Systems Engineering and Engineering Management

Course Description

(Unless otherwise specified, all are 3-unit term courses of three hours of lecture and one hour of tutorial per week.)

*SEG2410
Linear Algebra and Discrete Mathematics

SEG2420
Operations Research I

SEG2430
Applied Probability and Statistics

SEG2440
Engineering Economics

SEG2450
Production Planning and Control

SEG2470
Fundamentals in Engineering Management
This course is aimed at introducing students to the basics of engineering management. The major topics include: management tasks, industrial and engineering organizations, strategic management and decision making, financial management and basic marketing concepts. The use of mathematical models and computer-aided decision support is emphasized.

*Course offered in 2004-05 and before.
SEG2500
Management Principles for Engineering Managers (I)
Introduction to Management functions including planning, organizing, influencing, and controlling; project management; team building; corporate knowledge management, strengths and weaknesses of engineers as managers; global issues, and engineering management challenges. Introduction to marketing management including market segmentation, product positioning, pricing strategy, promotion, channels, marketing survey, customer relationship management, and the use of customer relationship management systems. (Not for Systems Engineering and Engineering Management Majors.)

SEG2510
Management Principles for Engineering Managers (II)
Introduction to financial and cost analysis: valuation of assets, liabilities, shareholder’s equity; determination of revenues and expenses; cost analysis; allocation of indirect cost; budgeting and performance; use of financial and cost data for planning and control. Introduction to macroeconomics including national income accounting, aggregate demand and supply models, demand and supply of money, fiscal and monetary policies, balance of payment, exchange rate systems, and business cycle theory. (Not for Systems Engineering and Engineering Management Majors.)

SEG2520
Fundamentals in Financial Engineering
Overview of financial markets for securities, foreign exchange, options and futures; special emphasis on understanding of the market characteristics; interpretation of financial statements of an organization in terms of liquidity, solvency, profitability, efficiency and growth.

SEG2530
Systems Engineering and Society
2 U; 2 Lect. 1 Tut.
Introduction to Systems Engineering, design and innovation in engineering. Intellectual property rights and other legal issues related to engineering, information technologies and E-commerce. Professional liabilities, engineering ethics and societal impact. Health considerations, safety concerns and environmental impact.

SEG3410
System Simulation
System concept and mathematical models. Model building: parameter estimation and data analysis. Elementary queuing theory and applications: M/M/S models. Introduction to simulation and simulation language. Principles of discrete event simulation. Random number generators and output analysis. Optimization via simulation. Applications to production and manufacturing systems. Prerequisites: CSC1110 and SEG2430 or with the approval of the course instructor.

SEG3420
File Structures and Processing
SEG3430
Information Systems Analysis and Design
Information system development life cycle; user requirement analysis; feasibility study; cost/benefit analysis; systems analysis tools such as data flow diagrams and process specification tools. Real time systems analysis. Transformation from analysis to design. Structured chart. System design quality heuristics such as coupling and cohesion. System design packaging and design optimization: CASE (Computer-Aided Software Engineering) Tools. Prerequisite: SEG3460 or with the approval of the course instructor.

SEG3440
Operations Research II
Non-linear programming: convex sets and functions; local and global optima; Lagrange multipliers; optimality conditions for unconstrained problems; descent methods; constrained optimization; Karush-Kuhn-Tucker conditions; solution methods. Non-differentiable optimization: integer programming models; formulations; cutting-plane methods; branch-and-bound. Dynamic programming: models and formulation; Bellman’s equations; solution methods.

SEG3450
Engineering Innovation and Entrepreneurship
Factors that drive continuous creative product innovation. Study of processes of creating, assessing and pursuing product opportunities. Evaluation of new product ideas and risk assessment of commercialization. Product development strategies in industrial marketing. Understanding the behaviour of buyer. Formulation and implementation of innovative marketing strategy and business plan. Prerequisite: SEG2440 or 2450 or with the approval of the course instructor.

SEG3460
Computer Processing Systems Concepts
Principles of operating system functions. Introduction to assemblers, linkers, loaders and libraries. Performance analysis of scheduling algorithm. Applications based on systems such as DOS, UNIX and MVS/ESA. Job control language, procedures, parameter passing and utilities. Comparison of programming languages of different levels and their evaluation and selection based on application needs. Prerequisite: CSC1110 or with the approval of the course instructor.

