Welcome to the School of IT at Swinburne, Australia's most technologically-focussed university, located close to the centre of Melbourne, a great international city of 3.5 million people. Our School has a very strong international focus. We have staff from over 20 countries, and students from even more. Our researchers collaborate with colleagues all over the world. Our student community is completely multicultural, and reflects the truly global nature of IT itself. It is always our great pleasure to welcome students from other countries, to help them develop personally, and to further their ambition through learning on our degree and graduate diploma programs.

We know how important it is when you come to a new country that you feel welcome and are assisted to embrace your new environment. The School of IT helps our international students to integrate into our learning community, to ensure an enjoyable and fulfilling experience. The School offers a variety of programs designed to meet student needs, whether you are an experienced IT professional seeking to extend your knowledge at an advanced level, or someone who desires to move into today's most dynamic field.

At Swinburne, we are totally committed to offering programs which address the needs of industry, and which prepare our students for challenging employment and career development. We constantly review our curricula, through the involvement of our Industry Advisory Committees, and regularly introduce new subjects that address the issues and technologies that are evidently being widely adopted in industry.

We offer a wide range of programs, supporting the major trends in IT. Students can choose to focus on technical aspects of IT, or on business applications. At undergraduate level, a variety of double degrees permit students to study IT as well as engineering or business disciplines in depth. At the postgraduate level, students can elect to specialise (in Java and J2EE technology, Microsoft .NET technology, or software engineering, for example), or to cover a broad range of important IT topics. The choice is yours!

The courses offer a wide range of entry and exit points allowing students the flexibility to undertake a course of postgraduate studies of between one and two years:

- A one year **Master of Information Technology (MIT)** is available for those who have a degree in an IT discipline.
- A two year **Master of Information Technology (MIT)** is available for those who have a degree in a non-IT discipline.
- A two year **Master of Science (Computing)(Honours)** is available for those who have a degree in an IT discipline.
- A one year **Master of Science (Computing)(Honours)** is available for those who have an Australian Masters degree in an IT discipline.

I hope that you find the information in this brochure interesting, and that you will visit our School's web-site (http://www.it.swin.edu.au/courses/international/internat.htm).

Best wishes
Professor Doug Grant
Dean of Information Technology
Master of Information Technology

Including specialisation programs:
MIT (Software Engineering)
MIT (Internet computing)
MIT (Information Systems)

Course Outline
Swinburne’s MIT is an outstanding program offering graduates a fast-track into an exciting IT career. The program is designed for university graduates with no previous university studies in IT. Those students with university qualifications in IT may be eligible for exemptions for up to half the course. It assumes a basic level of IT literacy. The MIT program starts by covering in detail some of the fundamentals of IT including programming, database, networking, the Internet and software engineering principles, and then offers a wide range of advanced studies in a number of important areas such as Internet Computing, Software Engineering and Information Systems. IT technologies of great importance such as Java, VB.NET, HTML, XML, UML and Oracle are included in the base curriculum. Students also have the opportunity to undertake a research project. At the advanced level students may choose to undertake one of the specialization programs, or alternatively choose a broader range of subjects, according to their projected career.

The program is in two stages: Stage 1 (foundations) and Stage 2 (advanced).

Stage 1
Stage 1 consists of 8 subjects totalling 100 credit points. Five core subjects provide foundational IT knowledge and skills including studies in programming (Java or VB.NET), database, data communications, software engineering and web development. A choice of 3 electives provides the opportunity for students to begin to specialise.

Stage 2
In Stage 2, students generally select 8 subjects, totalling 100 Credit Points from a wide range of alternatives. It is possible to select a broad program, or to choose from the MIT(Internet Computing), MIT(Software Engineering) or MIT(Information Systems) specialisations. To qualify for a specialisation, students must complete at least 75 Credit Points from a set of nominated core subjects. Students with an interest in, and aptitude for, research may replace up to 5 subjects by research-oriented subjects of a matching total Credit Point value.

Admission Requirements
General admission to the MIT is available to students who have a bachelor’s degree in any discipline, and whose degree is officially deemed to be equivalent to an Australian bachelor’s degree. Admission requires oral and written English equivalent to the International English Language Testing Service (IELTS) score which averages 6.5 in all academic modules, and includes no individual module score of less than 6.

