

# REALIGNING STUDENT FIRST YEAR ORIENTATION ACTIVITIES

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## ABSTRACT

Orientation Day for incoming student engineers is a strategic instrument delivered by the Engineering Foundation Year academic and teaching-support team as the initiation of orientation for students to Curtin University and the Engineering Foundation Year. In 2015 the Orientation Day rebranded as #EFYoday underwent significant realignment consistent with the principles of Conceive Design implement and Operate (CDIO) in order to better reflect the ongoing teaching at Curtin University Engineering and enhance orientation outcomes. Feedback was sought from students, staff and student-mentors regarding the efficacy of the changes.

## KEYWORDS

Orientation, competencies, learning outcomes, problem solving, professional accreditation, mentors, Standards: 1, 4, 8

## OBJECTIVES

### ***Previous Orientation Activities***

Orientation Day for incoming student engineers is perceived as a strategic instrument for the initiation of orientation for students to Curtin University and the Engineering Foundation Year, delivered by the Engineering Foundation Year academic and teaching-support team. Orientation Day historically comprised of a lecture-style information-transmittal day with a minor portion of the day recently delivered as a group based, information scavenger hunt (Lindsay et al, 2012).

### ***Objectives***

The vision for 2015 Orientation, rebranded #EFYoday, was to facilitate a range of interactive, hands-on team based activities. The goals for the realigned #EFYoday were:

1. to enhance the student experience of Engineering Foundation Year Orientation Day
2. to deliver a transitional orientation experience which is better aligned to the transition supplied via the Engineering Foundation Year curriculum framework (Bedford and O'Brien, 2012)
3. to introduce and model Conceive Design Implement Operate framework curriculum principles consistent with the engineering Foundation Year and degree program at Curtin University (<http://www.cdio.org/>)
4. develop partnerships with professional and academic staff across the University for ongoing transitional support in line with indicators of best practice and sector preparedness for sustained partnerships (Kift, 2009)

5. provide a sense of purpose, which is shown to enhance students' success (Wilson, 2009) by aligning and mapping orientation activities with professional engineering competencies and engaging professional engineers from the University-Industry partnership to act as mentors in addition to senior student-mentors (Engineers Australia, 2013)

## CURRENT STATUS

This 2015 #EFYOday semester 1 (February – July) orientation for 600 plus incoming students was held in February and comprised three non-traditional engineering orientation activities including:

1. team based physical and electronic scavenger hunt facilitated by student mentors (*OrientHunt*),
2. meet and greet style information fair engaging University wide support services and extra curricula groups (*Fact Find Fair*) and
3. conceive-design-implement construction activity (*CDIO Activity*) based on the worldwide Conceive Design Implement Operate framework principles facilitated by student mentors, and professional engineers and faculty whom acted as engineering consultants to student teams.

The day provided an active learning environment; through which the students had opportunity to integrate into the university environment from the more structured secondary school learning environment where the majority of incoming students transition from. This type of orientation format provided students with a self-learning, self-assessed, self-development opportunity. Information about EFYOday was presented to students in a format similar to a Unit Outline (a unit being a single semester based course provided within the degree program). These materials are provided as a handout. Activities were facilitated by Curtin University Mentoring Program mentors (START; Curtin University Student Transition and Retention mentors and Engineering Outreach mentors); Engineering Foundation Year engineering faculty and Industry partners (professional engineers).

A scavenger hunt was conducted within teams facilitated by senior student mentors, this provided students an essential opportunity to interact with peers and build relationships, and has been shown to be an effective orientation tool (Lindsay, Gray and Lloyd, 2012) Observations from 2012-2014 indicate student rely more heavily on smart phones to find and retrieve information. The fact Find Fair was facilitated by Campus-wide student support services and support agencies (sexuality and gender equity, autism-spectrum mentors, work integrated learning, student Guild), Engineers Australia, student groups (Robotics, Women in Engineering, Motorsport, Curtin Engineering Club and others).

The reinvigorated OrientHunt and Fact Find Fair had the opportunity and expectation for more electronic interactivity via Facebook, Instagram and Twitter. Upon reflection, this interactivity via social media occurred minimally and may reflect the observations from other researchers that students prefer to retain separation of social profile and their academic life (Bedford and O'Brien, 2009). However, the positive enhanced interactivity between students and faculty is not to be dismissed and has been shown to be effective in enhancing student engagement (Evans, 2013).

To gauge the achievement of the event student's experiences and responses to the event were to be recorded. The responses will be recorded using a survey instrument which will

also provide important feedback for the improvement of the event. The survey instrument will be based on Likert-Style quantitative questions and will contain additional open-ended questions to obtain additional information. This should holistically cover any information the students can provide about the event. Response-rate to the online survey was extremely low and the use of online survey tool or the implementation of offline mode will therefore be reviewed.

## OPEN QUESTIONS for FUTURE WORK

What strategies have been useful for positive orientations for engineering?  
What do you do to ensure orientation extends beyond extra curricula activities or days?  
How do you assess orientating activity performance and efficacy?  
How do you balance the demands of authentic activities or products, and time/resources?  
Industry sponsorship and support required time and commitment. How have you maintained sponsor enthusiasm and continuation?  
How could this initiative be better implemented in future orientations?  
How could this initiative be better aligned and enhanced from the CDIO Syllabus?

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## BIOGRAPHICAL INFORMATION

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