MIT Beaver Works Summer Institute  
Fall 2022 Outreach Program – 6 Courses

Girls Who Program Autonomous Cars
Girls Who Run Cyber Operations
Girls Who Design, Build and Fly Model Aircraft
Girls Who Want to Learn Many Interesting Things
Girls Who Program Cognitive Assistants
Girls and Computational Biology and The Microbiome

No Prior Experience Required!

WHO: High School 11th Grade Female Students *
WHEN: Saturdays 11am-2pm (EST): October 15, 22, 29, November 5, 12, 19, December 3, 10, 2022
WHERE: Virtually, through Zoom!
REGISTER: https://mit-bwsi.formstack.com/forms/bwsi_fall2022
FAQs: https://beaverworks.ll.mit.edu/CMS/bw/FAQ

* While all BWSI programs are open to eligible students of any gender identity this fall program is designed to encourage and support female students in STEM.
Girls Who Program Autonomous Cars

Who: Female High School Juniors interested learning about code and robots! Beginners encouraged!

When: Saturdays 11am to 2pm (EST) – 10/15, 10/22, 10/29, 11/5, 11/12, 11/19, 12/3, 12/10, 2022

Where: Virtually, through Zoom!

Registration Form: https://mit-bwsi.formstack.com/forms/bwsi_fall2022

Frequently Asked Questions: https://beaverworks.ll.mit.edu/CMS/bw/FAQ

No Prior Experience Required!

No Hardware Required!

Learn to Code Python!

Racing Robots!

No Cost!
Girls who Run Cyber Operations!

No Cost!

Who: Female High School Sophomore & Juniors interested in learning about defensive and offensive cyber operations! (Previous applicants of [Summer] Cyber Operations are also encouraged to reapply)!

When: Saturdays 11am-2pm (EST) - Saturday Schedules TBD

Where: Virtually, through Zoom! Discord for general communications & labs.

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Frequently Asked Questions: https://beaverworks.ll.mit.edu/CMS/bw/FAQ

Experience in: Linux, Bash, Python highly recommended, but not required.

Recommended Hardware: PC/Mac capable of virtualization.
**Girls Who Design, Build and Fly Model Aircraft — A BWSI Crash Course.**

**Design Build Fly Crash Rebuild**

**Introduction to RC Model Aircraft Design**

**Who:** Female High School Juniors interested in Aerospace and Aeronautics.

**When:** Saturdays 11am to 2pm (EST) – 10/15, 10/22, 10/29, 11/5, 11/12, 11/19, 12/3, 12/10, 2022

**Where:** Virtually, through Zoom!

**Registration Form:** https://mit-bwsi.formstack.com/forms/bwsi_fall2022

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**No Prior Experience Required!**
Girls who want to learn

Many Interesting Things:
From Transistors to Data Science

A BWSI Medlytics intro course by Christian Cardozo

An early introduction to the technologies that shape our world, with applications to medical data analytics!

Computer Architecture • Python
Machine Learning • Computer Vision

No prerequisites.
No pressure.

Who: Female High School Juniors interested in learning about computers, coding and medical data analytics. Beginners Encouraged!

When: Saturdays 11am to 2pm (EST) – 10/15, 10/22, 10/29, 11/5, 11/12, 11/19, 12/3, 12/10, 2022

Where: Virtually, through Zoom!

Registration Form: https://mit-bwsi.formstack.com/forms/bwsi_fall2022

Frequently Asked Questions: https://beaverworks.ll.mit.edu/CMS/bw/FAQ
Girls who program cognitive assistants! — a BWSI crash course

An introduction to artificial intelligence through building an autonomous cognitive assistant!

LEARN PYTHON!

EXPLORE MACHINE LEARNING!

LEARN ABOUT NATURAL LANGUAGE PROCESSING!

Who: Female High School Juniors interested learning about code and artificial intelligence! Beginners Encouraged!

When: Saturdays 11am to 2pm (EST) – 10/15, 10/22, 10/29, 11/5, 11/12, 11/19, 12/3, 12/10, 2022

Where: Virtually, through Zoom!

Registration Form: https://mit-bwsi.formstack.com/forms/bwsi_fall2022

Frequently Asked Questions: https://beaverworks.ll.mit.edu/CMS/bw/FAQ

No Prior Experience Required!
Yes! You can analyze the building blocks of life!

Girls and Computational Biology And The Microbiome

Who: High School Students (9th and 10th grade) interested in computational biology and the microbiome! Beginners encouraged!

When: Saturdays 11am to 2pm (EST) – 10/15, 10/22, 10/29, 11/5, 11/12, 11/19, 12/3, 12/10, 2022

Where: Virtually, through Zoom!

Registration Form: https://mit-bwsi.formstack.com/forms/bwsi_fall2022

Frequently Asked Questions: https://beaverworks.ll.mit.edu/CMS/bw/FAQ

The future of bio is now! Join us this spring for BWSI's Computational Biology and the Microbiome course — co-developed by MITRE and MIT Lincoln Laboratory. Learn about fundamental computational biology concepts like genomics, programming, data visualization, and digital biosecurity in a fun, low stress environment.

No Prior Experience Required!