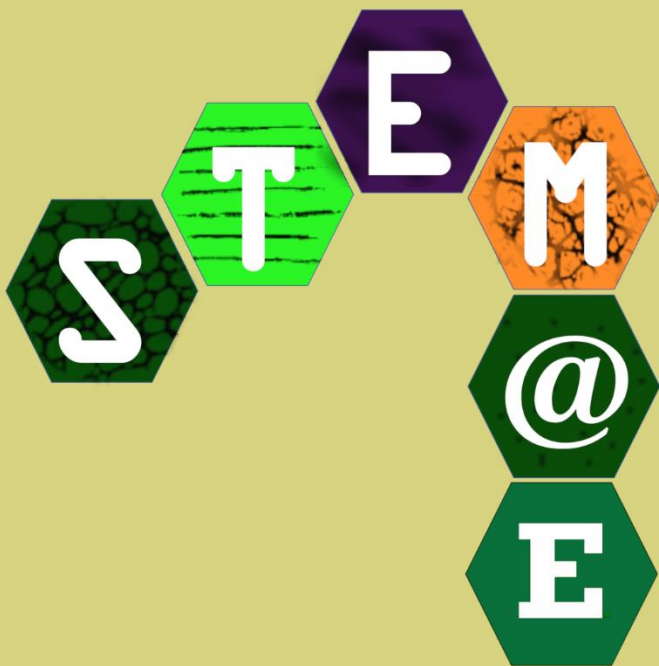




# Creative Science Inquiry Experience

126 Mark Jefferson  
(734) 487-0281  
[www.emich.edu/csie](http://www.emich.edu/csie)  
[aa\\_csie@emich.edu](mailto:aa_csie@emich.edu)  
[csie.emu@gmail.com](mailto:csie.emu@gmail.com)



# What is



STEM

Learning

experiences

## Benefits:

- Research Opportunities
- FREE STEM TEXTBOOKS
- Graduate Faster
- Advising
- Mentoring
- Tutoring
- Transcript Endorsement
- Hands-on Experience
- Broaden Career Choices
- STEM Retention

## CSIE is a STEM program that:

- Creates learning experiences through 1-2 credit hour courses and student events.
- Supplements your required STEM curriculum with real-world projects.
- Partners faculty with community organizations to create community-based, hands-on projects for students.
- Actively engages students in 21st century skills, including: creativity, critical thinking, communication, and collaboration.



# Fall 2020 CSIE Courses

## 1 Scientific Presentation

x	13531	CSIE	177L2	Scientific Presentation	W	2-2:50 pm	1 Cr Hr
---	-------	------	-------	-------------------------	---	-----------	---------

## 2 Intro to Physics & Engineering

x	13532	CSIE	178L2	Intro to Physics & Engineering	Tu/Th	11-11:50 am	2 Cr Hr
---	-------	------	-------	--------------------------------	-------	-------------	---------

## 3 Cyanobacteria in the Huron River

x	12476	CSIE	150L2	Cyanobacteria in the Huron River	F	11-11:50 am	1 Cr Hr
---	-------	------	-------	----------------------------------	---	-------------	---------

## 4 Scientific Learning

x	14301	CSIE	178L2	Scientific Learning	Th	6-7:50 pm	2 Cr Hr
---	-------	------	-------	---------------------	----	-----------	---------

## 5 STEM-IT! Exploring STEM Careers

x	13548	CSIE	177L2	Exploring STEM Careers	F	12-12:50pm	1 Cr Hr
---	-------	------	-------	------------------------	---	------------	---------

## 6 Contaminants in Groundwater

x	14004	CSIE	177L2	Contaminants in Groundwater	W	12:30-1:20pm	1 Cr Hr
---	-------	------	-------	-----------------------------	---	--------------	---------

## 7 STEM-a-thon (SUMMER Bridge Course)

x	Summer	CSIE	STEM-a-thon	T-Th	10am-2pm	FREE
---	--------	------	-------------	------	----------	------



Contact us: [csie.emu@gmail.com](mailto:csie.emu@gmail.com)

[www.emich.edu/csie](http://www.emich.edu/csie)

# **CSIE 177L2 (CRN 14004): Contaminants in Groundwater**

## **Course Description:**

One-third of Americans rely on groundwater for drinking and it is important to ensure this water source is free of contaminants. In this hands-on course, we will:

- Learn from government and industry professionals how to apply principles of chemistry, biology, and geology to investigate and clean up contaminated groundwater.
- Visit a field site and learn how to test well water for contaminants.
- Conduct a community outreach event with government agencies to evaluate human health risk from well water in a rural area.