SEG3470
Dynamic Optimization and Applications
Dynamic programming for sequential decision making under uncertainty, optimal control and combinatorial optimization. Applications to network problems (shortest paths, Viterbi algorithm, the travelling salesman problem) and discrete time dynamic optimization problems of finite and infinite horizon (linear-quadratic optimal control, inventory control, portfolio analysis). Numerical solution methods for infinite-time dynamic programming: value iteration, policy iteration and linear programming. Introductory continuous-time optimal control: calculus of variations, Pontryagin principle and the Hamilton-Jacobi-Bellman equation. Prerequisites: SEG2430 and 3440 or with the approval of the course instructor.
SEG3490
Information Systems Management
In-depth discussion of the challenges, techniques and technologies associated with the management of IT in a competitive environment. The linkage of IT to business strategy and business process re-engineering. Type of information systems: MIS, DSS, TPS. Development process. Information system planning. Systems project management and control. IT acquisition, budgeting and deployment. Performance evaluation and auditing. Operations management. Privacy and security. Prerequisite: SEG3430 or with the approval of the course instructor.

SEG3500
Quality Control and Management
Quality planning, control and improvement. Sampling theory. Statistical quality control theory applied to production operations. Specification and control charts for monitoring production systems. Quality engineering - the Taguchi Method. Quality control issues of manufacturing and service industry. Case studies of quality control problems in industry. Use of computer aids. Introduction to ISO 9000. Prerequisite: SEG2430 or with the approval of the course instructor.

SEG3510
Human-Computer Interaction
This course provides an introduction to the fast evolving field of human computer interaction (HCI). HCI is a multidisciplinary subject concerning the design, implementation and evaluation of interactive computing systems for human use, and the study of major phenomena surrounding them. We will provide a broad overview of the field, including the theory and principles underlying good designs, with an emphasis on the interface design process, development and evaluation. We will also sample some state-of-the-art technologies in HCI, such as speech recognition, haptics, virtual reality, software agents and computer supported cooperative work.

SEG3520
Managing Information Technology

SEG3530
Engineering and Technology Management
Managerial functions: planning, organizing, influencing and control. Strategic formulation and decision making. Strategic and operational considerations of technology. Management of research, engineering design and production functions. Project screening and selection. Project structuring, scheduling and budgeting. Project control.

SEG3540
Concepts of Information Systems
The roles of information systems in business application. Concepts of IS technology: databases, information retrieval, intelligent systems, transaction processing. Integration of different IS technologies. Concepts of telecommunication, Internet and Intranet. (Not for students of Engineering Faculty.)
SEG3550
Fundamentals in Information Systems

SEG3560
Introduction to E-Commerce
The course provides an overview of the technologies that support the development of E-Commerce applications, business models and strategies for E-Commerce, electronic payments and security, as well as legal issues related to E-Commerce such as intellectual property rights.

SEG3570
Stochastic Models

SEG3580
Risk Analysis for Financial Engineering

SEG3590
Investment Science
Basic theory of interests, fixed income securities, the term structure of interest rates, valuation of a firm, decision making under uncertainty, mean-variance portfolio theory, capital asset pricing model, models and data, basics of forward and futures contracts, basic options theory.

SEG3600
Engineering Entrepreneurship
2 U; 2 Lect. 1 Tut.
Evaluation of new product ideas and risk assessment of commercialization. Study of processes of creating, assessing and pursuing product opportunities. Venture launch and growth. Formulation and implementation of innovative marketing strategy and business plan. (This course must be taken concurrently with SEG3810 and is not for students who have taken SEG3450.)

SEG3610
Fundamentals in E-Commerce
2 U; 2 Lect. 1 Tut.
This course provides an overview of the technologies that support the development of E-Commerce applications, business models and strategies for E-Commerce, electronic payment and security. (Not for students who have taken SEG3560.)
SEG3810  
Product Development Project  
1 U

SEG4410  
Real-Time Computer Systems  

SEG4420  
Combinatorial Optimization  

SEG4430  
Stochastic Models in Decision Making  
Elementary factors in stochastic models. Stochastic dynamic programming. Advanced topics in queuing system: queuing models involving nonexponential distributions, queuing networks, Monte Carlo analysis and decision models. Stochastic inventory models: single and multiple period models with and without set-up costs. Forecasting techniques: constant level models and linear trend models. Prerequisites: SEG2430 and 3440 or with the approval of the course instructor.

