SIS 2\textsuperscript{nd} MAJOR SESSION

Wednesday
29 April 2015
BSc (ISM) Curriculum & 2nd Major offered by SIS

Associate Dean, Education
Venky SHANKARARAMAN
BSc (IS Management) **1st Major**

- 16 IS Courses
- Business Oriented Electives
- Quantitative Thinking
- SMU Broad Based
- Finishing Touch Workshops + Internship + Community Service

**Total 36 Courses**

**2nd Majors**

- advanced business technology
- accounting
- actuarial science
- analytics
- applied statistics
- arts & culture mgmt.
- corporate comm.
- economics
- finance
- international & asian studies
- legal studies
- marketing
- org. behaviour & human resources
- political science
- psychology
- quantitative finance
- sociology
- strategic mgmt.
- public policy & public mgmt.

**8 Second Major Electives (with double counting possibilities)**
What 2\textsuperscript{nd} major shall I choose to take?

http://sis.smu.edu.sg/programmes/bsc-ism-curriculum/2nd-majors

Second Majors for BSc (ISM) students

2\textsuperscript{nd} Majors Offered
- School of Accountancy
- Lee Kong Chian School of Business
- School of Economics
- School of Information Systems
- School of Law
- School of Social Sciences
- Across SMU schools

Advanced Business Technology

Without Track
Banking Processes & Technology Track
Enterprise Systems & Solutions Track
Technopreneurship Track
Information Security & Assurance Track

accounting
actuarial science
analytics
applied statistics

arts & culture mgmt.
corporate comm.
legal studies
marketing

international & asian studies
org. behaviour & human resources
political science
psychology

quantitative finance
sociology
strategic mgmt.

finance
operations mgmt.
public policy & public mgmt.
2nd Majors offered by SIS

The Singapore Management University (SMU) has recently introduced a university-wide 2nd major in Analytics for undergraduates. Students can take the Analytics 2nd major & specialise in one of the five tracks listed below, or choose a “No-Track” option:

<table>
<thead>
<tr>
<th>Marketing Analytics</th>
<th>Operational Analytics</th>
<th>Accounting Analytics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban &amp; Regional Analytics</td>
<td>Advanced Technology for Analytics</td>
<td></td>
</tr>
</tbody>
</table>

Students in the Analytics 2nd major are required to take an Analytics Practicum Course, where they will work in partnership with external organisations to apply what they have learned to real-world problems.

For more information, please visit [http://sis.smu.edu.sg/2nd-majors-analytics](http://sis.smu.edu.sg/2nd-majors-analytics)
Advanced Business Technology - Enterprise Systems Solutions Track

SIS Faculty Advisor: Venky SHANKARARAMAN
Areas of Focus

- Understand issues related to the interaction between organization design and the design of enterprise systems

- Understand enterprise business processes

- Get hands-on experience in:
  - Using enterprise systems (e.g. ERP, SCM, CRM)
  - Developing composite applications
  - Using cloud computing platforms and services
Career Prospects

• Builds on the core foundation and exposes you to real world enterprise applications and the emerging paradigms for building enterprise solutions such as composite applications and cloud computing
  • Solution Consultant
  • Business Analyst
  • IT Architect
  • Solution Architect
  • Project Managers
<table>
<thead>
<tr>
<th>enterprise systems &amp; solutions track</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>computer as an analysis tool</strong></td>
</tr>
<tr>
<td><strong>enterprise business solutions</strong></td>
</tr>
<tr>
<td>+ cloud computing and saas solutions</td>
</tr>
<tr>
<td>+ 3 is technology depth electives</td>
</tr>
<tr>
<td><strong>supply chain processes and technology</strong></td>
</tr>
<tr>
<td>or</td>
</tr>
<tr>
<td><strong>enterprise information systems</strong></td>
</tr>
<tr>
<td>or</td>
</tr>
<tr>
<td><strong>1 is management depth electives</strong></td>
</tr>
<tr>
<td>or</td>
</tr>
<tr>
<td><strong>1 is technology depth electives</strong></td>
</tr>
</tbody>
</table>

Advanced Business Technology - Technopreneurship Track

SIS Faculty Advisor: Desai NARASIMHALU

Presenter: Venky SHANKARARAMAN
## SIS Technopreneurship track

**Recognized by UNCTAD as an innovation approach to entrepreneurship**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Objective</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT and Business Innovation</td>
<td>Identify innovation opportunity</td>
<td>Business Innovation opportunity identified</td>
</tr>
<tr>
<td>Technopreneurship study mission</td>
<td>1. Understand entrepreneurship landscape</td>
<td>Internship host identified</td>
</tr>
<tr>
<td></td>
<td>2. Explore internship possibilities</td>
<td></td>
</tr>
<tr>
<td>Technopreneurship</td>
<td>Learn how to build a company</td>
<td>Initial blueprint for a start up designed; Technology sourced / developed.</td>
</tr>
<tr>
<td>Entrepreneurial Internship</td>
<td>Apprenticeship for building a business</td>
<td>Steps and challenges in building a start up learnt from practice. Start up blueprint refined</td>
</tr>
<tr>
<td>FYP / POC</td>
<td>Build a proof of concept prototype</td>
<td>Core functions of the prototype developed</td>
</tr>
</tbody>
</table>
Programme

• Declare major end of 2\textsuperscript{nd} Year or Beginning of 3\textsuperscript{rd} Year

