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NUS Enterprise



NUS SoC Presents:



8th STePS

SoC Term Project Showcase

A festive yet serious class showcase of innovative student works

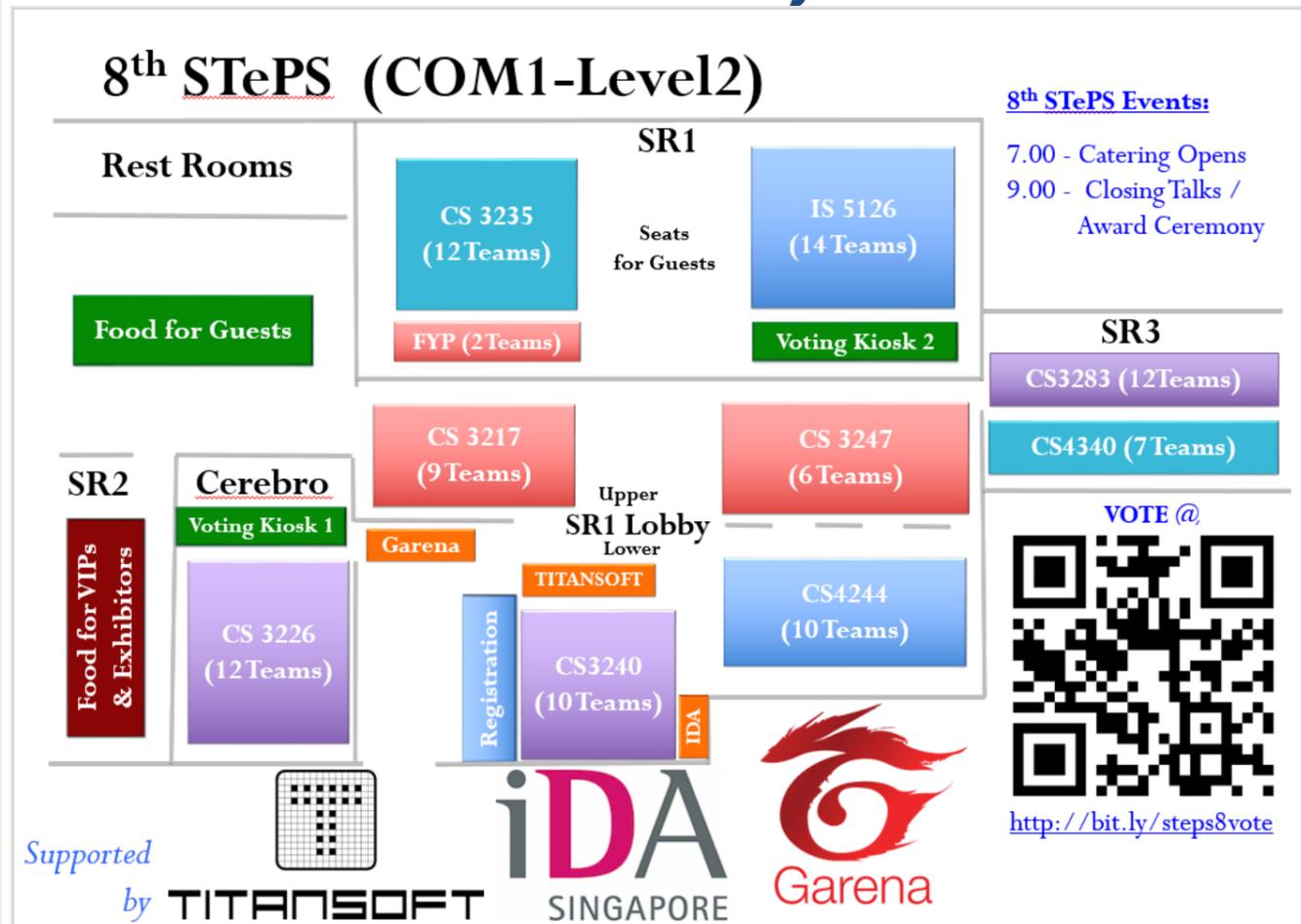
20 April 2016 18-22:00
@ SoC COM1 block

<http://steps.comp.nus.edu.sg>

Programme

- 17:30 Registration Starts,
Pre-event dinner for exhibitors
- 18:00 Poster Presentation Starts
- 19:00 Catering Opens (Outside SR2),
Catering for Sponsors/VIPs (in SR2)
- 20:50 Last Call for Votes
- 21:00 Closing Ceremony
- 22:00 End

