REGULATIONS FOR THE DEGREE OF
BACHELOR OF ARTS AND SCIENCES IN SOCIAL DATA SCIENCE
[BASc(SDS)]

These regulations apply to students admitted to the Bachelor of Arts and Sciences in Social Data Science [BASc(SDS)] curriculum in the academic year 2025-26 and thereafter.

(See also General Regulations and Regulations for First Degree Curricula)

Ed430 Admission to the degree

To be eligible for admission to the degree of Bachelor of Arts and Sciences in Social Data Science, candidates shall

(a) comply with the General Regulations;
(b) comply with the Regulations for First Degree Curricula;
(c) hold an Associate Degree or a Higher Diploma; or other qualifications of equivalent standard accepted for this purpose; and
(d) satisfy all the requirements of the curriculum in accordance with these regulations and the syllabuses.

Ed431 Period of study

The curriculum for the degree of Bachelor of Arts and Sciences in Social Data Science shall normally require four semesters of full-time study and a summer semester, extending over not fewer than two academic years, and shall include any assessment to be held during and/or at the end of each semester. Candidates shall not in any case be permitted to extend their studies beyond the maximum period of registration of three academic years, unless otherwise permitted or required by the Board of the Faculty.

Ed432 Selection of courses

(a) Candidates shall select their courses in accordance with these regulations and the guidelines specified in the syllabuses before the beginning of each semester. Changes to the selection of courses may be made only during the add/drop period of the semester in which the course begins, and such changes shall not be recorded on the transcript of the candidate. Requests for changes after the designated add/drop period of the semester shall not normally be considered.
(b) Withdrawal from courses beyond the designated add/drop period will not be permitted, except for medical reasons approved by the Board of the Faculty.

Ed433 Curriculum requirements

(a) To complete the curriculum, candidates shall follow instruction in the syllabuses prescribed and
  (i) satisfy the requirements prescribed in UG5 of the Regulations for First Degree Curricula[1]; and
  (ii) complete successfully not fewer than 120 credits, in the manner specified in these regulations and syllabuses, comprising:
    - 72 credits in the Major in Social Data Science (including 12 credits of capstone

[1] Under Ed434(b), candidates will be granted advanced standing of 120 credits, including 24 credits of courses in the Common Core Curriculum, a non-credit bearing Academic Communication in English course and 6 credits in a Chinese language enhancement course to fulfill part of the UG5 requirements for graduation.

experience);

- 6 credits in an English in the Discipline course;
- 12 credits of courses in the Common Core Curriculum, including not more than one course from the same Area of Inquiry;
- 6 credits in artificial intelligence literacy;
- 24 credits in free elective courses; and
- a non-credit bearing course in national education and national security education, and any other non-credit bearing courses as may be required from time to time.

(b) Candidates shall normally be required to take not fewer than 24 credits nor more than 30 credits in any one semester (except the summer semester) unless otherwise permitted or required by the Board of the Faculty, or except in the last semester of study when the number of outstanding credits required to complete the curriculum requirements may be fewer than 24 credits.

(c) Candidates may, of their own volition, take additional credits not exceeding 6 credits in each semester, and/or further credits during the summer semester, accumulating up to a maximum of 72 credits in one academic year. With the special permission of the Board of the Faculty, candidates may exceed the annual study load of 72 credits in a given academic year provided that the total number of credits taken does not exceed the maximum curriculum study load of 144 credits for the normative period of study specified in the curriculum regulations, save as provided for under Ed433(d).

(d) Where candidates are required to make up for failed credits, the Board of the Faculty may give permission for candidates to exceed the annual study load of 72 credits provided that the total number of credits taken does not exceed the maximum curriculum study load of 216 credits for the maximum period of registration specified in the curriculum regulations.

Ed434 Advanced standing and credit transfer

(a) Advanced standing may be granted to candidates in recognition of studies completed successfully before admission to the University in accordance with UG2 of the Regulations for First Degree Curricula. Credits granted for advanced standing shall not be included in the calculation of the GPA but will be recorded on the transcript of the candidate.

(b) In recognition of candidates' fulfillment of requirement stipulated in Ed430(c), they will be granted advanced standing of 120 credits, including 24 credits of courses in the Common Core Curriculum, a non-credit bearing Academic Communication in English course and 6 credits in a Chinese language enhancement course.

