

# Robotics short course

## LEGO Mindstorm EV3



Aurora College partners with a range of educational, scientific, cultural and tertiary institutions and we are proud to be working with Macquarie University and *FIRST* Australia to deliver this short course on robotics using LEGO.

### About the course

An experienced *FIRST* Australia team member will lead a team of 20 (maximum) Aurora College students in this practical 'hands-on' course. This program adopts a 'learner-centred' approach that targets design-thinking and seeks to find solutions to real world problems.

Course materials will be posted to each student which includes a comprehensive kit of parts (eg: LEGO Mindstorm EV3 Kit) which form the basis of robots they construct. Each student will have the opportunity to work at their own pace, but also have access to the guidance and support of the educator. There will also be opportunities to enter competitions such as the *FIRST* LEGO League held at Macquarie University on 4 November 2017.

By the conclusion of the course students will develop their skills, knowledge and understanding in the following areas – teamwork, collaboration, critical thinking, problem-solving, self-confidence, computer science, computer programming skills and electronics.

Aurora College will ensure that the course is linked to our merit system and that students will be acknowledged accordingly.

Each session will be held in a virtual meeting room via Adobe Connect with a supervising member of the Aurora staff. Communication about the course will take place via email.

### Course requirements

**Ideally, *FIRST* Australia would like students to work with another Aurora student from their home school**, as this is about collaboration and problem-solving where students discuss ideas with each other, but this is not essential, nor always possible.

Materials will be posted to the student's school address via the Aurora College Coordinator.

Students must be 16 years or younger. Places are limited to 20.

The course has three parts:

1. *Robot*: design, build and program a robot to complete a series of challenges.
2. *Project*: develop solutions to problem students have identified in line with the theme (theme is different each year) and present to judges
3. *Core values*: teamwork, cooperation/competition and gracious professionalism



## Commitment:

**Students must commit to attending each session for the duration of the course.**

Date: Commencing 11<sup>th</sup> October 2017  
Time: each Wednesday from 2-3pm  
Location: Online via Adobe Connect  
Cost: nil

*If feasible for parents, students can also compete in the Sydney Regional Competition on 4 November at Macquarie University.*

## Sessions:

Wednesday 11<sup>th</sup> October  
Wednesday 18<sup>th</sup> October  
**Wednesday 25<sup>th</sup> October**  
**(Super session:**  
**face-to-face at Bathurst residential**  
**3:30 – 5:30pm)**  
Wednesday 1<sup>st</sup> November  
Wednesday 8<sup>th</sup> November  
Wednesday 15<sup>th</sup> November  
Wednesday 22<sup>nd</sup> November

## Closing date

To confirm a place for this course, please complete the form on the following page and scan/email it to Kate Thompson, Head Teacher Teaching and Learning, by **Wednesday 6<sup>th</sup> September**. Places will be offered in the order that they are received. Kits will be sent out by the end of term 3.



## Permission

The student named below is committed to participating in the *FIRST* LEGO League short course during the dates and times indicated.

Student name: \_\_\_\_\_

Aurora buddy to work with (if applicable): \_\_\_\_\_

Home School: \_\_\_\_\_ Year Group: \_\_\_\_\_

Aurora College Coordinator: \_\_\_\_\_

Parent Signature: \_\_\_\_\_

Date: \_\_\_\_/\_\_\_\_/2017

## Further information

More information including handbooks, online resources, judging rubrics and key dates for challenges are available at <https://firstaustralia.org/programs/first-lego-league/>

If you have any questions or require more information, please contact

**Kate Thompson**

Head Teacher, Teaching and Learning

Aurora College

Ph: 02 9886 7103

Email: [kate.donnelly@det.nsw.edu.au](mailto:kate.donnelly@det.nsw.edu.au)