



## PROGRAM SUMMARIES 2019

PROGRAM	CAMPUS	LOCATION	AGES	DAY	LENGTH	DATES	COST*
Construction Exploration	CCCC	West Barnstable	Grades 7 - 9	Full Day	4-day week	July 22 - 25, 2019	\$299
Exploration of Robotics and Game Design	UMD	Dartmouth	Ages 11 - 14	Full Day	5-day week	July 8 - 12 or July 15 - 19, 2019	\$180
Front End App Design	CCCC	Hyannis	Grades 7 - 8	Full Day	4-day week	July 29 - August 1, 2019	\$299
Maker Movement: The Power of Wind on Cape Cod and Beyond	CCCC	West Barnstable	Grades 6 - 8	Full Day	4-day week	August 5 - 8, 2019	\$299
Mobile App Development	UMD	Dartmouth	Ages 13 - 16	Full day	5-day week	August 19 - 23, 2019	\$150
Sea, Science & Leadership Program - SSLP	MMA	Buzzards Bay	Grades 9 - 12	Full Day/overnight	4-day, 3 night	July 28 - 31, 2019	\$450
Summer Science Academy	BSU	Bridgewater	Grades 6 - 8	Full Day	5-day week	2 Sessions: July 8 - 12 & July 15 - 19, 2019	\$400
Summer Science Academy	BSU	Bridgewater	Grades 9 - 12	Full Day	5-day week	1 Session July 15 - 19, 2019	\$500

*\*Most programs offer scholarships to students unable to afford regular tuition.*

## **Construction Exploration**

**SPONSOR:** Cape Cod Community College

**WHERE:** Cape Cod Community College Campus, West Barnstable

**WHO:** 7<sup>th</sup> – 9<sup>th</sup> grade students

**WHEN:** July 22 – 25, 9:00 a.m. - 4:00 p.m.

**COST:** \$299

**CONTACT:** Mary Conklin, (508) 375-5010 [mconklin@capecod.edu](mailto:mconklin@capecod.edu)

**WEBSITE:** <http://www.capecod.edu/web/ccpe/summer-of-science>

**WHAT:** **Limited scholarships are available for this program.** Contact Mary Conklin, program coordinator, for a scholarship application at 508-375-5010 or [mconklin@capecod.edu](mailto:mconklin@capecod.edu).

Construction Exploration is a STEM-based, four-day program for children entering grades 7, 8, and 9. The program provides students with a fun, interactive, hands-on experience in the fundamentals of architecture, construction, and engineering and raises awareness of careers in the construction trades. The students are provided with the tools, skills, and resources to build projects they can take home and share with their parents. Students will also learn from professionals in the field through onsite demonstrations. This program will be offered at Cape Cod Community College, 2240 Iyannough Road, West Barnstable and is offered in partnership with Home Builders and Remodelers Association of Cape Cod. The Construction Exploration Program is sponsored by Mason & Mason Insurance, Mid-Cape Home Centers, and Shepley Wood Products.

## **Exploration of Robotics and Game Design**

**SPONSOR:** University of Massachusetts Dartmouth

**WHERE:** UMass Dartmouth campus

**WHEN:** Two separate one-week sessions, July 8 - 12 and July 15 - 19, 2019, 9:00 a.m. - 4 p.m.

**WHO:** Students ages 11-14

**COST:** \$180.00 per student per week; \$50.00 deposit should be mailed with application.

**CONTACT:** Sheryl Sears, [s.sears@umassd.edu](mailto:s.sears@umassd.edu) or 508-999-8457

**WEBSITE:** <http://www.umassd.edu/engineering/cis/cissummercamp/>

**WHAT:** Campers will work in teams to design a simple computer game and to make the robots move the way they want them to through basic programming. Campers will work in teams with our camp instructors and CIS students and on the last day will show parents how smart and talented they are and what they have accomplished. Campers will make new friends, have fun, and experience the value of teamwork. This camp may inspire you to choose computers as your career in the bright future ahead of you!