(c) Candidates may, with the approval of the Board of the Faculty, transfer credits for courses completed at other institutions at any time during their candidature. The number of transferred credits will be recorded on the transcript of the candidate, but the results of courses completed at other institutions shall not be included in the calculation of the GPA. The number of credits to be transferred shall not exceed half of the total credits normally required under the degree curricula of the candidates during their candidature at the University.

Ed435 Assessment and grades

(a) Candidates shall be assessed for each of the courses for which they have registered, and assessment may be conducted in any combination of coursework, written examinations and/or any other assessable activities. Only passed courses will earn credits. Grades shall be awarded in accordance with UG8 of the Regulations for First Degree Curricula.

(b) Courses in which candidates are given an F grade shall be recorded on the transcript of the candidate, together with the new grade if the candidate is re-examined as a second attempt or retakes the failed course. All failed grades shall be included in calculating the GPA and shall be taken into account for the purposes of determining eligibility for award of the BASc(SDS) degree, honours classification and whether a candidate shall be recommended for discontinuation of

studies.

(c) Candidates shall not be permitted to repeat a course for which they have received a D grade or above for the purpose of upgrading.

(d) There shall be no appeal against the results of examinations and all other forms of assessment.

Ed436 Absence from examination

Candidates who are unable, because of illness or other acceptable reason, to be present at the written examinations of any course may apply for permission to present themselves at a supplementary examination of the same course to be held before the beginning of the First Semester of the following academic year. Any such application shall be made within seven calendar days of the first day of the candidate's absence from any examination. Any supplementary examination shall be part of that academic year's examinations, and the provisions made in these regulations for failure at the first attempt shall apply accordingly.

Ed437 Retaking/Re-examination of failed course(s)

(a) Candidates who have failed to satisfy the examiners in course(s), but have
- completed successfully 36 or more credits in two consecutive semesters (not including the summer semester), except where candidates are not required to take such a number of credits in the two given semesters; and
- achieved an average Semester GPA of 1.0 or higher for two consecutive semesters (not including the summer semester),

shall be required, as specified by the relevant Board of Examiners:
(i) to undergo re-assessment(s)/re-examination(s) in the failed course(s) to be held no later than the end of the following semester (not including the summer semester); or
(ii) to re-submit failed coursework, without having to repeat the same course of instruction; or
(iii) to repeat the failed course(s) by undergoing instruction and satisfying the assessments; or
(iv) for elective course(s), to take another course *in lieu* and to satisfy the assessment requirements.

(b) Candidates shall not be permitted to retake a failed course or present themselves for re-examination as a second attempt if they have otherwise satisfied all the requirements stipulated in these regulations for the award of the BASc(SDS) degree.

Ed438 Failure in re-examination

(a) Candidates who have failed to satisfy the examiners at re-assessment(s)/re-examination(s), granted under Regulation Ed437, of course(s) in the Social Data Science Major shall:
(i) if these courses total *not more* than 12 credits, normally be permitted to progress to the following year of study and to present themselves for re-examination, in any prescribed form of examination; or
(ii) if these courses total *more* than 12 credits, be recommended for discontinuation of their studies as stipulated under Regulation Ed439(d).

(b) Candidates who have failed to satisfy the examiners at a supplementary examination, granted under Regulation Ed436, shall be permitted to present themselves for re-assessment in accordance with Regulation Ed437, as directed by the Board of Examiners.

Ed439 Discontinuation

Unless otherwise permitted by the Board of the Faculty, candidates shall be recommended for

discontinuation of their studies if they have

(a) failed to complete successfully 36 or more credits in two consecutive semesters (not including the summer semester), except where candidates are not required to take such a number of credits in the two given semesters; or
(b) failed to achieve an average Semester GPA of 1.0 or higher for two consecutive semesters (not including the summer semester); or
(c) failed BSDS4999 Project; or
(d) failed to satisfy the examiners at re-assessment(s)/re-examination(s) of course(s) in the Social Data Science Major, granted under Regulation Ed437, of more than 12 credits; or
(e) exceeded the maximum period of registration specified in Regulation Ed431.