SEG4480  
Decision Methodology and Applications  
Review of basic decision analysis concepts and methodologies. Single- and multiattribute utility theory under both certainty and uncertainty. Assessment methodologies; strength of preference; risk attitude; trade-off judgements. Prior information; subjective probability; Bayesian analysis; sequential analysis. Multiobjective optimization; methods for generating Pareto optimum solutions; methods with prior assessment of preferences; method with progressive assessment of preferences. Risk sharing and group decisions. Cooperative and non-cooperative game methods. Applications to risk analysis and management. Prerequisites: SEG2430 and 3440 or with the approval of the course instructor.

SEG4500  
Facility Management  
Construction and renovation. Maintenance and operation. Real estate consideration and planning. Space planning layout. Facility financial forecasting and management. General administrative services. Successful facility management. Industrial applications. Prerequisite: SEG2420 or with the approval of the course instructor.
SEG4510
Case Studies in Decision Making
Review of quantitative decision-making methods. Examination of problems arising from practical business planning and operations, and applications of quantitative methods, including mathematical tools and operations research techniques, to solve problems. Emphasis will be placed on studies of cases of successful real-world applications and project work. Prerequisites: SEG3410 and 3440 or with the approval of the course instructor.

SEG4520
Intelligent Management Support Systems
Decision modelling and support. Overview of management support systems. Data and model management in decision support systems. Group decision process. Group decision support systems and distributed group decision support systems. Executive information and support systems. Applications of artificial intelligence methodologies in decision support of accounting, investment and marketing systems. Integration of decision support technologies. Design and development of management support systems. Organizational and societal impacts. Prerequisite: CSC3230 or with the approval of the course instructor.

SEG4530
Introduction to Client/Server Systems
Client/server theory and practice. Management aspects: vision, priority and transition strategies, operational challenges. Overview of major protocols and distributed system concepts. Prerequisite: SEG3460 or with the approval of the course instructor.

SEG4540
Open Systems for E-Commerce
Overview the technologies and mechanisms of open systems. Advanced Internet applications including electronic commerce using open system and Web technologies. Multimedia applications over open systems. Applications on wireless and mobile network. Prerequisite: SEG3460 or with the approval of the course instructor.

SEG4550
Production Systems Planning and Management

SEG4560
Computational Intelligence for Decision Making
Introduction to knowledge-based system, neural computing, genetic algorithm and fuzzy logic. Inference methods and uncertainty management in design and implementation of expert systems. Application of computational intelligence techniques to management decision systems in specific business areas. Prerequisite: CSC2100 or with the approval of the course instructor.

SEG4570
System Design and Implementation
System implementation methodology construction, testing and maintenance. Software re-engineering and reverse engineering; software reliability and programme quality assurance; software reusability Software metrics. Performance engineering. Configuration management. Object-oriented system design. Use of computer-aided tools. Prerequisite: SEG3430 or with the approval of the course instructor.
SEG4580
Special Topics in SE&EM I
This course is designed to investigate and discuss selected topics of current interest in Systems Engineering and Engineering Management.

SEG4581
Special Topics in SE&EM II
This course is designed to investigate and discuss selected topics of current interest in Systems Engineering and Engineering Management.

SEG4590
Special Topics in SE&EM III
This course is designed to investigate and discuss selected topics of current interest in Systems Engineering and Engineering Management.

SEG4591
Special Topics in SE&EM IV
This course is designed to investigate and discuss selected topics of current interest in Systems Engineering and Engineering Management.

SEG4600
Logistics Management

SEG4610
Supply Chain Management
Management of moving raw materials, in-process inventory and finished-goods; transferring information and payment. Topics include: distribution; inventory management; purchasing and supplier management; the value of information and information technology; supply chain integration and strategic partnering; product design for supply chain management.

SEG4620
Electronic Payments Systems
This course covers various methods of transferring payments over the Internet and compares their functionality. Topics include electronic cash, electronic checks, electronic credit cards, micro-payments, certification of authority, the encryption and digital signature techniques needed to support electronic cash, and the technologies available to support secure transactions on the Internet. Implementations of various payment systems are examined.

