CLARENCE FITZROY BRYANT COLLEGE

PROGRAMME: ***INFORMATION TECHNOLOGY ASSOCIATE DEGREE***

CURRICULUM:	***Information Communications Technology***
COURSE TITLE:	*Capstone*
COURSE CODE:	IFTH2001
LEVEL OF STUDENTS:	N/A
CREDITS:	*3*
SEMESTER:	*2 (Two)*
DURATION:	*45 hours*
PREREQUISITE(S):	Complete All Course Requirements

RATIONALE

The Information Communication Technology (ICT) curriculum prepares individuals for employment as computer programmers, information technologist, and information systems managers, and related positions through study and applications in computer concepts, logic, programming procedures, languages, generators, operating systems, networking, data management, and business operations. The curriculum prepares graduates to solve business computer problems through programming techniques and procedures, using appropriate languages and software. The primary emphasis of the curriculum is hands-on training in programming and related computer areas that provide the ability to adapt as systems evolve.

Therefore, graduates from this program are qualified for employment in business, industry, and government organizations as programmers, programmer trainees, programmers/analysts, computer operators, systems technicians, or database specialists. It is therefore essential before graduation to demonstrate to the institution an acceptable level of readiness to function effectively in the world of work. Therefore, to graduate with an Information Communication Technology Associate degree you must complete a Senior Capstone Integrating Experience, which should be referred to as “the Capstone".

The capstone project requires that candidates for the Associate degree utilize the skills that they have developed over the two year-period of study to generate a product that solves a real life problem. The Capstone is the culminating project for all ICT majors: Information Technology, Applied Computer Science and Information Systems. Students must complete all required coursework before enrolling in the individual program’s Capstone project, since the project incorporates skills from all the required courses. The Capstone project must be successfully completed in the allotted amount of time before a degree will be awarded.

CAPSTONE PROJECT DESCRIPTION

This capstone project is encapsulating project that can be either administered in cooperate groups, with individual components or as an individualized project. Regardless of your approach to the project it requires students to spend as much as 30 hours outside of class engaged in product development, piloting and redesign. Capstone candidates are expected to meet with an instructor for two hours at the start of the process, and a final an evaluation session 75 days after. Regardless of the majors, all Capstone project candidates are required to implement one of the many products which they designed and developed during courses taken in previous semesters. All products designed each semester must be presented in a job

portfolio, but the product that is chosen for Capstone implementation should be accompanied by a real life implementation plan.

LEARNING OUTCOMES

On completion of the Capstone project students would have:

1. Create an implementation plan for a product/system that has direct application in a real organisation.
2. Write a proposal for implementation of a real organization of a product/system that was created from skills acquired from the relevant courses from an ICT major.
3. Identify potential design and development issues and work through to solutions.
4. Refine and package a final product for repeated use in an organisation.

Capstone Project Development Process

1. Project Initiation Phase [2 hour class]

1.1. A discussion of the product, project details and requirements.

1.2. Clarification about the purpose or expected outcome of the project including a review of the evaluation components of the project.

1.3. Establishing the project milestones that the student will use in the development of the project.

1.4. A review of the process that students will use during the project development stage to get feedback from the instructor.

1.5. Explain the process of proposal development.

2. Project Proposal Writing Phase [3 hour class]

2.1. A discussion of the last class, during which the instructor will evaluate the student's project proposal.

2.2. Student will present a proposal to class which outlines the process and steps that will be used to conduct his/her capstone project.

2.3. This presentation purposes to get the student to describe and demonstrate their product, and validate their design decisions with the instructor before implementation begins.

2.4. The final task during this meeting should involve the Instructor making a presentation to the student that outlines process that will be used to evaluate the project.

3. Project Implementation Phase

After the second class, there should be one additional in-person meetings between the student and instructor to receive a project journal for evaluation. This journal should chronicle their life in the field noting all milestones and key events in the project implementation process, and citing especially, interesting occurrences up to that point.

However, after this meeting no other in person meeting between the student and the instructor will occur. Any follow-up communication with the instructor will occur via e-mail. As the student completes their project, they will check in with the instructor based on the milestones established in the initial kick-off class to make sure they are on track for completion. The student may contact the instructor as many times as necessary to ask clarifying questions regarding the project. They may also contact the instructor up to four times for direction or suggestions (see the notes below on this subject under "Important Considerations").