Ed440 Award of degree and honours classifications

(a) To be eligible for the award of the degree of Bachelor of Arts and Sciences in Social Data Science, candidates shall have successfully completed the curriculum as stipulated under Regulation Ed433.
(b) Honours classifications for the degree of Bachelor of Arts and Sciences in Social Data Science shall be awarded in five divisions: First Class Honours, Second Class Honours Division One, Second Class Honours Division Two, Third Class Honours, and Pass. The classification of honours shall be determined by the Board of Examiners for the degree in accordance with the following Graduation GPA scores (GGPA) stipulated in UG9(a) of Regulations for First Degree Curricula, with all courses taken (including failed courses, but not including courses approved by the Senate graded as 'Pass', 'Fail' or 'Distinction') carrying weightings which are proportionate to their credit values:

Class of honours	*GGPA range*
First Class Honours	3.60 – 4.30
Second Class Honours	(2.40 – 3.59)
Division One	3.00 – 3.59
Division Two	2.40 – 2.99
Third Class Honours	1.70 – 2.39
Pass	1.00 – 1.69

(c) Honours classification may not be determined solely on the basis of a candidate's Graduation GPA and the Board of Examiners for the degree may, at its absolute discretion and with justification, award a higher class of honours to a candidate deemed to have demonstrated meritorious academic achievement but whose Graduation GPA falls below the range stipulated above of the higher classification by not more than 0.1 Grade Point.
(d) A list of candidates who have successfully completed the degree requirements shall be posted on Faculty notice boards.

SYLLABUSES FOR THE DEGREE OF
BACHELOR OF ARTS AND SCIENCES IN SOCIAL DATA SCIENCE
[BASc(SDS)]

(This programme will not be offered to non-BASc(SDS) students as a second major.)

These syllabuses apply to students admitted to the Bachelor of Arts and Sciences in Social Data Science [BASc(SDS)] curriculum in the academic year 2025-26 and thereafter.

Candidates are required to complete courses totaling not fewer than 120 credits for the Bachelor of Arts and Sciences in Social Data Science degree. These courses must comprise:

- 72 credits in the Major in Social Data Science (including 24 credits of introductory courses; 36 credits of advanced courses; 12 credits of capstone experience);
- 6 credits in an English in the Discipline course;
- 12 credits of courses in the Common Core Curriculum in different Areas of Inquiry;
- 6 credits in artificial intelligence literacy;
- 24 credits in free elective courses; and
- a non-credit bearing course in national education and national security education, and any other non-credit bearing courses as may be required from time to time.

FIRST YEAR OF THE CURRICULUM

Candidates shall normally take the following courses:

- 36 credits in the Major in Social Data Science;
- a 6-credit course in the Common Core Curriculum;
- a 6-credit English in the Discipline course;
- a 3-credit artificial intelligence literacy course; and
- 12 credits in free elective courses or Advanced Elective Courses.

SECOND YEAR OF THE CURRICULUM

Candidates shall normally take the following courses:

- 36 credits in the Major in Social Data Science;
- a 6-credit course in the Common Core Curriculum;
- a 3-credit artificial intelligence literacy course; and
- 12 credits in free elective courses.

MAJOR IN SOCIAL DATA SCIENCE (72 credits)

Candidates are required to complete 72 credits in the Major in Social Data Science (including 24 credits of introductory courses; 36 credits of advanced courses; 12 credits of capstone experience) as follows:

Introductory Courses (24 credits)
BSDS3001 Social data science foundations (6 credits)
BSDS3002 Social computing: methods and applications (6 credits)

BSDS3003 Data processing and visualization (6 credits)
BSDS3004 Introduction to statistics (6 credits)

Advanced Compulsory Courses (18 credits)
BSDS3005 Advanced statistical modeling for social applications (6 credits)
BSIM4018 Data warehousing and data mining (6 credits)
SDST2604 Introduction to R/Python programming and elementary data analysis (6 credits)

Advanced Elective Courses (18 credits)
Candidates are required to complete one course from each of the following three disciplines.

I. Faculty of Education
BSIM3017 Database systems (6 credits)
BSIM3021 Web development, users and management (6 credits)
BSIM3025 Multimedia and human-computer interaction (6 credits)
BSIM4011 Project management (6 credits)
BSIM4019 Electronic commerce (6 credits)
BSIM4020 Information society issues and policy (6 credits)
BSIM4024 Fundamentals of object-oriented programming (6 credits)
BSIM4027 Selected topics in information management (6 credits)
BSIM4028 Principles and practice of data visualization (6 credits)
MLIM6319 Information behavior (6 credits)
MLIM7350 Data curation (6 credits)