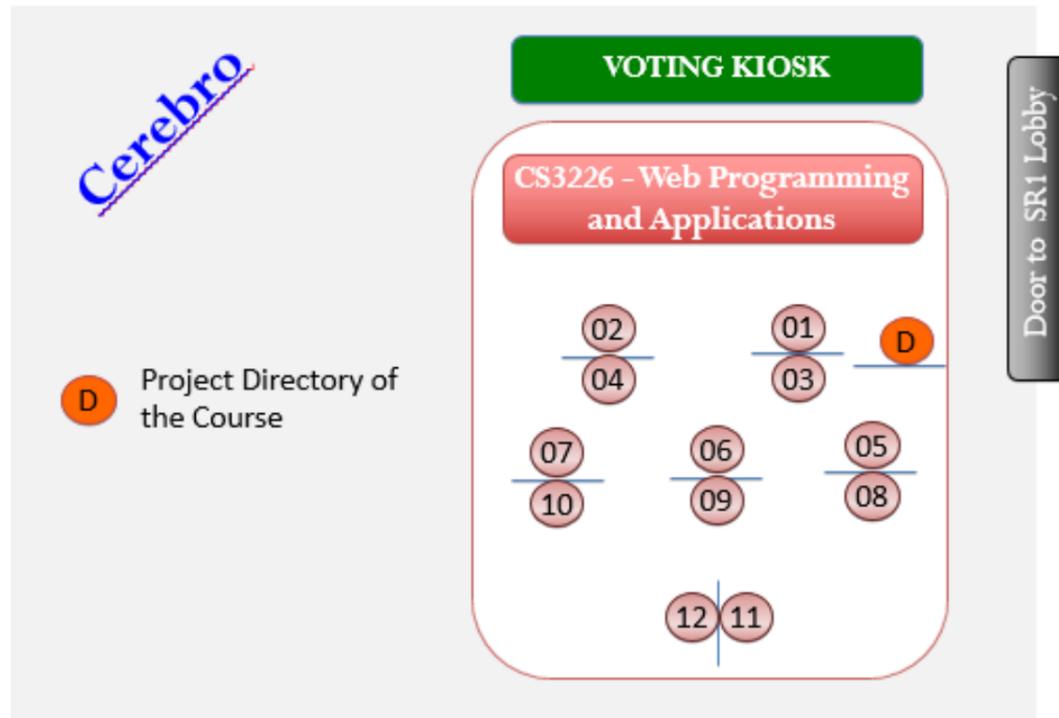
Overall Layout



Course Assignment for Voting

First letter of your last name	Courses to vote
A-E	CS3217, CS3247
F-K	CS3226, CS3240
L-O	CS3235, CS4244
P-T	CS3284, CS4340
U-Z	IS5126, FYP

