

## Robotics Boot Camps: Suitable for Years 4 to Year 12

At MacICT we believe that learning how to use technology is not enough; the heart of 21st century learning is about becoming a proficient and independent lifelong learner. Our activities promote this through an inquiry-based approach to learning where students are encouraged to collaborate and be creative in solving open-ended challenges.

Robotics provides a highly engaging medium for creativity, critical thinking, collaboration and communication - four essential skills for learning and ICT within a curriculum context. MacICT is offering Boot Camps (excursions) in robotics suitable for students from years 4 to year 12, using the *LEGO® Education Mindstorms* robotics kit and run by expert facilitators

These workshops feature the *LEGO®* Education Mindstorms EV3 model. The older *NXT* model is also available on request. You can choose from an introductory workshop OR a more advanced workshop:

## **INTRODUCTORY Boot Camp**

Ideal for students who are new to robotics. During the Boot Camp, students will:

- learn the basic features of the LEGO® NXT or EV3 robot & Mindstorms software
- build robots for specific purposes
- participate in open-ended challenges
- · document their solutions.

## **NEXT STEP Boot Camp**

This is for students who want to take LEGO® Education Mindstorms robotics to the next level. These activities provide the opportunity for students to engage in learning that is self-directed, interest driven, peer based and mastery orientated. Students will:

- build & program robots for specific purposes
- apply and adapt their programming & problem solving skills to solve challenges
- use real-world maths and science concepts for solutions
- design their own open-ended challenges for peer review.

## **Feedback**

"All tasks were enjoyed, but one most outstanding one was the stages of building the robot. We got to expand our imagination, as to how our robot is built, to any shape or form we wanted. There was no limitation or restriction to it, which made it the most enjoyable and fun."

"The students got so much from the experience ... the creative thinking and higher order learning activities were invaluable."

"I feel like crying from joy, to see the students so engaged. This is what they need."



Contact the Centre to arrange a date:

macictsupport@det.nsw.edu.au (02) 9850 4310

WHEN Tuesdays & Thursdays during school terms

**TIME** 9am - 2:30pm

**LOCATION** Macquarie ICT Innovations Centre

Building C5B

Macquarie University North Ryde NSW

We can take a maximum of two **NUMBERS** classes of 30 students per day.

> Flat rate of \$528 inclGST per class of up to 23 students.

> > An extra \$22 will be charged per additional student. Class size is capped at 30

**PAYMENT** Govenment schools will be charged internally by the NSW Department of Education and Communities. This will be reflected on your sundry tax invoice statement.

> Private schools will be invoiced by the NSW Department of Education and Communities.

Note: any cancellations made within 2 days of the excursion would incur a \$200 cancellation fee.