II. Faculty of Social Sciences
GEOG1020 Modern maps in the age of big data (6 credits)
GEOG2090 Introduction to geographic information systems (6 credits)
GEOG2152 Health and medical geography (6 credits)
GEOG3417 Health, wellbeing, place and GIS (6 credits)
POLI3039 Public policy analysis (6 credits)
POLI3080 Global political economy (6 credits)
POLI3131 In search of good policy: an introduction to policy evaluation (6 credits)
PSYC2071 Judgements and decision making (6 credits)
SOCI2080 Media and culture in modern societies (6 credits)
SOWK2023 Social policy issues in Hong Kong (6 credits)
SOWK2131 Behavioural economics for social change (6 credits)
SOWK3091 Mental health sciences and society (6 credits)

III. Faculty of Science
SDST2605 Demographic and socio-economic statistics (6 credits)
SDST3612 Statistical machine learning (6 credits)
SDST3613 Marketing analytics (6 credits)
SDST3617 Sample survey methods (6 credits)
SDST3622 Data visualization (6 credits)
SDST4011 Natural language processing (6 credits)
SDST4601 Time-series analysis (6 credits)
SDST4609 Big data analytics (6 credits)

Capstone Experience (12 credits)
BSDS3999 Internship (6 credits)
BSDS4999 Project (6 credits)

(Not all elective courses will be offered every year. For candidates who have no programming background, it is highly recommended to take at least one programming-related course to strengthen the background knowledge for the major study.)

Introductory Courses (24 credits)

Candidates are required to complete 24 credits of Introductory Courses for the major requirement.

BSDS3001 Social data science foundations (6 credits)

This course introduces foundations of social data science and provides an overview of the current issues that are challenging to the field. Students will explore how large-scale social data can be studied and analyzed in order to take an interdisciplinary approach integrating the relevant disciplines to address social issues or challenges. Methods of inquiry and research in social data science will be discussed to prepare students' further study in developing interdisciplinary solutions to social and policy issues.

Assessment: 100% coursework.

BSDS3002 Social computing: methods and applications (6 credits)

Social computing employs computational approaches and social analytics to study social behaviour in a broader context. This course is aimed to develop an understanding of social computing from an interdisciplinary perspective. Concepts and theories related to social computing applications are introduced from fields such as social psychology, sociology, business, and communication. Methods of computational models and social analytics including network analysis and collaborative filtering are covered in this course. The applications of social computing in supporting and exploring organizational and individual behaviour are discussed in depth.

Assessment: 100% coursework.

BSDS3003 Data processing and visualization (6 credits)

This course provides an in-depth exploration of data processing and visualization techniques, teaching students how to develop comprehensive data strategies for generating, collecting, and consuming data. Key topics include data collection and ingestion, data cleaning and pre-processing, data transformation and feature engineering, and data visualization. Through a series of hands-on practices, students will grasp the foundations of building end-to-end data pipelines, and the essential skills needed in exploring, analyzing, and communicating data-driven insights in social data science projects.

Prerequisite: Basic knowledge of Python programming is needed.

Assessment: 100% coursework.

BSDS3004 Introduction to statistics (6 credits)

This course introduces the most commonly used statistical methods in educational and social science research. Topics covered in this course include descriptive statistics, graphical representations, correlation, regression, basic probability, sampling distributions, confidence intervals, one- and two-sample t-tests, chi-square test, and one-way analysis of variance. This course also introduces how to use contemporary software (e.g. SPSS and Python) for the basic data analysis. No prior knowledge of statistics is required, but essentials of arithmetic and basic algebra will be used throughout this course.

Assessment: 100% coursework.

Advanced Compulsory Courses (18 credits)

Candidates are required to complete 18 credits of Advanced Compulsory Courses for the major requirement.

BSDS3005 Advanced statistical modeling for social applications (6 credits)

This course introduces students to the purposeful use of advanced statistical modeling methods to answer meaningful questions from complex data. Students will learn to distinguish among three purposes of modeling: (a) understanding and explaining relationships between variables through correlational analysis and causal inference; (b) discovering hidden patterns in data through unsupervised learning models; and (c) predicting future outcomes by building and evaluating supervised learning models. Through this course, students will engage in hands-on exercises and develop the ability to choose, apply, and interpret statistical models with real-world datasets.

Assessment: 100% coursework.

BSIM4018 Data warehousing and data mining (6 credits)

This course aims to introduce the challenges and solutions of discovering and extracting organizational information from heterogeneous sources through the use of data warehousing and data mining techniques. Topics include the motivation for and the processes of data warehousing, data warehouse architecture and design, online analytical processing, as well as concepts and techniques of data mining. Ethics and personal privacy issues in data mining are also addressed.

Assessment: 100% coursework.