**Offered Wednesdays, 12:30-1:20pm**



## **Who should take these courses?**

- Students with an interest in Geology, Biology, Chemistry, Environmental Science, or Science Education

## **What will I gain?**

- Hands-on research experience
- Network with professionals
- Community outreach

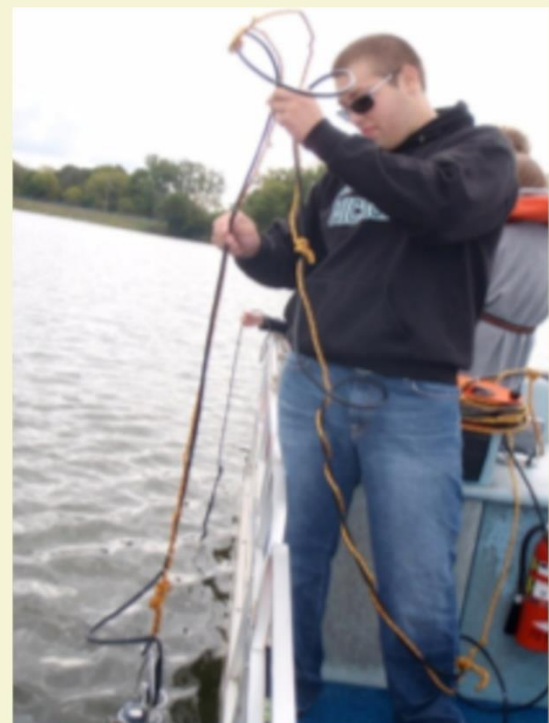
# **CSIE 150L2 (CRN 12973): Cyanobacteria**

## **Course Description:**

Students will characterize the conditions for growth of potentially harmful cyanobacteria in southeastern Michigan waterways. In this hands-on course, we will:

- Connect principles of biology and chemistry through exploratory research.
- Develop original research projects and hypotheses.
- Discuss methodology with biology and chemistry faculty.
- Collect field samples for analysis in the biology and chemistry laboratories.
- Interpret data and prepare oral and written reports.

**Offered Fridays, 11:00-11:50am**



# **CSIE 177L2 (CRN 13548): STEM-IT! Exploring STEM Careers**

## **Course Description:**

Are you interested in STEM (Science, Technology, Engineering, Mathematics)? This class will introduce you to the exciting possibilities in STEM. In this hands-on course, we will:

- Determine if a STEM career is right for you.
- Meet with the EMU Advising and Career Development Centers to help you understand the requirements and career possibilities of a STEM degree.
- Meet with career professionals in all STEM fields.
- Engage in on and off campus field trips to learn about STEM jobs and careers.

**Offered Fridays, 12:00-12:50pm**



## **Who should take these courses?**

- STEM majors
- Undecided/Exploratory majors
- Students who may be interested in STEM

## **What will I gain?**

- Exploratory learning experiences
- Network with professionals
- Field trips to scientific research facilities
- Mentoring and advising

# **CSIE 177L2 (CRN 13531): Scientific Communication**

## **Course Description:**

Students will evaluate science topics for clarity, accuracy, and misleading information using a variety of media sources. In this project-based course, we will:

- Explore and analyze the use of podcasts in the sciences.
- Explore the qualities that contribute to effective communication in the sciences.
- Students are introduced and paired with local scientists and shadow the scientist for the day.
- Create a podcast on job shadowing experience.

