

Business Process & Systems Engineering



"The subject areas covered in this course, including process optimisation, marketing strategies and business enhancement, are very relevant to the industry and will optimally equip students to meet the challenges of today's new business environment."

Sim Sin Sin
CEO
Secret Recipe Café Pte Ltd

In today's business environment, companies' operations have become more challenging and complex. In addition to performing the traditional role of managing an enterprise, business leaders now require the skills to continuously refine business processes in order to overcome vital challenges. This course combines engineering disciplines with business management principles, producing graduates who are highly sought after by multinational corporations as well as small and medium enterprises.

As technology advances and Singapore strives to be a world-class service centre and logistics hub, the 21st century will see an increasing demand for tech-savvy professionals with multi-disciplinary knowledge and skills who are able to offer solutions to business issues and problems, so as to add value to their employers.

The introduction of business concepts and principles into a core of engineering fundamentals in this course will enable holders of this diploma to easily find their niche in an extremely wide variety of industries, including the manufacturing, logistics and service sectors in Singapore.

There are two main areas in this course: (i) Business Analytics, which concerns the systematic investigation, prediction and prescription of business performance in order to provide insights for future planning, known as forward business management; and (ii) Systems Engineering, which deals with the management, improvement and optimisation of business processes using a systems thinking approach so as to enhance business productivity and profits.

Career Opportunities

Armed with the knowledge of fundamental business principles, business analytics, business process improvement and systems engineering skills, you will have the multi-disciplinary advantage to seek lucrative career opportunities in a variety of industries such as manufacturing, logistics and services which include healthcare operations, finance, retail, customer service, as well as sales and marketing. You can look forward to jobs as a business analyst, customer relationship executive, market researcher, logistics and supply chain executive, product marketing executive, quality assurance and control specialist, operations executive, and productivity and management systems executive.

Graduation Requirements

Cumulative Grade Point Average : min 1.0

TP Fundamentals Subjects : 36 credit units

Diploma Core Subjects : 86 credit units

Total Credit Units Completed : min 122 credit units

Application

Apply during the Joint Admissions Exercise following the release of the GCE O Level results. For other categories of local applicants, please refer to the section on “Admission and Requirements”. For international students, please refer to the section on “Information for International Students”.

Entry Requirements for Singapore-Cambridge

GCE O Level Qualification Holders

To be eligible for consideration for admission, applicants must obtain 26 points or better for the net ELR2B2 aggregate score (i.e. English Language, 2 relevant subjects and best 2 other subjects, including CCA Bonus Points) and meet the minimum entry requirements of this course. CCA cannot be used to meet the minimum entry requirements.

For details on GCE O Level Minimum Entry Requirements, refer to page 125.

Note: Applicants should not be suffering from severe vision impairment.

Course Structure

TP FUNDAMENTALS (TPFun) SUBJECTS				
SUBJECT CODE	SUBJECT	LEVEL	CREDIT UNITS	
ECS1005	Communication & Information Literacy	1	2	
ECS1006	Workplace Communication	1	2	
ECS1007	Persuasive Communication	1	2	
EGS1002	Global Studies	1	3	
EGS1003	Managing Diversity at Work*	1	3	
EGS1004	Global Citizenship & Community Development*	1	3	
EGS1005	Expressions of Culture*	1	3	
EIN1001	Innovation & Entrepreneurship	1	2	
GCC1001	Current Issues & Critical Thinking	1	2	
LEA1011	Leadership: Essential Attributes & Practice 1	1	1	
LEA1012	Leadership: Essential Attributes & Practice 2	1	1	
LEA1013	Leadership: Essential Attributes & Practice 3	1	1	
LSW1002	Sports & Wellness	1	2	
MCR1001	Career Readiness 1	1	1	
MCR1002	Career Readiness 2	1	1	
MCR1003	Career Readiness 3	1	1	
TGL1001	Guided Learning	1	3	
ESI3001	Student Internship Programme	3	12	

* Students must choose one of these three subjects or TGL1001 Guided Learning.

DIPLOMA SUBJECTS – CORE SUBJECTS

SUBJECT CODE	SUBJECT	LEVEL	CREDIT UNITS
EBZ1001	Business Fundamentals	1	4
EBZ1002	Principles of Economics	1	4
EEE1001	Circuit Analysis	1	6
EEE1003	Digital Fundamentals 1	1	5
EMA1003	Engineering Mathematics 1	1	4
EPZ1001	Introduction to Processes & Systems	1	4
ESE1006	Computer Programming for Problem Solving	1	4
ESE1007	Engineering Analytics	1	3
ESZ1001	Systems Concepts & Tools	1	4
ESZ1002	Quantitative Methods	1	4
EBM2004	Project Management	2	4
EBZ2003	Engineering Economy	2	4
EBZ2006	Service Quality & Management	2	4
EQM2001	Process Management & Innovation	2	4
ESZ2001	Decision Analysis	2	4
ESZ2002	Process Optimisation & Improvement	2	4
EMF3002	Manufacturing Logistics & Simulation	3	4
EMP3002	Major Project	3	8
EPZ3001	Customer Relationship Management	3	4
ESZ3001	Supply Chain Management	3	4
ESZ3002	Systems Modelling & Simulation	3	4