• You are required to do only 2 required courses to get this major
  • IS 401 IT and Business Innovations
  • IS 426 Technopreneurship

• Those intending to start a business are encouraged to benefit from other three courses
  • IS 427 – enjoy 70 % subsidy, learn from entrepreneurs
  • Entrepreneurial internships in US, Europe and Asia, live the life of an entrepreneur
  • IS 480: Raise up to 50 K to develop your innovative prototype for FYP
Impact for 2009 – 2014

Students reached
(10,789)

Students attending our events and talks
(8,383)

Students attending Start Up 101 / Study Missions & Workshops
(2,073)

Student & Non-Student Companies
(119)*

• Raised 13 M in grants for directed programs
• Helped 119 teams create start ups
  • Helped them raise $4.1M in grant funding
  • Helped them raise $12.5M in investments

(c) IIE April 2015
Benefit from IIE’s Incubation Process

Pre admission
• Qualifying
• Grant assistance

Admission
• Condition
• Business Mentor

Graduation
• One year
• Fund raising

Engagement
• Start up Strategy
• Functional Mentor
• Customer acquisition
Raise funds for your FYP / Startup

- Proof of concept grant
  - IDM i.Jam Reload grant
    - Up to $50,000
    - Investment up to 100,000
  - ACE’s YES
    - Up to $50,000
  - SMART Explorer grant
    - Up to $50,000

- Workshops
  - Refining Business Innovations
  - Innovation Development
  - Building a new business
  - Power selling

- Starting a company
  - Participate in the networking events to learn from others
    - DSS, Entrepreneurs corner, Lunch time talks, TSM, Internship etc.
  - Benefit from IIE sponsored workshops
  - Choose a mentor from over 75 Business Mentors
  - Benefit from functional mentor
  - Get investments from Angel investors and VCs
    - 200 K to 1 Million dollars
Companies created by SIS students

2006-2014

1. Aings
2. Appic
3. Apptheon
4. Arges
5. Baboonza
6. Gamemaki
7. I feel
8. I'm here
9. iSwim
10. Oompr
11. Open Business
12. Nectary Studio
13. Quantine
14. Sageby
15. Simplify
16. Smoo (Spotted)
17. Sociolico

18. SQKII
19. TaskAmigo
20. Teladi
21. Tocco Studios
22. Tweetoutloud
23. Tyler Projects
24. Viatick
25. Vicimi
26. Wressence
27. Engage Ventures
28. CarrotSnap
29. Deanslist
30. Leggo
31. Eventory
32. TechSociety
33. LeanTix
Some significant companies

- Tyler Project
  - Was earning 2 M dollars revenue per year on a cost base of 750 K
- Appic Technology
  - Acquired by Chope
- Tocco Studios
  - Offering travel related surface applications
- Quantine
  - Operates in the USA
- Baboonza
  - Renamed as Lovebyte and acquired by Migme
- Open Business
  - 2 M dollar order book for ERP Solution for SMEs
- Nectary studio
  - Had highest ranked game in Singapore Appstore, major order from Mediacorp
- Simplifly
  - A leading consultant for airline industry
We help you build your dream company

Let us HELP you BUILD your dream company!

Just like how we helped your friend here!

Oompr!

Oompr is an online marketplace that makes it fun and easy for individuals to discover what their friends are buying and selling. It addresses many pain points in the existing online marketplaces and forums.

Funding Source: ACE Grant $50,000

Quantine

Quantine provide job-specific assessments that are tailored for the industry by the industry. That is why our assessments are authored from “best-of-breed” practices by industry veterans and institutions.

Funding Source: YES! Grant $50,000

Tocco Studios

Tocco Studios develop both the hardware and the software for a multi-touchable, highly interactive interface that can be customized and assembled for different business needs.

Funding Source: IJAM Grant $50,000

TweetOutLoud

TweetOutLoud is a mobile application that allows users to interact with their Twitter using voice commands.

Funding Source: SMU Innovation Award $25,000

Our friendly staff are ready to help! Contact us at 6888 1991/ iie@smu.edu.sg
Do you know you do only 2 courses
• (IS401) IT & Business Innovation
• (IS426) Technopreneurship

And derive following benefits:
• Subsidized TSM (IS427) (Subsidy worth up to $3,000)
• Possible Internships with overseas Start Ups
• Admission to workshops taught by successful serial entrepreneurs
• Grant of up to $50,000 to start a company
• SMU Innovation Awards

Don’t miss the opportunity!
Declare this as your 2nd major in OASIS

For further enquiries
Sophia HENG | (E)sophiaheng@smu.edu.sg | (P)6828 0630
NOTES
Students doing the Technopreneurship Track are recommended to:

- Do an additional internship in the area of Technopreneurship
- Work on their proof of concept for the IS480 project

Advanced Business Technology - Banking Processes & Technology Track

SIS Faculty Advisor: Enoch CH’NG

Presenter: Alan MEGARGEL
An undergraduate would be required to complete the following modules:

- Computer as An Analysis Tool
- 5 IS Technology Depth Electives
- 1 IS Management Depth Electives
- 1 IS Technology or IS Management Depth Elective
But why Banking Technology & Processes track?

Banking is Technology
Without technology, there is no bank.

Yong Shao Qin
Intern at ANZ (October 12 to April 13)
Information Security & Technology Assurance Officer
ANZ (Current)
What do I get to do in this track?