SEG4630
E-Commerce Data Mining
This course introduces data mining techniques suitable for E-Commerce applications. It covers the following topics: prediction, association rule mining, rule induction, trend and deviation analysis, pattern visualization and data mining packages. Emphasis will be placed on employing these techniques to marketing, risk management, business negotiation and commercial applications.
SEG4640
Financial Decision and Pricing Models
Review of important concepts in financial decision theory such as utility theory, arbitrage, market efficiency hypothesis, mean-variance analysis, capital asset pricing models, separation theorems and arbitrage pricing theory and option pricing. Computational techniques such as stochastic programming, binomial trees and the finite difference method. Prerequisites: SEG2440 or FIN2010 and SEG2420 or with the approval of the course instructor.

SEG4650
Procurement Management
Overview of purchasing, quality specification and inspection, materials planning and control, price determination and negotiation, contract management, vendor management, international issues, and acquisition of fixed assets and services.

SEG5410
Optimal Control
3 U; 3 Lect.

SEG5420
Scheduling and Sequencing
3 U; 3 Lect.

SEG5430
Optimal Production Planning
3 U; 3 Lect.

SEG5440
Selected Topics in Discrete Optimization
3 U; 3 Lect.
Review of classical optimization. NP-hardness and using NP-hardness to analyse discrete optimization problems. Design and analysis of algorithms for easy and hard problems, including dynamic programming with pseudo-polynomial complexity, simulated annealing, fully polynomial approximation schemes, genetic algorithms and heuristics. Prerequisite: SEG3440 or with the approval of the course instructor.
SEG5450
Discrete Event Systems
3 U; 3 Lect.
Discrete event systems (DESs) modelling, manufacturing systems, computer networks and air-traffic control systems. Methodologies and techniques in analysing, controlling and managing of DESs: discrete event simulation, perturbation analysis, supervisory control and automata, Petri net, max algebra, etc. Prerequisite: SEG3410 or with the approval of the course instructor.

SEG5460
Information Systems Engineering
3 U; 3 Lect.
Review of information systems development, systems project planning and control, and other related managerial issues; information systems engineering economics; quantitative analysis of systems development; systems cost and effectiveness analysis; design principles and methodology for management information systems, decision support systems, real-time systems and unsurveyable systems. Prerequisite: SEG3430 or with the approval of the course instructor.

SEG5470
Knowledge Systems
3 U; 3 Lect.

SEG5480
Engineering Management Strategy
3 U; 3 Lect.
The course introduces students to the basics of strategic management. All aspects of strategic planning tools and techniques, strategy formulation and decision making, and implementation and control are covered. Topics include SWOT analysis, forecasting models, decision methodology, project planning, implementation and evaluation, team building and communication. Integration of business functions such as finance, human resources, marketing, and production and operations is emphasized.

SEG5490
Advanced Engineering Economics
3 U; 3 Lect.
SEG5520
Optimization I
3 U; 3 Lect.
The course covers the underlying theory and fundamental solution methodologies of mathematical programming: linear programming and unconstrained and constrained non-linear optimization. Topics include optimality conditions, search methods, descent methods, Lagrange multipliers and penalty functions. Developments of duality theory are presented. Concepts and issues in global optimization and multi-objective optimization are introduced. Applications are drawn from engineering and financial optimization.

SEG5530
Client/Server Systems Engineering
3 U; 3 Lect.
Issues in building client/server information systems. Concept, implementation and management aspects in the development cycle of client/server systems. Advanced technology such as distributed objects, CORBA and COM+, component technology and client/server system management.

SEG5540
Optimization II
3 U; 3 Lect.
The first part of this course covers underlying theory and fundamental solution methodologies of integer programming: optimality, relaxation and bounds, complexity and problem reductions, branch and bound, cutting plane algorithms, strong valid inequalities and duality theory. The second part of this course covers some of the recent developments in mathematical programming: interior point methodology, conic optimization and semidefinite programming. Various applications in engineering, management, and financial economics are discussed.

SEG5570
Numerical Methods in Finance
3 U; 3 Lect.
This course emphasizes the use of numerical methods for solving financial problems. The numerical methods include: binomial trees, Monte Carlo simulation, stochastic programming, linear/quadratic control models and semidefinite programming techniques. Those techniques will be applied, among other things, to: option pricing, index tracking, portfolio optimization, interest rate models and asset/liability management.

SEG5580
Advanced Stochastic Models
3 U; 3 Lect.

SEG5590
Financial Decision Models
3 U; 3 Lect.
SEG5600
Logistics and Transportation Planning
3 U; 3 Lect.

