Slide 1

FINAL YEAR PROJECT (PSM)

AN OVERVIEW

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Slide 2

PSM1 SCSR3032

PSM2 SCSR4134

PSM PURPOSE

To apply your knowledge, skills and ability to produce a good, well-designed, usable solution to a known problem.

SKILL — KNOWLEDGE — ABILITY

• *Coding*
• *Time management*
• *Project management*
• *Discipline*
• *Communication*
• *Ethics*
• *Understanding*
• *Critical thinking*
• *Design*
• *User Interface*
• *Data Collection*
• *Data Search*
• *Data Storage*
• *Accessibility*
• *Availability*
• *Ease of Use*
• *Listening*
• *Researching*
.... *and more*

FINAL YEAR PROJECT

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Slide 3

PSM1 SCSR3032 **PSM2** SCSR4134

GENERIC INFO

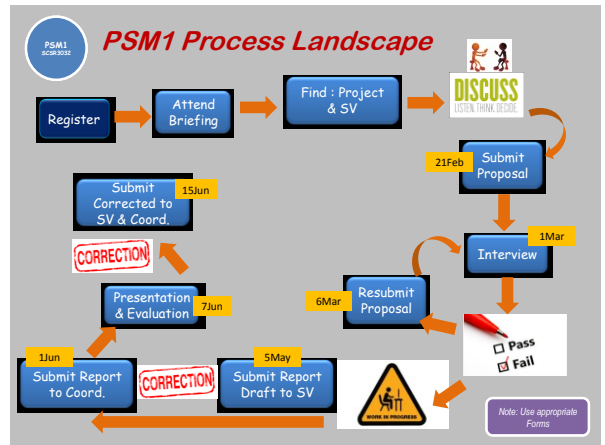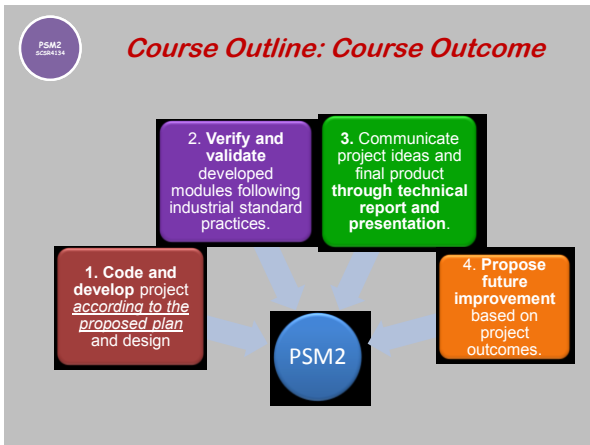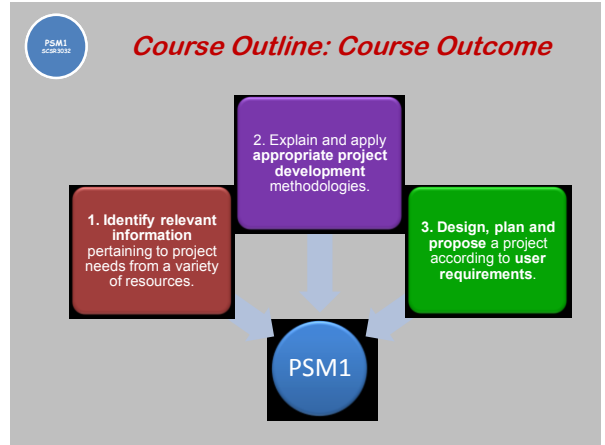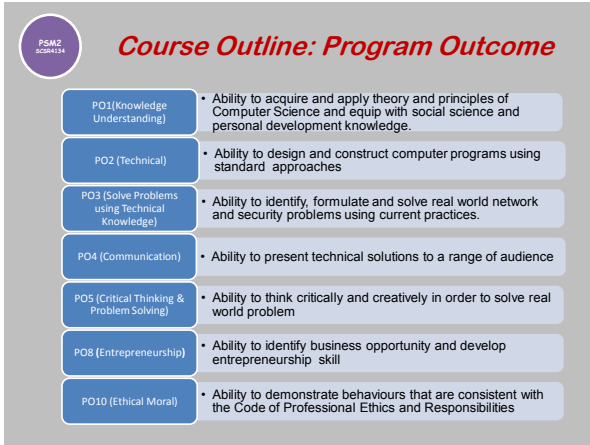|	
PSM Website: http://comp.utm.my/psm	• All info is here (forms, handbook, schedule, calendar, Thesis Writing Guideline, etc.)
FC Institutional Repository : http://ir.fsksm.utm.my/	• To view previously completed titles and thesis
PSM1 E-learning site (& PSM2 as well)	• Refer to this regularly, for updates and notifications.
The people	• Dr. Maznah Kamat ➔ CS PSM1 Coordinator • Ms. Hazinah KM ➔CS PSM1 Class & CS PSM2 Coordinator

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Slide 4

PSM1 SCSR3032

Course Outline: Program Outcome

PO1(Knowledge Understanding)	• Ability to acquire and apply theory and principles of Computer Science and equip with social science and personal development knowledge.
PO3 (Solve Problems using Technical Knowledge)	• Ability to identify, formulate and solve real world network and security problems using current practices.
PO4 (CS-Communication)	• Ability to present technical solutions to a range of audience
PO5 (CTPS-Critical Thinking & Problem Solving)	• Ability to think critically and creatively in order to solve real world problem
PO7 (LL-Life Long Learning)	• Ability to undertake lifelong learning and actively participate in change
PO10 (EM-Ethical Moral)	• Ability to demonstrate behaviours that are consistent with the Code of Professional Ethics and Responsibilities