- Q: I'm interested in coming. How do I attend the event?
A: The event is open to the public. Please come! The venue is at SoC, COM1 block, there will be signage). To let us know that you're coming, we'd appreciate if you can spend 2-3 minutes registering online first: <http://bit.ly/steps8ticket>
- Q: Where exactly is the event anyways? I haven't been to the School of Computing in years.
A: It'll be held on the second floor of the School of Computing. Directions are available here: <http://www.comp.nus.edu.sg/maps/location.html>. A map of the venue is here: <http://steps.comp.nus.edu.sg/steps8/img/layout.jpg> but a more detailed map will be prepared soon and available in the navigation bar of the website.
- Q: Will there be parking at the event? Where do I go to park?
A: Yes, you can park at Carpark 13 (CP13), which is right next to SoC on the map: <http://www.comp.nus.edu.sg/maps/location.html>. If you plan to leave the showcase by car before 7:30 PM, we can give you a parking voucher so that you won't have to pay fees for parking in the lot next to the School. After 7:30 PM, parking is free. You can indicate your need for a free parking voucher on the event registration form (See the above question).
- Q: How long do we have to assess projects? May we do additional assessment outside of the project showcase?
A: The projects are meant to be assessed within the evening of STePS. If you wish to give additional feedback to students, please interact with the students to get their email addresses and feel free to send them additional feedback beyond what you were able to provide during the showcase.
- Q: Do we have to be an expert in the course material to evaluate the projects?
A: No, not at all. Please use your own perspective and experience to guide the students about the real-world value of their work. If you can give constructive feedback that could encourage them to develop their projects further, that would be most appreciated.
- Q: What's the minimum commitment in assessing projects?
A: You can just use the simple evaluation form. This form consists of a list of projects to select the top three projects in each course and simple comment fields to offer free-form comments you have about the projects. Please indicate the project-id for each free-form comment. The free-form comments will be given to the project team at a later date.
- Q: If I use the more comprehensive evaluation form, do I still have to fill out a simple evaluation form?
A: Yes, please fill in a simple evaluation form to vote for top three projects in each course. This vote is important as it is the sole mechanism we use to determine prize winners. For free-form comments, you can use comprehensive evaluation form, which will be sent both to the instructor as well as the project students.
- Q: How do my comments influence the results of the showcase?
A: We value industry comments very highly. We weight your industrial evaluations three times more highly than evaluations by the students to their peers. The votes from industry as well as participants and guests will be used to determine the prize winners for the showcase. The votes do not influence the project grades, since this is the sole province of the course instructors.
- Q: May I evaluate other projects than the ones that I am assigned to?
A: Yes! You are free to evaluate any additional projects beyond the ones which we have assigned you. The students are very happy to receive additional evaluation. Grades for any additional projects will also be weighted three times as heavily as peer grades given by students.
- Q: May we interact with the project teams outside of the showcase?
A: Yes, you may. If you wish to do so, please take note of the students' email addresses. Feel free to offer more comments or schedule a time to meet up to students for any other purposes.
- Q: May we promote our company in our discussion with project students?
A: Yes, please do! Students in the project showcase are largely undergraduate students in their final years. They are very interested in potential job offers, and may have a resume or CV ready for your perusal.
- Q: If we are interested in some of the projects that the students have done, and wish to pursue licensing, who should we approach?
A: You should approach the students and the STePS coordinator, Dr. Bhojan Anand directly.



CS3226 - Web Programming and Applications (Chair: Dr. Steven Halim)

