Subject Description Form

Subject Code	HSS5304
Subject Title	Knowledge Management for Clinical Applications
Credit Value	3
Level	5
Pre-requisite/ Co-equisite/ Exclusion	Nil
Objectives	To equip students with fundamental knowledge of knowledge management (KM) and their applications in clinical settings, as well as the ability to participate in the development of health information systems and evaluate their effectiveness.
Intended Learning Outcomes	Upon completion of the subject, students will be able to: a. Master fundamental knowledge and concepts in the acquisition and representation of knowledge and information; b. Understand the need for effective knowledge and information management in the knowledge society; c. Develop the ability to manage knowledge and information with latest technology and effective KM tools; d. Evaluate the effectiveness of different knowledge and information approaches; e. Apply the skills and KM tools they have learned in real-life applications and information systems.
Subject Synopsis/ Indicative Syllabus	1. Introduction of KM: Importance of KM, KM benefit, data, information and knowledge, modes of knowledge conversion, KM element and KM process 2. Knowledge Leveraging, Representation and Sharing: KM strategy, intellectual capital, metaphor, taxonomy, knowledge sharing and KM tools 3. Knowledge Creation: Collaboration, innovation, organizational learning and community of practice 4. Knowledge Capture: Capturing tacit knowledge with different KM technique like interview with experts, on-site observation, brainstorming, consensus decision making, nominal group technique, Delphi method, etc. 5. Technologies for KM: Information system, knowledge portal, Artificial Intelligence (AI), heuristic search, knowledge-based system, expert system, rule-based reasoning, case-based reasoning, clinical decision support system, data mining and big data. 6. KM Implementation: Culture, change management, performance management, dialogue and ISO9001(2015)

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<tr><td></td><td>7. Case sharing and successful stories for health-care related applications.</td></tr>
<tr><td>Teaching/Learning Methodology</td><td><u>Lectures</u>
Lectures are given to introduce the concepts and principles of knowledge management, and discuss the acquisition, representation and processing of knowledge and information, with reference to relevant clinical applications.

<u>Case studies / Tutorials</u>
Students are guided to discuss and criticize cases, research works and application examples to reinforce the concepts and principles introduced in the lectures.

<u>Projects</u>
Projects can further strengthen the knowledge and skills learned by reviewing contemporary works and providing critical comments.</td></tr>
<tr><td>Assessment Methods in Alignment with Intended Learning Outcomes</td><td>
<table>
<tr><td rowspan="2">Specific assessment methods/tasks</td><td rowspan="2">% weighting</td><td colspan="6">Intended subject learning outcomes to be assessed</td></tr>
<tr><td>a</td><td>b</td><td>c</td><td>d</td><td>e</td><td></td></tr>
<tr><td>1. Coursework: test and written assignment</td><td>60%</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td></td><td></td></tr>
<tr><td>2. Project presentation</td><td>40%</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td></td></tr>
<tr><td>Total</td><td>100 %</td><td colspan="6"></td></tr>
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Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:

Coursework:
To assess students' level of understanding regarding the essential concepts and principles of knowledge management discussed in the lectures.

Project and presentation:
To provide students with an opportunity to demonstrate their understanding of the knowledge gained from the lectures. Students are required to critically review a contemporary work in knowledge management.</td></tr>
<tr><td>Student Study Effort Expected</td><td>
<table>
<tr><td>Class contact:</td><td></td></tr>
<tr><td>▪ Lecture</td><td>26 Hrs.</td></tr>
<tr><td>▪ Case study/tutorial</td><td>13 Hrs.</td></tr>
<tr><td>Other student study effort:</td><td></td></tr>
<tr><td>▪ Pre-reading</td><td>13 Hrs.</td></tr>
<tr><td>▪ Preparation of written test</td><td>26 Hrs.</td></tr>
<tr><td>▪ Preparation for term project and presentation</td><td>32 Hrs.</td></tr>
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	Total student study effort	110 Hrs.
Reading List and References	1. John and Joann Girard, Knowledge Management Matters: Words of Wisdom from Leading Practitioners, Sagology, 2018 2. Dalkir Kimiz, Knowledge Management in Theory and Practice. Boston, MA: Elsevier, 2011 3. Ashok Jashapara, Knowledge Management: An Integrated Approach (2nd Edition), Prentice Hall, 2011 4. Awad E.M., Ghaziri H. Knowledge Management, Prentice Hall, 2004. 5. Brachman R., Levesque H. Knowledge Representation and Reasoning. Morgan Kaufmann, 2004. 6. Davenport T.H., Prusak L. Working Knowledge: How Organizations Manage What They Know. Boston: Harvard Business School Press, 1998. 7. Davies J., Fensel D., van Harmelen F. Towards the Semantic Web: Ontology-Driven Knowledge Management. John Wiley & Sons, 2003. 8. Firestone J.M. Enterprise Information Portals and Knowledge Management. Butterworth Heinemann, 2003. 9. Gottschalk P. Strategic Knowledge Management Technology. Idea Group Publishing, 2005. 10. Kimiz Dalkir (2005). Knowledge Management in Theory and Practice. Butterworth Heinemann. ISBN-13: 978-0-7506-7864-3 11. Nilmini Wickramasinghe; Jatinder N. D. Gupta & Sushil K. Sharma (2004). Creating Knowledge-Based Healthcare Organizations. Paperback. ISBN-13: 978-1591404606 12. Rajeev K. Bali. Hershey, Pa (2005). Clinical knowledge management: opportunities and challenges. Idea Group Publishing. ISBN: 1-59140-301-4 or ISBN: 1-59140-302-2 (electronic version) 13. Rajeev, K. Bali & Ashish, Dwivedi (2007). Healthcare Knowledge Management: Issues, Advances and Successes. 1st ed. New York: Springer. ISBN: 978-0-387-33540-7 14. Articles from IEEE Transactions on Knowledge and Data Engineering, Knowledge and Information Systems: An International Journal, International Journal of Knowledge Engineering and Data Mining, International Journal of Electronic Healthcare; Proceedings of International Conference on Information and Knowledge Management and others.