

**Title (Units):** **GCIT1015 IT Innovations Shaping our World (3,2,1)**

**Course Aims:** This course aims to equip students with knowledge on the key IT innovations that are shaping our world, including the latest development of digital media technology, the advancement of digital communication technology, and the development of smart IT systems. This course introduces the key IT innovations, covers latest standards and basic scientific principles of digital entertainments, telecommunications, wireless technologies, as well as web and location-based systems. This course also aims to raise students' concern over IT related issues like innovation protection, computer security as well as IT challenges and ethics. In addition to IT concepts and IT related issues, this course also aims to equip students with IT skills for acquiring information, analyzing quantitative data, presenting information and enhancing the presentation. To enable students to work without location limit, a highlight of this course is to introduce various online collaboration tools supporting mind mapping, data collection and analysis and cloud storage.

**Prerequisite:** Nil

**Course Intended Learning Outcomes (CILOs):**

Upon successful completion of this course, students should be able to:

No.	Course Intended Learning Outcomes (CILOs)
	<b>Knowledge</b>
1	Describe the latest advancement of digital entertainments, telecommunications and wireless technologies, as well as web and location-based systems and explain the basic scientific principles behind.
2	Describe the key innovations throughout the historical development of information technology and their social implications to the global world.
	<b>Skill</b>
3	Use IT tools to acquire, organize, process, share and present information about an innovation or an innovative idea.
4	Use IT tools to acquire, manipulate and analyze quantitative data needed for presenting an innovative idea.
5	Demonstrate the ability to share information and perform online collaboration in a group.

**Calendar Description:** This course aims to equip students with knowledge on the key IT innovations that are shaping our world, including the latest development of digital media technology, the advancement of digital communication technology, and the development of smart IT systems. This course covers latest standards and basic scientific principles of digital entertainments, telecommunications and wireless technologies, as well as web and location-based systems. This course also introduces the key IT innovations in those areas.

**Teaching and Learning Activities (TLAs):**

CILOs	Type of TLA
1 - 2	Lectures to introduce various IT innovations, as well as the scientific concepts behind.
3 - 4	Software lab sessions to teach students the use of various IT tools, with emphasis on online collaboration tools.
3 - 5	Problem Solving Sessions to let students integrate the concepts learnt in the lecture and various IT skills learnt in the lab sessions.
3 - 5	Projects to let students integrate the concepts and skills that they have learnt in the course.

**Assessment:**

No.	Assessment Methods	Weighting	CILOs to be addressed	Description of Assessment Tasks
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1	Continuous Assessment	70%	3 - 5	This may include practical test, project and software based assignments.
2	Examination	30%	1 - 2	Examination questions are designed to evaluate students' understanding on the concepts they learnt from the lectures.

#### Assessment Rubrics:

<b>Excellent (A)</b>	<ul style="list-style-type: none"> <li>Achieve the first two CILOs, demonstrating a thorough understanding of the concepts involved in IT innovations.</li> <li>Able to perform various advanced techniques to acquire, organize, process, share and present information.</li> <li>Able to use various different tools to manipulate and analyze complicated quantitative data.</li> <li>Demonstrate an excellent ability to share information and perform online collaboration in a group.</li> </ul>
<b>Good (B)</b>	<ul style="list-style-type: none"> <li>Achieve the first two CILOs, demonstrating a good understanding of the concepts involved in IT innovations.</li> <li>Able to perform a good number of basic techniques to acquire, organize, process, share and present information.</li> <li>Able to use many different tools to manipulate and analyze complicated quantitative data.</li> <li>Demonstrate a good ability to share information and perform online collaboration in a group.</li> </ul>
<b>Satisfactory (C)</b>	<ul style="list-style-type: none"> <li>Achieve the first two CILOs, demonstrating a basic level of understanding of the concepts involved in IT innovations.</li> <li>Able to perform some typical techniques to acquire, organize, process, share and present information.</li> <li>Able to use typical tools to manipulate and analyze simple quantitative data.</li> <li>Demonstrate a basic level of ability to share information and perform online collaboration in a group.</li> </ul>
<b>Marginal Pass (D)</b>	<ul style="list-style-type: none"> <li>Achieve the first two CILOs, demonstrating a minimal level of understanding of the concepts involved in IT innovations.</li> <li>Able to perform a limited number of basic techniques to acquire, organize, process, share and present information.</li> <li>Able to use a limited number of tools to manipulate and analyze simple quantitative data.</li> <li>Demonstrate a basic level of ability to share information and perform online collaboration in a group.</li> </ul>
<b>Fail (F)</b>	<ul style="list-style-type: none"> <li>Do not achieve the first two CILOs, and have little understanding of the concepts involved in IT innovations.</li> <li>Unable to perform basic techniques to acquire, organize, process, share and present information.</li> <li>Unable to manipulate and analyze simple quantitative data.</li> <li>Unable to share information and perform online collaboration in a group.</li> </ul>

#### Course Content and CILOs Mapping:

Content		CILO No.
I	Technology Concepts of various IT Innovations and other IT related issues	1 - 2
II	Information Technology Skills	3 – 5
III	Information Management Skills	3 – 5

#### References:

- Daniel O'Leary, Linda O'Leary and Timothy O'Leary, Computing Essentials 2015 Complete Edition, McGraw-Hill Education, 2014.
- George Beekman and Ben Beekman, Digital Planet: Tomorrow's Technology and You, Pearson College Division, 2013.
- Carol V. Brown, Daniel W. DeHayes, Jeffrey A. Hoffer, Wainright E. Martin and William C. Perkins, Managing Information Technology, 7th Edition, Prentice Hall, 2012.

- Gary Shelly and Mark Frydenberg, Web 2.0: Concepts and Applications, Course Technology, 2010.
- Allan Brimicombe and Chao Li, Location-Based Services and Geo-Information Engineering, Wiley, 2009.
- Jinher Simon, Excel Data Analysis: Your Visual Blueprint for Creating and Analyzing Data, Charts and PivotTables, Visual, 2010.

**Course Content:**

**Topic**

- I. Technology Concepts of various IT Innovations and other IT related issues
  - A. Digitization and Innovations
  - B. Computer Network and Internet Applications
  - C. Emerging Internet Technologies and Smart IT Systems
  - D. Information security and privacy
  - E. Innovation protection and ethics
  
- II. Information Technology Skills
  - A. Photo editing
  - B. Audio and video editing
  - C. Creating mini game and/or simple animation
  - D. Advanced Word processing and spreadsheet operations
  
- III. Information Management Skills
  - A. Integrate IT knowledge and skills for data collection and acquisition, data processing and analysis, and information presentation, etc.
  - B. Information sharing and online collaboration