

# BIOCHEMISTRY PRE-PROFESSIONAL, BS

## Program Description

The Bachelor of Science in Biochemistry Pre-professional equips graduates with the skills necessary to proceed to graduate or professional programs, and to gain employment in academic, government, and industry sectors. Biochemistry graduates earn over 600 hours of hands-on, laboratory experience to prepare them for a career as a biochemist. Biochemists graduate trained on state-of-the-art instrumentation and in techniques that are industry standards.

The LSSU chemistry program has been approved by the American Chemical Society, and may provide certified degrees in Biochemistry Pre-Professional, Chemistry, Chemistry in Secondary Education, and Forensic Chemistry. Students pursuing the ACS certified degree will participate in an applied research project in close collaboration with faculty members to address meaningful chemical-based problems.

## Program Learning Outcomes

- Demonstrate proficiency in the five Chemistry sub disciplines defined by the American Chemical Society, including analytical chemistry, biochemistry, inorganic chemistry, organic chemistry, and physical chemistry.
- Demonstrate readiness for employment as a chemist, science technician, or chemical technician at the baccalaureate level or graduate and professional level study.
- With the guidance of a faculty mentor, develop a well-designed, well-executed, and clearly communicated research project that contributes to scientific knowledge in the field of Biochemistry.

## Degree Requirements

Code	Title	Hours
<b>Chemistry Degree Requirements</b>		
CHEM 115	General Chemistry I	5
CHEM 116	General Chemistry II	5
CHEM 199	Chemistry First Year Seminar	1
CHEM 225	Organic Chemistry I	4
CHEM 231	Quantitative Analysis	4
CHEM 261	Inorganic Chemistry	4
CHEM 299	Chemistry Sophomore Seminar	1
CHEM 326	Organic Chemistry II	4
CHEM 332	Instrumental Analysis	4
CHEM 351	Introductory Biochemistry	4
CHEM 353	Medicinal Chemistry/Toxicology	3
CHEM 361	Physical Chemistry I	4
CHEM 363	Phy Chem Lab: Kinetic/Reac Dy	1
CHEM 452	Adv Biochemical Molecular Tech	4
<b>Support Courses</b>		
BIOL 131	General Biology: Cells	4
BIOL 132	General Biology: Organisms	4
BIOL 204	General Microbiology	4
BIOL 220	Genetics	4
MATH 151	Calculus I	4

MATH 152	Calculus II	4
MATH 207	Prin of Statistical Methods	3
PHYS 2X1	Physics I	4
PHYS 2X2	Physics II	4

### Choose Research or Course Option:

Research Option		
CHEM 395	Junior Seminar	1
CHEM 49X	Senior Research <sup>1</sup>	2
CHEM 499	Senior Seminar	1
7 Credits of BIOL 3XX or Higher		7
Course Option		
11 Credits of BIOL 3XX or Higher		11

**Total Hours** **105**

<sup>1</sup> For American Chemical Society certified degree, additionally required (total lab hours must be at least 400 hours). See Department Chair for special rules regarding ACS certification: CHEM 495 Senior Laboratory Research

**General Education:** All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

**A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, and a gpa of a 2.00 or higher is required in your General Education Requirements.**