2024 St. Bonaventure University Summer Research Program for High School Students (SBU-SRPHS)

Application Deadline: Friday, April 5, 2024

Announcement of Acceptance: Friday, April 19, 2024

Program Dates: Monday, July 15 – Friday, July 26, 2024 (2 weeks)
Approximately 9AM-4PM, but can be flexible

One-on-one research opportunities with SBU faculty

Different STEM career talks

Celebrate project completion with Poster Presentations

A special thanks to our sponsor:

The National Science Foundation.

Program Description

Are you a high school junior or sophomore interested in pursuing a STEM career and wanting to go to college? Then consider a research experience by working with St. Bonaventure University faculty on an authentic research project.

Your research experience will take place on the SBU campus. A faculty mentor will work with you on a cutting-edge science topic. Scientists from different STEM fields will share their insights in your future career paths and give you advice on how to prepare for your future success remotely.

You will conclude your research experience by presenting your own project as a poster. Here you will hone your science communication skills and make your family proud. Throughout the program you will have the opportunity to bond with peers who have the same interest in STEM and passionate scientists who you interact with.

Program Eligibility

Applicants must be completing high school sophomore or junior year before summer 2024.

Application Submission

To apply, prepare the following:

1. An unofficial copy of your high school transcript.
2. A one-page personal statement describing why you want to apply to this program.
3. A statement on whether you need on-campus housing accommodations or not. If you do, an adult must accompany you during your stay on campus.
4. Read ***Faculty Research Descriptions*** on the next page and rank your top three areas of interest from the followings:

Biochemistry, Bioinformatics, biopsychology, Electrochemistry, Engineering, Materials Chemistry, Mathematics, Molecular Genetics, Spectroscopy, Synthetic Chemistry

See the list of faculty research descriptions on the next page.

This is not a residential program. However, on-campus housing options are available. For students who need housing accommodations during the program, please contact Dr. Zhang for details.

*Once accepted, a **$250** program fee is required to secure a seat.*

Please send your application materials electronically to:

Dr. Xiao-Ning Zhang
Professor of Biology, Director of Biochemistry Program
Email: xzhang@sbu.edu
Phone: (716) 375-2485

See program highlights from past years at www.sbu.edu/hsstudentresearch.

Faculty Research Descriptions:

Mr. Tae Cooke: Do you like Arduino microcontrollers, LED lights and electric motors? Or do you want to learn more about these and other low-voltage electronics? Learn or advance your understanding of these devices and leave with a project of your own choosing & design!

Dr. Kaitlyn Dykstra: In my lab we study how leukemia develops and is maintained at the cellular level by looking at what genes are abnormally turned on or off in the presence of certain mutations using molecular genetics and biochemical approaches.

Dr. Audrey Hager: My research is in the area of biopsychology. This project examines how mindfulness meditation and breathing exercises affect attention, learning and memory through measuring heart rate and brain wave activity.

Dr. Katsu Ogawa: My research involves development and characterization of polymer materials for organic LEDs and organic solar cells. Students can choose to work on spectroscopy or electrochemistry.

Dr. Alexander Rupprecht: My research is to develop novel materials through the use of self-assembled monolayers (SAMs). Through the use of SAMs, common surfaces can be tuned with desired properties such as corrosion resistance, improved biocompatibility, or antifouling.

Dr Zahmeeth Sayed Sakkaff: AI has made our life easier and led to new insights from big data. My research is focused on predicting interesting patterns from biological data using bioinformatics - exploring a digital frontier where technology meets the intricacies of biology!

Dr. Christine Uhl: Some of my research focuses on the metric dimension of graphs. The metric dimension is known for some families of graphs. In this mathematics project, students will work towards finding the metric dimension in cases where it is unknown.

Dr. Xiao-Ning Zhang: Climate change threatens the wellbeing and food supplies for organisms. My research is interested in how the genetic makeup plays a role in organism's response to environmental stresses using biochemistry, bioinformatics and molecular genetics approaches.