Course Outline: Program Outcome

PSM2 SCSR4134

PO1(Knowledge Understanding)	• Ability to acquire and apply theory and principles of Computer Science and equip with social science and personal development knowledge.
PO2 (Technical)	• Ability to design and construct computer programs using standard approaches
PO3 (Solve Problems using Technical Knowledge)	• Ability to identify, formulate and solve real world network and security problems using current practices.
PO4 (Communication)	• Ability to present technical solutions to a range of audience
PO5 (Critical Thinking & Problem Solving)	• Ability to think critically and creatively in order to solve real world problem
PO8 (Entrepreneurship)	• Ability to identify business opportunity and develop entrepreneurship skill
PO10 (Ethical Moral)	• Ability to demonstrate behaviours that are consistent with the Code of Professional Ethics and Responsibilities

Course Outline: Course Outcome

PSM1 SCSR3032

2. Explain and apply **appropriate project development** methodologies.

1. Identify relevant information pertaining to project needs from a variety of resources.

3. Design, plan and propose a project according to **user requirements**.

PSM1

Course Outline: Course Outcome

PSM2 SCSR4134

2. **Verify and validate** developed modules following industrial standard practices.

3. Communicate project ideas and final product **through technical report and presentation**.

1. Code and develop project *according to the proposed plan* and design

4. Propose future improvement based on project outcomes.

PSM2

PSM1 Process Landscape

PSM1 SCSR3032

Register → Attend Briefing → Find : Project & SV → DISCUSS

Submit Proposal — 21Feb

Submit Corrected to SV & Coord. — 15Jun

CORRECTION

Interview — 1Mar

Presentation & Evaluation — 7Jun

Resubmit Proposal — 6Mar

☐ Pass ☑ Fail

Submit Report to Coord. — 1Jun

CORRECTION

Submit Report Draft to SV — 5May

Note: Use appropriate Forms

PSM SV and Project Types

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- **Supervisor Tips**:
  - Find one early
  - Find one you can work with and easy to meet
  - Find one suitable in the area of interest/project
  - Discuss with them (the SV) first
  - If cross discipline, can have a co-SV

- **Project Types**
  - System Development
    - Resort E-Booking
    - Mobile App
    - RFID tagging

  - Research
    - Efficiency of Crypto Algo
    - Spam Detection Using Hybrid Clonal Selection

PSM Requirements

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- **Log Book**:
  - Must complete and keep up-to-date a logbook
  - Update at least after every meeting
  - **MUST have minimum 6 formal meetings** with supervisor before can submit and present project

- Network Security Projects **MUST** include elements of
  - **Network**
    - LAN, VPN, Wireless, Mobile, Client-Server, Servers (Web, Database), Cloud, etc.
  - **Security**
    - Access Control (Authentication, Authorization, Verification, Identification, Role Privileges) CIA, Firewall, IDS, Biometrics, Cryptography, Steganography, etc.

Please Note:
*-Password alone is **not enough security***
*-Localhost and emulators **not acceptable** (especially to get A)*

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PSM Good Practice

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Follow standard practices
Practice writing everyday
Cite diligently, stay away from plagiarism
Direct translation is plagiarism
Have your reports proofread before submission
Meet SV regularly, work smart, be ethical
In formatting, always consult SV and handbook - not seniors' thesis

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ANATOMY OF THE PROPOSAL

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SV & Project Title	Title should reflect the project and be easily understood
Problem Background	**Problem Background**: Explain why there is that problem. How it came by. The <u>weakness</u> of a system or lack of a system. How it affect users, profit or whatever. Know who your users are.
Proposed Solution	**Proposed Solution:** How you propose to solve (or at least make very much better) the problem → a new technique, an upgraded system, etc.
Objectives	Should be measurable process or outcomes to be achieved by the project
Scopes	The coverage provided by the project – not too wide, not too narrow

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ANATOMY OF THE PROPOSAL

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Project Requirements	What you are going to use in your project (do a little research here) *Software*: Java, PHP, .Net, C#, SQL *Hardware*: Android Phone, RFID Reader, Fingerprint Scanner, Server *Technology/Technique/ Method/Algorithm :* Watermark, AES, DES, Feature Selection
Project Type	System Development OR Research
Project Area	What area is your project focusing on? Security, Collaborative systems, Mobile computing, Embedded system, System Development, VPN, etc.

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Exercise : Crafting a proposal

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- **User**: Lecturer H
- **Consultant**: **Your group name here
- **Project**: Class attendance system
- **Project Requirement**: Must be accurate, cheap, quick, efficient and easy to use.

- **Task**: Write a proposal for this project to win the contract
- *Note: be creative, think outside the box if need be*

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Exercise Review : Crafting a proposal

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- What did you find to be most challenging?
- Is there more information you need? Where and how can you find it?
- Did you brainstorm many ideas before focusing on a winning idea?
- Do you think you can make the proposal better now?

Your Task:
Craft your own PSM proposal. Ready for discussion on the next class.

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Interesting Way of Thinking

http://www.designorate.com/triz-method-problem-solving/

End of Class…Today

EXPLORE !