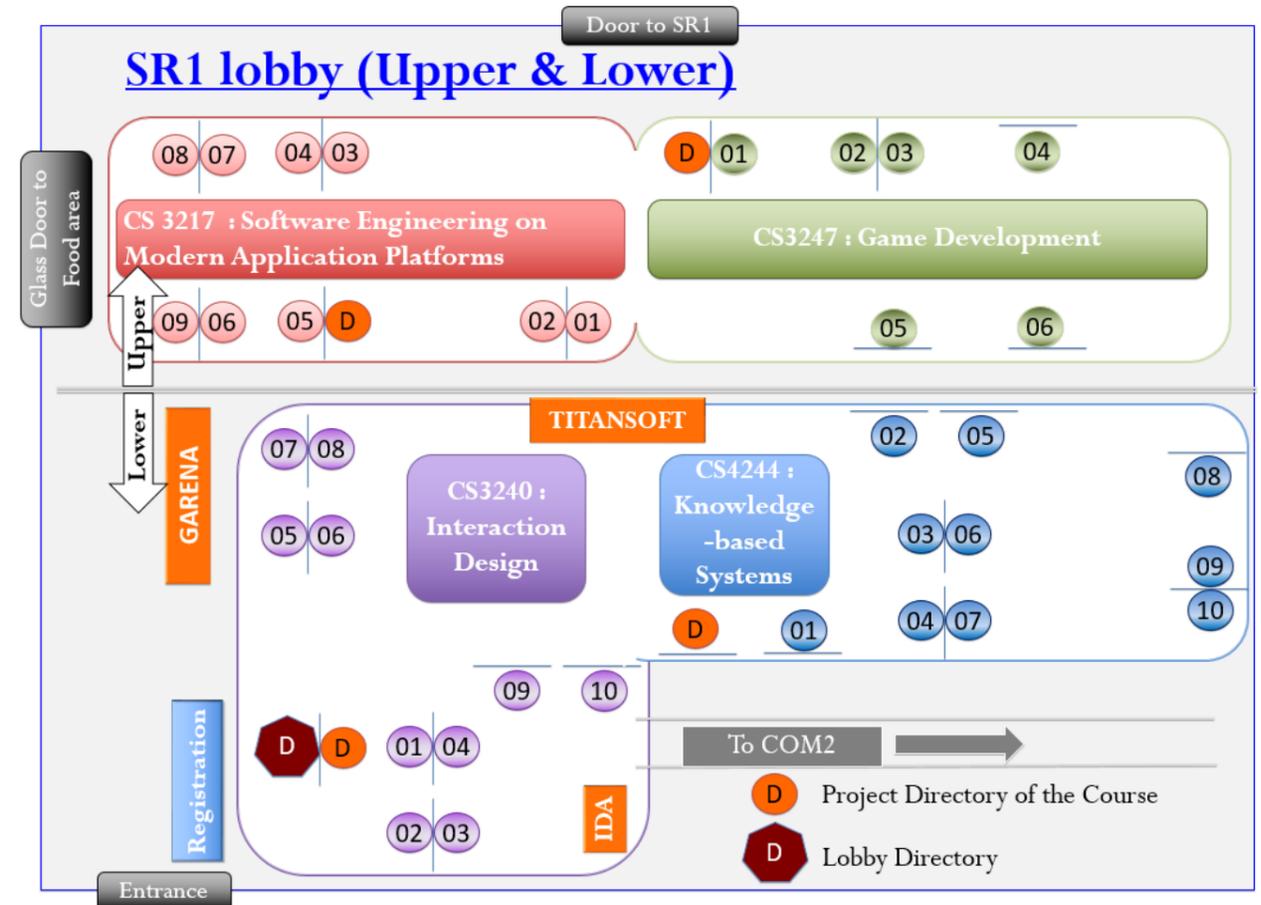
57 students in 12 teams

This module introduces students to software development on the Web platforms. Students will be exposed to important computer science concepts, including networking, databases, computer security, user interface design, programming languages, and software engineering. These concepts will be tied together through hands-on practice in building a Web-based application using the current Web development technology. At the end of the module, students are expected to be able to design and develop a Web application, to appreciate the underlying technology needed to build a Web application, and to develop a fundamental understanding of related computer science concepts..

Project Listings

1. CS3226-1: Rank Dash
2. CS3226-2: IOI Singapore 2020
3. CS3226-3: NUSAnswers.com
4. CS3226-4: NUS FORUM
5. CS3226-5: NUSAnswers.me
6. CS3226-6: FindCity
7. CS3226-7: SoCPlans
8. CS3226-8: NUSH :: NUS Student Life Hacks
9. CS3226-9: NUSmeow
10. CS3226-10: GymRats
11. CS3226-11: NUSLearn
12. CS3226-12: OddJobs@NUS

Vote online for the top three projects in each course @ <http://bit.ly/8stepsVote> or go to SR1 (voting kiosk) to key in your votes!



