIOL 502, 503 & 504)

- If BIOL 600 is selected, then 7 elective units required
- If BIOL 603 is selected, then 8 elective units are required

BIOL 500 Intro to Biopharmaceutical Production Operations	3						
BIOL 505 Molecular Structure	4						
BIOL 507 Pharmacogenomics and Pharmacoproteomics	3						
BIOL 508 Advanced Immunology	4						
BIOL 509 Plant Biotechnology	4						
BIOL 510 Tissue Culture Techniques & Stem Cell Technology	3						
BIOL 512 Advanced Topics in Regenerative Medicine	1						
BIOL 513 Cell Culture Facility Management	3						
BIOL 516 Clinical Trials and Quality Assurance	3						
BIOL 517 Mechanisms of Development	3						
BIOL 518 Advanced Topics in Molecular Cell Biology	3						
MGT 471 Project Management	3						
BIOL 590 Special Topics	3						
BIOL 597 Directed Study	1						
BIOL 603 Biotechnology Internship	3						
BINF 514 Statistical Methods in Computational Biology	3						

Advising Notes: