ORBS 7010 Operational Research I (3,3,0) (E)
This course introduces the fundamental theory, techniques and algorithms for linear programming, nonlinear programming and statistical computation problems.

ORBS 7020 Techniques of Production Operations Management (2,2,0) (E)
This course introduces students systematically to the range of activities involved in production and operations management, mainly adopting quantitative approaches.

ORBS 7030 Statistical Software in Business and Management (3,3,0) (E)
This course introduces elementary statistical concepts and methods and how to use SPSS, a friendly statistical software, as a computational aid to carry out the statistical computation.

ORBS 7040 Computer Tools for Simulation (3,3,0) (E)
This course introduces how to use computers to analyse real-life managerial problems, understand the theoretical basis of discrete-event simulation models and communicate technical results effectively to non-specialist managers.

ORBS 7070 Business Statistics and Modelling (3,3,0) (E)
This course introduces statistical methods for analysing categorical data arisen from qualitative response variables which cannot be handled by methods dealing with quantitative response, such as regression and ANOVA.

ORBS 7080 Operational Research II (3,3,0) (E)
This course introduces the basic techniques and algorithms for dynamic programming, inventory control and queuing theory.

ORBS 7090 Performance Management (2,2,0) (E)
This courses introduces students systematically to the range of activities in performance evaluation, mainly adopting quantitative approaches; and enables students to gain an understanding of the suitable quantitative approaches used in performance evaluations (and related areas).

ORBS 7100 Managing Complexity: The Systems Approach (2,2,0)
This course introduces a range of soft OR/systems methods in a practical and yet critical way.

ORBS 7110 Quantitative Models for Marketing (2,2,0)
This course aims to study market response models that capture the factors that drive a market and market segmentation models for conducting segmentation studies.

ORBS 7120 Business Intelligence and Decision Support (2,2,0)
The aims of this course are to study the concepts and tools of business intelligence, to explore the process, contents and context of managerial decision making and to look at how business intelligence can enhance a company's competitive advantage and improve its top management decision-support effectiveness.

ORBS 7130 Survey Sampling (2,2,0)
This course introduces the overall planning of the survey operation and design and selection of samples and the design of questionnaires; the various survey sampling methods and the corresponding analyses of data, especially the estimation methods of population mean and proportion.

ORBS 7140 Actuarial Statistics (2,2,0) (E)
This course introduces the mathematics of risk and insurance, life contingencies as applied to models including expenses, non-forfeiture benefits, dividends, and valuation theory for pension plans.

ORBS 7150 Experimental Design (2,2,0)
This course introduces various kinds of experimental designs involving factorial and uniform designs as well as design for computer experiments.

ORBS 7160 Network and Project Management (2,2,0) (E)
This course introduces the fundamental idea, techniques and algorithms for network, transportation, and assignment models, as well as project management.

ORBS 7180 Heuristic and Structured Problems in Operational Research (2,2,0) (E)
This course introduces model building and solution techniques for practical problems in mathematical programming, and the methods in the design and analysis of algorithms for solution to large size practical real-life problems.

ORBS 7190 Data Mining and Knowledge Discovery (2,2,0) (E)
This course introduces the concept of data mining and knowledge discovery, and data mining techniques (included advance statistical and machine learning technique) for solving problems such as data cleaning, clustering, classification, relation detection, and forecasting.

ORBS 7200 Derivatives (2,2,0) (E)
This course introduces computational methods for problems of finance, including mainly the computation of market indicators and option price.

ORBS 7210 Work-base Learning (2,0,2) (E)
This course gives an opportunity for students to apply the skills and knowledge from the MSc programme to local (Hong Kong) companies/industries.

ORBS 7220 Risk and Portfolio Management (2,2,0) (E)
This course introduces the fundamental concepts of financial derivatives and portfolio risk measurement and management. Students will learn why both firms and individual investors should learn how to measure and manage risk.

ORBS 7231-2 Dissertation I & II (6,0,9)
This is an individual dissertation which usually relates to the operational research and business statistics, and requires knowledge and skill acquired in the course. A thesis and an oral presentation are required upon completion of the project.

ORBS 7240 Forecasting and Demand Management (2,2,0)
To learn the theory of business forecasting, apply forecasting methods in practice using computer tools and real-world data, understand how firms should set and update pricing and product availability decisions across their various selling channels in order to maximize profitability.

ORBS 7250 Applied Multivariate Analysis (3,3,0) (E)
This course introduces classical multivariate analysis and techniques which are useful for analysing both designed experiments and observational studies.

ORBS 7260 Applied Time Series (3,3,0) (E)
This course introduces sophisticated statistical techniques and models for analysing time series data.

ORBS 7270 Financial Calculus (2,2,0)
This course introduces derivative pricing. Students will learn some well-known mathematical pricing models of financial instruments under no arbitrary principle. We first overview some fundamental probability, statistical knowledge and skills required for mathematical finance. Then, we shall introduce an important concept in financial pricing models, Martingale and Risk neutrality. In the incomplete market, Martingale probability measure provides an important method in obtaining a fair instrument price under no arbitrary principle. Then, we shall

study three well-known approaches to model the dynamic of the financial instruments, they are Markov process, Poisson process and Brownian model. To highlight the practical relevance of the course materials we shall discuss a number of real-world case studies throughout the course.

