MASTER OF SCIENCE IN BIOENGINEERING

Requirements

Intra-University in Colleges of Health and Human Sciences, Engineering, Natural Sciences, Veterinary Medicine & Biomedical Sciences

Effective Fall 2021

Code	Title	Credits
Core Course Requirements		
BIOM 533/CIVE 533	Biomolecular Tools for Engineers	3
BIOM 570/MECH 570	Bioengineering	3
BIOM 576/MECH 576	Quantitative Systems Physiology	4
BIOM 592	Seminar [1]	2
BIOM 699	Thesis	8
Select three credits from the following:		3
MATH 530	Mathematics for Scientists and Engineers	
MATH 535	Foundations of Applied Mathematics	
MATH 545	Partial Differential Equations I	
MATH 550/ ENGR 550	Numerical Methods in Science and Engineering	
MATH 560	Linear Algebra	
MATH 569A/ DSCI 569A	Linear Algebra for Data Science: Matrices and Vectors Spaces	
MATH 569B/ DSCI 569B	Linear Algebra for Data Science: Geometric Techniques for Data Reduction	
MATH 569C/ DSCI 569C	Linear Algebra for Data Science: Matrix Factorizations and Transformations	
MATH 569D/ DSCI 569D	Linear Algebra for Data Science: Theoretical Foundations	
Select four credits from the following:		4
STAR 501	Data Wrangling/Visualization for Researchers	
STAR 502	Multivariate Analysis for Researchers	
STAR 512	Design and Data Analysis for Researchers II	
STAR 513	Regression Models for Researchers	
STAR 514	Experimental Design/Analysis for Researchers	
STAR 531	Generalized Regression Models for Researchers	
STAR 532	Mixed Models for Researchers	
STAR 534	Machine Learning for Researchers	
Electives [2]		3
Program Total Credits:		**30**

A minimum of 30 credits are required to complete this program.[3]

[1] BIOM 592 must be taken in two semesters.

[2] Select a minimum of 3 credits of Engineering courses 500-level or above with approval of advisor.

[3] Program Total Credits must include a minimum of 21 semester credits earned at CSU (not including thesis or independent study) in 500-level (or above) regular courses.