

# Leonard C. Nelson College of Engineering and Sciences

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## General Information

The mission of the Leonard C. Nelson College of Engineering and Sciences of the West Virginia University Institute of Technology closely reflects the mission of the Institution. The programs in the College of Engineering and Sciences address the professional engineering and science needs of industry, government, and business and prepare their graduate to be citizens of the state, national, and global communities. The programs provide for a student-centered education that balances career preparation with an understanding and appreciation of the traditional humanities and sciences. The programs strive to prepare tomorrow's engineers and scientists with a broad education necessary to effectively communicate technical concepts to a wide audience and to place technical solutions in a societal context. In addition, the College of Engineering and Sciences gives qualified students the opportunity to gain valuable experience practicing the fundamentals of engineering and science through the Co-Op program, as well as through the placement of students in intern positions.

## DEPARTMENT OF BIOLOGY

### Biology

#### Minor Code - UT02

Code	Title	Hours
<b>Required Courses</b>		
BIOL 111	General Biology	4
BIOL 112	General Biology	4
BIOL Electives (must include at least 9 credit hours of upper division courses)		16
Total Hours		24

## DEPARTMENT OF COMPUTER SCIENCE AND INFORMATION SYSTEMS

### Computer Science

#### Minor Code - UT24

Code	Title	Hours
<b>Student must earn a grade of C or better for each of the courses counted towards the minor.</b>		
<b>Required Courses</b>		
CS 121	Computer Science 1	4
CS 122	Computer Science 2	0 or 4
Complete the requirements for one of the following tracks:		8-9
Programming Track		
CS 201	Data Structures	
CS 222	Intro Software Engineering	
CS 310	Principles of Programming Languages	
Systems Track		
CS 231	Introduction to Computer Organization	
CS 265	C Programming	
CS 355	Computer Systems	
Select two of the following courses:		6
CS 321	Introduction to Networking	
CS 324	Database Management	
CS 410	Compiler Construction	
CS 450	Operating Systems Structure	
CS 465	Cybersecurity Principles and Practice	
CS 472	Artificial Intelligence	
Total Hours		18-23

**DEPARTMENT OF MATHEMATICS****Mathematics****Minor Code - UT14**

Code	Title	Hours
<b>Required Courses</b>		
MATH 155	Calculus 1	4
MATH 156	Calculus 2	4
MATH 251	Multivariable Calculus	4
MATH 261	Elementary Differential Equations	4
MATH 441	Applied Linear Algebra	3
<b>Mathematics Electives: MATH 300+ or 400+ Level Courses (excluding MATH 315)</b>		<b>6</b>
Total Hours		25

**DEPARTMENT OF PHYSICAL SCIENCES****Chemistry****Minor Code - UT04**

Code	Title	Hours
<b>An minimum overall GPA of 2.0 is required for this minor.</b>		
<b>Required Courses</b>		
CHEM 115 & 115L	Fundamentals of Chemistry 1 and Fundamentals of Chemistry 1 Laboratory	4
CHEM 116 & 116L	Fundamentals of Chemistry 2 and Fundamentals of Chemistry 2 Laboratory	4
CHEM 233 & 233L	Organic Chemistry 1 and Organic Chemistry 1 Laboratory	4
CHEM 234 & 234L	Organic Chemistry 2 and Organic Chemistry 2 Laboratory	4
Select two of the following courses:		8
CHEM 215 & 215L	Introductory Analytical Chemistry and Introductory Analytical Chemistry Laboratory	
CHEM 310 & 310L	Instrumental Analysis and Instrumental Analysis Laboratory	
CHEM 346 & 346L	Physical Chemistry 1 and Physical Chemistry 1 Laboratory	
CHEM 348 & 348L	Physical Chemistry 2 and Physical Chemistry 2 Laboratory	
Any CHEM course(s) at the 300-level or higher		
Total Hours		24

**Accreditation**

Computer Science within the Leonard C. Nelson College of Engineering and Sciences has specialized accreditation through the Computing Accreditation Committee (CAC) of ABET.

The following programs within the Leonard C. Nelson College of Engineering and Sciences have specialized accreditation through the Engineering Accreditation Commission (EAC) of ABET.

- Chemical Engineering
- Civil Engineering
- Computer Engineering
- Electrical Engineering
- Mechanical Engineering