Compulsory (2 of 3, your choice)
- Retail Banking Processes and Technology (IS419)
- Financial Markets Processes and Technology (IS423)
- ePayments Processes and Technology (IS430)

Any IS Technology/Management Depth Electives (Strongly recommended)
- FS T&O Study Mission to London (IS438)
- Guided Research in IS (IS470/IS471) ← banking related
SMU Teaching Bank on the Cloud

- SMU Teaching Bank is deployed onto Amazon EC2, and available for use by other universities.

http://tbankonline.com
Career Prospects

Financial Institutions
- Application Developers
- Business Analysts
- IT Architects
- Project Managers

Service Providers
- Application Developers
- Business Analysts
- IT Architects
- Project Managers
- Sales Specialists
- Solution Architect
- Consultants
Singapore Financial Services Landscape

• World’s 4th leading financial center.
  – 6 Local banks
  – 26 Foreign full banks
  – 52 Wholesale banks
  – 39 Offshore banks
  – 1 Financial Holding Company
  – 46 Merchant banks
  – 36 Representative offices of banks
  – 380 Money changers
  – 80 Remittances
  – 3 Finance companies
  – 165 Institutions with ACU

• World’s 4th largest foreign-exchange trading center.
  – Average daily foreign exchange turnover volume reached US$266b (2010 BIS Survey)
Financial Services Pays Well

Average Monthly Earnings by Industry (2011)
### BANKING PROCESSES & TECHNOLOGY TRACK

<table>
<thead>
<tr>
<th>COMPUTER AS AN ANALYSIS TOOL</th>
<th>CHOOSE 2 OF 3 TECH DEPTH ELECTIVES IN THIS BOX</th>
<th>1 IS MANAGEMENT DEPTH ELECTIVES <em>(FINANCIAL SERVICES &amp; OPERATIONS STUDY MISSION - STRONGLY RECOMMENDED)</em></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RETAIL BANKING PROCESSES &amp; TECHNOLOGY / FINANCIAL MARKETS PROCESSES &amp; TECHNOLOGY / ePAYMENTS PROCESSES &amp; TECHNOLOGY</td>
<td>+ 3 IS TECHNOLOGY DEPTH ELECTIVES <em>(IS470/471 : GUIDED RESEARCH IN IS (BANKING RELATED) - STRONGLY RECOMMENDED)</em></td>
</tr>
</tbody>
</table>

OR

1 IS TECHNOLOGY DEPTH ELECTIVES

Students with special interest in banking processes, operations and technology solutions are strongly encouraged to take some of the courses in finance that are offered by the Lee Kong Chian School of Business. These courses can be counted towards your Business Oriented Electives.

The End

+65 6808-5155  enochchng@smu.edu.sg  Enoch.Chng
Advanced Business Technology
- Information Security & Assurance Track

SIS Faculty Advisor: DING Xuhua
Course Requirements

- IS 102: Computer as an Analysis Tool
- IS 302: Information Security & Trust
- IS 403: Network Security
- IS 437: Software & Systems Security
- IS 436: Data Security and Privacy
- IS 433: Information Security Management
- 4 more IS Technology Depth Electives (IS 204: Networking recommended)

Or

- 3 more either IS Tech + 1 IS Mgmt. Depth Elective (IT and the Law recommended)
Information Security and Assurance Track

- IS 204: Networking
- IS 302: Information Security & Trust
- IS 102: Computer as Analysis Tool

Technology

- IS 403: Network Security
- IS 436: Data Security & Privacy
- IS 437: Software & Systems Security
- IS Open Elective (2 or 3CUs)

Management

- IS 433: Information Security Management
- LAW: IT and the Law

Related Groups at SMU / SIS

- Data Management & Analytics Group
- Software Systems Group
- Intelligent & Decision Analytics Group
- Information Systems & Management Group
- School of Law

Legend:
- 2 out of 3
- Required
- Suggested Elective
- Open Elective
Potential Security Career*

- Information Security Officer
- Information Security Analyst
- Information Security Specialist
- Information Security Architect
- Information Security Manager
- Information Security Director
- IT Audit and Assurance
- IT Security Analyst
- IT Security Auditor
- IT Security Consultant
- IT Security Engineer

- Cyber Security Engineer
- Cyber Security Analyst
- Forensic Analyst
- Incident Responder
- Malware Analyst
- Network Security Engineer
- Computer Crime Investigator

* [http://www.sans.org/20coolestcareers/](http://www.sans.org/20coolestcareers/)
McAfee ISA Award

- Two ISA Awards of S$3000 each will be presented to the top two students of any nationality who demonstrated outstanding academic results in the track and have the desire to pursue a career in the security sector.
## Mapping with Security+ Certificate (CompTIA)

<table>
<thead>
<tr>
<th>Certifications</th>
<th>Courses</th>
</tr>
</thead>
</table>
| - Network security                                  | IS 302: Information Security and Trust  
- Compliance and operational security                | IS 403: Network Security  
- Threats and vulnerabilities                        | IS 436: Data Security & Privacy  
- Application, data and host security                | IS 437: Software & Systems Security  
- Access control and identity management             | IS 433: Information Security Management  
- Cryptography                                       | Other Electives (IT and the Law)                                      |
|                                                      | X  
- Compliance and operational security                | X  
- Threats and vulnerabilities                        | X  
- Application, data and host security                | X  
- Access control and identity management             | X  
- Cryptography                                       | X  
|                                                      | X  
|                                                      | X  
|                                                      | X  
|                                                      | X  
|                                                      | X  