CS3240 - INTERACTION DESIGN (Chair: Dr. Bimlesh Wadhwa)

40 students in 10 teams

CS3240 Interaction Design is intended for students in computing and related disciplines whose work focuses on human-computer interaction (HCI) issues in the design of computer systems. The course stresses the importance of user-centered design and usability in the development of computer applications and systems. Students are taken through the analysis, design, development, and evaluation of human-computer interaction methods for computer systems. They acquire hands-on design skills through laboratory exercises and assignments. The course covers HCI design principles and emphasizes the importance of contextual, organizational, and social factors in interaction design.

Project Listings

1. CS3240-1: FoodByte
2. CS3240-2: Ride NUS
3. CS3240-3: YouFind
4. CS3240-4: NUS Modules Tracker
5. CS3240-5: Instynct
6. CS3240-6: NUSTicket
7. CS3240-7: Anakin

Vote online for the top three projects in each course @ <http://bit.ly/8stepsVote> or go to SR1 (voting kiosk) to key in your votes!

8. CS3240-8: EventPresso
9. CS3240-9: Collab
10. CS3240-10: NUS Academic Planner

CS4244 - Knowledge-based Systems (Chair: Prof. Tan Chew Lim)

40 students in 10 teams

This is a module that contains both the theory and practice of building knowledge-based systems. The aim of this module is to prepare students so that they can design and build knowledge-based systems to solve real-world problems. The module starts with motivations, background and history of knowledge-based system development. The main content has five parts: rule-based programming language, uncertainty management, knowledge-based systems design, development and life cycle, efficiency in rule-based language and knowledge-based systems design examples.

Project Listings

1. CS4244-1: Algebraic Equation Solver
2. CS4244-2: Knowledge-Based Module Planner
3. CS4244-3: SoC Module Planner
4. CS4244-4: CLIPS Plays Poker
5. CS4244-5: NUS Module Planner for SoC Students
6. CS4244-6: NextBook
7. CS4244-7: Dating Go Where
8. CS4244-8: Laptop Recommendation System
9. CS4244-9: Food Plus
10. CS4244-10: Where2Go

CS3247 - GAME DEVELOPMENT (Chair: Dr. Anand Bhojan)

37 students in 6 teams

The objective of this module is to introduce techniques for electronic game design and programming. This module covers a range of important topics including 3D maths, game physics, game AI, sound, as well as user interface for computer games. Furthermore, it will give an overview of computer game design, publishing and marketing to the students. Through laboratory projects, the students will have hands-on programming experience with popular game engines and will develop basic games using those engine. Themes for this Semester's Projects: Virtual Reality Game, Virtual Reality Simulation for Training (using Oculus Rift).

Project Listings

1. CS3247-1: House Of Horrors
2. CS3247-2: Eye Contact
3. CS3247-3: Vengeance Rising
4. CS3247-5: Legends of Mors Ter
5. CS3247-6: Lux Valley

Vote online for the top three projects in each course @ <http://bit.ly/8stepsVote> or go to SR1 (voting kiosk) to key in your votes!

CS4340 - Digital Special Effects (Chair: Prof. Terence Sim)

