

CSCI4007: PATENT APPLICATION AND TECHNOPRENEURSHIP

Effective Term

Semester A 2024/25

Part I Course Overview

Course Title

Patent Application and Technopreneurship

Subject Code

CSCI - College of Science

Course Number

4007

Academic Unit

College of Science (SI)

College/School

College of Science (SI)

Course Duration

One Semester

Credit Units

3

Level

B1, B2, B3, B4 - Bachelor's Degree

Medium of Instruction

English

Medium of Assessment

English

Prerequisites

CSCI2003 Introduction to Technopreneurship and Intellectual Property Rights

Precursors

Nil

Equivalent Courses

Nil

Exclusive Courses

Nil

Part II Course Details

Abstract

This is a mini-project-based course aims to provide the opportunity for students who have already acquired preliminary experimental data on a novel technical invention or scientific discovery to generate advanced drafts of a patent application. The course will focus on the Hong Kong Patent system. A step-by-step guide to drafting a patent, including techniques in the usefully description of an invention, conduction of prior art searches, production of patent drawings, drafting of claims, etc., will be introduced. The course is consisted of two parts: (a) lectures providing general guidelines and case-studies for patent drafting, and (b) a workshop for individual student to draft his/her own patent application based on his/her technical invention or scientific discovery.

Students taking this course must have already obtained preliminary experimental results from their own independent research work.

Course Intended Learning Outcomes (CILOs)

CILOs		Weighting (if DEC-A1 app.)	DEC-A1	DEC-A2	DEC-A3
1	Describe the types, purposes and the basic format of a Hong Kong patent, and identify methods for searching patent databases.	20		x	
2	Develop the appropriate skills in drafting a patent application.	30		x	
3	Using the data generated in previous independent research, compose an advanced draft of a patent application based on the format of a Hong Kong short-term patent.	50	x		x

A1: Attitude

Develop an attitude of discovery/innovation/creativity, as demonstrated by students possessing a strong sense of curiosity, asking questions actively, challenging assumptions or engaging in inquiry together with teachers.

A2: Ability

Develop the ability/skill needed to discover/innovate/create, as demonstrated by students possessing critical thinking skills to assess ideas, acquiring research skills, synthesizing knowledge across disciplines or applying academic knowledge to real-life problems.

A3: Accomplishments

Demonstrate accomplishment of discovery/innovation/creativity through producing /constructing creative works/new artefacts, effective solutions to real-life problems or new processes.

Learning and Teaching Activities (LTAs)

LTAs		Brief Description	CILO No.	Hours/week (if applicable)
1	Lectures	Lecture on techniques in the drafting of a technical patent will be given.	1, 2	
2	Library and web-based searching and literature review	Library and web-based searching of the literature, reading and interpretation of relevant patents and scientific literature, and assembly of a literature review, including the appropriate analysis of the legal and marketing aspects, relating to the invention.	1, 2	

3	Writing	Writing, under the supervision of an academic supervisor and/or a patent attorney/agent, a patent application for the Hong Kong patent.	3	
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Assessment Tasks / Activities (ATs)

ATs	CILO No.	Weighting (%)	Remarks (e.g. Parameter for GenAI use)
1	Library and web-based searching and literature review	1	20
2	Drafting of a Hong Kong patent †	3	60
3	Short quizzes	1, 2	20

Continuous Assessment (%)

100

Examination (%)

0

Additional Information for ATs

An assessment panel consisting of the student's supervisor for patent drafting, an a second assessor from academic departments or external institution whom is experienced in patent application will be formed to assess the drafted patent.

Assessment Rubrics (AR)**Assessment Task**

Library and web-based searching and literature review, Drafting of a Hong Kong Patent, Short Quizzes

Criterion

The following description is indicative of the grading criteria adopted for assessment purposes:

Excellent (A+, A, A-)

Student completes all assessment tasks/activities and can demonstrate excellent synthesis of the principles, characteristics, processes, methodologies, problems and limitations of the study related to various aspects of developing a patent. Provides a comprehensive analysis of the literature and prior art search data with clarity of the explanations, logical and advanced justifications, and creative/personal interpretations and viewpoints. Shows evidence of critical evaluation of the impact and commercial potentials of the technology/invention/scientific discovery involved in the patent. Generation of a draft patent application appropriate for submission to the official bodies without major revisions.

Good (B+, B, B-)

Student completes all assessment tasks/activities and can describe and explain the principles, characteristics, processes, methodologies, problems and limitations of the study related to various aspects of developing a patent. Provides a detailed, critical analysis of the literature and prior art search data, with accurate, clear explanations and fair justifications. Shows ability in integration of various sources of information to explain the impact of the technology/invention/scientific discovery involved in the patent. Generation of a draft patent application appropriate for submission to the official bodies with some revisions.

Fair (C+, C, C-)

Student completes all assessment tasks/activities and can describe and explain some key elements in the principles, characteristics, processes, methodologies, problems and limitations of the study related to various aspects of developing a

patent. Provides simple but accurate explanations and basic justifications of the literature and prior art search data. Shows evidence of use of written communication clearly. Generation of a draft patent application appropriate for submission to the official bodies with major revisions.

Marginal (D)

Student completes all assessment tasks/activities but can only briefly describe isolated elements of principles, characteristics, processes, methodologies, problems and limitations of the study related to various aspects of developing a patent. Demonstrates limited ability in analysis and justification of the literature and prior art search data. Can communicate simple ideas accurately in writing. The draft patent application generated is not deemed ready for submission to the official bodies.

Failure (F)

Student fails to complete all assessment tasks/activities and/or cannot accurately describe and explain relevant principles, characteristics, processes, methodologies, problems and limitations of the study related to various aspects of developing a patent. Cannot provide appropriate analysis and satisfactory justifications of literature and prior art search data, and may show evidence of plagiarism or inability to communicate ideas.

Part III Other Information

Keyword Syllabus

Nil

Reading List

Compulsory Readings

Title	
1	Nil

Additional Readings

Title	
1	Reading and reference materials will be provided by the supervisor on individual basis