Subject Description Form

Subject Code	COMP4123
Subject Title	Business Process and Workflow Management
Credit Value	3
Level	4
Pre-requisite / Co-requisite / Exclusion	
Objectives	The objectives of this subject are to: 1. present a process-oriented view to business modelling and the application of workflow technologies to business process engineering; and 2. equip students with the fundamental knowledge of workflow management systems.
Intended Learning Outcomes	Upon completion of the subject, students will be able to: *Professional/academic knowledge and skills* (a) understand the role of business processes in modern enterprises; (b) understand the basic steps in business process engineering/re-engineering; (c) understand the application of workflow technologies to process modelling and implementation; (d) understand the building blocks of a workflow management system; (e) understand the existing industrial workflow standards; (f) apply workflow technologies to solve business problems; *Attributes for all-roundedness* (g) improve presentation and communication skills (through case study presentations); and (h) learn independently and to find/integrate information from different sources required in solving real-life problems.

Subject Synopsis/ Indicative Syllabus	**Topic** **1. Introduction to Business Process** Modern business environment; process-oriented view to organizations; examples of business processes. **2. Business Process Engineering** Process analysis; process re-engineering; business engineering and workflow. **3. Fundamental Concepts of Workflow** Major components of a workflow management system; BPMN (Business Process Model and Notation (BPMN) standard: process discovery process analysis, process redesign, process implementation, process monitoring and controlling. Process simulation and analysis. **4. Advanced Functions of Workflow** Events; dynamic modification of workflows; advanced join conditions; converting as-is process model to to-be process model; different roles in BPM life cycle; qualitative and quantitative performance analysis; Coloured Petri Nets modeling, simulation and analysis. **5. Workflow Systems Architecture** Application structure; middleware; Internet and mobile workflow; emergent technologies. **6. Workflow Standards** OMG's Workflow Management Facility; Workflow Management Coalition standards. Case Study: Presentations will be held during the seminars, where the students will form groups to read and present real-life cases related to the subject's topics.
Teaching/ Learning Methodology	Lectures focus on the introduction and explanation of key concepts. Seminars provide students with the opportunity to deepen their understanding of the concepts taught in lectures and to apply the theories to the analysis of real-life issues.

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	f	g	h
Continuous Assessment	**30%**								
Project									
1. Written Report		✓	✓	✓	✓	✓	✓	✓	✓
2. Oral Presentation		✓	✓	✓	✓	✓	✓	✓	✓
Examination	**70%**	✓	✓	✓	✓	✓	✓		✓
Total	100%								

The course will be expected to be accessed using both examination and coursework group project.

The project can be used to measure the understandings of the students about the current industrial workflow standards. The students could further improve their presentation and communication skills through the project presentation.

Examination can be used as an overall measure of the understandings of the students on the workflow concepts, technologies and understand the existing standards which discussed in the lectures.

Student Study Effort Expected

Class contact:	
▪ Lecture	39 Hrs.
▪ Tutorial	0 Hrs.
Other student study effort:	
▪ Reading and Self-Learning	66 Hrs.
Total student study effort	105 Hrs.

Reading List and References

Reference Books:

1. Marlon Dumas, Marcello La Rosa, Jan Mendling and Hajo A. Reijers, *Fundamentals of Business Process Management,* Springer 2018.
2. Thomas Allweyer, *BPMN 2.0 : Introduction to the standard for business process modeling,* 2016, Books on Demand.
3. Coloured Petri Nets, https://cs.au.dk/cpnets/.