

Summer Paid Research Opportunity for Middle and High School STEM Teachers

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, geography, and chemistry; however, each project is closely aligned with the Saginaw Bay Environmental Science Institute (SBESI). You may also choose to earn Teacher Education 601 (Science, Sustainability, and Education) credits, but you will be responsible for paying tuition.

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:

- Teacher applications are **due April 30** to Adrienne Cole (acole@svsu.edu).
- Anticipated funding decisions to award teacher interns will be made by **May 21**.
- Summer internship program orientation day – **June 28**.
- Dow SSEC Poster Symposium – **August 5**.
- Dow SSEC project reflection paper/report due – **August 5, 2021**.

Teacher Intern eligibility, functions, and compensation:

Eligibility

- Preference will be given to middle and high school STEM teachers in the Great Lakes Bay region.
- Must be legally able to work in the United States.

Functions

- Serve as liaisons between faculty directors and high school students
- Supervise the research group consisting of the high school and undergraduate students
- Conduct research under the guidance of the faculty intern director
- Assist students in composing final project posters and attend the poster symposium on **August 5**.
- Write a final, 3-page reflection paper.

Compensation

- \$90/half day (4-6 hrs.) or \$180/full day (8 hrs.) for 4 days per week (Monday – Thursday) over 6 weeks.

Teacher Intern Applications

Middle and high school teachers should complete the [online application form](#) (also found at www.svsu.edu/stem), as well as email a cover letter, resume, and contact information for at least two references (attach as .doc or .pdf only) to Adrienne Cole, Director of STEM (acole@svsu.edu) no later than **April 30**.

In the cover letter, briefly introduce yourself, outline your level of interest in this project, discuss if you were a previous participant in the Dow SSEC and if so, in which research group you participated. Also, **comment on 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). Please note: It is important that you are available to work with your research group for the majority of the 6-week period; please indicate in your application letter any planned vacations or other absences including other summer programs.

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.

Teacher intern applications are separate from those of students from their schools. High School student interns will be selected through a separate application process by the faculty intern directors. Research group assignments are made by the coordinator and the faculty intern directors.

Project Report:

Each teacher 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 may affect your teaching. 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.