

Mid-Atlantic Robotics IN Education

Program offerings

All in-person excursions are suitable for 10 to 20 students and include bus transportation, experimental materials, and ASU BIOS educator.

Ocean Sounds | The Science of Sound

2.5-hour excursion

Students will explore how sound travels through different mediums and factors that affect pitch. In the laboratory, they will learn how to use hydrophones to identify different marine sounds. Students will discover how marine life uses sound to communicate and learn how scientists use sound to study the ocean.

Proficiency Scales P5 Physics / Light and Sound
M3 Physics / Light and Sound

Circuits | Diagrams and Conductors

2.5-hour excursion

Students will build their own circuits to investigate materials that are conductors or insulators. They will make predictions, observe their findings and record the results of their circuit experiments. Students will practice constructing circuit diagrams, identifying symbols and recognizing when diagrams are incorrect. Using their knowledge of circuits, students will pilot student-built remotely operated vehicles in BIOS's Innovation Test pool. (In the event of inclement weather, an alternative third workshop will be offered.)

Proficiency Scales P4, P6 & M1 Physics / Electricity and Magnetism

Engineering | Robotics

2.5 hour excursion

Students will explore aspects of marine engineering with three hands-on workshops. Using a computer simulation, students will control a remotely operated vehicle and learn about engineering solutions used for marine conservation. Students will solder a prototypes circuit board to complete an electrical circuit that they can take home. Finally students will compete in a remotely operated vehicle piloting challenge at BIOS's Innovation Test pool. (In the event of inclement weather, an alternative third workshop will be offered.)

Proficiency Scales M3 Physics / Electricity and Magnetism

MARINE Field Trip grants are kindly supported by Renaissance Re, Hannover Re, the Butterfield Charitable Donations Committee and other donors.