### Project title
Development of the courseware including online/flexible delivery learning resources for the Associate Degree in Engineering Technology (Network Engineering) program – AD008

### Project leader
Arvind Sharma, Industry Manager, SOE (TAFE)  
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### Team members
- Arvind Sharma
- Sukhvir Judge
- George Listopad - (Peer Reviewer)
- Milan Simic - (Peer Reviewer)
- Barbara Goulborn – Curve Projects P/L (Instructional Designer) - External

### Funds approved
$30,000

### Funds acquitted (attach financial statement)
- Total Salaries & On costs: $20,710
- Consultancy Services: $8,000
- Please see financial statement attached

### Introduction
Associate Degree Programs are relatively new in Australia and RMIT took lead in delivering Associate Degree programs in number of areas. This project aimed to develop courseware (two courses) including online/flexible delivery learning resources for the Associate Degree in Engineering Technology (Network Engineering) program – AD008. This new program AD008 has been delivered to international and local students from Semester 1, 2008. This project led to the development of teaching and learning material for a dual sector qualification in a high priority area. This program will provide direct pathway into two streams of Bachelor of Engineering program (BP200).

### Detailed project description and outline of what was done
The project developed modern teaching and learning materials comprising online resources and lab activities for two key courses EEET 2322 - Embedded Systems Fundamentals and EEET 2328 - Network Security. This initiative will significantly improve delivery of the new Associate Degree program to the students and will provide RMIT an edge over competitors like Box Hill TAFE who are delivering similar programs in the niche area of Networking.

The following tasks were completed during this project that led to development of online/flexible resources for two courses of the program AD008:

1. Consultation with the Academic staff to shortlist two courses and teaching staff for writing resources. The following two courses were shortlisted and teaching staff was allocated for each course.

   EEET 2322 - Embedded Systems Fundamentals (Sukhvir Judge)  
   EEET 2328 - Network Security (Arvind Sharma)

2. In order to develop teaching and learning material of high quality, services of
Educational designer facilitated by Program And Courseware Enhancement (PACE) team of SET College. Educational Designer was appointed and detailed Consultations with the Educational Designers and Warren Nageswaran from PACE completed.

3. It was decided to prepare Conceptual Map (that details week by week approach of learning activities, assessment tasks and learning outcomes achieved by the students) prior to writing teaching and learning material. It was also decided to get feedback from Higher Education Counter part about Concept Map prior to writing resources to ensure consistency of delivery of undergraduate programs in TAFE and H.Ed schools. Prof Andrew Jennings from School of Electrical and Computer Engineering (SECE) reviewed the conceptual map and provided comments. Conceptual Map was finalised based on the review comments and suggestions made by the Educational Designer.

4. After development of conceptual Map, the whole project was facilitated by Educational Designer Barbara Goulborn (Curve Projects PTY Ltd) and monitored by Warren Nageswaran (PACE team of SET College). Four milestones were set for the rest of the project and deadlines were agreed by the teaching staff and Educational Designer to minimise risks.

4. Educational designer completed proof read and ensured learning material is meeting quality benchmarks. Continuous Feedback was provided to the relevant teachers to ensure prospective students have clear understanding of the learning activities, assessment tasks and assessment timelines/weightage.

5. On completion of third milestone i.e. 100% of teaching and learning material is ready, whole learning package was reviewed by the Educational Designer and sent to Subject Expert for the feedback (peer reviewing). Dr Milan Simic reviewed learning package for EEET 2322 -Embedded Systems Fundamentals course and submitted written report including comments. Learning package for EEET 2328 - Network Security course was reviewed by Mr George Listopad in the similar way.

6. Learning package was modified based on the peer review report and final Desktop publication was done by the Educational Designer.

7. Finalised Learning Packages for both courses are submitted to PACE team (SET College) to be available online to the students via Learning Hub.

Attach the full and detailed report and evaluation of your project outcomes including evidence of the impact the project has had. Also make reference to how the outcomes address the five key objectives:

- Improved student learning experiences, outcomes and employment opportunities
- Innovation
- Strategic alignment
- University wide application
- Value for money

Innovation
This LTIF project provided an innovative way of developing teaching and learning material that could be delivered online for flexible delivery. Usually peer review is requested by PACE after completion of all the milestones. In many cases it was not possible to address comments made in the peer review at the last stage as in some cases there was a need to rewrite the entire package. In this project, new approach was taken by requesting feedback at the planning stage by an H.Ed academic of the articulating school. All the modifications were done at the Conceptual Map stage i.e planning stage. This approach ensured learning package developed based on collective wisdom and consistency of delivery of undergraduate programs in TAFE and H.ED schools.

Improved student learning experiences, outcomes and employment opportunities
Teaching and Learning material prepared in this project is based on the input from many academics and educational designer. It will certainly enhance learning of international and local students and help them to achieve employability skills.

University wide application
These courses are available to any undergraduate student as a student elective. Availability of online/flexible resources developed in this project will be available to other academics and could be of assistance to develop resources in future.
- **Value for money**
  This project is a value for money as it addresses multiple purposes. Development of online/flexible resources will enable RMIT to offer quality teaching and learning material to AD008 students. In addition to that these specialised courses could be delivered as fee for service course to public in general or existing workforce onshore/offshore.

- **Strategic alignment**
  The project addresses the following RMIT & SET TAFE strategic priorities:
  
  - Focus on target markets and product development for international onshore TAFE.
  - Capability building in curriculum design, business and project management, again in specific industry groupings and sectors.
  - TAFE specific and targeted marketing strategies that are industry grouping/industry sector driven.
  - Expand industry partnerships and enterprise based training and assessment.

This project also aims to address key training areas identified in ICT Skills SnapShot released by Victorian Government in 2007.

It will also meet one of the requirements of Engineers Australia for Accreditation of Associate Degree in Engineering Technology (Network Engineering) program. Accreditation of Engineering programs is strategically important for our university and enhances employability skills of our students.

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<tr>
<th>Dissemination of project outcomes both completed and planned. This should include both within RMIT and externally.</th>
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<tbody>
<tr>
<td>The outcomes of this project are disseminated to the relevant academics and teaching staff within the school. This project was monitored by the PACE Team of SET College and all the milestones of the project were completed in consultation with PACE Team and External Educational Designer.</td>
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