INTRODUCTION TO ROBOTICS:
MANIPULATORS AND
UNDERWATER MONITORING
2015
INTRODUCTION TO ROBOTICS: MANIPULATORS AND UNDERWATER MONITORING

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

INTRODUCTION TO ROBOTICS: MANIPULATORS AND UNDERWATER MONITORING WILL BE HELD ON THE CAMPUS OF MICHIGAN TECHNOLOGICAL UNIVERSITY FROM JULY 26 TO AUGUST 1, 2015.

PROGRAM INFORMATION
This program is a weeklong 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
The nonrefundable registration fee of $100.00 is due within ten days of submitting your application—you will not be registered in the class until the deposit is received. Payments can be made by check (addressed to Summer Youth Programs) or credit card over the phone. Each student enrolling in this course will receive a scholarship. The balance of payment, due by June 1, will be the parents’ responsibility.

<table>
<thead>
<tr>
<th></th>
<th>Commuter Costs</th>
<th>Live-In Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program Cost</td>
<td>$475</td>
<td>$895</td>
</tr>
<tr>
<td>Registration Fee</td>
<td>-$100</td>
<td>-$100</td>
</tr>
<tr>
<td>Scholarship</td>
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<td>-$380</td>
</tr>
<tr>
<td>Balance Due</td>
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<td>$415</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 2015

CONTACT OUR OFFICE WITH ANY QUESTIONS.
Michigan Tech Summer Youth Programs
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 AND RETURN THIS FORM.

THERE ARE TWO WAYS TO APPLY: online at www.syp.mtu.edu or by mail (see below).

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 ten days of submitting your application—your application will not be processed until this payment is received.

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?

National Summer Transportation Institute (NSTI)  □ [ ]  □ [ ]  □ [ ]

Engineering Scholars Program (ESP)  □ [ ]  □ [ ]  □ [ ]

Women in Engineering (WIE)  □ [ ]  □ [ ]  □ [ ]

Women in Computer Science (WICS)  □ [ ]  □ [ ]  □ [ ]

Summer Youth Programs (SYP)  □ [ ]  □ [ ]  □ [ ]

Which SYP Exploration? _________________________________________

CONTACT INFORMATION

Participant’s email ___________________________________________

Address/PO Box _____________________________________________

City _________________________________________________________

State/province _______________________________________________

ZIP or postal code ____________________________________________

County ______________________________________________________

Country _____________________________________________________

Telephone ___________________________________________________

Participant’s cell phone _______________________________________

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 2015? _________

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.

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

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. What are your favorite classes?
2. If you were to build a robot, what would you want your robot to do?
3. Do you play video games? What are they?
4. Do you play any sports? Which ones? How comfortable are you playing on a team with others you don’t know?
5. What careers are you interested in? Why?
HOW DID YOU HEAR ABOUT OUR PROGRAM?

- Counselor or teacher
- Previous participant
- Summer Youth Programs website
- Friend
- Catalog
- 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 26—9:00 AM–4:00 PM EDT
Day ________ Time ________

How do you plan on arriving at Michigan Tech?
- Car
- United Airlines: Houghton (CMX)
  Flight number ________________ Arrival time ________________
- SYP charter bus
  Please pick me up in: ○ Lansing ○ Detroit
  ○ Bay City ○ Gaylord ○ St. Ignace
  Pickup will be the Saturday evening prior to the program start date.
- Other ____________________________

When do you plan on departing from Michigan Tech?
Reminder: departure must be by noon Saturday, August 1
Day ________ Time ________

How do you plan on departing from Michigan Tech?
- Car
- United Airlines: Houghton (CMX)
  Flight number ________________ Departure time ________________
- SYP charter bus
  Please drop me off in: ○ Lansing ○ Detroit
  ○ Bay City ○ Gaylord ○ St. Ignace
  Departure from Michigan Tech will be the Friday evening following the program.
- 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 for the 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 ______________________