

Summer Paid Research Opportunity for High School Science Students Dow Science & Sustainability Education Center

Consider applying to be a paid summer intern for the Dow Science and Sustainability Education Center (DSSEC). Middle and high school STEM teachers, high school students, and SVSU undergraduate students are welcome to apply for an opportunity to participate in scientific research during the summer with SVSU faculty. SVSU faculty will be directing projects in areas such as biochemistry, biology, chemistry, and geography; however, each project is closely aligned with the Saginaw Bay Environmental Science Institute (SBESI). Funding is available for high school internship positions for up to 6 weeks (20-30 hrs/wk).

The summer internship will occur during SVSU's summer term: **June 28 – August 5, 2021**. The anticipated schedule is Monday through Thursday from approximately 8:00 am – 4:00 pm, although this is subject to slight changes.

Due to the evolving nature of the Covid-19 pandemic, these plans and programs are subject to change or cancellation at any time to reflect public health guidance and current conditions. Participants will be notified of any changes as soon as possible.

Dow SSEC timing:

- High school student intern applications are **due May 7** to Adrienne Cole (acole@svsu.edu).
- Anticipated high school intern selections will be made by **May 27**.
- Summer internship program orientation day – **June 28**.
- Dow SSEC Poster Symposium – **August 5**.
- Dow SSEC project reflection paper/report due – **August 5, 2021**.

High School Student Eligibility, Function, and Compensation:

Eligibility

- Current 9th – 11th grade students may apply. Those graduating this spring are not eligible to be high school interns.
- Must be legally able to work in the United States.

Functions

- Work with middle and / or high school teachers to conduct hypothesis-driven research with their own projects that fit within the scope of the larger SBESI framework
- Contribute to long term data collection for ecological state of the Sag. Bay Watershed
- Collaborate with SBESI undergraduate student interns
- Compose a final project poster and attend the poster symposium on August 5.
- Complete a survey about the program
- Write a final, 3 page reflection paper

Compensation

- \$9.65 per hr. for up to 6 weeks (20-30 hrs./wk.)
- Tuition for 4 credit science course at Saginaw Valley State University

Application procedure:

High school students should complete the [online application form](#) (also found at www.svsu.edu/stem), as well as email a cover letter, resume, and a letter of recommendation (attach as .doc or .pdf only) to Adrienne Cole, Director of STEM (acole@svsu.edu) no later than **May 7**.

In the cover letter, briefly introduce yourself and outline your level of interest in being an intern in the program. Please indicate if you were a previous intern in the Dow SSEC and if so, in which research group you participated. Also, **indicate your availability** (i.e. will you be unavailable a certain week due to vacation or if you are available the entire time, please state that). You are strongly encouraged to be available for the majority of the 6-week program.

Background for the Dow Science and Sustainability Education Center:

The Dow Science & Sustainability Education Center (DSSEC) was funded by The Dow Chemical Company Foundation in December 2013 for the purpose of enhancing STEM education in the region at all levels. The DSSEC will have natural connections to the Saginaw Bay Environmental Science Institute (SBESI), and each program would benefit from the existence of the other. The SBESI will be focused on undergraduate research, often funded through external grants and motivated by needs within the community/region. The Dow Science & Sustainability Education Center will focus on broader educational outreach, focusing not just on college students, but also on high school students and teachers, through the summer internship program. The broader community will be engaged via the mobile science lab, through which citizens will have opportunities to participate in scientific studies, not only of the Saginaw Bay Watershed, but also other opportunities such as green chemistry, biodiversity and alternate energy.

Summer research:

The summer research experience will involve two components:

1) Hypothesis based projects as part of your existing research program – this is the main experience. The summer internship program will be strongly tied to SBESI research and other environmental and/or sustainability related projects fitting within the intent of the DSSEC. Each research group will consist of faculty intern directors, high school and / or middle school teachers, undergraduate interns, and high school interns. Each student will have a hypothesis based project that is directly tied to faculty research.

2) Sustained and organized sample and data collection around the Saginaw Bay Watershed – where possible within research group structures and activities

While each research project may be unique depending on the faculty director, the watershed sampling will connect students from all research groups and years as they construct a sustainable watershed database. At sites around the watershed, students will obtain water quality parameters, benthic species indices, algal growth, muck distribution, and invasive species distribution using widely accepted methods and metrics. A database has been developed that will expand each year with input from the participants. A subset of collection sites will remain fixed in order to enable the development of a long-term record of Saginaw Bay ecosystem conditions.

Research group structure:

Research groups will consist of one faculty internship director, two high school and/or middle school teachers, two undergraduate students, and four high school students.

Research group assignments are made by the coordinator and the faculty intern directors.

Project Report:

Each student intern is required to submit a three page final paper consisting of three sections: one page description of the project, one page reflection on the summer experience, and one page description of how the summer internship affected your interest in a STEM career. A general format will be given before the end of the summer internship. These reports will be used for internal evaluation of the program and your participation.