## **Front End App Design**

**SPONSOR:** Cape Cod Community College

**WHERE:** Cape Cod Community College, Hyannis Center, Hyannis

**WHO:** 7<sup>th</sup> – 8<sup>th</sup> grade students

**WHEN:** July 29 – August 1, 9:00 a.m. – 4:00 p.m.

**COST:** \$299

**CONTACT:** Mary Conklin, (508) 375-5010 [mconklin@capecod.edu](mailto:mconklin@capecod.edu)

**WEBSITE:** <http://www.capecod.edu/web/ccpe/summer-of-science>

**WHAT:** Front End App Design is a creative, STEM-based, four-day program for children entering grades 7 and 8. Students will explore basic elements and principles of design and visual communication. Students will also jump into the role of an App developer and understand what it means to design a user experience from the ground up using Adobe XD. All

students enrolled in this program will be required to setup a (free) Adobe ID prior to the start of the program. This program will be offered at Cape Cod Community College - Hyannis Center, 540 Main Street, Hyannis.

### **Maker Movement – The Power of Wind on Cape Cod and Beyond**

**SPONSOR:** Cape Cod Community College

**WHERE:** Cape Cod Community College, West Barnstable

**WHO:** 6<sup>th</sup> – 8<sup>th</sup> grade students

**WHEN:** August 5 – August 8, 9:00 a.m. - 4:00 p.m.

**COST:** \$299

**CONTACT:** Mary Conklin, (508) 375-5010 [mconklin@capecod.edu](mailto:mconklin@capecod.edu)

**WEBSITE:** <http://www.capecod.edu/web/ccpe/summer-of-science>

**WHAT:** Maker Movement is a STEM-based, four-day program for students entering grades, 6, 7, & 8. This program is designed to explore concepts in engineering design, energy transformation, electromagnetism, and forces. Students will work in teams to build a mock wind turbine and analyze output based on device testing. This program will be offered at Cape Cod Community College, 2240 Iyannough Road, West Barnstable.

### **Mobile App Development**

**SPONSOR:** University of Massachusetts Dartmouth

**WHERE:** UMass Dartmouth College of Engineering

**WHEN:** August 19 – 23, 9:00 a.m. – 4:00 p.m.

**WHO:** Students ages 13-16

**COST:** \$150.00

**CONTACT:** Christian Ellis [cellis3@umassd.edu](mailto:cellis3@umassd.edu) or Raymond Laoulache [rlaoulache@umassd.edu](mailto:rlaoulache@umassd.edu)

**WEBSITE:** <https://www.umassd.edu/engineering/ioscamp/>

**WHAT:** The 2019 summer iOS App Camp teaches students Apple iOS mobile app development with the Swift programming language. Students will learn the fundamentals of problem solving, programming, and computing in an open lab-style learning environment. Camp culture fosters collaboration through team building, idea sharing, and rewarding creativity. Students are encouraged to feed their curiosity and learn the concepts needed to implement their app ideas.

### **Sea, Science, and Leadership Program (SSLP)**

**SPONSOR:** Massachusetts Maritime Academy

**WHERE:** Massachusetts Maritime Academy, 1 Academy Drive, Buzzards Bay, MA 02532

**WHEN:** July 28 - 31, 2019; four days, three nights

**WHO:** High school students

**COST:** \$450

**CONTACT:** Kristen Riley, [kriley@maritime.edu](mailto:kriley@maritime.edu), or 508-830-6686

**WEBSITE:** <https://www.maritime.edu/sea-science-and-leadership-program-sslp>

**WHAT:** The mission of the Sea, Science and Leadership Program (SSLP) at Massachusetts Maritime Academy is to provide high school students with interactive, educational workshops that build confidence and challenge decision-making skills that develop and strengthen leadership qualities. SSLP will immerse participants in the educational and regimental lifestyles of a cadet through hands-on workshops that include the use of ship-handling simulators, small boats, an emergency management control room, engineering labs, and the 540 ft. T.S. Kennedy (pending availability). SSLP will prepare participants for the college admissions process, build lifelong friendships and educate participants on the career opportunities Massachusetts Maritime Academy offers. Some activities may include:

- **Cold Water Survival:** Don cold water exposure suits, jump into the ocean, climb into an inflatable life raft and learn the rescue operations of cold water survival.
- **Emergency Management Simulation:** Learn how to respond to a virtual oil spill in Boston Harbor by operating response vessels managing cleanup activities through the use of our Emergency Management Control Room.
- **Environmental Issues:** Discuss the impact of the changing climate on your local environment and the maritime industry. Discussions are facilitated by professors and students collect samples during the workshop to highlight topics covered in class.
- **Firefighting:** Experience the thrill and excitement of learning how to assist your shipmates to safety on board vessels while also charging hoses and wearing Scott Air Packs
- **Navigation/Radar Operations:** Learn the basic principles of navigation, charts and radar operations including hands-on activities in the Academy's Radar Laboratory\*
- **Ship Handling Simulator:** Operate the Academy's newest marine 360 degree ship handling simulator through virtual New York City Harbor or Hong Kong Harbor.\*
- **Small Boat Maneuvering:** Utilize Academy motor whaleboats at the waterfront including the use of the Training Vessel Ranger\* while learning nautical commands.

## **Summer Science Academy**

**SPONSOR:** The Center for the Advancement of STEM Education at Bridgewater State University

**WHERE:** Bridgewater State University's Main Campus

**WHEN:** Two separate one-week sessions, July 8 - 12 and July 15 - 19. Grades 6-8 program hours are 8:30 a.m. - 4:00 p.m. Grades 9 - 12 program hours are 9:00 a.m. - 4:30 p.m.

**WHO:** Students entering grades 6 - 12 in the fall of 2019.

**COST:** \$400 - \$500 per student per week (does not include lunch or transportation)

**CONTACT:** (508) 531-2575 or CASEBSU@bridgew.edu

**WEBSITE:** <http://microsites.bridgew.edu/case/summer-science-programs>

**WHAT:** The Summer Science Academy offers one-week science classes for students entering grades 6-12 in the fall of 2019. This unique program allows students to work as scientists and is designed to inspire students about science while providing them with the foundations necessary for further scientific exploration. Summer Science Academy students are immersed in science courses and conduct hands-on investigations in their selected class. Students in classes for grades 6-8 will also participate in extracurricular science activities. All classes focus on the importance of science communication as students lead presentations on the last day of class.

- **Forensics Institute of Bridgewater** (Entering grades 6 - 8) – Bridgewater Campus (July 8 - 12)  
As a new employee at the Forensics Institute of Bridgewater (FIB), you expect your intensive training on crime scene investigations to be exciting, but you never thought it would be THIS exciting. While training on the various crime lab biotechnology techniques, a live case is delivered and F.I.B. needs YOU to help determine what happened!  
Have you ever watched crime scene investigators and wondered what really happens to the evidence at a crime scene and how that evidence is used to solve the crime? Join us in a week-long adventure into the life of a crime scene analyst! Working with senior scientists, you will learn how to collect and analyze fingerprints from a simulated crime scene, perform blood type analysis and get closer to solving the mystery using DNA fingerprinting. At the end of the week, you will present your findings as an expert crime scene technician to our "jury" so they can determine if your lab analysis and scientific evidence is sufficient for the case to go to trial.

- **Shipwrecked: Exploring the STEM of Maritime Archaeology** (Entering grades 6 - 8) – Bridgewater Campus (July 15 - 19)

Come join us where history meets science at the water's edge! Ever wonder what causes shipwrecks, and how scientists explore, study, and map them and other artifacts under water? Now you can find out! This program teaches the concepts, methods, and technology used in the field of maritime archaeology -- and applies them to real-world, hands-on experiences like documenting an actual shipwreck!

*Please note that students access shipwrecks from the shore and will be in water no deeper than 2-3 feet. All students will wear waders provided by the program. Outdoor activities are dependent on weather and conditions.*

- **Cancer in Context** (Entering Grades 9 - 12) – Bridgewater Campus (July 15 - 19)

Students will explore the many questions related to cancer. How does cancer occur? How does cancer progress? How is cancer diagnosed? How is cancer treated? Students will explore these questions within the context of six "patients" and their different cancer diagnoses. Students will have the opportunity to perform experiments such as microscopy, gene microarray and gel electrophoresis. They will also complete activities and case studies relevant to understanding cancer along with an investigation of career options.