



# STEM University 2023 - SIUC Scouts BSA College Class Catalog

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**Registration opens January 19, 2023**  
Visit [www.scoutingevent.com/312-stemusiucscoutsbsa2023](http://www.scoutingevent.com/312-stemusiucscoutsbsa2023) to register



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## Class Catalog

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### Stem Novas (Scheduled Classes)



**STNO103** **Designed to Crunch**

This module is designed to help you explore how math affects your life each day.

1-4 PM

**Instructor:** Lee Elliot

**Maximum number of participants:** 12

**Prerequisites:** 1,2



**STNO100** **Shoot!**

This module is designed to help you explore how science affects your life each day.

9-12 PM

**Instructor:** Lee Elliot

**Maximum number of participants:** 12

**Prerequisites:** 1, 2

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### Stem U SIUC (Scheduled Classes)

**SIUC134 Archaeology**

Archaeologists are detectives who study how people lived in the past. They figure out what happened, when, how, and why. Using the clues that people left behind, they try to understand how and why human culture has changed through time.

9-4 PM

**Instructor:** Ryan Campbell**Maximum number of participants:** 15**Prerequisites:** Worksheet and wear appropriate clothing**SIUC125 Architecture**

Architecture is not just the special buildings like cathedrals, museums, or sports stadiums we read about or see on television; it is as normal as the homes, places of worship, schools, and shopping malls where we live, worship, work, learn, and play every day. However, architecture is more than just common shelter; building has always satisfied the human need to create something of meaning. Even the simplest form of architecture is a work of art that requires thought and planning.

9-4 PM

**Instructor:** Drew Mifflin**Maximum number of participants:** 20**SIUC102 Aviation**

For most of history, people have dreamed of flying, imagining how it would feel to soar through the sky like an eagle or hover in midair like a hummingbird, to float on unseen currents, free of Earth's constant tug, able to travel great distances and to rise above any obstacle. Today, through aviation, we can not only join the birds but also fly farther, faster, and higher than they ever could.

9-4 PM

**Instructor:** Charley Rodriguez**Maximum number of participants:** 15**Prerequisites:** \*\*Merit Badge will be held at the SIU Transportation Education Center\*\***SIUC103 Chemistry**

Chemistry explores how substances react with each other, how they change, how certain forces connect molecules, and how molecules are made are all parts of chemistry. Stretch your imagination to envision molecules that cannot be seen - but can be proven to exist - and you become a chemist.

9-4 PM

**Instructor:** Mary Kinsel**Maximum number of participants:** 12**Prerequisites:** 4a**SIUC116 Chess**

Chess builds critical thinking, forward thinking, and proper sportsmanship in young people.

9-12 PM

**Instructor:** Robert Tolnai**Maximum number of participants:** 14

1-4 PM

**Instructor:** Robert Tolnai**Maximum number of participants:** 14**Prerequisites:** none**SIUC126 Composite Materials**

Composites can be found just about everywhere: in airplanes and sports cars, golf clubs and guitars, boats and baseball bats, bathtubs and circuit boards, and even bridges. Composites make bicycles and skis lighter, kayaks and canoes stronger, houses warmer, and helmets tougher.

9-4 PM

**Instructor:** Jay Byington**Maximum number of participants:** 20

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- Prerequisites:** Contact: Jay Byington ronald.j.byington@boeing.com
- Read the merit badge book thoroughly and be familiar with the information.
  - Complete requirement 2, 4, and 6
  - Fill out the worksheet as much as possible. The scout can use it during the review process at the end of the merit badge session.
  - Our focus for the day will be to complete the projects and present an overview of the information with experts on hand. Scouts should take notes as they can use that information in addition to the information in the merit badge book and what they discover in their research during the final review.
- Each Scout should bring with them the following:
- The merit badge book
  - Paper and pencil
  - The merit badge workbook, available on-line(meritbadge.org)



### SIUC135 Energy

Saving, producing, and using energy wisely will be critical to America's future. If we are to leave future generations with a world in which they can live as well or better than we have, Scouts and other potential leaders of tomorrow must begin the hard work of understanding energy and the vital role it will play in the future.