SEG5610
Inventory and Supply Chain Management
3 U; 3 Lect.

SEG5620
Data Warehousing for Financial Engineering
3 U; 3 Lect.
This course addresses the data and decision aspects of financial information systems. The data aspect includes collection, cleansing, storage and retrieval of quantitative and qualitative financial data. The decision aspect include on-line analytical processing on financial data and data mining for nontrivial data pattern and knowledge.

SEG5640
Human-Computer Spoken Language Systems
3 U; 3 Lect.
Principles and theories underlying the design and implementation of human-computer spoken language systems. Component technologies including multilingual speech recognition, natural language understanding, dialog modelling and speech synthesis. Related topics including acoustic-phonetics in conversational speech, linguistic features of spoken language, digital signal processing, pattern recognition, machine learning, statistical modelling and artificial intelligence. Software architectures that integrate the various component technologies. Examples of real applications. Students are advised to take ELE3410 before taking this course. Prerequisite: SEG2430 or with the approval of the course instructor.

Study Scheme

I. Major Programme

There are four streams of specialization: E-Commerce Systems, Financial Engineering, Information Systems, and Logistics and Supply Chain Management. Students may choose to specialize in one of the four streams and select certain courses as prescribed. A student who does not wish to specialize in any of the four streams should follow a study scheme devised with the advice of the academic advisers of the Department.

A. Applicable to students admitted in 2006-07 and thereafter

Students are required to complete a minimum of 81 units of Major courses as follows:
(i) Required Courses: 60 units
ERG2018, 2020, 4910#, 4920#, SEG2420, 2430, 2440, 2530, 3410, 3430, 3460, 3530, 3550, 3570, 3600, 3610, 3810, ELT1111, CSC1110, 2100

(ii) Seven Elective Courses from: 21 units
SEG2520, 3420, 3470, 3490, 3500, 3510, 3550, 3590, 4410, 4480, 4530, 4540, 4550, 4560, 4570, 4580, 4581, 4590, 4591, 4600, 4610, 4620, 4630, 4640, 4650, 5410, 5420, 5430, 5470, 5490, 5520, 5530, 5540, 5570, 5580, 5590, 5600, 5610, 5620, 5640, CSC3230#, FIN3010#, 3080#, 4110#, MAT4210#, 4250#

Total: 81 units

Streams of Specialization

Students choosing a stream of specialization should take, among the seven elective courses, at least six courses from the corresponding list for their stream of specialization; the remaining courses can be chosen from outside their stream of specialization.

E-Commerce Systems Stream
SEG3490, 3510, 4530, 4540, 4610, 4620, 4630, FIN3080#

Financial Engineering Stream
SEG2520, 3490, 3500, 3590, 4480, 4560, 4630, 4640, FIN3010#, 3080#, 4110#, MAT4210#, 4250#

Information Systems Stream
SEG3420, 3490, 3510, 4410, 4530, 4540, 4550, 4570, 4630, CSC3230#

Logistics and Supply Chain Management Stream
SEG3470, 3490, 3510, 4480, 4540, 4550, 4660, 4610

Recommended course pattern

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SUMMARY

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The Major Programme requirement for second-year entrants can be viewed on the homepage of the Academic Affairs Section, <http://www.cuhk.edu.hk/aas/>.

B. Applicable to students admitted in 2005-06

Students are required to complete a minimum of 81 units of Major courses as follows:

(i) Required Courses: 60 units
   - ERG2018, 2020, 4910*, 4920*, SEG2420, 2430, 2440, 3410, 3420, 3440, 3450, 3460, 3530, 3550, 3560, 3570, 3810, ELT1111, CSC1110, 2100

(ii) Seven Elective Courses from: 21 units
   - SEG2520, 3420, 3470, 3490, 3500, 3510, 3580, 3590, 4410, 4480, 4530, 4540, 4550, 4560, 4570, 4580, 4581, 4590, 4591, 4600, 4610, 4620, 4630, 4640, 4650, 4650, 5410, 5420, 5430, 5470, 5480, 5490, 5500, 5520, 5530, 5540, 5570, 5580, 5590, 5600, 5610, 5620, 5640, CSC3230*, FIN3010*, 3080*, 4110*, MAT4210*, 4250*

   **Total:** 81 units

Streams of Specialization

Students choosing a stream of specialization should take, among the seven elective courses, at least six courses from the corresponding list for their stream of specialization; the remaining courses can be chosen from outside their stream of specialization.

