APPLIED COMPUTING: SOFTWARE DEVELOPMENT

UNIT 3

In this unit students apply the problem-solving methodology to develop working software modules using an object-oriented programming (OOP) language. Students develop an understanding of the analysis, design and development stages of the problem-solving methodology.

AREAS OF STUDY

- Programming
- Analysis and Design

OUTCOMES

Outcome 1: be able to interpret teacher-provided solution requirements and designs and use appropriate features of an object-oriented programming language to develop working software modules.

Outcome 2: On completion of this unit the student should be able to document a problem, need or opportunity, formulate a project plan, document an analysis, and generate design ideas and a preferred design for creating a software solution.

UNIT 4

In this unit, students focus on how the needs of individuals and organisations are met through the development of software solutions using an object-oriented programming (OOP) language and consider the cyber security risks to organisations as a result of insecure software development practices.

AREAS OF STUDY

- Development and evaluation
- Cyber Security

OUTCOMES

Outcome 1: On completion of this unit the student should be able to develop and evaluate a software solution that meets requirements and assess the effectiveness of the project plan.

Outcome 2: On completion of this unit the student should be able to respond to a teacher-provided case study to analyse an organisation's software development practices, identify and evaluate current security controls and threats to software development practices, and make recommendations to improve practices.