*SMU*
# Mapping with CISSP Certificate (ISC)²

<table>
<thead>
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</tr>
</thead>
<tbody>
<tr>
<td>• Information security and risk management</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
<td>X</td>
</tr>
<tr>
<td>• Access control</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Cryptography basics</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Physical (environmental) security</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
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<td>X</td>
</tr>
<tr>
<td>• Security architecture and design</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>• Telecommunications and network security</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>• Application security</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>• Operations security</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>• Business continuity and disaster recovery plan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>• Legal, regulations, compliance &amp; investigations</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

- X indicates the course is covered by the CISSP certificate.
- Blank cells indicate the course is not covered by the CISSP certificate.
## Mapping with CISM Certificate (ISACA)

|-----------------------------------------------------|***********************************************|-----------------------------------------|---------------------------|---------------------------------|------------------------------------|----------------------------------------|-----------------------------------|
| - Information Security Governance                   | X                                            | X                                       |                           |                                 |                                    |                                        | X                                 |
| - Information Risk Management and Compliance         |                                               |                                         |                           |                                 |                                    |                                        | X                                 |
| - Security Program Development and Management        | X X X                                       | X                                       |                           |                                 |                                    |                                        | X                                 |
| - Information Security Incident Management           | X X X X                                      | X                                       |                           |                                 |                                    |                                        |                                   |
Advanced Business Technology - without Track

SIS Faculty Advisor: Swapna GOTTIPATI
Why Choose ABT (without Track)?

- **Flexibility** to select courses on topics that interest you most.
- Enabling a **broad understanding** of different application areas and solutioning methods
- Go further with designing, integrating and realizing **innovative software solutions** that enhance business value and capability.
- Strengthen your technology capability and gaining more experience with **larger scale problems** and deeper integration of IT solutions in the setting of specific industry and business problems.
Students who chose this option will learn about concepts and application without special focus on a particular domain or field (unlike the other 5 tracks) and will be able to pick up courses of choice under the broader analytical category.

2nd Major in Analytics (SMU-wide)

SIS Faculty Advisor: Seema CHOKSHI

Presenter: Prakash Chandra SUKHWAL
Second Major in Analytics

Second Majors for Undergraduates

- Accounting
- Actuarial science
- Advanced business technology
- Analytics
- Arts & culture management
- Business statistics
- Corporate communications
- Economics
- Finance
- Information systems management
- International & Asian studies
- Law
- Marketing
- Operations management
- Organizational behavior
- Political science
- Psychology
- Public policy & public management
- Quantitative finance
- Sociology
- Strategic management
Course Requirements for the 2\textsuperscript{nd} Major

<table>
<thead>
<tr>
<th>Analytical Foundation Requirements</th>
<th>Track Specific Requirements and/or Electives</th>
<th>Additional Electives</th>
<th>Analytics Practicum</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Courses</td>
<td>3 Courses</td>
<td>2 Courses</td>
<td>1 Course</td>
</tr>
</tbody>
</table>

Total of 8 Courses

Students are able to Graduate with Bachelors + Analytics 2\textsuperscript{nd} Major within 39 Courses
## Details of Courses

<table>
<thead>
<tr>
<th>Foundation</th>
<th>Track Specific</th>
<th>Add. Electives</th>
<th>Practicum</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Courses</td>
<td>3 Courses</td>
<td>2 Courses</td>
<td>1 Course</td>
</tr>
<tr>
<td>- Analytics Foundations</td>
<td>- Marketing Analytics Track</td>
<td>- All the Track-Specific Courses qualify as Analytics Electives. Additionally, the courses listed below can also be taken as Analytics Electives:</td>
<td>- Analytics Practicum</td>
</tr>
<tr>
<td></td>
<td>- Operational Analytics Track</td>
<td>- PSYC110 Psychology Research Methods I</td>
<td>Analytical Project Course with real world cases in partnership with external organizations</td>
</tr>
<tr>
<td></td>
<td>- Urban &amp; Regional Analytics</td>
<td>- PSYC201 Psychometrics and Psychological Testing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Advanced Technology Track</td>
<td>- PSYC208 Psychology Research Methods II</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Accounting Analytics Track</td>
<td>- STAT205 Computational Statistics</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- No Track</td>
<td>- STAT313 Quantitative Risk Analysis</td>
<td></td>
</tr>
</tbody>
</table>

- STAT204 Survey Methods
### Program Structure for Undergrad Analytics 2\textsuperscript{nd} Major at SMU

<table>
<thead>
<tr>
<th>Analytical Foundation Requirements</th>
<th>Track Specific Requirements and/or Electives</th>
<th>Additional Electives</th>
<th>Analytics Practicum</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Courses</td>
<td>3 Courses</td>
<td>2 Courses</td>
<td>1 Course</td>
</tr>
</tbody>
</table>

**Operational Analytics Track**  
Management Science; High Performance Warehousing & Fulfillment; Computer Simulation by Modeling Business Systems; Managing Process Improvement; Supply Chain Process & Technology Solutions; Enterprise Analytics for Decision Support

**Advanced Technology Analytics Track**  
Advanced Data Management; Data Warehousing & Business Analytics; Data Mining & Business Analytics; Visual Analytics & Business Intelligence; System Dynamics & Business Gaming; Intelligent Business Gaming; Applied Regression Methods