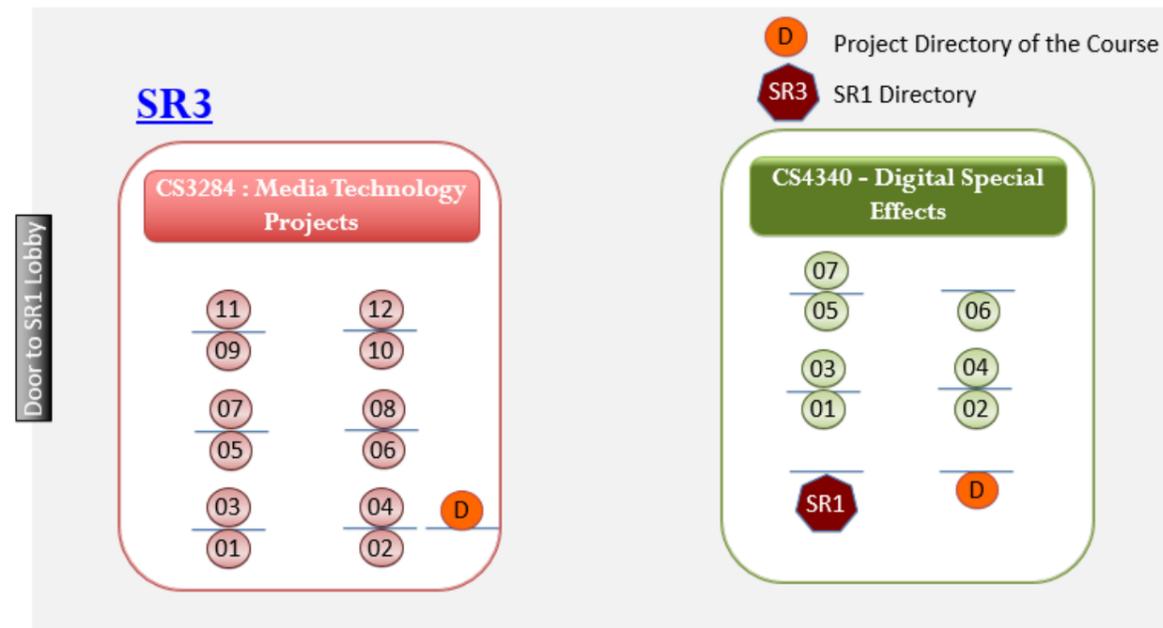
25 students in 7 teams

This module aims at teaching multimedia techniques for creating digital special effects video. It allows the students to explore their creativity while extending their skills in multimedia technologies. Topics covered include elements of special effects, camera work, storyline and storyboard, digital compositing, matchmoving, video effects, CG effects, 2D/3D morphing, realistic rendering, sound effects, case studies. The students are required to analyse and critique special effects in movies. The module culminates in a short video project that demonstrates the students' creativity and innovation in using various techniques to create a captivating and stunning digital special effects video.

Project Listings

1. CS4340-1: "pikachu" by A+ productions house
2. CS4340-2: "Earthquake" by Breakthrough Productions
3. CS4340-3: "Feu Follet" by Century Production
4. CS4340-4: A Revenge
5. CS4340-5: The little story of the little guys
6. CS4340-6: Fear the Mustache!
7. CS4340-7: Reap What You Sow

Vote online for the top three projects in each course @ <http://bit.ly/8stepsVote> or go to SR1 (voting kiosk) to key in your votes!



CS3284 - Media Technology Projects (Chair: Prof. Ooi Wei Tsang)

56 students in 12 teams

CS3283 and CS3284 are two modules on the development of media technology systems such as interactive systems, games, retrieval systems, multimedia computing applications, etc. Students will form project teams to work on media technology projects. This first part focuses on the analysis of the user's needs, formulation of the computing requirements of the desired solution that meets the user's needs, design of the systems according to the requirements, implementation of first-cut prototype for evaluation purpose, and evaluation of the design.

Project Listings

1. CS3284-1: LynkMe
2. CS3284-2: Bill.eGoat: Automated Management of Bills and Statements
3. CS3284-3: X-Aurora
4. CS3284-4: TranslateLah -- a medical translator for Healthcare Professionals
5. CS3284-5: Vumix - A tool to create your own Augmented Reality mobile application!
6. CS3284-6: Guild Masters
7. CS3284-7: CloudyGame: Cloud-Gaming Friendly Game Engine
8. CS3284-8: WorldScope: Live Mobile Broadcasting Platform
9. CS3284-9: Zoomable.js: HTML5-based Zoomable Video Streaming Player
10. CS3284-10: Reindeer - A Leap Towards Better Tutorial Experiences
11. CS3284-11: Cubist
12. CS3284-12: SuperStreamer - Game Engine with Progressive Content Streaming

Vote online for the top three projects in each course @ <http://bit.ly/8stepsVote> or go to SR1 (voting kiosk) to key in your votes!