Students with a degree in IT will normally be granted exemptions from the whole of Stage 1, and permitted to commence study at Stage 2. It is assumed that such students have a basic knowledge of programming, software engineering, database, web technology and data communications. Students without an IT degree may be able to gain exemptions from a number of Stage 1 subjects on the basis of equivalent successful prior study at university level. To apply for exemptions, students should provide full details of the curriculum studied, and signed official transcripts of results obtained in the prior studies.

Students admitted to Stage 1 will be required to achieve an appropriate standard in their Stage 1 subjects (normally an average of at least 65%) before being permitted to progress to Stage 2. Students who are not permitted to progress to Stage 2 may exit on completion of Stage 1 with the qualification of Graduate Diploma of Information Technology, provided that they have studied and passed at least 6 subjects at Swinburne, or with the qualification of Graduate Certificate in Information Technology provided that they have studied and passed at least 4 subjects at Swinburne.

Professional Standing of the MIT Program
Stage 2 of the program is accredited by the Australian Computer Society at the highest level (Professional Level).

Course Structure

Stage 1
Stage 1 consists of 100 credit points taken over 1 year of full-time study. The program involves completing 8 subjects comprising 5 core subjects and 3 electives. (Stage 1 is completed by those students entering the course with a non-IT qualification. Those with a degree in IT commence at Stage 2)

Core Subjects
Elective Subjects (Choose 3)

HIIT6006 Business Computing
HIIT6024 Introduction to HCI
HIIT6052 Software Development 2G (Java)
HIIT6091 Advanced Web Technologies
HIIT6110 Programming in VB.NET
HIIT6149 Analysis, Modelling and Design
HIIT7017 Database 2
HIIT7084 Electronic Commerce: A Business Perspective
HIIT7136 Information Technology – A Critical Review

Students should consider the prerequisites for the Stage 2 subjects when choosing subjects.

Stage 2
Stage 2 consists of 100 credit points taken over 1 year of full-time study. The program involves 8 electives chosen from an extensive list of subjects. Postgraduate subjects are classified as Level 2 or 3 and are generally worth 12.5 credit points. For Stage 2, students must complete at least 75 credit points of Level 3 subjects, and up to 25 credit points of Level 2 subjects (in areas not covered by their previous IT studies) for a total of 100 credit points.

Pre-requisites for all subjects must be successfully completed before the selected subject is attempted. Co-requisites must be successfully completed before, or concurrently with, the subject being attempted.

It is anticipated that the following subjects will be offered in 2004. The course is continually under review in order to keep it in touch with state-of-the-art technology hence changes in course structure and subjects occur from time to time. The most current course information is available at www.it.swin.edu.au/courses/postgrad

Subjects
Postgraduate subjects are classified as Level 2 or 3 and are generally worth 12.5 credit points. Subject descriptions may be found in the last section of this brochure.

Level 3 Subjects

**Semester 1 (Feb – June)**

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<td>Information Systems Modelling Project</td>
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<td>HIT8032</td>
<td>Information Systems Management*</td>
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<td>HIT8050</td>
<td>Evolutionary and Neural Computing</td>
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<td>HIT8060</td>
<td>Systems Project Management</td>
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<td>HIT8063</td>
<td>Unix Systems Programming</td>
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<td>HIT8066</td>
<td>Software Tools</td>
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<td>HIT8087</td>
<td>Advanced Java</td>
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<td>HIT8088</td>
<td>eCommerce Management*</td>
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<td>HIT8093</td>
<td>XML Technology</td>
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<td>HIT8096</td>
<td>.NET Architecture</td>
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<td>HIT8097</td>
<td>Programming for .NET</td>
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<td>Enterprise Java</td>
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<td>HIT8127</td>
<td>Component Modelling and Design</td>
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<td>HIT8140</td>
<td>Multimedia for the WWW</td>
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<td>HIT8142</td>
<td>Object-Oriented Modelling</td>
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<td>HIT8157</td>
<td>Large Scale System Design</td>
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<td>HIT8159</td>
<td>Software Quality Management</td>
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<td>HIT8164</td>
<td>Internet Networking Infrastructure</td>
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**Semester 2 (Aug – November)**