**Marketing Analytics Track**  
Marketing Information Systems; Marketing Research; Social Analytics; Search Engine Technologies

**Urban & Regional Analytics Track**  
Geospatial Analytics for Business Intelligence; Social Networks; Sociology & Political Science Research Methods

**Accounting Analytics Track**  
Accounting Information Systems; Enterprise Accounting Systems; Data Management

Total of 8 Courses  
Students are able to Graduate with Bachelors + Analytics 2\textsuperscript{nd} Major within 39 Courses
<table>
<thead>
<tr>
<th>MARKETING ANALYTICS</th>
<th>OPERATIONAL ANALYTICS</th>
<th>ACCOUNTING ANALYTICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>MKTG103 Marketing Research</td>
<td>OPIM101 Management Science</td>
<td>ACCT221 Accounting Information Systems</td>
</tr>
<tr>
<td>MKTG209 Marketing Information Systems*</td>
<td>OPIM322 High Performance Warehousing and Fulfilment</td>
<td>ACCT411 Enterprise Accounting Systems</td>
</tr>
<tr>
<td>MKTG220 Digital Marketing</td>
<td>OPIM331 Computer Simulations by Modelling Business Systems</td>
<td>IS202 Data Management (only for NON-SIS students)</td>
</tr>
<tr>
<td>MKTG228 Marketing Analytics</td>
<td>MGMT317 Managing Process Improvement</td>
<td>IS417 Data Warehousing and Business Analytics (only for SIS students)</td>
</tr>
<tr>
<td>IS414 Search Engine Technologies</td>
<td>IS406 Supply Chain Processes &amp; Technology</td>
<td></td>
</tr>
<tr>
<td>IS434 Social Analytics (newl)</td>
<td>IS421 Enterprise Analytics for Decision Support</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>URBAN &amp; REGIONAL ANALYTICS</th>
<th>ADVANCED TECHNOLOGY FOR ANALYTICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>IS415 Geospatial Analytics for Business Intelligence</td>
<td>IS410 Advanced Data Management</td>
</tr>
<tr>
<td>SOCG304 Social Networks</td>
<td>IS417 Data Warehousing and Business Analytics</td>
</tr>
<tr>
<td>IDS100 Research Methods in Sociology and Political Science</td>
<td>IS418 Intelligent Business Gaming</td>
</tr>
<tr>
<td></td>
<td>IS424 Data Mining and Business Analytics</td>
</tr>
<tr>
<td></td>
<td>IS428 Visual Analytics Business Intelligence</td>
</tr>
<tr>
<td></td>
<td>STAT312 Applied Regression Methods</td>
</tr>
</tbody>
</table>

*Note: MKTG209 Marketing Information Systems is required for students interested in the marketing analytics track.
Applying Analytics

- [https://dl.dropboxusercontent.com/s/2rq2x181wdk980/News.html](https://dl.dropboxusercontent.com/s/2rq2x181wdk980/News.html)
- [https://www.dropbox.com/s/d6h6znedw7yqi1/predict.jpeg?dl=0](https://www.dropbox.com/s/d6h6znedw7yqi1/predict.jpeg?dl=0)
Double-counting & Related Curriculum Matters

Presenter:
Edison Lim (SIS Yr 2)

For queries, contact SIS School Managers: Jeandie LIM, Sophia HENG, Dave CHUA sis_ugrad@smu.edu.sg
Declaration of 2\textsuperscript{nd} Major

• Please declare by the last Friday (noon) of Modified Term 2 of 2014-15, ie 5 June 2015 (12 noon) via OASIS > Study > Enrolments & Withdrawals > Declare/Change Major/Major with Track/Concentration.

• \textit{Incentive for early declaration:}
  - You get to bid for courses under your First Major in BOSS 1.
  - Students with declared Second Major get to bid for courses under the respective Second Major in BOSS 1A.

• Any drop, amendment or late declaration to the First/Second Major or Major with Track/Concentration (to be submitted via OASIS) would be subjected to approval from the respective school as well as an administrative charge of e$10 (an administrative hold\# may also be placed on students who do not declare their First Major or Major with Track/Concentration within the first 4 regular terms of study).
What is double-counting?

https://wiki.smu.edu.sg/sis/Second_Major

Double-counting is using one module to clear the requirements of the **BSc (ISM) degree** (primary degree) and your **second major**. Therefore double-counting is not allowed within the BSc (ISM) degree; it is only allowed between (a) BSc (ISM) degree and second major or (b) BSc (ISM) degree and secondary degree, provided that the courses are listed in both course areas.

Take note that the total CUs earned after double counting does not fall below the minimum CUs required.
Example of Double Counting

https://wiki.smu.edu.sg/sis/Second_Major

**Degree Requirements**
- Foundation
- Uni Core
- BOE
- IS Foundations
- IS Advanced Topics
- IS Project & Electives
- GE
- GRS

**Second Major Requirements**
- Compulsory courses
  - Electives
Example of Double Counting (e.g. Marketing 2\textsuperscript{nd} Major)

Degree Requirements
- Foundation
- Uni Core
- BOE
- IS Foundations
- IS Advanced Topics
- IS Project & Electives
- GE
- GRS

Second Major Requirements
(e.g. Marketing 2\textsuperscript{nd} Major)
- Consumer Behavior
- Finance
- Financial Accounting
- Marketing
- Marketing Research
- 3 Marketing Electives
Example of Double Counting (e.g. Marketing 2\textsuperscript{nd} Major)