CS3217 - Software Engineering on Modern Application Platforms (Chair: Prof. Khe Chai SIM)

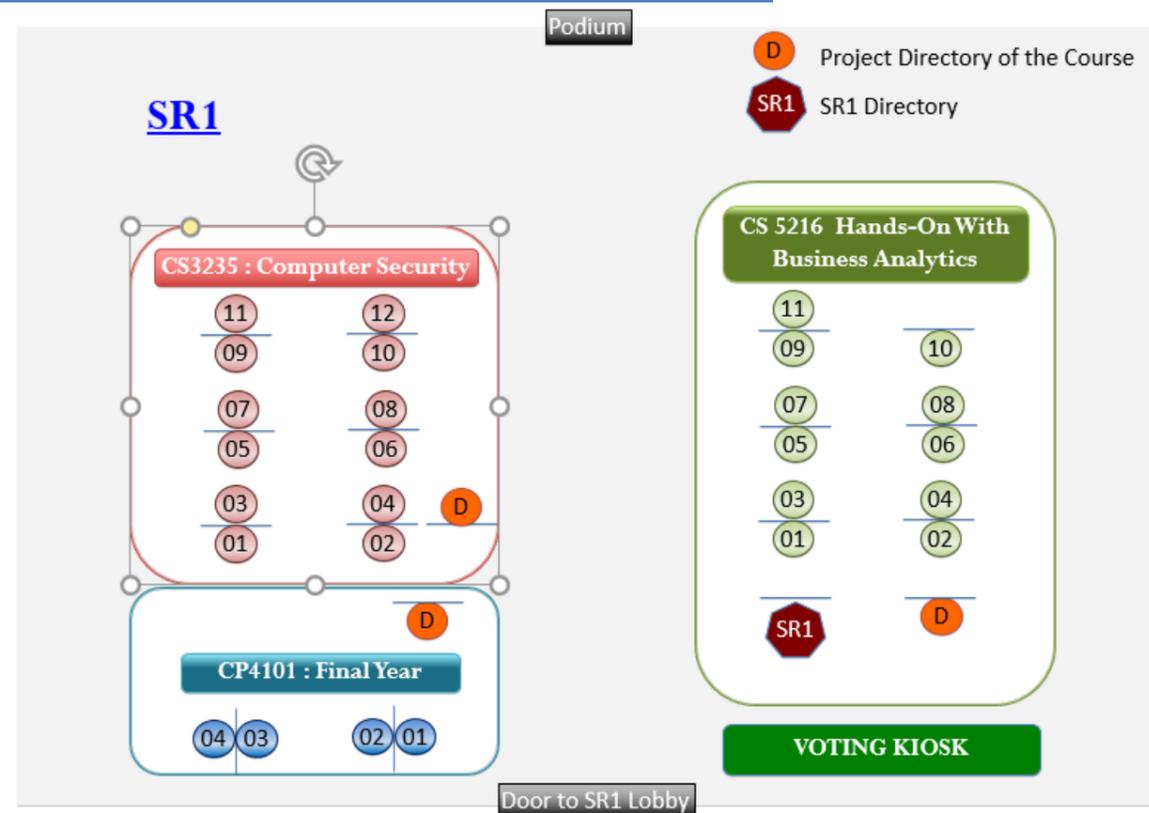
35 students in 9 teams

Students will learn about the essential Software Engineering (SE) principles and develop their SE skills by writing mobile apps for the iOS platform. During the second half of the semester, students will work in teams of not more than 4 students to develop cool and innovative iOS apps. Students can pretty much develop whatever apps that they desire as long as it is not immoral and does not compromise learning values. Visit our FaceBook page on <https://www.facebook.com/cs3217> to find out more about the apps that were created by past students from CS3217.

Project Listings

1. CS3217-1: Playgrounds for iOS
2. CS3217-2: Paperless Meeting Using iPad
3. CS3217-3: Act It Out!
4. CS3217-4: Falco
5. CS3217-5: Courir
6. CS3217-6: BloatyRex
7. CS3217-7: NUSTraversal
8. CS3217-8: Zone
9. CS3217-9: Eggie Run

Vote online for the top three projects in each course @ <http://bit.ly/8stepsVote> or go to SR1 (voting kiosk) to key in your votes!



