

Date (sorted by)	Title/Fees	Description
16-17 Dec 9.00am - 5.00pm @SR2.4	Having Fun Building Web Applications (: Fees: \$16	<p>For: Those who want to learn how to build web applications with Javascript</p> <p>Prerequisites: Completed IS200</p> <p>Min class size: 15 (the class will run only if there's this minimum number)</p> <p>Max class size: 40</p> <p>Instructor: Clarence NGOH Peng Yu (student)</p> <p>Syllabus: Front-End Development, also known as Client Side Development, is the practice of producing HTML, CSS and Javascript for a website or web application so that a user can see and interact with it directly through the web browser. These technologies are a useful toolset for developers, as the User Interface is a necessary component for all software, empowering developers to present information to the user in a compelling way.</p> <p>Additionally, with the dawn of new technologies like Node.js, the same JavaScript code can run on both the web browser and the server, giving rise to new ways to build modern web-applications with less code and less time! Experience the advantages of building an app using JavaScript frameworks through this course, so that you may potentially use them in future projects.</p> <p>This course focuses on hands-on coding rather than the theoretical. Students should look forward to building a web application from scratch, and hosting it online for the world to use at the end of the course.</p> <p>Day 1</p> <ul style="list-style-type: none"> ● Understanding websites VS web applications - a primer on single page applications ● Introduction to CSS Frameworks, learn how to read the documentation and make use of ready-made components ● Creating responsive web pages using a grid system ● JQuery - understand how it extends javascript for manipulating DOM elements and adding interactivity to web pages ● Understand server side templating (PHP, JSP etc) VS client side templating (using Mustache, Handlebars etc) ● Learn about JSON and how it can be used as a data exchange format ● How to make use of 3rd party libraries/APIs

		<p>(examples include using simple plugins to generate charts/progress bars)</p> <p>Day 2</p> <ul style="list-style-type: none"> ● Introduction to Full Stack Javascript ● Learn how to leverage the Meteor.js framework to build real-time apps ● We will be learning how to port over our app from Day 1 to Meteor ● Packages - finding the right resources to maximise developer productivity ● Taking your app live - How to make use of free hosting services
<p>14-18 Dec 9.30am - 5.30pm @LKCSB SR2.2</p> <p>Register Class is full!</p>	<p>Java Programming</p> <p>Fees: \$50</p>	<p>For: It is a good follow-up to what is covered in IS200, and you will learn more about the Java programming language which will come in handy for the next course, IS201 (Object-Oriented Application Development).</p> <p>Prerequisites: Completed ISSF (IS200), or Fundamentals of the Java Programming Language</p> <p>Min class size: 30 (this course will run only if we have at least this number of students)</p> <p>Max class size : 70</p> <p>Instructor: LEE Yeow Leong</p> <p>Notes:</p> <ul style="list-style-type: none"> ● SMU is conducting this course under the Oracle Academy. This course covers the official syllabus of the Oracle Certified Java Programmer (OCJP) certification. ● This is a very intensive Java programming course & a good “follow-up” from the fundamental course.
<p>18-19 Dec 10.30am - 4.00pm @SR2.4</p>	<p>Javascript: ES6 and React</p> <p>Fees: \$16</p>	<p>For: People who have basic knowledge of Javascript and front-end knowledge, and want to learn the most cutting edge stuff.</p> <p>Prerequisites: Basic Javascript and front-end development knowledge</p> <p>Min class size: 15 (the class will run only if there’s this minimum number)</p> <p>Max class size: 30</p> <p>Instructor: Bob CAO Fangzhou (Alumni)</p> <p>Syllabus: React, from Facebook, is the most cutting edge library for building user interfaces in the current state of affairs. It’s</p>

foreseeable that it will become the most dominated user interface building library in coming 1-2 years.

And the next generation of JavaScript, ECMAScript 6, is seeing increasing support from various browsers, and will become the standard language for building front-end applications in the short future.

Combining these two, I will talk about how to use React in ES6 context to build the most simple yet advanced front-end components.

