Subject Description Form

Subject Code	COMP4512
Subject Title	Intellectual Property Protection and Management
Credit Value	3
Level	4
Pre-requisite / Co-requisite / Exclusion	
Objectives	The objectives of this subject are to: 1. introduce to students the management and protection of intellectual property in this knowledge-based society from the legal, technical and business perspectives, with emphasis on the technical perspective; 2. equip students with knowledge of the value of innovation and value of protection; and 3. introduce to students various techniques for digital rights management.
Intended Learning Outcomes	Upon completion of the subject, students will be able to: *Professional/Academic Knowledge and Skills* (a) understand the value of intellectual property and their protection; (b) understand various measures in the protection of digital content; (c) use current technologies and tools for the practice of software protection; *Attributes for All-Roundness* (d) recognise the need for continuing development; and (e) have an understanding of professional, ethical and legal issues and responsibilities in the use of digital content.

Subject Synopsis/ Indicative Syllabus

Topic
1. Overview of Intellectual Property Protection and Management IP management perspective: legal, business and technical; IP acquisition: purchase, JV, strategic alliances, licenses, patent pooling; the value of IP in business strategy; the law (Copyright Acts) and economics governing intellectual property protection (secrecy and patent), the use of I.P. in the digital content industry.
2. Intellectual Property Protection Copyright, related rights; trademarks and patents; problem of IP theft and their solutions.
3. Digital Right Management Digital rights management in different scenarios including computer software, documents, e-books, films, music and television. Also include different generations of DRM software and their limitations.
4. Common DRM Techniques Restrictive Licensing Agreements; Software Obfuscation and Encryption; trusted hardware/ trusted computing; reverse engineering; digital watermarking; steganography; traitor-tracing techniques in encryption.
5. Optional Topics Opposition to DRM; Alternatives to DRM; DRM system in practice (Adobe Adept DRM, Apple FairPlay, Ubisoft Uplay, etc.).

Teaching/ Learning Methodology

During the lectures, students will come across the common concepts and theories. Those concepts and theories would be further explained with reference to case studies in the tutorials.

Assessment Methods in Alignment with Intended Learning Outcomes

Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed				
		a	b	c	d	e
Continuous Assessment	**55%**	✓	✓	✓	✓	✓
Examination	**45%**	✓	✓	✓	✓	✓
Total	100%					

Types of assessments included assignments, project, test and examination. Assignments are designed to reinforce the concepts and theories learned in the lecture, by solving bigger problems. Project is used to develop students' analytic and problem-solving skills by developing a study report. Test and examination are used to assess independent problem solving and critical thinking skills.

<table>
<tr><td rowspan="5">Student Study Effort Expected</td><td colspan="2">Class contact:</td></tr>
<tr><td>▪ Lecture</td><td>39 Hrs.</td></tr>
<tr><td colspan="2">Other student study effort:</td></tr>
<tr><td>▪ Assignments, Project, Self-study, Test and Exam Preparation</td><td>66 Hrs.</td></tr>
<tr><td>Total student study effort</td><td>105 Hrs.</td></tr>
<tr><td>Reading List and References</td><td colspan="2">Reference Books:
1. Bouchoux, Deborah E., Intellectual Property: The Law of Trademarks, Copyrights, Patents, and Trade Secrets, 5th Edition, Cengage, 2017.
2. European Union Intellectual Property Office. https://euipo.europa.eu/knowledge/course/view.php?id=1738
3. Halt Jr., G.B., Donch Jr., J.C., Stiles, A.R. and Fesnak, R., Intellectual Property in Consumer Electronics, Software and Technology Startups, Springer, 2014.
4. WIPO - World Intellectual Property Organization http://www.wipo.int</td></tr>
</table>