

Credit Unit Statement

(for Major in Decision Analytics)

General Guideline for Contact Hours Requirement in the BSc Degree Curriculum

- (a) A 6-credit course has around 120-180 total study hours, including contact hours, study time, assignment and assessment.
- (b) About 30% of the total study hours are actual contact hours in the form of a class, e.g. lecture hours.
- (c) A 6-credit course has around 36 to 45 lecture hours.
- (d) For lecture-based courses, normally there will be tutorial/discussion sessions.
- (e) For courses employing a non-lecture or lab-based approach, e.g. field camp, IT-based or project-based courses, students are expected to devote about 120-180 hours for a 6-credit course and 240-360 hours for a 12-credit course.

Courses of Different Levels for Major in Decision Analytics

A. Introductory Level Courses

(i) Science Foundation Courses

The two science foundation courses aim to provide students a holistic view of the science discipline in terms of its nature, concepts and impact on civilization and society and equip students with the basic skills required for their science studies and research. Students will also be provided an overview of the giant web of knowledge that makes up science and general principles and unifying concepts of science used in various disciplines to describe the diverse phenomena and objects in the natural world.

(ii) Introductory Disciplinary Courses

The introductory disciplinary courses provide students with the basic knowledge and foundation required to understand the concepts and methodologies of decision analytics. Students will also be introduced to the underlying theories in relation to a broad range of related disciplinary academic or professional areas. The course list comprises of both lecture-based courses and lecture with laboratory component courses.

B. Advanced Level Courses

The advanced level courses focus on diverse and applied techniques of decision analytics in multidisciplinary fields, including but not limited to statistical analysis, data mining and data visualization, programming, data structuring, mathematical and statistical modelling and implementation of database systems. Students will be able to learn how to adopt analytical techniques and tools to extract and classify critical information as well as design and implement analytic initiatives and solutions with accuracy and confidence.

C. Capstone Courses

Capstone experience is an integral part of the major programme which focuses on integration and application of knowledge and skills gained in the early years of study. The capstone course carries a minimum of 6 credits and students must complete this for fulfillment of the graduation requirements.

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A. Lecture-based Courses (6 credits)

Contact hours for Science courses: 36 hours of lectures and 12 hours of tutorials

Contact hours for COMP courses: 26-39 hours of lectures and 2-13 hours of tutorials

These courses are taught predominantly by lectures and tutorials. Assessment is by a combination of examination (0-75%) and continuous assessment/coursework (25-100%). For Science courses, continuous assessment/coursework tasks include written assignments (totaling no more than 8,000 words) such as essays and project reports, and oral presentations. For COMP courses, continuous assessment may include problem-solving type assignments, programmes, course projects, mid-term or written quizzes. The number of and level of assignments, programming tasks, mathematical calculations, course projects and quizzes shall be appropriate for assessing the learning outcome of the students but in all cases written output shall not exceed 3000 words. Details of the assessment tasks can be found in the description of individual courses.

B. Lecture with Laboratory Component Courses (6 credits)

Contact hours for COMP courses: 26-35 hours of lectures, 3-12 hours of laboratory sessions and 2-6 hours of tutorials

These courses are taught by a combination of lectures and laboratory/practical sessions. Assessment is by a combination of examination (50%) and continuous assessment (50%). Continuous assessment may include problem-solving type assignments, programmes, course projects, mid-term or written quizzes. The number of and level of assignments, programming tasks, mathematical calculations, course projects and quizzes shall be appropriate for assessing the learning outcome of the students but in all cases written output shall not exceed 3000 words. Details of the assessment tasks can be found in the description of the individual course.

C. Project-based Courses (6 and 12 credits)

These courses aim at providing students with an opportunity to pursue their own research interest under the supervision of a teacher. The teacher normally meets with the student weekly to discuss project progress. Assessment task is normally through research reports or a dissertation (totaling no more than 10,000 words for a 6-credit course and 20,000 words for a 12-credit course). Oral presentation will form part of the assessment. Details of the assessment tasks can be found in the description of individual courses.

D. Internship (6 credits)

Internships aim to offer students the opportunity to gain work experience related to their major of study. The teacher meets with the student regularly to discuss work progress. Students have to undertake at least 160 hours of internship work arranged formally. Assessment tasks (100%) normally include the following outputs: a written report of no more than 2000 words, feedback from the internship supervisor and an oral presentation on students' internship experience. Details of the assessment tasks can be found in the description of the individual course.