

H6CMPTHNK: Computational Thinking

Module Code:	H6CMPTHNK
Long Title	Computational Thinking APPROVED
Title	Computational Thinking
Module Level:	LEVEL 6
EQF Level:	5
EHEA Level:	Short Cycle
Credits:	5
Module Coordinator:	FRANCES SHERIDAN
Module Author:	Patrick Delaney
Departments:	School of Computing
Specifications of the qualifications and experience required of staff	Master's degree in computing or cognate discipline. May have industry experience also.
Learning Outcomes	
<i>On successful completion of this module the learner will be able to:</i>	
#	Learning Outcome Description
LO1	Create high quality academic, technical and scientific documents using appropriate tools and technologies
LO2	Implement appropriate referencing techniques for both written text and programming code
LO3	Compose both technical and non-technical questions in a manner which elicits the required response and information
LO4	Apply critical thinking, teamwork, communication and problem solving skills when working as part of a team
LO5	Analyse personal learning needs and identify ways in which to resolve those needs in an autonomous fashion, seeking the support of, and providing support to peers where appropriate
Dependencies	
Module Recommendations	
No recommendations listed	
Co-requisite Modules	
No Co-requisite modules listed	
Entry requirements	

H6CMPTHNK: Computational Thinking

Module Content & Assessment			
Indicative Content			
Computational Thinking Define and describe how the computational thinking relates to other ways of thinking.			
Computational Thinking Introduce the concepts of computational thinking (i.e., Abstraction, Decomposition, Pattern Recognition, Algorithm Design) and how they can be applied in solving real life problems			
Critical Thinking Identifying and challenging assumptions.Recognizing the importance of context.Imagining and exploring alternatives.Developing reflective scepticism. Mnemonic Techniques for studying Innovation Techniques			
Effective Questioning Posing questions to: o Peers o Lecturers o Google o Subject specific Q&A forum			
Professional Development Reflection			
Technical Writing Elements of Technical Writing i.e. Clarity, Accuracy, Brevity, Sentence length, Paragraphs and Reader Centricity Writing for different audiences i.e. CV, blogs etc.			
Referencing Referencing in written academic documents, Referencing for code –How to reuse code, acknowledging authors/others work			
Professional Development Time Management,i.e.,Kaizen Stress Management, i.e.,Mental health –Anxiety, depression and so on			
Professional Development Effective Communication, i.e.,Presentations, Interviews, one to one and so on Personal Responsibility			
Computing Teams Roles within a team and dealing with group dynamics			
Group Work Technologies Project Management			
Group Work Technologies Cloud Services for collaboration			
Assessment Breakdown			%
Coursework			100.00%
Assessments			
Full Time			
Coursework			
Assessment Type:	Other	% of total:	Non-Marked
Assessment Date:	n/a	Outcome addressed:	1,2,3,4,5
Non-Marked:	Yes		
Assessment Description: Ongoing feedback on ongoing tutorial activities. Feedback on regular reflection.			
Assessment Type:	Portfolio	% of total:	50
Assessment Date:	n/a	Outcome addressed:	1,2,3,4
Non-Marked:	No		
Assessment Description: A portfolio of evidence demonstrating achievement of each of the first four module learning outcomes. Portfolio evidence should comprise samples from assignments completed in other modules accompanied by feedback and responses to feedback where appropriate.			
Assessment Type:	Reflective Journal	% of total:	50
Assessment Date:	n/a	Outcome addressed:	5
Non-Marked:	No		
Assessment Description: An ongoing reflective journal documenting the learning experiences of each week and outlining the relevance of each piece of evidence in the learning portfolio.			
No End of Module Assessment			
No Workplace Assessment			
Reassessment Requirement			
Coursework Only <i>This module is reassessed solely on the basis of re-submitted coursework. There is no repeat written examination.</i>			
Reassessment Description Reassessment of this module will be via resubmission of the learning portfolio with new evidence supporting the achievement of any outstanding learning outcomes.			

H6CMPTHNK: Computational Thinking

Module Workload				
Module Target Workload Hours 0 Hours				
Workload: Full Time				
Workload Type	Workload Description	Hours	Frequency	Average Weekly Learner Workload
Lecture	Classroom & Demonstrations (hours)	24	Per Semester	2.00
Tutorial	Other hours (Practical/Tutorial)	0	Per Semester	0.00
Independent Learning	Independent learning (hours)	101	Per Semester	8.42
Total Weekly Contact Hours				2.00
Workload: Part Time				
Workload Type	Workload Description	Hours	Frequency	Average Weekly Learner Workload
Lecture	No Description	24	Every Week	24.00
Tutorial	No Description	0	Every Week	0.00
Independent Learning Time	No Description	101	Every Week	101.00
Total Weekly Contact Hours				24.00

Module Resources	
<i>Recommended Book Resources</i>	
Gillie Bolton,Russell Delderfield. (2018), Reflective Practice, SAGE Publications Limited, p.296, [ISBN: 978-1526411709].	
<i>Supplementary Book Resources</i>	
Moon, J. A.. (2004), A handbook of reflective and experiential learning: Theory and practice, Psychology Press.	
<i>This module does not have any article/paper resources</i>	
<i>This module does not have any other resources</i>	
Discussion Note:	