CS3235 - COMPUTER SECURITY (Chair: Prof. Hugh Anderson)

44 students in 12 teams

The objective of this module is to provide a broad understanding of computer security with some in-depth discussions on selected topics in system and network security. The module covers the following topics: intrusion detection, DNS security, electronic mail security, authentication, access control, buffer overflow, memory and stack protection, selected topics in application security, for instance, web security, and well-known attacks. The student projects are picked by themselves, in some area of computer security.

Project Listings

1. CS3235-1: NFC Cracking - NUS Matriculation Cards
2. CS3235-2: NFC sniffing through android applications
3. CS3235-3: Detecting and Combating ARP Spoofing
4. CS3235-4: Infra-red Pin-Pad Sniffing
5. CS3235-5: IoT hacking: Attacking the Photon
6. CS3235-6: Ultrasound authentication scheme within a physically confined setting
7. CS3235-7: Secure digital lock with NFC-enabled Android devices
8. CS3235-8: Sniff and Capture Mining info from the tightly secured LTE network
9. CS3235-9: Visualizing Application to Application Links on a Secure Network
10. CS3235-10: Drone hacking: Demystified
11. CS3235-11: Hack My Router

Vote online for the top three projects in each course @ <http://bit.ly/8stepsVote> or go to SR1 (voting kiosk) to key in your votes!

IS5126 - Hands-on with Business Analytics (Chair: Prof. Tuan Q. Phan)

55 students in 14 teams

Business Analytics is the growing, inter-disciplinary field of bringing data to build business insights and support decisions. The goal of the course is to bridge the divide between technical skills and business know-how. Students self-propose projects across a variety of industries and interests. Projects are focused on providing prescriptive or causal analysis, in addition to predictive and descriptive analysis.

Project Listings

1. IS5126-1: An Investigative Study of the impact of Disasters on Tourism
2. IS5126-2: What drives the success of Kickstarter projects?
3. IS5126-3: More Guns, More Crime?
4. IS5126-4: Project Hope: Using Big Data To Create A Better World
5. IS5126-4: Has Citi Bikes Reduced Traffic Congestion in NYC?
6. IS5126-4: Does higher education help escape poverty?
7. IS5126-7: Affects of social and economic factors on alcohol consumption among teens
8. IS5126-8: A Study on the Effect of Local Disasters on Related Tourism
9. IS5126-9: Hail a taxi, leave a tip?
10. IS5126-10: The Impact of Weather on Business Visits: An Analytical Approach
11. IS5126-11: Moneycar: The Science of Buying a Car
12. IS5126-12: Robot Bill Cunningham
13. IS5126-13: What Motivates You to Open a Restaurant There?
14. IS5126-14: Melbourne Cricket Ground(MCG) : Crowd Attendance Prediction

CP4101 - Final Year Project (Chair: Dr. Anand Bhojan)

4 students in 4 teams

The individual project dissertation provides the opportunity for a student to demonstrate independence and originality and to apply knowledge learnt in modules to a reasonably large problem requiring analytical and/or design and/or experimental effort. Students taking this module must work independently on a research project or applied research project, under the supervision of staff. The project demonstrates a student's work ethic, level of initiative, determination and innovative ways of solving problems. It also tests a student's ability to adapt to work in a research or a large scale project environment involving design and development, or take up an individually challenging problem requiring innovative solution and able to think laterally when difficulties are encountered. The project also provides scope for student to use their skill in technical project execution and management, and to think and seek solutions when difficulties are encountered, as each student is largely responsible for their own programme of work.

Project Listings

1. CP4101-1: 3D Makeup Projection
2. CP4101-2: A Tiny Multitasking Operating System for Arduino
3. CP4101-3: Nibble - a Mobile App for Food Logging
4. CP4101-4: Mooder — The social network for emotions

Vote online for the top three projects in each course @ <http://bit.ly/8stepsVote> or go to SR1 (voting kiosk) to key in your votes!