SDST2604 Introduction to R/Python programming and elementary data analysis (6 credits)

This course is designed to provide a first-level introduction to Python programming for statistics. This course focuses on learning the basic programming skills in Python with examples and applications in elementary statistical analysis. The programming skills involved can be applied to input and output of data sets, work with different data types, manipulation and transformation of data, random sampling, descriptive data analysis, and production of professional summary reports with high-quality graphs.

Assessment: 100% coursework.

Advanced Elective Courses (18 credits)

Candidates are required to complete 18 credits of the Advanced Elective Courses, one course from each of the three disciplines as prescribed in the syllabus, for the major requirement. They may also take Advanced Elective Courses as free electives to enhance and extend their learning in the field. Not all of the courses listed below will be offered every year.

BSIM3017 Database systems (6 credits)

This course aims to introduce fundamental concepts of database management systems, with an emphasis on the relational database model and applications in information agencies. Topics include the motivation for database systems, data modeling, principles of database design, data definition and manipulation languages. Support for procedural database objects in Structured Query Language (SQL) is also introduced.

Assessment: 70% coursework, 30% examination.

BSIM3021 Web development, users and management (6 credits)

This course covers basic principles of web design and development from technical, user, and management perspectives. It aims to develop an understanding of web-related technologies and user behaviour in such environments and of best practice in the creation, organization, and maintenance of such websites through studying and practising relevant theories.

Assessment: 100% coursework.

BSIM3025 Multimedia and human-computer interaction (6 credits)

The course provides a general introduction to the theory and practice of multimedia information systems. We will explore how to design and develop multimedia information systems that account for the principles of human information processing, sensation, perception, cognition, interaction, and learning. This course focuses on developing systems in an online environment, but the principles should apply to every information system that interacts with people. You will gain theoretical background and practical experience to design, innovate, and critique digital multimedia information systems.

Assessment: 100% coursework.

BSIM4011 Project management (6 credits)

This course introduces the project life cycle and the techniques and change management aspects of managing, planning, and implementing successful projects in organizations. Conceptual foundations are the focus so students can use project management software effectively. General management and communication skills are explored in the context of project manager communication with project teams, clients, and other stakeholders.

Assessment: 100% coursework.

BSIM4019 Electronic commerce (6 credits)

This course examines organizational and technological issues related to E-Commerce. Topics include business models for B2B or B2C E-commerce, E-commerce strategies for business, technology infrastructure for E-commerce system development, information privacy and security, and emerging topics such as Mobile Commerce and Web 2.0 Commerce.

Assessment: 100% coursework.

BSIM4020 Information society issues and policy (6 credits)

The course examines the link between information society issues and the need for information policies that address these issues. Issues including intellectual property rights and copyright, privacy and freedom of access to information, information and culture, technology and culture, and societal needs and demands for information are explored. Information policies and the policy development process are addressed at macro and micro levels. At the completion of this course, participants will be able to identify the need for information policies, critique existing information policies, and develop information policies at the organizational level.

Assessment: 100% coursework.

BSIM4024 Fundamentals of object-oriented programming (6 credits)

This course aims to equip students with basic concepts of object-oriented programming and practical knowledge for designing and implementing simple software applications through an object-oriented programming language. In addition to basic programming constructs such as control statements, basic data structures and algorithms are also introduced.

Assessment: 100% coursework.

BSIM4027 Selected topics in information management (6 credits)

Students will learn contemporary topics in information management (IM) not covered in regular courses in the curriculum, emphasizing current issues, challenges, methodologies, and/or applications under the current globalized knowledge economy. After completing this course, students will understand some current topics of information management to facilitate their future careers or studies, particularly as an information professional, educator, or manager. A variety of examples and case studies will be given concerning different context of information management.

Assessment: 100% coursework.

BSIM4028 Principles and practice of data visualization (6 credits)

In the era of big data, data visualization plays a crucial role in information management. It translates information into a visual context, making it easier to identify patterns and trends, and ultimately helping decision-makers gain insights from large and complex data sets. Interactive data visualizations and dashboards also assist organizations in monitoring their performance, enabling them to identify and respond to various issues effectively. This course aims to introduce students to the principles and practice of data visualization. Students will learn fundamental principles, theories, and rules of data visualization. Students are given opportunities to prepare data sets and apply related principles to create visuals and dashboards using drag-and-drop visualization tools (e.g. Tableau, Qlik or Power BI). A variety of chart types (e.g. comparing categories, time/trend, distributions, relationship and composition) will be introduced. The importance of ethical practice in data visualization is also emphasized.