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<tbody>
<tr>
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<td>Current Issues in Information Systems*</td>
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<tr>
<td>HIT8018</td>
<td>Database 3</td>
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<tr>
<td>HIT8033</td>
<td>Information Systems Development Project (25 CP)</td>
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<tr>
<td>HIT8035</td>
<td>Information Technology Effectiveness*</td>
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<tr>
<td>HIT8041</td>
<td>Advanced Web Development</td>
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<td>HIT8045</td>
<td>Personal Software Process</td>
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<td>HIT8055</td>
<td>Software Maintenance Project</td>
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<td>HIT8057</td>
<td>Software Testing and Reliability</td>
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<td>Agile Development Project</td>
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<td>Enterprise .NET</td>
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<td>HIT8156</td>
<td>Software Process Improvement</td>
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<td>Internet Networking Infrastructure</td>
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<td>HIT8165</td>
<td>Windows Programming .NET</td>
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<tr>
<td>HIT8189</td>
<td>Usability Engineering</td>
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</tbody>
</table>

* at least four years of relevant industry experience is required as a prerequisite for these subjects
Level 2 Subjects

Up to 25 credit points (2 subjects) of Level 2 subject may be chosen in Stage 2.

HIT6092  Advanced Web Technologies
HIT6110  Programming in VB.NET
HIT6149  Analysis, Modelling and Design
HIT7017  Database 2
HIT7037  Programming in Java
HIT7072  C++ for Programmers

Note: some Level 2 subjects may be necessary in order to fulfil the pre-requisite knowledge of level 3 subjects.

Research Subjects

HIT8067   Minor Thesis (50 CP)
HIT8068   Research Seminar (12.5 CP)
HIT8069   Research Paper (12.5 CP)
HIT8070   Research Report (25 CP)

Note: Students wishing to undertake research subjects must present evidence of their capacity for research. Normally Distinction Level performance in Stage 1 subjects or in previous undergraduate studies in IT is needed to undertake these subjects.

Specialisations

In Stage 2 it is possible to select a broad program comprising of 100 credit points of subjects providing prerequisite requirements are satisfied. Alternatively, students may choose to follow one of the prescribed specialisation programs. Current specialisation programs are the MIT(Internet Computing), MIT(Software Engineering) and the MIT(Information Systems). In order to qualify for a specialisation, students must complete at least 75 Credit Points from a particular set of subjects. Up to 25 credit points of other MIT subjects may also be chosen.

The specialisation programs are:

Master of Information Technology (Software Engineering)

The Software Engineering specialisation offers a course of study focusing on the development of practical skills and theoretical knowledge in Software Engineering. It focuses on methodologies, tools, techniques and management principles necessary to support the effective and efficient development of high quality software.

HIT8023  Human-Computer Interaction
HIT8055  Software Maintenance Project
HIT8057  Software Testing and Reliability
HIT8060  Systems Project Management
HIT8066  Software Tools
HIT8098  Agile Development Project
HIT8156  Software Process Improvement
HIT8157  Large Scale System Design
HIT8159  Software Quality Management (must be included)
HIT8189  Usability Engineering

Master of Information Technology (Internet Computing)

The Internet Computing Specialisation offers a practical course of study focusing on the skills and concepts required to develop Internet-based systems. It also includes advanced topics in enterprise systems development, XML and web technologies. Students are advised that it is wise to include both subjects in one of the pairs (HIT8087 and HIT8119) and (HIT8097 and HIT8099).

HIT8041  Advanced Web Development
HIT8087  Advanced Java
HIT8093  XML Technology
HIT8096  .NET Architecture
HIT8097  Programming for .NET
HIT8099  Enterprise .NET
HIT8119  Enterprise Java
Master of Information Technology (Information Systems)

The Information Systems specialisation offers a course of study focusing on the knowledge and skills needed by information systems analysts, designers and developers. It includes advanced topics in system and information modelling, database design and component technology. The Unified Modelling Language (UML) is emphasised. Students use industrial strength products such as Oracle and Microsoft .NET development tools.

* at least 4 years of relevant industry experience is required as a prerequisite for these subjects

HIT8012 Current Issues in Information Systems*
HIT8018 Database 3
HIT8023 Human-Computer Interaction
HIT8030 Information Systems Modelling Project
HIT8032 Information Systems Management*
HIT8033 Information Systems Development Project (25 CP)
HIT8035 Information Technology Effectiveness*
HIT8060 Systems Project Management
HIT8088 eCommerce Management*
HIT8096 .NET Architecture
HIT8121 Internet Security
HIT8126 Advanced Data Modelling
HIT8127 Component Modelling and Design
HIT8142 Object-Oriented Modelling
Master of Science (Computing)(Honours)

Course Overview
Swinburne’s Master of Science (Computing)(Honours) provides the opportunity to study some of today’s most exciting IT developments in depth. The aim of the MSc(Comp)(Hons) is to provide graduates with advanced professional skills and conceptual knowledge which is complemented with a major industry focussed project or alternatively a research-based thesis. The program provides the ability for students to choose subjects in a range of areas, however all students are required to undertake a specialisation in a particular area such as software engineering, internet computing or information systems.