And I hope the knowledge you learn in this enrichment course will help you in your school projects, internships and future career.

PS: Attending Having Fun Building Web Applications course is highly recommended, as I will NOT talk about the basic, and you must prepare yourself ahead in order to catch up the speed.

Day 1

We will talk about ES6 stuff in day 1, which is the necessary foundation for writing React components in day 2.

Roughly, we will cover

1. Classes
2. Module
3. Import and Export
4. Template strings
5. Array
6. Object
7. Default + Rest + Spread
8. Let + Const
9. Iterators + For..Of

Day 2

Day 2 we cover React. And we will go through in roughly following sequences.

1. What's React.
2. Seeing React in actions
3. Component, Component, Component
4. Thinking in React
5. What are the components of a component?
6. Props and states.
7. Life cycle of a component
8. Refs
9. Events system
10. React Attributes
11. Official tutorial walkthrough

Summer

Date (sorted by)	Title/Fees	Description
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<p>Run 1 8 Jun - 12 Jun (Mon - Fri) 9.30am - 6.00pm @SOE SR5.2</p> <p>Run 2 15 Jun - 19 Jun (Mon - Fri) 9.30am - 6.00pm</p> <p>Run 3 29th Jul Wed, 30th Jul Thur, 31st Jul Fri, 3rd Aug Mon, 4th Aug Tue, 5th Aug Wed 9.00am - 5.30pm</p>	<p>Web Component Development with Servlets & JSPs, Java EE 5</p> <p>Fees: \$50</p>	<p>For: Students who will be taking SE or IS480</p> <p>Prerequisites: Generally proficient in Java programming. Preferably completed Oracle Certified Java Programming. This course is a superset of the JSP/Servlet knowledge required for IS203 Software Engineering. Students who signed up for "Web Application Development with JSP & Servlets" course are not allowed to sign up for this class. This class is strongly recommendation for students who have a strong foundation in Java (a good indication would be a B+grade for OOAD).</p> <p>Max class size: Run 1 & 2: 50/run Run 3: 45/run</p> <p>Instructors: Lee Yeow Leong, Fiona Lee</p> <p>Bonus! Run 1 & 2, Yeow Leong: You have to decide on the Difficulty Level at the start of course. Difficulty Level: ** \$30 Capital Land Voucher + Remote presentator if pass the hands-on test (\$0 if you DID NOT pass)</p> <p>Run 3, Fiona: \$20 Capital Land Voucher</p> <p>Syllabus: JavaServer Pages (JSP page) technology and servlets are the key web-tier technologies defined in the Java Platform, Enterprise Edition (Java EE platform). The Web Component Development With Servlet and JSP Technologies course provides experienced developers of Java technology applications the knowledge and skills to quickly build web applications from JSP page and servlet technologies using the Sun Java System Application Server, and the Apache Struts framework. Students are exposed to the current methods for analyzing, designing, developing, and deploying web applications with Java technologies. Lab exercises provide students with experience in constructing and deploying the small-to-medium scale web applications found in intranet and low-volume commercial sites. The course features the Java EE 5 technology, and uses the Java EE 5 SDK. The students perform the lab exercises using the NetBeans Integrated Development Environment (IDE). This course is also a recommended method for preparing for the Oracle Certified Professional, Java EE 5 Web Component Developer certification examination.</p> <p>Notes: 1. SMU is conducting this course under the Oracle Academy. This course covers the official syllabus of the Oracle Certified Expert, Web Component Developer certification. 2. This course will cover MORE than the essentials to</p>
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		prepare you for Software Engineering.
<p>30, 31 Jul, 3-5 Aug (5 full days)</p> <p>Run 1 Hong Seng 9.00am - 5.00pm @SIS SR3.4 (30, 31 Jul) @SIS SR2.4 (3-5 Aug)</p> <p>Run 2 Joelle 9.00am - 5.00pm @SIS SR2.3 (30th Jul) @SOE SR2.6 (31st Jul) @SOA SR 2-2 (3rd Aug) @SIS SR 2-3 (4-5 Aug)</p> <p>Run 3 Vandana 9.30am - 5.30pm @SOE SR2.4 (30- 31 July & 4-5 Aug) @SOA SR1.3 (3 Aug)</p> <p>Run 4 Hong Ngoh Starts 9.30am on DAY ONE ONLY. 9.00am - 5.00pm @SOE SR2.8 (30-31 July & 4-5 Aug) @SOA SR1.1 (3 Aug)</p> <p>Run 5 Kwan Chin 9.30am - 5.30pm @SIS SR3.3 (30, 31 Jul) @SOA SR1.2 (3-5 Aug)</p>	<p>Fundamentals of the Java Programming Language</p> <p>Fees: \$25</p>	<p>For: Mainly for new batch of freshmen or IS second major students from other schools</p> <p>Prerequisites: nil</p> <p>Max class size: 40-45 (depending on runs)</p> <p>Instructors (not in order of the runs) : 5 runs by Vandana, Joelle, Hong Ngoh, Kwan Chin, Hong Seng</p> <p>Syllabus: The Fundamentals of the Java Programming Language course was designed to enable students with little or no programming experience to begin to learn programming using the Java programming language. The course teaches the significance of object-oriented programming, the keywords and constructs of the Java programming language, and the steps required to create simple Java technology programs. Students taking this course can receive a solid basis in the Java programming language upon which to base continued work and training. The course features the Java Platform, Standard Edition 6 (Java SE 6) platform, and uses the Java SE Development Kit 6 (JDK 6) product.</p> <p>Notes:</p> <ul style="list-style-type: none"> ● SMU is conducting this course under the Oracle Academy. This course covers the official syllabus of the Oracle Certified Associate, Java SE 6 (OCA). ● Number of actual runs and instructors will depend on the enrollment. ● You will need a laptop for this course. ● Any pre-course preparations details will be sent to you by the respective instructor nearer to the course date.