Assessment: 100% coursework.

GEOG1020 Modern maps in the age of big data (6 credits)

Maps have been widely used in our everyday work-life activities, while modern maps, such as photo-realistic streetscape maps available on the Internet and dynamic/interactive maps with changing 3D views, which are made possible with big data, i.e. extremely large datasets relating to human behavior

and social interaction captured with modern positioning and affordable mobile devices, are making our daily life more convenient and our work more efficient. This course introduces the main features of modern maps, the characteristics of big data, the opportunities and challenges, and the basic principles for producing and applying modern maps in the age of big data.

Assessment: 60% coursework, 40% examination.

GEOG2090 Introduction to geographic information systems (6 credits)

This course introduces students to the computer-assisted techniques of geographic data analysis, collectively known as GIS, which involve the overlaying and merging of spatial data layers. The principles of such an approach will be discussed focusing on the nature of spatial data, raster and vector data structures, GPS data collection, data transformation and geocoding, and spatial overlay techniques. Students must complete five simple exercises involving the application of GIS concepts in real-life situations. An examination requiring short-essay responses will be administered during the examination period.

Assessment: 60% coursework, 40% examination.

GEOG2152 Health and medical geography (6 credits)

This course introduces students to the history, theories and methods of the Health and Medical Geography subfield. We will explore topics from the perspective of health equity. Topics include tools of the field, social, biologic and spatial determinants of health, urban and rural health, the health transition and chronic disease, and climate change and health. This course will incorporate discussions on current, regional events to highlight the importance of various geographic aspects to understanding the many dimensions of health.

Assessment: 50% coursework, 50% examination.

GEOG3417 Health, wellbeing, place and GIS (6 credits)

(Students are recommended to take GEOG2090 Introduction to geographic information systems before taking this more advanced course)

All aspects of the natural, built, and socioeconomic environment may affect human health and wellbeing both individually and collectively. The idea of applying GIS techniques in health-related studies is not new. Indeed, GIS has been used for decades in the western countries to undertake assessment and control of environmental factors that can potentially affect health. This course explores how GIS is used to address and analyze pressing health problems from the geographical perspective. It covers such topics as theoretical and practical issues, simple disease mapping, disease pattern analysis, and environmental association through spatial modeling techniques. The course will be conducted in a series of lectures and hands-on practices (six computer-based exercises) in a problem-based learning environment. Students will design and implement spatial analysis and statistical approaches on a health outcome topic that is demonstrated during the semester.

Assessment: 100% coursework.

MLIM6319 Information behavior (6 credits)

This course introduces the essential concepts, theories, and models of information behaviour, as well as the critical reflections on the usage of digital technologies in facilitating information behaviour in both social and organizational settings. Research methods and network analysis for studying information behaviour will also be introduced in this course. In doing so, this course aims to orient students with a comprehensive set of conceptual and theoretical knowledge associated with information behaviour.

Assessment: 100% coursework.

MLIM7350 Data curation (6 credits)

This course discusses all aspects of data curation principles and best practices. The goal is to prepare students in data planning, management, documentation, preservation and sharing in all organizations with complex digital environments. This course is complementary to courses in data analysis and database management. Topics covered in this course include: overview of data management, data management life cycles; data management plans in the context of sponsored projects, risk and sustainability; standards and tools for data storage, access and security; metadata standards and design in context; data sharing and reuse; legal and ethical considerations.

Assessment: 100% coursework.

POLI3039 Public policy analysis (6 credits)

This is an introductory course to public policy analysis with an emphasis on the production of advice for decision-makers. This course builds foundations of public policy analysis by covering related theories and concepts. Having answered why we need government intervention in solving public policy problems, this course also seeks to equip students with skills and techniques to analyze, design, and assess policy options.

Assessment: 100% coursework.

POLI3080 Global political economy (6 credits)

This course explores the political dimensions of global economic relations. The objectives of this course are to give students a better appreciation of major problems and dilemmas of contemporary global economy and to provide a conceptual framework for addressing policy problems in the global economy. We begin by examining several contending perspectives on global political economy. The course then examines distinct issue areas: globalization, development, trade, capital flows, financial crises, multinational production, environmental degradation, world hunger, and the transnational movement of people.

Assessment: 60% coursework, 40% examination.

