Module Title	**System Administration and Maintenance**
Level	5
Reference No.	CSI_5_ISA
Credits	20
Student Study Hours	Total: 200 Contact hours: 52 Student managed learning hours: 148
Pre-Requisites	None
Co-requisites	None
Excluded combinations	None
Module coordinator	TBC
Division	Division of Computer Science and Informatics
Short Description	This module provides the practical tools and techniques required to design, implement and manage information systems and associated configuration items in an effective manner using appropriate frameworks and tools.
Aims	This module will provide you with the knowledge and skills to analyse, design and manage the users, data and hardware which are required for the efficient operation of IT systems. You will also study wider issues such as effective planning of IT operations to minimise business risk due to large-scale technical or environmental problems. You will have the opportunity to gain the technical knowledge and skills required to study for the professional certification often required by employers.
Learning Outcomes	**LO1: Knowledge and Understanding** ● Describe the configuration and operation of typical system management procedures. ● Critically evaluate the benefits of a range of solutions to system design and management problems (Maps to: 2.2.3 a1-a3) **LO2: Intellectual Skills** ● Use sources of information to improve your knowledge and understanding. ● Discuss work with your lecturers in a reflective and rationale manner. (Making changes to work following reflection.) (Maps to: BCS 2.2.1 a1-a5, a7-a9; 2.2.3 a1-a3) **LO3: Practical Skills** ● Catalogue and manage services using industry tools ● Manage a helpdesk support system. ● Write reports supported by academic reading and argument. (Maps to: BCS 2.2.1 b1-b4; 2.2.3 a4-a6) **LO4: Transferable Skills** ● Recognise what needs to be done to meet deadlines and satisfy others' expectations. (Time management and self-awareness.). (Maps to: BCS 2.2.1 a1-a9)
Employability	Complex enterprise IT infrastructure requires approaches and tools for the management and implementation of associated services so that they are fit for purpose and fit for use. Students will design, implement and catalogue service-oriented systems and embedded processes ready for real world use. They will deliver these services in a campus-based setting. Also, they will be exposed to real-world contexts through attending an industrial event to foster confidence and knowledge of IT administration and maintenance in action.

Teaching and Learning Pattern	Classes will be taught by a mixture of lectures, blended learning, laboratory sessions, on campus events, an industrial event and practical workshops.
Indicative Content	● System administration concepts ● Service strategy, design, transition, operation and continuous improvement ● Service cataloguing ● Innovative and disruptive technology adoption strategies ● Helpdesk operation ● Leveraging of cloud technologies ● Configuration item management – from peopleware to hardware and software
Assessment *Elements & weightings*	**EXAM 40% : COURSEWORK 60%** **Summative Assessment** Exam: a closed book exam, four questions from six. There will be a known question on the industrial event visit which has to researched during and after the event visit. (Maps to: BCS 2.2.1 a1-a5, a7-a9; 2.2.3 a1-a3) Coursework: Expected to take the form of an individual written technical report on the design of a service for a disruptive or innovative technology and a reflective repository, such as an e-Portfolio or online blog, containing simple journaling to the complex synthesis of ideas over the course of the semester.(LO1- LO4) (Maps to: BCS 2.2.1 a1-a5, a7-a9; b1-b4; c1-c2; 2.2.3 a1-a6) **Formative Assessment** Skills for the summative assessment will be embedded throughout formative opportunities in Lectures and Workshops. Formative assessment will take different forms, such as: ● verbal feedback on tutorial activities ● observation and questioning to provide instant feedback as the student takes part in learning activities ● think-pair-share concept and class discussions
Indicative Sources *(Reading lists)*	**Core:** ● Limited, AXELOS. (2019) *ITIL Foundation: ITIL 4 Edition*, The Stationery Office Ltd,. ProQuest Ebook Central [online] ● Klosterboer, L. (2015). *ITIL capacity management.* Upper Saddle River, NJ: IBM Press. ● Sileika, R. (2014). *Pro Python System Administration.* Berkeley, CA: Apress. **Optional:** ● Farenden, P. (2012). *ITIL for dummies.* Hoboken, NJ: Wiley.Available: https://www.safaribooksonline.com/ **Typical Online Resources:** ● ITIL Foundation course: http://lynda.com ● IPExpo: http://ipexpo.com ● Cloud Expo: http://cloudexpo.com ● Association for Computing Machinery: http://ww.acm.org