Annex D

THE UNIVERSITY OF HONG KONG

Credit Unit Statement (CUS) of Taught Programmes

Faculty / Offering Unit: Department of Geography, Faculty of Social Sciences

Programme title: (Second) Major and Minor in Geospatial Data Sciences

Applicable student cohort(s): 2025/26 cohort and thereafter

The Second Major and Minor in Geospatial Data Science, offered by the Department of Geography, Faculty of Social Sciences at The University of Hong Kong, are designed to equip students with advanced skills in harnessing spatial data and big data analytics. The programme requires a total of 72 credits for a Second Major, comprising 18 credits of introductory courses, 42–48 credits of advanced courses (12 credits of compulsory courses, 24 credits of core courses, 6-12 credits of disciplinary electives, and 6-12 credits of capstone experience). For a Minor, students must complete 36 credits, including 6 credits of introductory courses and 30 credits of advanced courses (6 credits of compulsory courses, 12 credits of core courses, 12 credits of disciplinary electives). All courses are 6-credits except the Honours Dissertation which is a 12-credit course. The Department of Geography uses 120 hours of student learning activities (including both contact hours and other forms of learning activities) as the norm for 6-credit courses. The contact hours and output requirements for different types of courses may vary according to the learning modes employed. Generally, each 6-credit course comprises 24 hours of lectures and 2-15 hours of laboratory sessions. The approximate total study load for the Second Major is 1,440 student learning hours and 312-468 contact hours. The approximate total study load for the Second Minor is 720 student learning hours and 156-234 contact hours.

There are 5 categories of courses in this programme, as outlined below. The listed hours are relevant to GEOG-coded courses offered by the Department of Geography.

1. **Introductory Courses (6 credits per course)**

   These courses provide foundational knowledge and skills related to geospatial data science. Students are taught through a combination of lectures (24 hours), practical exercises and laboratory sessions (2-5 hours total), and class discussions. Assessment includes a end-of-semester examination, a variety of coursework assignments/lab reports (40-50% examination; 50-60% coursework). The written examination is normally 1 ½ hours in length. The assessments are no more than 2,500 words for essay type assignments, and 1,500 words for lab report type assignments. The number of student learning hours is approximately 120.

   Examples of Introductory Courses include

   - GEOG1005: Map use, reading and interpretation
   - GEOG1020: Modern maps in the age of big data

2. **Advanced Courses (Compulsory Courses) (6 credits per course)**
These courses focus on advanced topics and applications in geospatial data science. Students engage in lectures (24 hours), laboratory-based practicals (5-10 hours), and group projects. Assessment is typically based on coursework, practical assignments and final examinations (40-50% examination, 50-60% coursework), The written examination is normally 2 hours in length. The assessments are typically between 2,500 and 3,000 words.The number of student learning hours is approximately 120.

Examples of advanced courses (Compulsory Courses) include:

- GEOG2090: Introduction to geographic information systems
- GEOG2120: Introductory spatial analysis
- GEOG2141: Remote sensing applications

3. **Advanced Courses (Core Courses and Disciplinary Electives) (6 credits per course)**
These courses allow students to explore specialized topics within geospatial data science. Students can choose from a range of elective courses based on their interests and career goals. Students engage in lectures (24 hours), laboratory based practical (10-15 hours), class discussion and group projects. Assessment includes coursework assignments, practical exercises, and examinations (0-60% examination, 40-100% coursework). The written examination is normally 2 hours in length. The assessments are typically between 2,500 words and 3,500 words. If a course is 100% coursework the assessment may go up to 6,000 words in length. The number of student learning hours is approximately 120.

Examples of elective courses include:

- GEOG2147: Building smart cities with GIS
- GEOG2156: Introduction to remote sensing
- GEOG2157: Open-source GIS
- GEOG3430: Geospatial data for environmental change
- GEOG4012: Advanced GIS II

4. **Advanced Courses (Capstone Experience: Research Based Course) (6 or 12 credits; for major only)**
This capstone experience course is designed to develop students' ability to apply geospatial data science to a research area of their choosing. It provides students the opportunity to develop their research ability under the supervision of a advisor. Contact hours are minimal (12 hours for 6 credit; 12-18 for 12 credits) as students are actively engaged in individual research. Assessment is by means of a research proposal, oral presentation, and written report (6,000+ words for 6 credits; 12,000+ words for 12 credits) (100% coursework) The number of student learning hours is approximately 120 for 6 credits and 240 for 12 credits.

Examples of capstone experience research courses include:

- GEOG4003: Honours dissertation
- GEOG40aa: Directed project in geospatial data science

5. **Advanced Courses (Capstone Experience: Internship) (6 credits; for major only)**

This capstone experience course is designed to develop students' ability to apply geospatial data science to real-world problems in the workplace. Each student must undertake a project

either through an internship or relevant work experience, under the supervision of a faculty advisor. Due to its internship nature there is a high number of on-site contact hours (80) plus additional meeting and supervisory contact hours (15). The assessment is based on the supervisors feedback, an oral presentation and a written report (no more than 2,000 words) (100% coursework). The number of student learning hours is approximately 120.

Examples of a capstone experience internship course include:

- GEOG40bb: Internship in geospatial data science