**Degree Requirements**
- Foundation
- Uni Core
- BOE
- IS Foundations
- IS Advanced Topics
- IS Project & Electives
- GE
- GRS

**Second Major Requirements**
(e.g. Marketing 2\textsuperscript{nd} Major)
- Consumer Behaviour
- Finance
- Financial Accounting
- Marketing
- Marketing Research
- Marketing Elective 1
- Marketing Elective 2
- Marketing Elective 3

Example of Double Counting (e.g. Marketing 2\textsuperscript{nd} Major)
Example of Double Counting (e.g. Marketing 2\textsuperscript{nd} Major)

**Degree Requirements**
- Foundation
- Uni Core
- BOE (CAT & Stats)
- IS Foundations
- IS Advanced Topics
- IS Project & Electives
- GE
- GRS

**Double-Counting**

**BOE**
- Consumer Behaviour
- Finance
- Financial Accounting
- Marketing

**IS Depth Elective**
- MIS / Digital Mktg / Mktg Analytics

**GRS**
- World Travel & Tourism

**Second Major Add-Ons\***
- Marketing Research
- Marketing Elective 3

\*Additional requirement = 2 CUs
What are the 2\textsuperscript{nd} major requirements and double-counting possibilities?

OASIS > Study > Advisement & Curriculum >> Second Major Requirements
What are the 2\textsuperscript{nd} major requirements and double-counting possibilities?

OASIS > Study > Advisement & Curriculum >> Second Major Requirements

<table>
<thead>
<tr>
<th>2ND MAJOR</th>
<th>BSC(ISM) (edd adm from AY2011-12 onwards)</th>
<th>DOUBLE COUNTING POSSIBILITY</th>
<th>BSC(ISM) (edd adm from AY2008-09 to AY2010-11)</th>
<th>DOUBLE COUNTING POSSIBILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>MARKETING</td>
<td>Consumer Behavior</td>
<td>BOE1</td>
<td>Consumer Behavior</td>
<td>BOE1</td>
</tr>
<tr>
<td>Marketing Research</td>
<td>BOE2</td>
<td>Marketing Research</td>
<td>BOE2</td>
<td></td>
</tr>
<tr>
<td>3 Marketing electives</td>
<td>GR51 (MKTG224); ISMDE (MKTG209); BOE3</td>
<td>3 Marketing electives</td>
<td>GR51 (MKTG224); ISMDE (MKTG209); BOE3</td>
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</tr>
<tr>
<td>Finance</td>
<td>BOE4</td>
<td>Finance</td>
<td>BOE4</td>
<td></td>
</tr>
<tr>
<td>Financial Accounting</td>
<td>BOE5</td>
<td>Financial Accounting</td>
<td>Marketing</td>
<td></td>
</tr>
<tr>
<td>Marketing</td>
<td>BOE6</td>
<td>Marketing</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Pre-requisite for compulsory course(s): Marketing

Introductory Statistics    | BOE Compulsory                           | Introductory Statistics      | BOE Compulsory                                |

Minimum Course Units - 36

| STRATEGIC MANAGEMENT     | Entrepreneurial Management               | BOE1                         | Entrepreneurial Management                    | BOE1                         |
| (inactive w/e 17/09/10)  | Entrepreneurship and Business Creation   | BOE2                         |                                              |

Note: Students who have declared Management Major prior to T4 AY09-10 (before it was inactivated on 1st July 2009) will continue to fulfill the old requirements.

Students who intend to change to Management (Entrepreneurship) will need to fulfill the new Management major requirements indicated below.

<table>
<thead>
<tr>
<th></th>
<th>Management Electives</th>
<th>UC1</th>
<th>Management Electives</th>
<th>UC1</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 Management electives</td>
<td>Leadership &amp; Teambuilding</td>
<td>UC2</td>
<td>Change Management</td>
<td>UC2</td>
</tr>
<tr>
<td></td>
<td>Technology &amp; World Change</td>
<td>UC3</td>
<td>Management Elective</td>
<td>UC3</td>
</tr>
<tr>
<td></td>
<td>Business, Government &amp; Society</td>
<td>UC4</td>
<td>Management Elective</td>
<td>UC4</td>
</tr>
<tr>
<td></td>
<td>Management Elective1</td>
<td>UC5</td>
<td>Management Elective</td>
<td>UC5</td>
</tr>
<tr>
<td></td>
<td>Management Elective2</td>
<td>UC6</td>
<td>Management Elective</td>
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</tr>
<tr>
<td></td>
<td>Management Elective3</td>
<td>UC7</td>
<td>Management Elective</td>
<td>UC7</td>
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<tr>
<td></td>
<td>Change Management</td>
<td>UC8</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Management Elective2</td>
<td>UC9</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Management Elective3</td>
<td>UC10</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Change Management</td>
<td>UC11</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Pre-requisite for compulsory course(s): Management of People at Work

BOE4

Minimum Course Units - 38
How to find the courses in course areas?

OASIS > Study > BOSS > BOSS Bidding

Top Ten FAQs

1. I dropped my course which I bid for $87 in BOSS 2. However, I was only
   paid $30. Why is this the case?

2. With $50 left after paying tuition, I bid for a course. Why didn't I get it?
How to find the courses offered in course areas? (cont’d)

BOSS > Class Search
How to find the courses offered in 2 specific course areas? (cont’d)

BOSS > Class Search
How to find the courses offered in 2 specific course areas? (cont’d)

BOSS > Class Search

- Select Undergraduate course career.
- In the Subject Area field, input a title or part of a title with a wildcard %.
- Under Course Area, select Business-Oriented Electives.

