

IT 184: Research for IT

Mary Jane Gaceta Sabellano
University of San Carlos
Department of Computer Science



Outline

- Introduction (class list, groupings)
- Syllabus
- Deliverables
- Schedule of Activities
- Document Format (applicable to Deliverable 1 & 2 only)
- Rubric during Oral Defense

Introduction

- See classlist
- Groupings (project leader & members) and advisers based on Capstone proposal defense last October 24, 2014 (see list)

Course Detail

COURSE TITTLE: Research for IT

CREDIT: 3 units

REQUIRED ELECTIVE COURSE FOR
IT 4th year students starting SY 2014-
2015

Important Clause

- *According to the Commission on Higher Education (CHED) Memorandum Order (CMO) No. 53 Series of 2006: Policies and Standards for Information Technology Education (ITE) Programs. Article V Curriculum Section 10*
- **Section 10. Thesis/capstone project**
- **Thesis is a requirement for the BSCS program. Contents must be focussed on the theories and concepts of computing and it should be in the form of scientific work that may be presented in a public forum.**
- **Capstone project is required for BSIT and BSIS programs. It should be in the form of systems application or an enterprise resource plan.**

BSIT Alignment

According to the Commission on Higher Education (CHED) Memorandum Order (CMO) No. 53 Series of 2006: Policies and Standards for Information Technology Education (ITE) Programs. Article V Curriculum Section 11

The minimum number of internship hours for the BSIT and BSIS programs are 486 hours and 162 for the BSCS program.

On-the-Job-Training Hours. Requirements. From 350 To 486 Hrs. **3 unit course.**

BSIT Alignment

According to the Commission on Higher Education (CHED) Memorandum Order (CMO) No. 53 Series of 2006: Policies and Standards for Information Technology Education (ITE) Programs. Article V Curriculum Section 10

Section 10. Thesis/capstone project

Thesis is a requirement for the BSCS program. Contents must be focussed on the theories and concepts of computing and it should be in the form of scientific work that may be presented in a public forum.

Capstone project is required for BSIT and BSIS programs. It should be in the form of systems application or an enterprise resource plan.

Required Elective IT 184 Research for IT. Requirements. Collaborative work with BSICT students to promote interdisciplinary and team work.

BSIT Alignment



1st year

**SY 2011-
2012**



2nd

**SY 2012-
2013**



3rd year

**SY 2013-
2014**



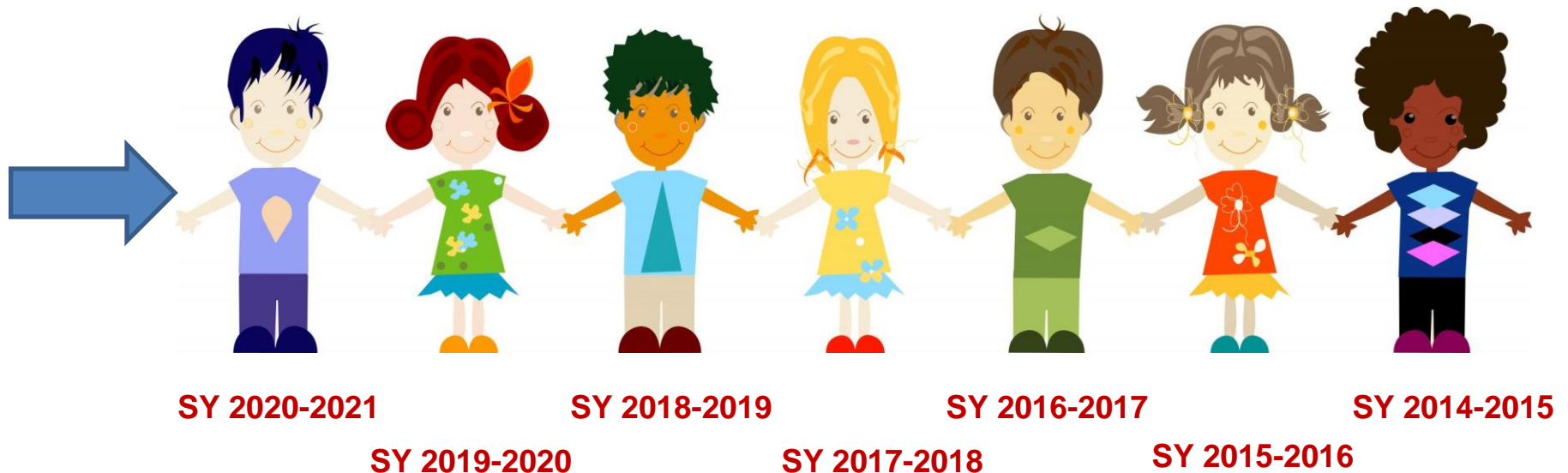
4th year

**SY 2014-
2015**

You will take the
Capstone or **IT184**
Research for IT course
as **Required Elective**
this second semester
SY 2014-2015

BSIT Alignment

The changes will take effect also to next set of 4th year students



What is Research?