<p>6th Aug 9.00am - 5.00pm @SIS SR3.2</p>	<p>Fun with Front-End Development (:</p> <p>Fees: \$10 (note that this fee is used for either catering or gifts for quizzes in class, not instructor's fee)</p>	<p>For: Those who are interested in front-end development.</p> <p>Prerequisites: Students who have completed IS200</p> <p>Min class size: 15 (the class will run only if there's this minimum number Max class size: 30</p> <p>Instructor: Clarence NGOH Peng Yu (student)</p> <p>Syllabus: Front-End Development, also known as Client Side Development, is the practice of producing HTML, CSS and Javascript for a website or web application so that a user can see and interact with them directly through the web browser. These technologies are a useful toolset for a developer, as it complements business logic and helps to present information to the user in a compelling way. This course gives an introduction to HTML/CSS/JS, and a hands-on session coding a web application from scratch.</p> <ul style="list-style-type: none"> ● Understanding websites VS web applications - a primer on single page applications ● Introduction to CSS Frameworks, learn how to read the documentation and make use of ready-made components ● Creating responsive web pages using bootstrap grid system ● JQuery - understand how it extends javascript for manipulating DOM elements and adding interactivity to web pages ● Understand server side templating (PHP, JSP etc) VS client side templating (using mustache, handlebars etc) ● JSON and how it can be used as a data exchange format ● Using html5 localStorage API for persistence (Databases will not be used for simplicity's sake) ● How to make use of 3rd party libraries/APIs (hands-on using simple plugins that can generate charts/progress bars) <p>At the end of this workshop, participants will have created a web application using the concepts above, and I would be walking them through how to build this from scratch.</p>
<p>13th Aug 9.00am - 5.00pm @SIS SR3.2</p>	<p>A Practical Guide for Javascript from Intermediate to Advanced</p> <p>Fees: \$10 (note that this fee is used for either catering or gifts for quizzes in class, not instructor's fee)</p>	<p>For: Any student who already knows the basic of Javascript and intend to level up coding skills for interest or for her/his FYP.</p> <p>Prerequisites: Completed OOAD or have a good foundation on one programming language, preferably Javascript.</p> <p>Min class size: 10 (the class will run only if there's this minimum number Max class size: 40</p> <p>Instructor: CAO Fangzhou (graduating)</p>

