



**B.S. F.M. Long Bioengineering  
2020-2021 Catalog**

University of Wyoming			
B.S. F.M. Long Bioengineering	cr	Min Grade	Notes
<b>USP - University Studies Program Requirements</b>			
<b>USP: First Year Seminar</b>	3	C	FYS
<b>USP: Communications I</b>	3	C	C1
<b>USP: Communications II</b>	3	C	C2
<b>USP: Communications III</b> (EE 4820/4830 part of Computer Engineering curriculum)		C	C3
<b>USP: US &amp; Wyoming Constitutions</b>	3		V
<b>USP: Human Culture</b>	3		H
<b>USP: Quantitative</b> MATH 2200 Calculus I	4	C	Q
<b>USP: Physical &amp; Natural World</b> CHEM 1020 General Chemistry	4	C	PN
PHYS 1210 Engineering Physics I	4		
<b>Credit hours subtotal:</b>			27
<b>F.M. Long Bioengineering Major Courses</b>			
ES 1060 Introduction to Engineering Problem Solving Any ES, EE, BE course (2000 or higher) or COSC 3011 or COSC 3750	3	C	
Any ES, EE, BE course (2000 or higher) or COSC 3011 or COSC 3750	3		
ES 2210 Electric Circuit Analysis	3	C	
EE 2220 Circuits and Signals	4	C	
EE 2390 Digital Systems Design	4	C	
EE 3150 Electromagnetics	3	C	
EE 3220 Signals And Systems	3	C	
EE 3310 Electronics I	4	C	
EE 3330 Electronics II	4		
EE 3510 Electric Machines and Power Systems	4		
EE 4075 C+ with Numerical Methods for Engineers	4		
EE 4220 Probabilistic Signals and Systems	3		
EE 4390 Microprocessors	3		
EE 4820 Senior Design I	2	C	C3
EE 4830 Senior Design II	2	C	C3
<b>Choose one:</b> EE 4330 Electronic Systems Design OR BE 4810 Bioinstrumentation	3	C	
<b>Choose one:</b> EE 4620 Automatic Control Systems OR BE 4820 Biomedical Signal Processing	3	C	

BE or EE Elective	3	C	See BE/EE note
<b>Credit hours subtotal:</b>			61
<b>Major Related Courses</b>			
CHEM 2300 Introductory Organic Chemistry	4	C	
LIFE 1010 General Biology	4	C	
PHYS 1220 Engineering Physics II	4	C	
MATH 2205 Calculus II	4	C	Q
MATH 2210 Calculus III	4	C	
MATH 2250 Elementary Linear Algebra	3	C	
MATH 2310 Applied Differential Equations I	3	C	
MOLB 2021 General Microbiology	4		
MOLB 3610 Principles of Biochemistry	4		
Technical Elective	3		
<b>Credit hours subtotal:</b>			37
<b>B.S. F.M. Long Bioengineering total credit total:</b>			125

### F.M. Long Bioengineering Major Notes:

- A minimum of 128 hours is required.
- A minimum of 42 hours must be upper division.
- Math/Science, Technical, and BE/EE Electives must be selected with advisor's approval from Department list.
- Degree candidates must meet the academic requirements of the university, and must have a minimum GPA of 2.0 in all engineering courses.
- Students may not take a course for S/U credit to satisfy any requirement, unless the course is offered for S/U credit only.
- PHYS 1210 must be taken prior to or concurrently with ES 2120. PHYS 1220 should be taken prior to or concurrently with ES 2210.
- Grades of C or better are required for all courses that are prerequisites for courses within the students course of study and all required MATH courses.
- EE 1101 is recommended for EE and CPEN majors for their FYS requirement.

### University of Wyoming Requirements

- Students must have a minimum cumulative GPA of 2.0 to graduate.
- Students must complete 42 hours of upper division (3000-level or above) coursework, 30 of which must be from the University of Wyoming.
- Courses must be taken for a single letter grade unless offered only for S/U.
- University Studies Program (USP), Human Culture (H) and Physical & Natural World (PN) courses must be taken outside of the major subject, but can be cross-listed with the major.

The University of Wyoming Office of the Registrar provides final approval of degree completion requirements prior to the awarding of any degree.