- Research is an active, diligent and systematic process of inquiry in order to discover, interpret or revise facts, events, behaviours, or theories, or to make practical applications with the help of such facts, laws or theories
 - Shamathakamani Narendan

Capstone/Research

- for senior level BSIT student in their last Semester
- it is a consultative in nature class which involves a periodic, regular meeting with faculty-in-charge.
- provides an integrative learning experience which allows students to work in group to apply their prior learning to an integration project.
- project in the form of a systems application - a group of related applications programs designed to perform a specific function.

Capstone/Research

involves critical analysis of a selected area in information and communication technology,

or the development of an innovative solution to a **significant problem** using **industry level information** and **communication technology applications or tools**

in various fields or area such as: art, business, marketing, accounting, **education**, economics, human relations, natural science, social science, health science, and information and communication technology.

Institutional Outcomes

What they know, they apply justly and honestly. **Virtus**. Noble in character. **Integrity. Commitment. Evangelization. Leadership.**

What they do not know, they seek to learn.

What they don not have, they endeavour to acquire. **Scientia**. Competence. **Excellence.**

What they have, they share. **Devotio**. Communitarian. **Social Responsibility.**

Program Outcomes

1. Knowledge for Solving Computing Problems
2. Problem Analysis
3. Design/ Development of Solutions
4. Modern Tool Usage
5. Individual and Team Work
6. Communication
7. Computing Professionalism and Society
8. Ethics
9. Life-long Learning

Knowledge for Solving Computing Problems

- Use and apply core IT concepts, best practices and standards to defined and applied computing procedures, processes, systems, or methodologies.

Problem Analysis

- Analyze user needs and computing requirements and take them into consideration in the selection, creation, evaluation and administration of computer-based systems.

Design/ Development of Solutions

- Design, implement, evaluate and integrate IT-based solutions, computer-based systems ,processes and components to meet specified needs with appropriate consideration for public health and safety, cultural, societal, and environmental considerations.

Modern Tool Usage

- Select, adapt ,apply and administer effective and efficient IT techniques, resources, and appropriate modern computing tools to IT-based computing activities , with an understanding of the limitations.

Individual and Team Work

- Function effectively as an individual and as a member or leader in diverse teams and cultures in computing activities, multidisciplinary work settings, and communities.

Communication

- Communicate effectively with computing communities and with the society at large (in local and international scenes) about complex computing activities by being able to comprehend and write effective documents, make effective presentations, give and understand clear instructions, and in articulating research outputs in publishable forms

Computing Professionalism and Society

- Assess and evaluate societal, health, safety, legal, and cultural issues within local and global contexts, and the consequential responsibilities relevant to professional computing practice.

Ethics

- Practice ethical and moral profession in the development, usage and presentation of theories, quality research and software solutions aligned with the university's core values.

Life-long Learning

- Engage in independent learning and continual development activities as a result of recognizing the needs in developing further one's competence in the field of Computer Science.
- Engage in independent learning and continual development activities as a result of recognizing the needs in developing further one's competence in the field of Information Technology.

Course Outcomes

1. Design and develop automated business processes and select suitable IT-based solution applications to address clients or selected community needs and problems
2. Communicate effectively and professionally to academic and industry panellists about the developed software solutions by writing technical documentation and deliver doing presentations during the oral defense.

