The mission of the Educational and Staff Development Department (ESDD) is to enhance the quality of teaching and learning in Singapore Polytechnic. It provides expertise for the professional development of academic staff and assists academic schools and departments in developing strategies to enhance the quality of teaching and learning.

The department’s key functions include encouraging and leading educational innovations and initiatives, providing consultancy in the areas of curriculum, teaching, learning and assessment, applying educational research to enhance teaching and learning, promoting e-learning and notebook PC pedagogy, promoting pedagogically sound applications of educational technology to teaching and learning, and providing services to support audio/video production and e-learning content creation.
Specialist Diploma in E-Learning Design and Development

With the advent and convergence of information and communication technologies, the very notion of education and training has taken on new meaning and significance. The educational paradigm of marrying education and the Internet has revolutionized the idea of classroom teaching and corporate training. In times of company downsizing, travel uncertainties or outbreak of a flu pandemic, web-based learning or e-learning becomes an extremely favourable option.

Course Aims

This one year part-time course is designed to equip the participant with the necessary knowledge and competencies to:

(a) Conduct a learning needs analysis for an organisation or institution.
(b) Design and develop an e-learning programme using sound pedagogical approaches and principles.
(c) Evaluate a range of e-learning technologies for implementing a complete e-learning solution.
(d) Implement and deliver an e-learning programme.
(e) Evaluate the effectiveness of an e-learning programme.

Entry Requirements

Applicants must have a polytechnic diploma or higher qualification. Those with other equivalent qualifications will be considered on a case-by-case basis.

Hardware and Software Requirements

Participants are expected to have their own notebook PC and software for the course. Access to the Internet is required and each participant should have his / her own email account.

Course Assessment

All modules will be assessed in-course, including tests, mini projects, assignments, presentations and participation. Each student will also hold an electronic portfolio for performance review and assessment by their lecturers.

Course Structure

The course comprises of six modules and adopts a blended learning approach. The planned duration for this course is 270 hours.

First Semester

ES8001 – Needs Analysis & Planning
ES8002 – e-Learning Design
ES8003 – e-Learning Development

Second Semester

ES8004 – e-Learning Implementation & Delivery
ES8005 – e-Learning Evaluation
ES8006 – e-Learning Practicum

Educational Development

The Department pursues pedagogical innovations and developments, translates new research findings into practical curriculum applications as well as leads educational initiatives identified by the Polytechnic. It provides consultancy services to academic schools / departments in curriculum development, improvement of teaching effectiveness, production of teaching / learning materials and assessing learning.

The Department provides pedagogical support to academic schools implementing the CDIO Initiative. The CDIO Initiative is an innovative engineering education framework that aims to educate students to be graduates who understand how to Conceive – Design – Implement – Operate value-added engineering products, processes, and systems in a team-based environment. The Department works with academic schools / departments to redesign the curriculum to integrate personal and interpersonal skills, and product, process and system building skills. It collaborates with academic staff to develop active and experiential learning activities that provide real-world learning experiences, and authentic assessments for the CDIO skills.

Professional Staff Development

The Department offers staff, especially the academic staff, a wide range of programmes, specialised workshops and talks to improve teaching and learning. Some activities and resources are also developed to equip academic staff with the necessary knowledge, skills and resources to be creative and innovative in their teaching. These include:

- Certificate in Teaching for new academic staff. The objective is to equip newly appointed academic staff with the fundamentals of teaching and learning.
- Advanced Certificate in Teaching for experienced academic staff. The objective is to enable academic staff to deal effectively with the changing demands of their professional teaching role. The course emphasizes critical reflection on practice and the development of necessary competence to meet the demands of providing quality learning experiences for students.
- Certificate in IT for Teaching for all academic staff. The objective is to ensure that all academic staff have a sufficient range and level of IT competence to function effectively in an IT-rich teaching environment.
- Pedagogical short courses / workshops in the following areas:
  - CDIO Skills and Curriculum Design
  - Learning Design and Management
  - Technology in Teaching and Learning
DEPARTMENT OF EDUCATIONAL AND STAFF DEVELOPMENT

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Centre for Pedagogical Practices

The Centre for Pedagogical Practices (CPP) offers customised training and consultancy in pedagogy-based creative learning programmes to tertiary and educational sectors across the region. Its range of courses includes:

- Creative Teaching Framework
- Developing Good Thinking
- Designing Outcomes-based Programmes
- Problem-Based Learning
- Action Research
- E-Learning Pedagogy and Assessment
- Assessing Types of Thinking
- Designing Assessment Schemes

Using Technology in Teaching and Learning

The Department promotes the Polytechnic’s initiatives in e-learning. It collaborates closely with the various e-learning committees, schools and departments to conceptualise and implement pedagogically viable blended learning and teaching approaches. It also provides pedagogical and technical expertise in the design, development and implementation of online content.

To support the teaching and learning community, the Department manages an enterprise learning and content management system. It is equipped with a suite of e-learning tools for content development, online assessments, video streaming and live classroom tutoring. The Department also evaluates and recommends the use of relevant software applications to enhance learning.

Every semester, the Department provides the necessary support for the e-learning week. The e-learning week is designed mainly to address the specific issue of business continuity in case of emergency (e.g. SARS and avian flu) where students study at home and learn online.

Media Development

The Department provides media design and development expertise to support the academic schools and departments and industry. This includes using audio, video, animation and graphics elements to assist them in the production of web-based training and presentation materials, and video packages. Some of the projects completed were:

- e-Exams for Industry Certification
- Wafer Fabrication e-Learning System
- Interactive Game-Based Language Package
- Web-based Occupational Safety and Health Package
- E-learning content for Thermofluids and Mechanics
- Video-recording of lectures

The Department houses a video studio, audio recording room and also a training room specially equipped with remote-controlled video cameras for recording lectures and tutorials to facilitate the professional development of new academic staff.

All first-year full-time diploma students need to own a notebook PC to enable them to access the rich variety of IT resources provided by Singapore Polytechnic to its student community, and to exploit IT for learning and communication. The Department administers the notebook PC ownership scheme to allow students to purchase notebook PCs at reasonable prices with appropriate warranty and service support.

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- Assessment
- Student Management
- Course Development and Evaluation
- Educational Research
- Educational Leadership

• Educational Technology short courses / workshops in the following areas:
  - Flash MX
  - Advanced PowerPoint for E-Learning
  - Digital Video Production
  - Blackboard Learning and Content Management System
  - Assessment authoring tools
  - Web page development tools
  - Creating and managing e-Portfolios
  - Online collaboration and communication
  - Web conferencing and virtual classroom

• Magellan, a cross-disciplinary innovation programme that invites staff to break out of their familiar knowledge territories and discover new possibilities and new ways of looking at things through the craft of a completely non-related discipline. Magellan facilitates creative and innovative ideas and learning by exposing participants to interesting facets of different disciplines and encouraging them to blend these new experiences with their own expertise. Staff are put in a new learning environment where they can see and discover something new and get themselves excited about learning again.

• Education Roundtable sessions to help academic staff identify new developments in curriculum, teaching, learning and IT, and evaluate their relevance to professional practice.

• Training and support for part-time lecturers.

The Department hosts the annual Excellence in Education and Training Convention to honour SP’s excellent teachers, and to update staff on new developments in education.