The project is expected to take from 30 to 40 hours of student time to complete, however completion time will depend on the student's mastery of the material covered in their classes.

4. Project Evaluation Phase

The final meeting between the student and instructor is the evaluation of the student's Capstone project. It should occur in person 75 days after the initial kick-off class.

i. If at that time the project is considered by the instructor to be complete, the student will have successfully passed the Capstone class.

ii. If the student does not successfully complete the project, the instructor should review with the student the area(s) where the project did not meet expectations. The student

will then have an additional 15 days to correct these problems and resubmit the project via e-

mail. The 15-day grace period may not be extended for any reason, and only one resubmission is allowed; this will be considered the final opportunity to pass the project. The instructor will notify the student of the pass/fail status of the final submission via reply e-mail. If, after resubmitting the project the second time, the instructor believes that the work is not satisfactory, then the student will be considered to have failed the project, and the degree will not be issued. The student's only recourse is to re-enrol in and pay for the Capstone again.

iii. If the student does not submit the project within 75 days, an additional 15-day grace period will be extended to the student only, if the student submits an e-mail to the instructor before the end of the 75th day requesting an extension. However, if the student either does not submit the project by the end of the 15- day extension or does submit it to the instructor, but does not meet the minimum standards required for the project to pass, then the student will be considered as having failed the project and the degree will not be issued. A second resubmission of the project is not allowed, and an extension of the 15 day grace period will not be extended for any reason. The student's only recourse is to reenrol in and pay for the Capstone again.

iv. If the student would like an earlier evaluation than 75 days after the first class, they must contact the instructor to see if an earlier date can be arranged. Such arrangements will be on a case-by-case basis and, if an early evaluation is agreed to, it may need to take place via e-mail rather than in a face-to-face meeting. If an early evaluation takes place and the student does not successfully complete the project, an additional 15 day extension, starting from the date that the instructor informs the student of the failing grade, will be extended to the student. If, after resubmitting the project the second time, the instructor believes that the work is not satisfactory, then the student will be considered to have failed the project, and the degree will not be issued. The student's only recourse is to reenrol in and pay for the Capstone again.

Important Considerations Regarding the Capstone Project

1. Once the student enrols in the Capstone project, it is expected that they have successfully learnt the material presented in the required and elective classes. Therefore, the instructor will not supplement the Capstone project with tutoring or instruction on previous coursework. Although we want to help students who are stuck, we also want to maintain the integrity of this Capstone project. Therefore, the instructor of the Capstone Project will

only provide general guidance and suggestions (up to four times per student) for improvement of the student's project. It is not an opportunity to have the instructor debug the student's code or to receive specific code feedback. Example instructor responses are as follows: "If you want to see what files are in a directory, you could also try the Directory class," or "Investigate the errors that this function call can generate." Again, the purpose of an instructor answering students' questions during the Capstone project development is to give direction, not solutions. It will also not involve extensive code review or execution of the program.

2. Each student may contact the instructor an unlimited number of times during the Capstone project proposal writing phase to ask questions and receive clarification on the project requirements.

3. Milestone checkpoints are designed to help the student stay on track through the stages of project implementation so they can complete their project on time. Milestone checkpoints are not code review, and the instructor will not spend time checking over the student's work. The milestones have no bearing on the project evaluation. For example, a student may meet all milestones yet not pass the project.

4. The Capstone Project will not be evaluated in stages. The full project review is on the date of the second meeting which is scheduled for 75 days after the initial class. There is the possibility of an extension of 15 days as mentioned above. If a student wants an evaluation earlier than the 75-day evaluation, the student may contact the instructor to determine if an earlier evaluation is feasible. If so, the evaluation may be done via e-mail rather than in person.

5. If a student fails the initial project evaluation and resubmits their project, the instructor will only evaluate those areas that failed the initial evaluation and verify that those areas now meet the project specifications. This is not an additional full-project evaluation.

6. A student who does not successfully pass the project may retake the Capstone project class in the future; however, the full class charge will be assessed at that time. The student will be required to create a new project, and will not be able to rework their previous project.

TEACHING AND LEARNING METHODS

To facilitate fulfilment of the requirements of this course lesson will utilise the following methods:

- Presentations
- Research

- Fieldwork
- Independent Product Development

ASSESSMENT PROCEDURES

Capstone Project Proposal & Presentation (30%)

Capstone Final Project (70%)

TEXTBOOKS AND REFERENCES

All materials used in previous courses