

CONTACT

Office of Admissions
admissions@indianatech.edu
260.422.5561
admissions.indianatech.edu

Biology, B.S.

ind.tc/child-development-bs

With a choice focus on cellular and molecular biology or environmental biology, this degree will provide you with skills and experience that can be applied immediately to the workforce or to continued training and graduate-level study, including medical school or veterinary school. In this program, you will literally get your hands dirty to solve problems and accomplish learning.

Your curriculum includes a unique combination of biology, chemistry, physics, math and social sciences coursework, supplemented with science communication, leadership and professional development opportunities. Mastery in biology begins with the skills you develop in the first courses you take; you begin immediately to practice protocols, to run experiments, and to drive your own laboratory findings. Your learning does not stop at the content because we know that leadership is developed over time. Our daily expectations are for you to lead, in your gifted way, to develop skills to succeed in the future. In order to help you become your best self, our learning outcomes in every course include professionalism, self-awareness and respect.

Why Choose Indiana Tech?

- You will learn through inquiry and hands-on fieldwork in the environment.
- State-of-the-art skills and problem-driven experiences will be practiced in each course, lab and field assignment.
- Extensive networking opportunities with professionals, whose experience includes soil science, urban biomes and wetlands and all areas of biomedicine, will be available to you.
- You will benefit from our Science Seminar Series where experts bring conversation and networking over lunch
- We foster an active learning environment, enriched by instructors who possess years of experience in their respective fields.

What You Can Do With This Degree

Below are potential career opportunities available to graduates with this degree. Some opportunities listed may require additional education or certification. For clarification, consult your academic advisor.

- Conservation scientist/Forester
- Environmental scientist
- Agriculture/Food scientist
- Biological technician
- Veterinarian or veterinary technician
- Urban and regional planner
- Physician/Surgeon

Curriculum

Required Core Courses

- BIO 1330 - General Biology I (Organismal)
- BIO 1340 - General Biology I Lab
- BIO 1350 - General Biology II (Cell and Molecular)
- BIO 1360 - General Biology II Lab
- BIO 2900 - Cell Biology
- BIO 2910 - Cell Biology Lab
- BIO 3000 - Genetics
- BIO 3010 - Genetics Lab
- BIO 3310 - Bioinformatics
- CH 1220 - General Chemistry I
- CH 1225 - General Chemistry I Lab
- CH 1230 - General Chemistry II
- CH 1240 - General Chemistry II Lab
- CH 2400 - Organic Chemistry I
- CH 2410 - Organic Chemistry I Lab
- EGR 3430 - Applied Probability & Statistics
- IIT 1000 - University Experience
- MA 1100 - Applied Calculus I
- PH 1100 - Fundamentals of Physics
- PH 2100 - Fundamentals of Physics II

Choose one of the following Biology research groups (12 credits):

- BIO 4800 - Cell and Molecular Research I
- BIO 4810 - Cell and Molecular Research II
- BIO 4900 - Urban Biology Field Project I
- BIO 4910 - Urban Biology Field Project II

Internship Opportunities

To help launch this new program, we are working with the following partners, among others, to offer internship opportunities for our students:

- Conservation and land use organizations, such as Allen County Department of Environmental Management or Allen County Department of Planning Services
- Agricultural and biomedical companies
- Foundations for restoration and preservation of local ecology
- Fort Wayne Parks and Recreation for horticulture
- Public health and public policy organizations, such as Fort Wayne-Allen County Department of Health
- Regional universities for biomedical or agricultural research
- Government agencies at the city, county, state and federal levels, such as city utilities, surveyors and USDA/NRCS

Nina Penny

B.S. Biology, 2024

Biology major Nina Penny earned an outstanding internship opportunity for the summer of 2023. Nina is participating in Northwestern University CURE, a prestigious cancer-focused undergraduate research experience at the Robert H. Lurie Comprehensive Cancer Center in Chicago.

Penny, who was one of 12 students selected from a field of over 1,000, is spending eight weeks working alongside top cancer researchers in state-of-the-art laboratories and helping advance novel research projects in cell and molecular biology, cancer immunology and other focus areas.

"I am very honored to receive this opportunity. It gives me the chance to apply the skills I have learned throughout these past three years to cancer research," said the Chicago native, who will graduate in 2024. "My experience at Indiana Tech has greatly prepared me for this opportunity; the countless labs and phenomenal professors have trained me to not only work well in a group of researchers, but to also think independently to solve research questions."

While in the program, Nina will be working in the lab of Dr. Karla Satchell, who leads the Center for Structural Genomics of Infectious Diseases at Northwestern University's Feinberg Medical School. Dr. Satchell's lab focuses on diseases caused by Vibrio bacteria and the cell biology applications of bacterial toxins. Nina will work with a group of postdoctoral students to document the effects of a the pathogen on infected mice.

"I want to gain more skills involving research so I can further prepare for a career in veterinary medicine, especially since I am not quite sure what field of veterinary medicine I want to pursue," Nina said. "Additionally, this program provides me the chance to grow as a woman in science in a lab that is dedicated to improving society through infectious disease and cancer research."

After graduating, Nina plans on attending veterinary school. She is also interested in medical research, surgery and emergency medicine.

"Nina's success in obtaining this incredible opportunity is a testament to her focused determination," said Dr. Julie Good, director of Indiana Tech's biology program. "Her work at Northwestern University's Feinberg School of Medicine this summer will open doors not only into the research of Dr. Karla Satchell but also into the Robert H. Lurie Comprehensive Cancer Center and the School of Medicine. I am thrilled for all that she will bring back to Tech in the fall!"