SOLENT UNIVERSITY SOUTHAMPTON

Solent University Module Descriptor

Module Code: COM615 **Module title: Network Management**

Why is this module important?

This module investigates the issues relating to the design and management of computer networks. The key phases range from requirements analysis, design and modelling of proposed solutions, implementation and testing of new systems, and the ongoing monitoring and management of existing networks. This module allows you to investigate new concepts in computer networking and also to further build on your accumulation of knowledge on the subject from previous levels, applying this to real world systems. You should be familiar with current and future technologies that may impact on or enhance computer networks and IT systems. You also need to be aware of management and security issues and the techniques for enhancing network security.

What you will learn on the module

You will be investigating the following topics on this module:

- **Network Planning** - for example requirements analysis, design, implementation and testing of new networks and related systems.

- **Business and Industrial Networks - involving** typical **a**pplication of network solutions, management and monitoring principles to business and industrial or Industrial Internet of Things (IIoT) networks.

- **Network Optimisation and Monitoring** - this will include monitoring and optimisation of computer networks, recording and comparing baseline data, load balancing techniques and analysis of capacities and speeds.

- **Network Technology and Management - n**etwork management and security techniques and issues will feature, along with the application of technology and management techniques to real world systems. This will also involve configuration management and automation techniques.

- **Current and Future Systems- f**uture and current technologies will be investigated, which will include Network Function Virtualisation and Software Defined Networks.

How you will learn

A real-world case study will be used in the module, introduced as part of small group sessions where you will engage in role playing as an IT specialist. Initially you will work as part of a team in a particular sector of business or infrastructure, for example banking, education, utilities etc. You will establish the background and overall needs of your customer and work on your own individual requirements focussed on the area of your chosen topic. You will develop a specification of a system based on the customer's requirements to define a networking problem that needs a solution, primarily based on one or more of the topic areas shown above. These problems will require theoretical solutions and practical experimentation or implementation.

How much time the module requires

You will need to attend and engage in timetabled practical workshops and tutorials for this module. You will also need to engage in an additional amount each week of directed and independent learning outside of these sessions in order to work towards proficiency in this subject. This will include work on research and preparing evidence for your report.

How you will be assessed

Tasks which help you to learn and prepares you for summative tasks (Formative):
You will be expected to engage in directed and independent learning, regularly consulting with your tutor during the small group sessions where you will be provided with ongoing formative feedback opportunities. You should record feedback regularly from your tutor so that you can use this as evidence in the assessment for this module.

Tasks which count towards your degree (Summative):
The summative assessment is based on a written report in which you should analyse the requirements of a real-world case study and also suitable solutions evidenced by theoretical analysis and practical experimentation or implementation. You should provide supporting evidence that demonstrates the process of engagement with the customer and ongoing investigation. Evidence may include discussion and feedback and interim presentations.

When assessment does not go to plan
If you have not completed your report to a standard satisfactorily enough to pass the module you will be expected to complete a report based on the original assessment completed to at least a satisfactory standard according to the assessment criteria. If you previously handed work in that failed to meet the criteria you should consult the feedback that you received on the original work for guidance on areas for improvement.

What you will be able to do after the module

1. Systematically and critically review computer networking technologies.
2. Independently design a solution to the requirements of a real-world computer networking problem.
3. Conduct research and apply technologies to a particular computer networking problem.
4. Analyse and evaluate a range of alternative solutions to real world problems
5. Communicate solutions effectively to customers in the context of a real-world case study.

How this relates to the dimensions of Solent's Real-world curriculum framework

Dimensions	How students learn	How students are assessed
Students are challenged to think in critical, creative and applied ways	Students research and analyse the requirements of a real world case study and apply solutions in theory and practice through experimenation	A report that analyses the requirements and solutions to a case study supported by evidence of investigation
Students are inspired to do research through inquiry, curiosity and problem-solving	Students research problems and alternate solutions to a real-world case study	Students will analyse alternative solutions and evidence problem solving in a report
Students experience an intellectually stimulating curriculum which inspires them to learn for life	Students will act in a role that simulates expectations of a real working environment in which they engage with team members and	Students will provide evidence of engagement with a customer, real or acting, documenting this in their report.

	customers to provided solutions to problems in the commercial domain	
Students reflect and grow inwardly, social and ethically to be able to confront the challenges of the world	Students will acquire skills in promoting themselves as a professional practitioner	Students will be required to show evidence of how they have engaged in a professional manner with the process of developing solutions for clients
Students face outward to the community, industry and the global environment	Students will need to engage with business and industry through engagement with industrial contacts, whether real or simulated through role playing	Students will need to present evidence of feedback and evaluation they have gained from engagement for both formative and summative assessments
Students learn from authentic, engaging and programmatic assessment	Students will be exposed to current industry practices and workflows in developing solutions for clients	Students should present themselves and their solutions based upon current practice, standards and guidelines.

Summative assessment details

AE1	Weighting:	100%
	Assessment type:	Report
	Aggregation:	N/A
	Length/duration:	5000 words plus appendices
	Online submission:	Yes
	Grade marking:	Yes
	Anonymous marking:	Yes

Module Author: Neville Palmer

Module Title: Network Management			
Credit Points:	20	Module Code:	COM615
FHEQ Level:	6	School/Service	SMAT
Module Delivery Model:	CD	Max/Min student numbers	25 max
Module Leader:	Neville Palmer		
HECOS code	100365		

Module change history:

Module Approved/Year Implemented/Code	July 2019	2020/21	COM615
Module modified/Year Implemented/Code			
Add extra rows as required			