		<p>Syllabus: This one day workshop will cover the Intermediate parts for Javascript, and an outline is attached below:</p> <ul style="list-style-type: none"> ● General Javascript <ul style="list-style-type: none"> ○ Logical operator ○ function ○ closure ○ promise ● NodeJS <ul style="list-style-type: none"> ○ overall design ○ callback ● Meteor <ul style="list-style-type: none"> ○ A hands-in-hands walk through of official tutorial <p>At the end of this course, you will be able to create a simple to-do app writing in Javascript with MeteorJS as the framework.</p>
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Past Enrichment

Date (sorted by)	Title/Fees	Description
<p>21 – 22nd Jul @SoE Level 5, SEIL Lab 9:30 - 5:30PM</p>	<p>Fundamentals of Microsoft .NET development in C# with Visual Studio</p> <p>Fees: \$15</p>	<p>For: Students interested in developing .NET based applications in C# with Visual Studio.</p> <p>Prerequisites: Generally proficient in programming and object oriented concepts.</p> <p>Min class size: 15 (this course will only run if this min number is met)</p> <p>Max class size: 45</p> <p>Instructors: Lee Kok Khing, Koh Kwan Chin</p> <p>Syllabus: This course attempts to introduce students who have no prior experience in developing .NET applications in Visual Studio to .Net fundamentals with basic C# programming.</p> <p>The following topics will be covered:</p> <ol style="list-style-type: none"> 1. Introduction to .NET framework 2. Exploring Visual Studio features 3. Understanding C# Language Fundamentals 4. Building .NET-based Applications with C# 5. Using ADO.NET to manipulate data access 6. Debugging in Visual Studio
<p>27 - 28th April 10.00am - 6.00pm @SIS SR 2.4</p>	<p>Ruby/Rails</p> <p>Fees: \$15</p>	<p>For: Any students interested in learning Ruby/Rails for interest or potentially your FYP.</p> <p>Prerequisites:</p>

		<p>Completed OOAD or have a good foundation on one programming language.</p> <p>Syllabus: This 2-day workshop will cover the fundamentals of the Ruby language, and the Ruby on Rails framework, and is suitable for programming beginners. The workshop covers the basics of the Ruby language, but expects that you have got the fundamentals of programming languages so that we can cover more ground. In addition, we will cover how Rails builds web applications using the MVC (model view controller) paradigm, with hands-on exercises to venture deeper into each layer of a web application.</p> <p>Min class size: 15 (the class will only run if the min number is met)</p> <p>Max class size: 45</p> <p>Instructor: Our Alumni - Jaryl Sim I'm the technical founder at Tinkerbox Studios, which I built from the ground up whilst pursuing my degree at SMU. Today, we help startups build web applications on Ruby on Rails, utilizing Lean UX and Lean Startup techniques. I got my start in technology when I was in secondary school, learning C/C++ to pursue my interest in game development. I eventually grew out of that and learned about web development, using the .Net platform. When I picked up Ruby on Rails, back in 2008, I was exposed to a new way of working on software. The ruby community was a gold mine of not just best practices, but innovative endeavors that moved the web forward, and I knew I had to be a part of that community.</p>
<p>29 - 30th Apr 2.00pm - 5.00pm @SIS SR 2.4</p>	<p>Statistical Data Analysis</p> <p>Fees: \$15</p>	<p>For: Students who are keen to learn Statistical data analysis, which is useful if you are interested in data analytics or considering to do data analytics or related modules</p> <p>Prerequisites: Students are assumed to be familiar with random variables and their distributions from elementary statistics/probability theory.</p> <p>Syllabus:</p> <ul style="list-style-type: none"> • This course provides an introduction to statistics inference and data analysis based on real examples. Key ideas underlying statistical reasoning will be covered with an emphasis on hypothesis testing and multivariate data analysis. <p>Min class size: 12 Max class size: 45</p> <p>Instructors: Prof JIANG Binyan</p>