E-Commerce Systems Stream
   - SEG3490, 3510, 4530, 4540, 4610, 4620, 4630, FIN3080*

Financial Engineering Stream
   - SEG2520, 3490, 3580, 3590, 4480, 4560, 4630, 4640, FIN3010*, 3080*, 4110*, MAT4210*, 4250*

Information Systems Stream
   - SEG3420, 3490, 3510, 4410, 4530, 4540, 4560, 4570, 4630, CSC3230*

Logistics and Supply Chain Management Stream
   - SEG3470, 3490, 3500, 4480, 4540, 4550, 4600, 4610
### Recommended course pattern

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<tr>
<td>Free Electives</td>
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The Major Programme requirement for second-year entrants can be viewed on the homepage of the Academic Affairs Section, <http://www.cuhk.edu.hk/aas/>.

### C. Applicable to students admitted in 2004-05

Students are required to complete a minimum of 81 units of Major courses as follows:

(i) Required Courses: 57 units

- ERG2020, 4910#, 4920#, SEG2420, 2430, 2440, 3410, 3430, 3440, 3450, 3460, 3530, 3550, 3560, 3570, 3810, ELT1111, CSC1110, 2100

(ii) Eight Elective Courses from: 24 units

- SEG2520, 3420, 3470, 3490, 3500, 3510, 3580, 3590, 4410, 4480, 4530, 4540, 4550, 4560, 4570, 4580, 4581, 4590, 4591, 4600, 4610, 4620, 4630, 4640, 4650, 5410, 5420, 5430, 5470, 5480, 5490, 5520, 5530, 5540, 5570, 5580, 5590, 5600, 5610, 5620, 5640, CSC3230#, FIN3010#, 3080#, 4110#, MAT4210#, 4250#

Total: 81 units
Streams of Specialization

Students choosing a stream of specialization should take, among the eight elective courses, at least six courses from the corresponding list for their stream of specialization; the remaining courses can be chosen from outside their stream of specialization.

E-Commerce Systems Stream
SEG3490, 3510, 4530, 4540, 4610, 4620, 4630, FIN3080*

Financial Engineering Stream
SEG2520, 3490, 3580, 3590, 4480, 4560, 4630, 4640, FIN3010*, 3080*, 4110*, MAT4210*, 4250*

Information Systems Stream
SEG3420, 3490, 4110, 4410, 4530, 4540, 4560, 4570, 4630, CSC3230*

Logistics and Supply Chain Management Stream
SEG3470, 3490, 3500, 4480, 4540, 4550, 4600, 4610

Recommended course pattern

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Notes (Applicable to all Major students):
1. Major courses at 3000 and above level will be included in the calculation of the Major GPA for honours classification. Courses with "#" are to be included in the Major GPA as well.
2. Besides the Major courses mentioned in Note 1, the ACE, CEG, CSC, ELE, ERG, IDE, IEG and INE courses at 3000 and above level taken by the students will also be included in calculation of the Major GPA.

3. Students are strongly advised to consult with the academic advisers of the Department in choosing elective courses.

2. Minor Programme

Engineering Management

Students are required to complete a minimum of 18 units as follows:

(i) Required Courses: 6 units
   (SEG2500 or 3530), 2510

(ii) Elective Courses: 12 units
   SEG2420, 2430, 2440, 3430, 3440, 3450, 3490, 3500, 4480, 4500, 4550, 4610, 4650, MGT3010, MKT3010

Total: 18 units

Notes: 1. A maximum of 6 units can be used to fulfill both the Major and Minor Programme requirements.

2. Elective courses are subject to availability.

Financial Engineering

Students are required to complete a minimum of 18 units as follows:

(i) Required Courses: 6 units
   SEG2510, 2520

(ii) Elective Courses: 12 units
   SEG2430, 3440, 3570, 3580, 3590, 4480, 4630, ECO3410, 3420, FIN4110, MAT4210, 4250

Total: 18 units

Notes: 1. A maximum of 6 units can be used to fulfill both the Major and Minor Programme requirements.

2. Elective courses are subject to availability.

3. Faculty Language Requirement

(Please refer to the “Faculty Language Requirement” of Faculty of Engineering for details.)

4. Major/Faculty Requirement for S6 Entrants

(Please refer to the “Major/Faculty Requirement for S6 Entrants” of Faculty of Engineering for details.)