# Solent University Module Descriptor

## **Module Code: COM423 Module title: Systems Analysis & Design Work Based Project**

### **Why is this module important?**

Systems analysis is a project-driven process that ensures that information systems are designed, developed and maintained in ways that provide optimum value to companies and clients. It is concerned with the identification and examination of business requirements and problems and the creation of efficient solutions. It is effective when all sides of the problem are reviewed, and when more than one design solution can be proposed. This module will also provide an introduction to project management which is very useful. This module is important for Apprentices as it allows them to practically apply the knowledge gained in the classroom and blended sessions into the workplace.

### **What you will learn on the module**

In this module, the key components of business information systems are identified and dissected to reveal the essential elements considered in systems analysis. Theoretical approaches towards the planning and execution of effective design strategies are supported by practical case study examples. You will learn how to identify user requirements in order to analyse the functionality of systems and to produce basic design specifications for a spectrum of commercial and industrial situations. They will also be introduced to the management of project life cycles that govern the process of systems analysis. In doing so, they will be introduced to and use software tools that are current in wider industrial contexts. Sessions will also be run to introduce formal academic writing, researching and referencing.

The module will cover the context for business information systems and the analysis stages of the systems development life cycle in breadth. The stages covered will be project initiation, feasibility, investigation and analysis. For each stage, the objectives, scope, prerequisites, tasks, resources, techniques and deliverables are identified.

Initiation: Identification of the need for a new updated system initiated by new requirements or specific problems. The agreement on terms of reference before the start of any feasibility study.

Feasibility: Investigation of the viability of a project in terms of the financial, technical and operational viewpoints.

Investigation: The investigation of a system using fact-finding techniques to gather information that is used for later analysis.

Analysis: The analysis of facts found at the investigation stage will culminate in a statement of user requirements. This approach will take account of both structured and object-oriented methods, and these will also be used to produce an updated version of the user requirements document to re-address appropriate initial analyses as system requirements change.

Design: Incorporates the transition from analysis to design using conceptual diagramming techniques as appropriate for both structured and object-oriented methods.

Construction and Implementation: Takes account of elementary planning control and scheduling, presentation of a proposed new system, implementation tasks including testing, installation strategies, handover, training, quality assurance and documentation.

Maintenance and Review: Including amendment procedures, configuration management, and post-implementation review.

Project Management

### **How you will learn**

Classroom based sessions will underpin the later blended learning where you will incorporate your knowledge into a work-based project. This project is agreed between yourself, the tutor and your employer in order to fulfil the brief.

You will be guided to apply the knowledge from this module to a business system (real or notional) of an agreed topic.

### **How much time the module requires**

This module is a 20 credit module and you are expected to study for 200 hours (which equates to 10 hours per credit)This total learning time is made up of contact time, directed learning tasks, independent learning and assessment activity.

### **How you will be assessed**

#### **Tasks which help you to learn and prepares you for summative tasks (Formative):**

The module will be delivered in a blended learning fashion with content dissemination in a workshop manner underpinned by extensive resources on the University’s VLE. Concepts and theories are delivered incrementally. An agreed learning contract between academic, employer (notional or real) and you. Taught concepts will have landmarks and objectives in terms of your learning. This is intended to motivate learners by ensuring that they are able to monitor their progress and relate specific aspects of module teaching to broader learning outcomes. This means teaching is organised in a way that resembles project structures and therefore reflects a principle that is core to executing systems analysis effectively.

You will learn to a method designed to consolidate learning through active participation and reflection. Sessions combine - incorporating the use of multimedia – with discursive elements and practical tasks. These are designed in such a way as to make the relevance of learning to workplace situations explicit and it is used as the basis for independent study and directed tasks designed to consolidate what is learned.

#### **Tasks which count towards your degree (Summative):**

Module is formally and summatively assessed using a portfolio of tasks consisting of individual projects and a structured report in which you are required to draw on a broad knowledge of the systems analysis process. The individual project requires a detailed analysis of a specific information system and use appropriate techniques and methodologies to solve a defined business problem or need.

Performance within the individual project is assessed via a report which is completed in line with a template provided by the tutor. This introduces you to the fundamentals of report writing in a supported way appropriate to the level. This will include a narrated video or similar to a prescribed specification.

The teaching structure identified above provides a framework that ensures that learning is reviewed at regular points and that you are able to monitor your learning according to clearly defined targets relevant to assessed work. Within this structure the emphasis on applying knowledge in practical tasks ensures that you receive ongoing feedback from the tutor.

**When assessment does not go to plan**
Re-assessment task must demonstrate achievement of the learning outcomes covered by the original assessment task. Therefore, you are permitted to retake a re-assessment, which will be similar to the original assessment, although the university policy on referral and late submission kick in.

### **What you will be able to do after the module**

1. Identify and explain the stages of information system development within organisations or in business contexts including analysis and design methodologies and their associated techniques.
2. Apply the principles and techniques of systems analysis to a specific business development problem or requirement, including the use of software support tools.
3. Investigate, analyse and critique a business system using recognised systems development concepts and techniques. Offers suggestions for process and cost (time and money) improvement.
4. Analyse and build models using appropriate computer packages and modelling techniques.
5. Present reports and results clearly, in a variety of ways, accurately and to a specified format.
6. Reflect on interaction with stakeholders.

### **How this relates to the dimensions of Solent’s Real-world curriculum framework**

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| **Dimensions** | **How students learn** | **How students are assessed** |
| Students are challenged to think in critical, creative and applied ways | Different theory of machine learning will be examined. The application of this theories will challenge is expected to challenge students cognitively  | Real-world problem based assessment is provided |
| Students are inspired to do research through inquiry, curiosity and problem-solving | Group and independent tasks will be given and in-depth research is expected to arrive at a solution | Student will work in groups and independently at different stages to provide adequate solution to given problems |
| Students experience an intellectually stimulating curriculum which inspires them to learn for life | The application of theories and machine learning algorithms and their application in providing solution to real life problems stimulate students intellectually | Artefact and report is expected to demonstrate skills of solving real life problems  |
| Students learn from authentic, engaging and programmatic assessment | The assessment is a real world problem which will carry  | Problem based assessment involves report on how given problems is resolve following taught concepts. |

### **Summative assessment details**

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| AE1 | Weighting: |  100% |
|  | Assessment type: | Portfolio Report with supporting artefacts  |
|  | Aggregation: | N/A |
|  | Length/duration: | 2000 |
|  | Online submission: | Yes |
|  | Grade marking: | Yes |
|  | Anonymous marking: | No |

### **Module Author:**

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| Module Title: Systems Analysis and Design Work Based Project |
| Credit Points: | 20 | Module Code: | COM423 |
| FHEQ Level: | 4 | School/Service | SMAT |
| Module Delivery Model: | CD | Max/Min student numbers | N/A |
| Module Leader: | Dr Craig Gallen |
| HECOS code | 100753 |

### **Module change history:**

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| --- | --- | --- | --- |
| Module Approved/Year Implemented/Code | July 2019 | 2020/21 | COM423 |
| Module modified/Year Implemented/Code |  |  |  |
| Add extra rows as required |  |  |  |