

CIT

Teaching & Learning at CIT

1 Teaching & Learning Unit

1.1 Background

In September 2008, the Teaching & Learning Unit at CIT was formed. The TLU is responsible for managing, facilitating and monitoring the following activities within CIT:

- Development of an Effective Learning Environment
- Development Learning, Teaching and Assessment Strategies
- Development Teaching and Learning with Technology (TLT)
- Promotion of Excellence and Innovation in Teaching and Learning
- Research in the areas of Teaching, Learning and Assessment
- Support of the Design & Development of Programmes and Curricula

Membership of the TLU is drawn from each Faculty within the Institute with additional members bringing expertise in areas of e-learning and teaching with technology.

1.2 Current Work

The TLU disseminates its work primarily via workshops and courses. This month, the TLU is offering the following workshops and courses:

a) Cognitive Information Processing: Implications for the design of E-Learning materials

Description: Cognitive Information Processing (CIP) Theory provides a model of human learning which involves the processing of information through three different kinds of memory: sensory memory, working memory and long-term memory. This workshop provides a generalised account of this model, addressing, along the way, some important research into, for example, selective attention, working memory duration, memory retrieval, dual encoding etc. The primary focus of the workshop is practical with participants being provided with clear advice regarding the implications of CIP theory for the design of e-learning materials.

b) Fostering Academic Honesty

Description: This presentation aims to assist lecturers in developing strategies to foster academic honesty in their learners. A key requirement for innovative and emerging assessment methodologies is that the reliability of the results obtained is equivalent to more traditional methods of assessment. Thus there must be a high degree of confidence that the work provided is the learner's own work. This

workshop focuses in particular on strategies for the prevention and detection of plagiarism. Finally an overview of plagiarism detection software TURNITIN is given.

c) Strategies to Foster Creativity

Description: This presentation introduces participants to a range of techniques to foster Creative Thinking. The presentation seeks to define the nature of creativity in a variety of contexts or discipline areas. Related areas such as ideas generation, lateral thinking and divergent thinking are explored. These areas are seen to be fundamental to fields such as design; product design; problem solving and projects. Techniques explored in this workshop to facilitate creativity include Mind Mapping ; Storyboarding; Brainstorming; Problem Reversal; etc.

d) Problem Based Learning Course

Description:- A course for those academic staff interested in using problem based learning and related techniques as part of their teaching and assessment of learners. This course consists of five one hour lectures/workshops and is practical and interactive in nature with participants formed into groups and given sample problems to work through. The course commences with active learning techniques that may easily be incorporated into traditional lectures and proceeds to focus on alternatives such as problem and enquiry based learning.

e) Classroom 2.0 Course

Description: This course on Web 2.0 focuses on the implications of this technology for educators. This session will be followed one week later by a workshop that will examine the following web applications:

- Blogs – these can be used to develop writing, share ideas, brainstorm, generate discussion and reflect on work undertaken in the classroom. A micro-blogging service can be used to send short messages to your students or to follow the activities of fellow researchers.
- Wikis - a wiki can be used for group projects, to build knowledge and share information.
- RSS - keep up with the latest research in your area or direct students to rich Internet resources.

Both sessions explore ways of integrating this technology into the classroom and examine methods of engaging students in new and interesting ways of learning.

f) Blackboard Learning Management System Course

Description: This course is aimed at those academic staff wishing to incorporate the Blackboard LMS in the teaching and assessment of learners. The course itself is delivered in a blended learning fashion with the participant enrolling in Blackboard and experiencing the teaching/learning paradigm from the viewpoint of a learner.

The TLU also offers courses in areas such as curriculum design, assessment strategies and serious games.

2. Creativity, Innovation & Teamwork Module

2.1 Background

The objectives of this module are to introduce the learner to his/her field of study and to facilitate the transition of the learner to higher education. This module is designed to:

- excite the learner about their chosen field of study;
- reinforce and develop key academic skills such as creativity, innovation and team work which the learner will require both in their academic life in CIT and subsequently in the world of work;
- prepare and motivate them for a lifetime of independent and reflective learning.

The learning outcomes of the module are that the learner will

1. Demonstrate that problem solving is fun, educational, rewarding and helpful to society
2. Display creativity and problem solving skills
3. Plan and execute a project as part of a team
4. Communicate ideas effectively by written/visual/oral means in a manner intended to the appropriate audience
5. Develop a learning plan for his/her future academic and professional career

The principal learning strategy is a team project. Learners, over the course of the semester, are required to research, plan and execute a project in their chosen area. As they undertake their projects, they develop their expertise in areas such as: basic research (library, Internet etc); independent thinking; risk taking; problem-solving; time management; participating in and leading teams; and communication. Projects are diverse, innovative, challenging and interesting to the learner. The host department of each programme selects appropriate projects for their fields of study. Examples include : Lego Mindstorm robot; spaghetti bridge; solar powered vehicle; musical instrument made from recycled material; concert/recital cd; original composition; sculpture; tourism product website.

In the academic year 2007-2008, approximately 2000 first year learners from 47 programmes enrolled in the CIT module. These learners, both full-time and part-time, came from all Faculties and Constituent Colleges of the Institute. A survey of lecturers delivering the module revealed their overall satisfaction with the design of the module. They felt that this module helped to develop the team work, communication and problem solving skills of their learners and therefore supported overall programme learning outcomes in these core areas.

3. Curriculum Delivery Decision Support System

Supported under the Strategic Innovation Fund, CIT, in collaboration with a local software company, are currently developing an academic resource allocation model and associated decision support system. This curriculum delivery decision support system is fully integrated with curriculum development software to provide detailed staff and space resource allocations to be timetabled using Syllabus Plus. With increased sharing of modules across programmes, this DSS will allow the Institute to optimize its delivery regime to continue to deliver its diverse programme portfolio.

Curriculum Development Software

- Number of student contact hours per module
- Nature of contact hours (lecture, laboratory, tutorial)

Curriculum Delivery Decision Support System

- Maximum allowable student group size for lectures, laboratories, tutorials associated with this module
- Overall student numbers enrolled on module calculated from associated programme enrollments
- Optimum number of module deliveries and associated BANNER CRNs calculated .
- Academic staff assigned to these instances of delivery
- Reports generated detailing staff, space type, module and programme allocations
- Reports generated detailing module and programme costs

Timetabling Software

- Resultant staff and space allocations timetabled