PROGRESSIVE DEGREE PROGRAM COURSE PLAN TEMPLATE

USC SCHOOL	Viterbi School of Engineering	
ACADEMIC DEPARTMENT	Biomedical Engineering	
GRADUATE PROGRAM	Master of Science in Biomedical Data Analytics	
POST CODE	1809	
TERM EFFECTIVE DATE	Spring 2025	

PROGRAM DESCRIPTION

A brief description of the graduate program.

This program aims to introduce BME graduate students to the mathematical and computational methods of biomedical data analysis and to demonstrate the application of these methods to selected domains of high importance for Biomedical Engineering (e.g. biomedical signal and system analysis, medical imaging, clinical diagnostics and treatment monitoring).

COMMON BACHELOR DEGREE PROGRAM PATHWAYS

A list of common bachelor's degrees that undergraduate students pursue in advance of pursuing a progressive degree option with this graduate program. Some programs are restricted to certain majors while others are open to all students.

Biomedical Engineering/Bioengineering	Chemistry, Biology, Physics	
Quantitative and Computational Biology	Pre-Med/Pharm/Dental/Optometry Majors	
All Engineering Majors	Mathematics/Statistics	
Public Health		

PREPARATORY UNDERGRADUATE COURSES

A list of courses at the undergraduate level that prepare students for the graduate program. Required coursework is listed first, followed by recommended courses. If not applicable, this section will be blank.

Dept. Prefix - Course #	Course Title	Required or Recommended	Units
MATH – 245	Mathematics Physics & Engineering I	Recommended	4
BME – 423	Statistical Methods in Biomedical Engineering	Recommended	4

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UNDERGRADUATE COURSES USED TO REDUCE GRADUATE LEVEL UNITS

A list of undergraduate level courses that may be used to reduce the number of graduate level units required for the graduate program. If there are none, that is specified instead.

Dept. Prefix - Course #	Course Title	Units
BME 202	Control and Communication in the Nervous System	4
BME 403L	Physiological Systems	

CORE GRADUATE PROGRAM REQUIREMENTS (# units required)

A list of all required graduate courses for the graduate program. None of these courses may be used toward satisfying undergraduate degree requirements.

If special exceptions for any of these courses are made by the academic department, the course # is marked with an asterisk (*) and the exception is explained in the "Department Notes" section at the end of this course plan template.

Dept. Prefix - Course #	Course Title	Units
BME-511	Physiological Control Systems	
BME-513	Introduction to Medical Product Regulation	
BME-514	Physiological Signals and Data Analytics	4
BME-515	Data Analytics in Biomedical Engineering	4
BME-528	Medical Diagnostics, Therapeutics and Informatics Applications	4
Technical Electives*		8

PRE-APPRED ELECTIVE COURSEWORK

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Elective coursework is approved at the discretion of the academic department. Note the following details about the total number and units required of elective coursework.

8	TOTAL ELECTIVE UNITS REQUIRED FOR THE TRADITIONAL GRADUATE DEGREE		
0	TOTAL ELECTIVE UNITS REQUIRED FOR THE PROGRESSIVE GRADUATE DEGREE		
TOTAL UN	IT COUNTS AND REQUIRED GRADUATE UNITS		
28	TOTAL UNITS REQUIRED FOR THE TRADITIONAL GRADUATE DEGREE		
8	TOTAL GRADUATE UNITS THAT MAY BE WAIVED (IF ANY)		
20	MINIMUM NUMBER OF GRADUATE UNITS THAT MUST BE AT THE 500 LEVEL OR ABOVE		
	has specific restrictions (courses, majors, etc.), they are dents are not required to complete technical elective co		
Kelly Gou	ılis	4/30/2025 10:53:22 AM PD	
Authorizin	g Dean's Name	Date Approved	
Senior A	ssociate Dean		

Authorizing Dean's Title

For any questions about PDP, please reach out to Viterbi.pdp@usc.edu