- In the Course Area field, select Business-Oriented Electives, Marketing Major.
- Below, select Marketing Major.

Example: E.g. 101
How to find the courses offered in 2 specific course areas? (cont’d)

BOSS > Class Search
How to check for course areas and pre- or co-requisites? (cont’d)

BOSS > Class Search

Course Career: Undergraduate

Catalogue No: E.g. 101

Search

MKTG207 - Marketing Strategy

<table>
<thead>
<tr>
<th>Type</th>
<th>Start Date</th>
<th>End Date</th>
<th>Day</th>
<th>Start Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLASS</td>
<td>28-Apr-2014</td>
<td>28-May-2014</td>
<td>Mon</td>
<td>12:00</td>
</tr>
<tr>
<td>CLASS</td>
<td>28-Apr-2014</td>
<td>28-May-2014</td>
<td>Wed</td>
<td>12:00</td>
</tr>
<tr>
<td>CLASS</td>
<td>28-Apr-2014</td>
<td>28-May-2014</td>
<td>Fri</td>
<td>12:00</td>
</tr>
</tbody>
</table>

Meeting information is not available.
How to check for course areas and pre- or co-requisites? (cont’d)

BOSS > Class Search

### COURSE DESCRIPTION

The course is structured to provide students with an understanding of the critical elements of marketing strategy that gears firms towards creating, communicating, and delivering value to customers as well as devising means to appropriate value for the firm. Thus, the course aims to look at all elements of a firm's marketing program from a strategic lens that takes both a short-term and a long-term perspective on managerial marketing decision making. As extensive amount of tacit learning is involved in devising and implementing marketing strategy, the course will place students in near real world situation with the use of cases and MARKSTRAT simulation and prod the students to make decisions and defend the decisions in oral and written formats.

### MEETING INFORMATION

<table>
<thead>
<tr>
<th>Type</th>
<th>Start Date</th>
<th>End Date</th>
<th>Day</th>
<th>Start Time</th>
<th>End Time</th>
<th>Venue</th>
<th>Instructor(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLASS</td>
<td>28-Apr-2014</td>
<td>28-May-2014</td>
<td>Mon</td>
<td>12:00</td>
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<td>LKCSB Seminar Rm 3.5</td>
<td>LEE PUI YEE, MICHELLE</td>
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<td>LEE PUI YEE, MICHELLE</td>
</tr>
</tbody>
</table>

### COURSE AREAS

The course area(s) mentioned below, if any, serve only as a generic guide to the possible area(s) this course may fall under. Undergraduate students must verify the actual mapping of the course areas by updating their curriculum worksheet and running the degree progress report (Course List What-If) before bidding/enrolling for the course.

- Marketing Major
- Business Options
- Major Related in Economics
- Business-Oriented Electives
- Social Sciences Major-related

### ENROLMENT REQUIREMENTS

Pre-Requisite: Marketing

Second Major Requirements

Degree Requirements
How to find the courses that will be offered in Term 1/2/3A/3B?

OASIS > Study > Courses & Schedules >> Course Offerings

Course Offerings for 2014-15

Please use the Course Catalogue/Course Search to get class schedule and course outlines (not all are available).

- School of Accountancy - Coming Soon
- Lee Kong Chan School of Business - Coming Soon
- School of Economics - Coming Soon
- School of Social Sciences - Coming Soon
- School of Information Systems - Coming Soon
- School of Law - Updated 3 Apr 2014

Course Offerings for 2013-14

- School of Accountancy - Updated 22 Oct 2013
- Lee Kong Chan School of Business - Updated 21 Mar 2014
- School of Economics - Updated 18 Nov 2013
- School of Social Sciences - Updated 18 Feb 2014
- School of Information Systems - Updated 20 Sept 2013
- School of Law - Updated 6 Feb 2014
NOTE!

- Do not assume that you can secure the courses that allow double-counting as these courses are usually very popular and oversubscribed.

- Do not plan to do your 2nd major electives during Term 3A/3B. Courses listed as offered in Term 3 may be changed/cancelled.

- Do not place very high bids on double-counting courses because you may end up with zero or insufficient e$ to bid for your remaining courses in that term and subsequent terms. This will create more bidding problems for yourself in future.

- If you are unable to secure the double-counting course(s), you will need to make provisions to take 2 CUs instead of 1 CU (since you cannot take 1 CU to double-count). For example, GRS and Marketing elective, you need to take 2 CUs = 1 CU for GRS and 1 CU for Marketing elective.
Understanding your Degree Progress Report

> Minimum Overall Course Units

Name: 
Date of Enrolment: 
Date of Birth: 

Student ID No: 
Date of Issue: 

**ADVICEMENT REPORT**

**Programme(s) Enrolled:** BSc (ISM)-Finance (Single Degree)

<table>
<thead>
<tr>
<th>Programme</th>
<th>Status</th>
<th>Major</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSc (Information Systems Mgmt)</td>
<td>×</td>
<td>Information Systems Management</td>
<td>×</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Finance</td>
<td></td>
</tr>
</tbody>
</table>