9-12 PM

**Instructor:** Aur Bech

**Maximum number of participants:** 20

**Prerequisites:** Contact Aur Beck using email below  
tech@aessolar.com



### SIUC117 Fingerprinting

In earning the Fingerprinting merit badge, Scouts will learn about and use an important technique that is used by law enforcement officers, along with other materials like matching dental records and DNA sampling, to help identify amnesia victims, missing persons, abducted children, and others.

9-12 PM

**Instructor:** Connie Adams

**Maximum number of participants:** 15

**Prerequisites:** Contact Connie Adams at si.sciencecenter@gmail.com



### SIUC143 Graphic Arts

The field of graphic arts includes many kinds of work in the printing and publishing industries. Graphic arts professionals are involved in the creation of all kinds of printed communication, from business cards to books to billboards. The scope of printing communications is huge.

1-4 PM

**Instructor:** Stephanie Dukat

**Additional Fee:** \$15.00

**Maximum number of participants:** 10

**Prerequisites:** 6

SIU Craft Center; \$15; provide T-shirt size to  
stephaniedukat@siu.edu



### SIUC123 Metalwork

Scouts will begin their work on this merit badge by learning about the properties of metal, how to use simple metalworking tools, and the basic metalworking techniques. Then they will practice using these tools and techniques before concentrating on the more intricate skills of one of four metalworking options.

9-12 PM

**Instructor:** Stephanie Dukat

**Additional Fee:** \$25.00

**Minimum Rank:** Scout

**Maximum number of participants:** 6

**Prerequisites:** None

\*\*Merit Badge will be held in the SIU Craft Center. There will be a \$25 additional fee for this MB.  
Option 2 "Silversmith" will be completed in this workshop.

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### SIUC106 Mining in Society

Mining has been an important part of our nation since the 19th century. Today, the industry employs 3 million Americans, directly and indirectly, and is a major contributor to the global society we live in. This merit badge covers the history of mining, explores the status of mining in the 21st century, introduces Scouts to modern mining careers, and explores the all-important topic of mining safety.

9-4 PM

**Instructor:** Joe Hirschi**Maximum number of participants:** 20**Prerequisites:** None

\*\*Scouts must plan to attend a mine tour at Knight Hawk Coal Company on a future date to complete this Merit Badge.\*\*

**NOTE:** See Mining pdf attachment with details on Mine tour for March 11. Requirement to complete the badge.



### SIUC137 Oceanography

The oceans cover more than 70 percent of our planet and are the dominant feature of Earth. Wherever you live, the oceans influence the weather, the soil, the air, and the geography of your community. To study the oceans is to study Earth itself.

9-4 PM

**Instructor:** Ed Heist**Maximum number of participants:** 10**Prerequisites:** 8

### SIUC113 Pottery

The Pottery merit badge provides an introduction to pottery making, enabling Scouts to gain skill and understanding from actually creating pottery. Completing the requirements will include hands-on production of a work of art, from start to finish.

9-12 PM

**Instructor:** Stephanie Dukat**Additional Fee:** \$15.00**Maximum number of participants:** 6**Prerequisites:** See pre-req sheet

### SIUC118 Pulp and Paper

Here's an astonishing number to digest. Each person in the United States uses about 700 pounds of paper each year. Paper is everywhere in our lives. Every year in the United States, more than 2 billion individual books, 24 billion newspapers, and 350 million magazines are published on paper.

1-4 PM

**Instructor:** Connie Adams**Additional Fee:** \$15.00**Maximum number of participants:** 15**Prerequisites:** Contact Connie Adams at [si.sciencecenter@gmail.com](mailto:si.sciencecenter@gmail.com)

### SIUC114 Sculpture

This merit badge introduces Scouts to sculpture, an art form that allows an artist to express what he sees and feels by using these three dimensions by shaping materials such as clay, stone, metal, and wood.

1-4 PM

**Instructor:** Stephanie Dukat**Additional Fee:** \$10.00**Maximum number of participants:** 10**Prerequisites:** See pre-req sheet.

2b or 2c

SIUC Craft Center



### SIUC108 Weather

Meteorology is the study of Earth's atmosphere and its weather and the ways in which temperature, wind, and moisture act together in the environment. In addition to learning how everyday weather is predicted, Scouts can learn about extreme weather such as thunderstorms, tornadoes, and hurricanes, and how to stay safe.

9-4 PM

**Instructor:** Corinne Brevik**Additional Fee:** \$5.00**Maximum number of participants:** 20**Prerequisites:** 11