POLI3131 In search of good policy: an introduction to policy evaluation (6 credits)

This course provides an introduction to rigorous policy evaluation. The main objective of this course is to familiarize students with a wide range of quantitative methods that are increasingly used to evaluate public policy and inform policy-making. Students will begin by reflecting on the interaction between statistics, policy analysis and decision-making. This will be followed by an introduction to the fundamental concepts underlying quantitative evaluation methods. The remainder of the course will focus on understanding the theory and application of policy evaluation methodologies, including

randomized experiments, instrumental variable analysis, matching methods and difference-in-differences. Additional topics to be covered include mixed methods approaches, review and synthesis approaches, choice experiments, and the impact of big data on evaluation methods. By the end of the course, students will be able to fully engage with published studies using quantitative evaluation methods and to be able to draw out appropriate policy implications. This course does not require any pre-existing experience or training in mathematics or statistics.

Assessment: 100% coursework.

PSYC2071 Judgements and decision making (6 credits)

To understand the psychological factors involved with human judgment and decision making. We will contrast human decision making with normative theories of rational choice, and survey psychological evidence of systematic decision biases and errors in judgments. We will discuss the heuristics and biases approach to judgment and decision errors, and critiques of this approach. Real world examples will be presented from the domains of medicine, economics, and consumer choice.

Assessment: 100% coursework.

SOCI2080 Media and culture in modern societies (6 credits)

This course introduces key thinkers, traditions and current debates in media and cultural studies and explores the central role of media and culture in contemporary social life. It enables students to understand media and culture as institution, practice, representation, production and consumption, and creativity. Topics include: (a) the rise of the mass entertainment industries and their influence on social behaviour; (b) the role of consumption in maintaining and creating new social identities and status hierarchy; (c) the search for fantasies in advertisement; (d) new regimes of body management and their impact on gender relations; (e) the reclaiming of gender, sexual and cultural identities; and (f) the various emerging forms of cultural politics and local activism.

Assessment: 60% coursework, 40% examination.

SOWK2023 Social policy issues in Hong Kong (6 credits)

This course examines the issues of social policy in Hong Kong including privatization of welfare services, the impact of welfare ideology on the state of development in Hong Kong, the issue of equity and equality in welfare provision, community care and service needs of the new arrivals from the mainland. Different theories of welfare will be discussed in relation to local welfare issues.

Assessment: 100% coursework.

SOWK2131 Behavioural economics for social change (6 credits)

This course will examine the relationship between behavioural economics and social change. Individuals frequently make decisions that systematically depart from the predictions of standard economic models based on a purely rational model. Behavioral economics attempts to integrate the understanding of the psychology of human behavior into economic and policy analysis. The course will review the major themes of behavioral economics and address the implications for social policy and social change in a wide variety of domains, including social security, health care, labour, education and social welfare programmes.

Assessment: 100% coursework.

SOWK3091 Mental health sciences and society (6 credits)

This course brings together cutting-edge knowledge and discussions on mental health from diverse but related disciplines of philosophy, psychology, psychiatry, epidemiology, and social and healthcare services administration, both in the unique local context and in the international mental health scene. Students will be introduced to the critical examination of theories and practices in mental health with real-world examples. Throughout the course, conceptual explorations will be illustrated by case studies, including two complex syndromes affecting youth (i.e. psychotic disorders) and elderly (i.e. dementia), as well as other common mental health conditions such as depression, anxiety and developmental disorders (e.g. autism spectrum disorder) where appropriate. Using the conventional disease/medical model as a starting point, students will be guided to understand mental health in the broader context of biological, psychological, social and cultural factors that operate in combination to affect mental health outcomes at individual and population levels.

Assessment: 100% coursework.

SDST2605 Demographic and socio-economic statistics (6 credits)

The course covers the major methods for studying demographic and socio-economic statistics, with a quantitative evidence-based approach to understand the socio-economic well-being of residents in a territory. The course aims to provide students with (a) essential underlying principles and the pertinent methods behind internationally adopted statistical indicators; and (b) skills in the statistical descriptions and further analysis for application to planning, policy-making and commercial endeavours of a territory.

Assessment: 35% coursework, 65% examination.

SDST3612 Statistical machine learning (6 credits)

Machine learning is the study of computer algorithms that build models of observed data in order to make predictions or decisions. Statistical machine learning emphasizes the importance of statistical methodology in the algorithmic development. This course provides a comprehensive and practical coverage of essential machine learning concepts and a variety of learning algorithms under supervised and unsupervised settings.

Prerequisite: BSIM4018

Assessment: 100% coursework.

