INTRODUCTION TO ROBOTICS: MANIPULATORS AND UNDERWATER MONITORING

Michigan Tech Summer Youth Programs . . . where college begins!


PROGRAM INFORMATION

This middle school commuter program is a discovery of the field of robotics from two new perspectives. By working with two of Michigan Tech’s robots (GUPPIE and Neu-pulator), students will learn how robots can help to explore the environment and augment human capabilities. In this course, students will:

• Learn about co-robots and their application in human life.
• Learn how underwater robots—such as underwater gliders—work, then collect data to predict change and prevent hazards.
• Learn how assistive robots—such as prosthetic legs or arms—work and explore how the robots augment people’s capabilities and improve life quality.
• Experience assembling, programing, and designing new parts for robots GUPPIE and Neu-pulator.
• Experiment with GUPPIE to collect water data and swim with it.
• Experiment with Neu-pulator and use electrical activity of human muscles to move a manipulator.

HOW TO APPLY

Enrollment in this program will be first-come, first-served. In order to be considered, please submit this completed application, including typed responses to the short-answer questions. You can fax, scan/email, or mail this application to the contact info below.

COST

This is a regular Summer Youth Programs course, however, students from the Keweenaw Peninsula are eligible for a partial scholarship upon acceptance (you will be notified)*. This course is commuter only for scholarship recipients.

<table>
<thead>
<tr>
<th></th>
<th>Commuter Costs</th>
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<tbody>
<tr>
<td>Program Cost</td>
<td>$475</td>
</tr>
<tr>
<td>Registration Fee</td>
<td>-$100</td>
</tr>
<tr>
<td>Scholarship*</td>
<td>-$295</td>
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<tr>
<td>Balance Due</td>
<td>$80</td>
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TRANSPORTATION

You are responsible for your own transportation. Travel accommodations and charter bus information are included in the information you will receive once you are accepted. Transportation funding may be provided on an individual basis.

APPLICATION CHECKLIST

☐ Completed application
☐ Signature of applicant
☐ Signature of parent or guardian
☐ Short responses to questions
☐ Student in grade 6–8 as of June 2016

CONTACT OUR OFFICE WITH ANY QUESTIONS.

Michigan Tech Summer Youth Programs
Administration Building 217
1400 Townsend Drive
Houghton, MI 49931-1295

Toll-free 888-773-2655
Fax 906-487-1136
Email syp@mtu.edu

WWW.SYP.MTU.EDU
INTRODUCTION TO ROBOTICS: MANIPULATORS AND UNDERWATER MONITORING APPLICATION

ALL APPLICANTS MUST COMPLETE THIS FORM OR APPLY ONLINE.

Application deadline is Sunday, May 1, 2016.

Please complete both sides of this application and send it with your short answer responses. The payment form and $100 registration fee will be due within 10 days of submitting your application—your application will not be processed until this payment is received. The remaining $80 is due before June 1, 2016.

Legal name ________________________________________________________________________________________________________________
First Middle Last Suffix (Jr., Sr., II, etc.)

Preferred name/nickname _________________________________________________________________________________________________

This is how your name will appear on your participant ID.

HAVE YOU APPLIED TO OR ATTENDED ANY OF THESE PROGRAMS IN THE PAST? DO YOU PLAN TO APPLY?

- Junior Women in Engineering (JWIE)
- Introduction to Robotics: Manipulators and Underwater Monitoring
- Summer Youth Programs (SYP)

Which SYP Exploration? _________________________________________

☐ Plan to apply □ Previously applied □ Attended

CONTACT INFORMATION

Participant’s email ___________________________________________
Address/PO Box _____________________________________________
City _________________________________________________________
State/province _______________________________________________
ZIP or postal code ____________________________________________
County ______________________________________________________
Country ______________________________________________________
Telephone ___________________________________________________
Participant’s cell phone _______________________________________

PARENT/GUARDIAN INFORMATION—EACH PARENT/GUARDIAN MUST FILL OUT THE FOLLOWING:

Parent first name Middle name Last name Suffix
Relationship to applicant ______________________________________
Evening phone _______________________________________________
Day phone ___________________________________________________
Cell phone ___________________________________________________
Email _______________________________________________________

Is your address the same as the participant’s? □ Yes □ No

PERSONAL INFORMATION

Gender ___________ Birth date ___________ Age __________

SCHOOL INFORMATION

What is the name of the school you attended this year?

What grade will you have completed by June 2016? __________
Current class rank ________________ out of ___________________
Cumulative GPA __________________

Note: If your school uses a grading system other than the 4.0 scale, an explanation of the method must accompany your transcript.

PLEASE TYPE OR PRINT YOUR SHORT RESPONSES TO THE QUESTIONS BELOW ON A SEPARATE PIECE OF PAPER.

Be sure to put your full name at the top of the page and that you are applying to Introduction to Robotics: Manipulators and Underwater Monitoring.

1. Have you participated in any robotics activities previously? If so, what were they?
2. If you were to build a robot, what would you want it to do?
3. Do you know how to write programs (code)? If so, what are they and how did you learn them?
4. What is your favorite video game? Which part of the game interests you most?
5. What careers interest you? Why?
HOW DID YOU HEAR ABOUT OUR PROGRAM?

☐ Counselor or teacher
☐ Previous participant
☐ Summer Youth Programs website
☐ Friend
☐ Catalog
☐ Social Media
☐ Internet search
☐ Michigan Tech alumni or faculty/staff
☐ Mind Trekkers event

Date and place ________________________________
☐ Other ________________________________

TRANSPORTATION

If you are selected, more information—including directions to Michigan Tech and specific charter bus drop-off and pick-up locations—will be sent in your Confirmation Packet. Please refer to our website for more details on your transportation options.

When do you plan on arriving at Michigan Tech?
Check-in: Sunday, July 10—10:00 AM–2:00 PM EDT
Day __________ Time __________________

How do you plan on arriving at Michigan Tech?
☐ Car
☐ Other ________________________________

When do you plan on departing from Michigan Tech?
Check-out: Friday, July 15—5:00–11:00 PM EDT
Day __________ Time __________________

How do you plan on departing from Michigan Tech?
☐ Car
☐ Other ________________________________

Please note: If you will be arriving before the program begins, there is an additional fee. See website for details: www.syp.mtu.edu.

PARENT/GUARDIAN CONSENT

I approve of ____________________________ applying to Michigan Tech’s
Introduction to Robotics: Manipulators and Underwater Monitoring program.

Applicant name

Signature ___________________________________________ Date __________________

STUDENT SIGNATURE

I attest that the information provided in this application is correct.

Signature ___________________________________________ Date __________________