**Offered Wednesdays, 2:00-2:50pm**



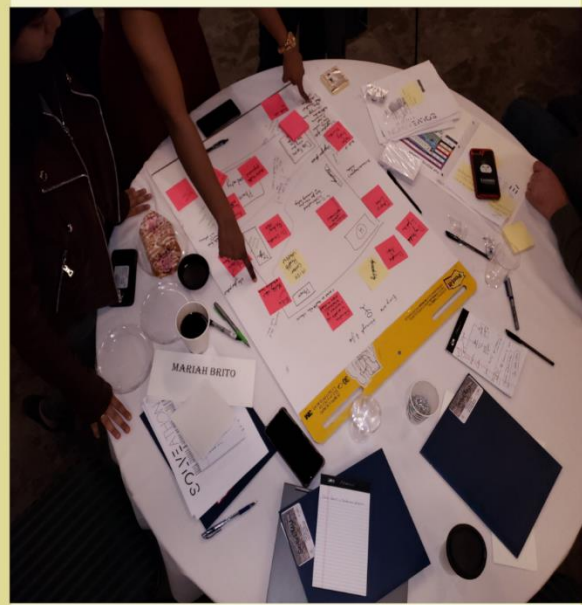
# CSIE 178L2 (CRN 13533): Scientific Learning

## Course Description:

The aim of this course is to give students the tools to become better learners. Proven techniques based on current research in neuroscience are presented and put into practice. These techniques/strategies include:

- Learn to read textbooks and take notes more effectively.
- Be able to test whether learning is taking place.
- Avoid procrastination.
- Lower test anxiety.
- How to use solved problems.
- Enhancing memory.

Offered Thursdays, 6:00-7:50pm



## Who should take these courses?

- STEM majors
- Students majoring in Physics or Engineering
- Science Education majors

## What will I gain?

- Hands-on, project-based learning experiences
- Mentoring and advising
- Master self-regulated learning techniques

# CSIE 178L2 (CRN 13532): Intro to Physics and Engineering

## Course Description:

In this special topics course, students will learn skills that will help them succeed in physics and engineering courses. In this hands-on course, students will:

- Complete a major class project.
- Analyze videos of motion.
- Build a microcontroller-based device.

Offered Tuesday & Thursday, 11:00-11:50am



# This is why we do what we do

"You have this relationship with the professor to learn what is the next step of your life...The professors help you achieve [your goals]."

"The learning strategies and study techniques have helped me with all of my classes."

"The guest speakers were great - enhanced the value of the course."

"Hey, I got a 100% on my last test. Thank you for helping me, you're the best Mariah."

"My professor encouraged me to go into research...she helped me form an application, I [wrote] an abstract, went to a couple conferences. It showed the medical schools I was applying to that I thought about the scientific process."

"Class was interesting and fun. Dr. Contis really went to great lengths to be accomodating and to get us involved in the material."

"Dr. Gellasch knows his hydrogeology! I feel like he really wants students to succeed."

"Dr. Francoeur is likely the best biology professor I've ever had the pleasure to take a course with."

"I really liked him [Dr. Vites], everytime I had a question, he answered it very thoroughly...He helped me understand many concepts."

"Lectures are very interesting and homework is reasonable... Class content fun - no theory or math. We work with Arduinos, Audacity, and Tracker. Paradis is an amazing professor and this is an enjoyable 2 credit hour class."

The SolvEMU was challenging, meaningful, and a valuable collaborative effort. We thank you for giving us the opportunity to think about inclusive education and its application to EMU in a different light. Our hearts are full and we are grateful beyond belief for your generous grand prizes. Thank you CSIE Team for all the work you did to put on this phenomenal event. You are appreciated."



**Find us at:**  
**126 Mark Jefferson**  
**(734) 487-0281**  
**[www.emich.edu/csie](http://www.emich.edu/csie)**

**[aa\\_csie@emich.edu](mailto:aa_csie@emich.edu)**  
**[csie.emu@gmail.com](mailto:csie.emu@gmail.com)**