SDST3613 Marketing analytics (6 credits)

This course is designed to provide an overview and practical application of trends, technology and methodology used in the marketing survey process including problem formulation, survey design, data collection and analysis, and report writing. Special emphasis will be put on statistical techniques particularly for analyzing marketing data including market segmentation, market response models, consumer preference analysis and conjoint analysis. Students will analyze a variety of marketing case studies.

Prerequisite: Any course with prefix SDST

Assessment: 50% coursework, 50% examination.

SDST3617 Sample survey methods (6 credits)

This course will cover design and implementation of sample surveys and analysis of statistical data thus obtained. Survey design includes overall survey design, design of sampling schemes and questionnaires, etc. Sampling methods include sample size determination, sampling and non-sampling errors and biases, methods of estimation of parameters from survey data, imputation for missing data etc.

Prerequisite: BSDS3004 or any course with prefix SDST

Assessment: 50% coursework, 50% examination.

SDST3622 Data visualization (6 credits)

This course will focus on how to work with statistical graphics, graphics that display statistical data, to communicate and analyze data. Students will learn a set of tools such as R to create these graphics and critically evaluate them.

Prerequisite: BSIM4018

Assessment: 100% coursework.

SDST4011 Natural language processing (6 credits)

Natural language processing (NLP) is a subfield of artificial intelligence, focusing on understanding human language. In essence, NLP is interested in building a tool that can use language like humans. This course will introduce the mathematical, statistical and computational challenges in natural language processing. It covers main applications of NLP techniques and a range of models in structured prediction and deep learning. In this course, students will gain a thorough introduction to cutting-edge machine learning and deep learning techniques for NLP.

Prerequisite: BSDS3001, BSDS3003, BSDS3004 and BSIM4018

Assessment: 100% coursework.

SDST4601 Time-series analysis (6 credits)

A time series consists of a set of observations on a random variable taken over time. Time series arise naturally in climatology, economics, environment studies, finance and many other disciplines. The observations in a time series are usually correlated; the course establishes a framework to discuss this. This course distinguishes different type of time series, investigates various representations for the processes and studies the relative merits of different forecasting procedures. Students will analyze real time-series data on the computer.

Prerequisite: SDST3600

Assessment: 40% coursework, 60% examination.

SDST4609 Big data analytics (6 credits)

In the past decade, huge volume of data with highly complicated structure has appeared in every aspect, such as social web logs, e-mails, video, speech recordings, photographs, tweets and others. The efficient extraction of valuable information from these data sources becomes a challenging task. This course focuses on the practical knowledge and skills of some advanced analytics and statistical modeling for solving big data problems.

Prerequisite: BSIM4018 or SDST3612

Assessment: 100% coursework.

Capstone Experience (12 credits)

Candidates are required to complete 12 credits of Capstone Courses for the major requirement.

BSDS3999 Internship (6 credits) (A capstone requirement)

Students will apply what they learn from their academic studies into real-life situations by working on social data science related projects through internship experience in an organization. The course provides opportunities for the application of social data science knowledge and techniques to practical situations.

Assessment: 100% coursework.

BSDS4999 Project (6 credits) (A capstone requirement)

Students will learn basic research methods and skills in doing a project for social data science. Topics including key elements of a research project, steps of the research process, and quantitative and qualitative research methods are introduced in lectures. Students then complete a substantial final year project under supervision.

Assessment: 100% coursework.

ENGLISH IN THE DISCIPLINE COURSE (6 credits)

CAES9420 Academic English for information management and social data science students (6 credits)

This one-semester, 6-credit English course will provide the opportunity for information management students and social data science students to develop their report writing and oral presentation skills for disciplinary studies and academic purposes. Students are required to identify an issue relevant to their discipline and undertake a small-scale research project to investigate the problem issue and communicate an argument to an academic audience in writing with appropriate organizational and rhetorical skills. During the process, students need to gather data by means of an interview, perform analysis on the information they obtain, and present their findings orally and in formal report writing.

The course will allow students to practice relevant English language skills for their Final Year Project/Capstone Experience courses.

Assessment: 100% continuous assessment by coursework.

COMMON CORE CURRICULUM (12 credits)

Candidates are required to complete 12 credits of courses in the Common Core Curriculum in different Areas of Inquiry.

ARTIFICIAL INTELLIGENCE LITERACY (6 credits)

Candidates are required to complete 6 credits in artificial intelligence literacy.

ELECTIVE COURSE (24 credits)

Candidates are required to complete 24 credits in elective courses.