**Overall Requirements**

- [√] Residency Requirement
- [√] Minimum Course Units at SMU  
  CUs (Required/Earned/Outstanding): 20.00 / 22.50 / 0.00
- [×] Minimum Overall Course Units and Cumulative GPA Requirement (LLB Students: Please check unofficial transcript for LLB GPA)
- [×] BScISM-AnyBus(2nd Maj)exOM/QF  
  Minimum Overall Course Units required - 38 CUs  
  CUs [Required/Earned/Outstanding]: 38.00 / 24.50 / 13.50
- [√] BScISM-AnyBus(2nd Maj)exOM/QF  
  GPA (Minimum/Earned): 2.00 / 3.94
# Understanding your Degree Progress Report

> Showing Double Counting Courses

## Marketing - 2nd Major

### Marketing Major Compulsory

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1112 T1</td>
<td>MKTG 102 Consumer Behaviour</td>
<td>1.00</td>
</tr>
<tr>
<td>1011 T3A</td>
<td>FNCE 101 Finance</td>
<td>1.00</td>
</tr>
<tr>
<td>1011 T2</td>
<td>ACCT 101 Financial Accounting</td>
<td>1.00</td>
</tr>
<tr>
<td>1011 T2</td>
<td>MKTG 101 Marketing</td>
<td>1.00</td>
</tr>
<tr>
<td>1213 T1</td>
<td>MKTG 103 Marketing Research</td>
<td>1.00</td>
</tr>
</tbody>
</table>

### Marketing Major Electives

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1213 T1</td>
<td>MKTG 219 Retail Management</td>
<td>1.00</td>
</tr>
<tr>
<td>1011 T3B</td>
<td>MKTG 204 Services Marketing</td>
<td>1.00</td>
</tr>
<tr>
<td>1112 T1</td>
<td>MKTG .224 World Travel &amp; Tourism</td>
<td>1.00</td>
</tr>
</tbody>
</table>

## Business Oriented Electives

### Compulsory courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1011 T1</td>
<td>IS 102 Computer as an Analysis Tool</td>
<td>1.00</td>
</tr>
<tr>
<td>0910 T1</td>
<td>STAT 101 Introductory Statistics</td>
<td>1.00</td>
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</tbody>
</table>

### Elective courses

<table>
<thead>
<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>1112 T1</td>
<td>MKTG 102 Consumer Behaviour</td>
<td>1.00</td>
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<tr>
<td>1213 T1</td>
<td>MKTG 103 Marketing Research</td>
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</tr>
<tr>
<td>1213 T1</td>
<td>MKTG 219 Retail Management</td>
<td>1.00</td>
</tr>
<tr>
<td>1011 T3B</td>
<td>MKTG 204 Services Marketing</td>
<td>1.00</td>
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</tbody>
</table>
## Understanding your Degree Progress Report

### Showing Double Counting Courses

#### Marketing - 2nd Major

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>1112 T1</td>
<td>MKTG 102 Consumer Behaviour</td>
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<td>FINC 101 Finance</td>
<td>1.00</td>
</tr>
<tr>
<td>1011 T2</td>
<td>ACCT 101 Financial Accounting</td>
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</tr>
<tr>
<td>1011 T2</td>
<td>MKTG 101 Marketing</td>
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<tr>
<td>1213 T1</td>
<td>MKTG 103 Marketing Research</td>
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#### Marketing Major Electives

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<thead>
<tr>
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<td>1.00</td>
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<tr>
<td>1011 T3B</td>
<td>MKTG 204 Services Marketing</td>
<td>1.00</td>
</tr>
<tr>
<td>1112 T1</td>
<td>MKTG .224 World Travel &amp; Tourism</td>
<td>1.00</td>
</tr>
</tbody>
</table>

#### Global and Regional Studies

**Elective courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1011 T3A</td>
<td>MGMT 303 Knowledge Governance: Policies &amp; Strategies for Managing Knowledge-based Economies in Southeast Asia</td>
<td>1.00</td>
</tr>
<tr>
<td>1112 T1</td>
<td>MKTG .224 World Travel &amp; Tourism</td>
<td>1.00</td>
</tr>
</tbody>
</table>
NOTE!

- Please refer to our 2nd major wiki for more information on double-counting and other FAQs [https://wiki.smu.edu.sg/sis/Second_Major](https://wiki.smu.edu.sg/sis/Second_Major)

- Use our SIS curriculum planning template to help you with your academic progression planning. Download it from our 2nd Major wiki or from [http://blue.smu.edu.sg/2major/](http://blue.smu.edu.sg/2major/)

- Always use the curriculum planning template concurrently with your degree progress report to help you understand your academic progression better

- Please email our SIS School Managers if you need help with your curriculum planning:

  **Jeandie LIM, Sophia HENG, Dave CHUA**

  sis_ugrad@smu.edu.sg
Talk to Us
Look for the Professors of the ABT tracks and Analytics 2nd Major

- ABT (ESS Track) – Prof Venky S.
- ABT (Technopreneurship Track) – Prof Desai N.
- ABT (BPT Track) – Prof Enoch CH’NG/Prof Alan MEGARGEL
- ABT (ISA Track) – Prof Ding Xuhua
- ABT (without track) - Prof Swapna GOTTIPATI
- 2nd Major in Analytics – Prof Seema CHOKSHI/Prof Prakash Chandra SUKHWAL
- For course planning enquiries, please email your planning template to us and we will reply asap

SIS Undergraduate matters – sis_ugrad@smu.edu.sg