Course Content

I. Course Orientation

- 1.1 Course Overview
- 1.2 Course Requirements
- 1.3 Course Deliverables
- 1.4 Course Time Table

II. Topic Presentation

- 2.1 System Requirements Specification Presentation

III. Project Proposal and Project Documentation Writing

- 3.1 Presentation of Documentation (Chapter 1, 2 and 3)

Course Content

IV. Project Prototype Presentation

- 4.1 Project Specifications
 - 4.1.1 Business Process
 - 4.1.2 Project Features
 - 4.1.3 Project Modules/ Functionalities

V. System Software Development Documentation Writing

- 5.1 Creation of Evaluation Instrument
 - 5.1.1 User Acceptance Test
 - 5.1.2 Documentation and Analysis of Result
- 5.2 Writing the User Manual and Technical Manual

VI. Final Project Documentation Writing

- 6.1 Writing of Chapter 4 and 5
- 6.2 Final Draft of Project Documentation

Course Content

VII. Mock Defense

7.1 Presentation of Project Prototype and Documentation

VIII. Final Oral Defense

8.1 Presentation of Final Project Prototype and Documentation

IX. Project Revision

9.1 Revision of Project (Documentation and System) for Deployment

X. Project Implementation

10.1 Presentation and Turn Over of developed system to the Company or Organization

Capstone Phases

Phase 1: Initial Project Documentation Write-up

Phase 2: Project Methodology (inclusive of Business Process)

Phase 3: System Software Development Documentation Write-up

Phase 4: Presentation of Test Results and its Interpretation

Phase 5: Successfully Defend the Capstone Project (inclusive of revision)

Phase 5: Project Deployment and Submission of Final Documentation

DEFENSE VERDICT

PASSED

Minor revisions are necessary to enhance the document and/or software, but they do not have to be presented in front of the panelists. The panelists are tasked to make sure that all the revisions are made.

RE DEFENSE

Another formal defense is necessary because the proponent failed to present his/her capstone properly and/or the documentation and/or software contain major errors.

FAILED

Either the objectives of the study have not been met or the proponent cheated. The verdict is a unanimous decision among the three members of the capstone defense panel. Once issued, it is final and irrevocable.

Learning Activities

- This subject will engage the students in:

- Lectures

The lectures will provide the students the theoretical background behind the development of a research proposal;

- Documentation writing

The documentation writing will be assigned to the students and to be defended towards the end of the semester.

Course Requirements

- This subject will engage the students in:

- Project Deliverables

Students are required to document the progress of their project. This is made to ensure that they are actively working and developing their project. This includes the presentation of the progress of the development of the system for evaluation and testing (project prototype presentation)

Course Requirements

- This subject will engage the students in:

—Mock Defense

Students are required to present and undergo the experience of a pseudo final defense in preparation for their final defense of their project.

—Final Defense

Students are required to present and undergo the experience of a final defense with a technical panel, it is successfully defended once all the prescribed revision, are completed, presented and complied.

Course Requirements

- This subject will engage the students in:

—Final Deliverables

Students are required to submit 3 copies of the hardbound capstone project document and each of the copy should come with a CD that contains the softcopy of the document and a working copy of the Capstone Project (system). Letter/ Certificate of Acceptance from the company should also be part of the documentation.

Evaluative Measures

- Each student will be assessed on the following:
 - Deliverables (D) 20%
 - Mock Defense Rating (MDR) 20%
 - Final Defense Rating (FDR) 50%
 - Final Documentation 10%
-
- 100%

Grading System

Progressive grading system

- **MG = INC (in ISMIS)**
- **FG = D20% + MDR20% + FDR50% + FD10%**

Deliverables must be submitted on time
otherwise no grade for that specific deliverable
requirement

Deliverables

DELIVERABLE 1:

1. Letter of Request
2. Transcript of Interview
3. Letter of Agreement
4. Agreement Form
4. BIR
5. ERD(consulted with your advisers)
6. Gantt Chart(consulted with your advisers)
7. **Weekly Consultation Sheet signed by your advisers.**

Deliverables

-DELIVERABLE 2 (Chapter 1 & 2)

with approval sheet and recommendation sheet (listed during the proposal defense)

1. Chapter 1 (complete already corrected based on the panelists' recommendation and checked by they adviser and panelists)
2. Chapter 2 (Review of Related Literature) at least 10 articles use APA format for citations

Note: Prepare a LONG SIZE BROWN ENVELOPE WITH PLASTIC FOR PROTECTION. Write at the UPPER LEFT CORNER the following information:

Course Code:

Capstone Project Title:

Members:

(with checklist)

Deliverables

DELIVERABLE 3 (Chapter 3)

DELIVERABLE 4 (Chapter 4)

DELIVERABLE 5 (Chapter 5)

DELIVERABLE 6 (Chapter 6)

MOCK DEFENSE

FINAL DEFENSE

COMPLIANCE TO REVISIONS

HARD BOUND COPIES

Schedule of Activities

See Timetable

Document Format

See file

Rubric for Oral Defense

See file

The End