



# California State University Channel Islands

## Dual Degree: Masters of Science in Biotechnology and Masters of Business Administration Biomedical Engineering Emphasis

### Advising Form: 2019-2020

Name: \_\_\_\_\_ ID Number: \_\_\_\_\_

Term Admitted: \_\_\_\_\_ Last Updated: \_\_\_\_\_

The MS Biotechnology and MBA dual degree with Biomedical Engineering emphasis consists of 7 parts: MS Biotechnology Prerequisites or MBA Foundations courses (15-16 units, as required), MS Biotechnology Core (9 units), Biomedical Engineering Emphasis courses (12 units), MS Biotechnology Electives (6 units), MBA Core courses (18 units), Common Core Courses (9 units) and MBA Electives (6 units double counted) for a total of 75-76 minimum units required.

Students must obtain a grade of C or better in order for courses to be applied to the MS in Biotechnology and Masters of Business Administration dual degree. Students must receive a grade of B or better in BINF 500 and BUS 520 to satisfy the Writing Assessment requirement (GWAR) necessary for graduation.

MS Biotechnology/MBA Curriculum	Units	Instit.	Course	Units	Grade	Term	Comments
<b>MS Biotechnology Prerequisites (16 units, as required)</b>							
CHEM 110 Chemistry of Life	4						Or equivalent course
BIOL 201 Principles of Cell & Molecular Biology	4						Or equivalent course
BIOL 300 Cell Biology	4						Or equivalent upper division course
BIOL 400 Molecular Biology	4						Or equivalent upper division course
<b>MBA Foundation Requirements (15 units, as required)</b>							
BUS 500 Economics for Managers	3						Undergraduate equivalent = 1 semester micro economics + 1 semester macro economics
BUS 502 Quantitative Methods for Decision Making	3						Undergraduate equivalent = upper division statistics or CSUCI's BIOL 203
BUS 504 Introduction to Accounting and Finance	3						Undergraduate equivalent = Financial Acctg + Managerial Acctg + Business Finance
BUS 506 Principles of Management & Marketing	3						Undergraduate equivalent = Principles of Management + Principles of Marketing
BUS 508 Business Ethics & Law	3					Waived	Waived for Dual Degree majors based on BIOL 503
<b>MS Biotechnology Core Requirements (9 Units)</b>							
BINF 500 DNA and Protein Sequence Analysis	3						
BIOL 503 Biotechnology Law and Regulation	3						
BIOL 504 Molecular Cell Biology	3						

**Biomedical Engineering Emphasis Required Courses (12 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						

**MS Biotechnology Electives (Minimum 6 units)**

BIOL 500 Introduction to Biopharmaceutical Production Operations	3						
BIOL 502 Techniques in Genomics and Proteomics	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 of Molecular Cell Biology	3						
BIOL 590 Special Topics	3						
BIOL 597 Directed Study	1						
BIOL 603 Biotechnology Internship	3						
BIOL 605 Biotechnology Across National Boundaries Field Trip	1						
BINF 514 Statistical Methods in Computational Biology	3						

**Common Core Curriculum (9 units)**

MGT 471 Project Management	3						
BIOL 610: Dual Team Project	6						

**MBA Core Requirements (18 units)**

BUS 510 High Performance Management	3						
BUS 520 Strategy and Leadership	3						
BUS 530 Managing Business Operations	3						
BUS 540 Financial Reporting and Analysis	3						
BUS 550 The Contemporary Firm	3						
BUS 560 The Entrepreneurial Manager	3						

**MBA Electives (6 units, double-counted)**

BINF 500 DNA & Protein Sequence Analysis							
BIOL 503 Biotechnology Law and Regulation							

**Advising Notes:**