ORGC 1240 Public Speaking (3,1,2)
This course presents the principles and techniques of public speaking and introduces the students to effective uses of presentational software. Students practise analysis, formulation, organization, development and delivery of ideas and are provided with the instruction and practice in the utilization of common presentational software to support the effective communication of their ideas to the audience.

ORGC 1310 Interpersonal Communication (3,2,1)
This course introduces the theories and principles of effective communication as they apply to interpersonal and relational contexts of interaction. It aims to increase students' ability to note communication patterns and processes, and to make active and constructive choices during their interaction with other people. Analysis of the major variables in face-to-face communication include topics on verbal and nonverbal behaviors, self-awareness and disclosure, interpersonal perceptions and communication competence, and types of relationship.

ORGC 2005 Group Communication (3,2,1) (E)
Theories and processes of small groups are reviewed as relevant to enhance communication skills necessary for productive group interaction. Emphasis is placed on the types of small group discussions oriented towards effective problem solving, decision-making, and conflict management, as well as the role of leadership in the process, focusing on the behaviour of groups and leaders as inherently communicative. Students will study small group and leadership communication theory, research, and practice from several different perspectives, focusing on how group synergy emerges from the communication.

ORGC 2007 Organizational Communication (3,2,1) (E)
Prerequisite: COMM 1005 Introduction to Communication
This course examines various theoretical approaches to communication phenomena in organizations. Analyses of organizational communication problems in the local settings will be conducted. Emphasis will be given in evaluating the applicability of existing communication theories to organizational practices.

ORGC 2015 Computer Mediated Communication (3,2,1)
This course explores the influences of computer technology on communication studies and the inter-relations among computer network, culture and communication, and reviews some major concepts of computer mediated communication (CMC) as presented in academic publications. Students are encouraged to both utilize computer technology to demonstrate an alternative form of presentation and reflect critically to such communication phenomenon.

ORGC 2016 Culture, Society and the Media (3,2,1) (E)
Prerequisite: COMM 1005 Introduction to Communication
This course is an introduction to cultural studies. This new area within the discipline of communication brings social and political analysis to the study of communicative practice. The emphasis is on developing sets of concepts which help to understand communicative power, using examples from film, press, television, popular music, fiction, and so forth.

ORGC 2017 Nonverbal Communication (3,2,1)
Prerequisite: COMM 1005 Introduction to Communication
Nonverbal behaviour is examined as part of the package of interacting signals which are fundamental to interpersonal, group, and all forms of mass mediated communication. Surveys of the major divisions of kinesics, proxemics, artifactual, chronemics and paralinguistics are supplemented with published scholarship in the comparatively minor areas of tactile, environmental and olfactory research. Cross-cultural implications are explored. Primary emphasis is placed on the practicalities for the communication professional who designs as well as interprets signs. A research project gives practical experience for methodically recording naturalistic observation.

ORGC 2025 Interpersonal Communication (3,2,1) (E)
This course introduces the theories and principles of effective communication as they apply to interpersonal and relational contexts of interaction. It aims to increase students' ability to note communication patterns and processes, and to make active and constructive choices during their interaction with other people. Analysis of the major variables in face-to-face communication include topics on verbal and nonverbal behaviours, self-awareness and disclosure, interpersonal perceptions and communication competence, and types of relationship.

ORGC 2027 Interviewing (3,2,1) (E)
Interpersonal communication in interviewing situations is examined including dyadic communication principles and specific applications in selection, appraisal, counselling, exit, journalistic, and survey interview situations.

ORGC 2110 Culture, Society and the Media (3,2,1)
Prerequisite: COMM 1160 Introduction to Communication
This course is an introduction to cultural studies. This new area within the discipline of communication brings social and political analysis to the study of communicative practice. The emphasis is on the developing sets of concepts which help to understand communicative power, using examples from film, press, television, popular music, fiction and so forth.

ORGC 2120 Computer Mediated Communication (3,2,1)
This course explores the influences of computer technology on communication studies and the inter-relations among computer network, culture and communication, and reviews some major concepts of computer mediated communication (CMC) as presented in academic publications. Students are encouraged to both utilize computer technology to demonstrate an alternative form of presentation and reflect critically to such communication phenomenon.

ORGC 2140 Persuasion and Social Influence (3,2,1) (E)
Prerequisite: COMM 1160 Introduction to Communication
Taking a social scientific approach, this course is designed to provide students with foundational theories of persuasion and their applications to everyday situations. Specifically, this course focuses on audience analysis, attitude formation, the attitude-behaviour relationship, and changing attitudes and/or behaviour. Persuasion practices in the Chinese culture will be compared with those in Western world.

ORGC 2160 Group Communication (3,2,1)
Theories and processes of leadership and small groups are reviewed as relevant to enhance communication skills necessary for productive group interaction. Emphasis is placed on the types of small group discussions oriented toward effective problem solving, decision making and conflict management, as well as the role of leadership in the process, focusing on the behaviour of groups and leaders as inherently communicative. Students will study small group and leadership communication theory, research and practice from several different perspectives, focusing on how leadership emerges from the communication.

ORGC 2210 Interviewing (3,2,1) (E)
Interpersonal communication in interviewing situations is examined including dyadic communication principles and specific applications in selection, appraisal, counselling, exit, journalistic, and survey interview situations.