The MSc(Comp)(Hons) is designed for those with a bachelor’s degree or a graduate diploma in an Information Technology discipline and is aimed to suit the needs of recent graduates who wish to pursue advanced studies, and recent graduates of other Masters level programs in IT who are seeking to enhance their skills and knowledge through a major project or a thesis.

Course Length
Students commencing the MSc(Computing)(Hons) can complete the course, which consists of 200 credit points (cp) of study in 2 years full-time. The award of Honours is subject to satisfaction of performance criteria.

Students who have completed a Master of Information Technology or equivalent can complete the course in 1 year full-time.

Admission Requirements
Admission to the MSc(Comp)(Hons) is available to students who have a bachelor’s degree or a graduate diploma in an Information Technology discipline (Computer Science, Information Systems, Computer Systems Engineering). Admission requires oral and written English equivalent to the International English Language Testing Service (IELTS) score which averages 6.5 in all academic modules, and includes no individual module score of less than 6.

Students with a Masters degree in an Information Technology discipline (for example, Computer Science, Information Systems, Information Technology) may be eligible for up to 100 cp of exemptions and will usually be required to undertake 100 cp of studies. These students will be exempted from the requirement to undertake a specialisation.

Alternative Exit Points
Students who wish to exit the program after completing 150 cp will be awarded a Master of Science (Computing). Students who wish to exit the program after completing 100 cp may apply for the Master of Information Technology. Students who wish to exit the program after completing 50cp may apply for the Graduate Certificate of Information Technology.

Course Structure
The Master of Science (Computing)(Honours) degree consists of 200 cp, equivalent to 2 years of full-time study. The award of Honours is also subject to satisfaction of performance criteria. Entry is possible in both Semester 1 (March) and Semester 2 (July/August). The program consists of:

- 137.5 credit points of elective subjects which include a specialisation
- a 12.5 credit point core subject in either project management or research methods
- a 50 credit point major project or a 50 credit point minor thesis, taken over 2 semesters.

Electives
Postgraduate subjects in the School of Information Technology are classified as Level 2 or Level 3. Students must complete at least 112.5 cp of Level 3 electives, and up to 25 cp of Level 2 electives for a total of 137.5 cp. Students must complete one of the available specialisation programs by completing at least 75 cp from one of several sets of nominated subjects. Current specialisation programs are Internet Computing, Software Engineering and Information Systems (Details of the specialisations may be found in the section in this brochure that describes the Master of Information Technology).

Core
All students must complete HIT9060 IT Project Management (12.5 cp) or HIT9010 Research Methods (12.5 cp). HIT9060 will provide essential project management skills and knowledge in preparation for the major project. HIT9010 will prepare students for the minor thesis. An average score of at least 75% for the subjects undertaken in semesters 1 and 2 of the program is required for entry to HIT9010 Research Methods and HIT9167 Minor Thesis A.

Thesis or Project
Students will undertake either:
- HIT9158 Major IT Project A and HIT9258 Major IT Project B (50 cp in total)

Students wishing to undertake the Minor Thesis option in the final semester must take HIT9010 Research Methods (12.5 cp). HIT9267 Minor Thesis B requires a pass in HIT9010 Research Methods. HIT9258 Major IT Project B requires a pass in HIT9060 IT Project Management.

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**Master of Science (Computing)(Honours) - Structure**

<table>
<thead>
<tr>
<th>Electives</th>
<th>HIT9060 or HIT9010</th>
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<tbody>
<tr>
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<td>HIT9167 Minor Thesis A (12.5 cp)</td>
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* at least four years of relevant industry experience is required as a prerequisite for these subjects

### Level 2 Subjects

Up to 25 credit points (2 subjects) of Level 2 subject may be chosen in Stage 2.

- HIT6092 Advanced Web Technologies
- HIT8110 Programming in VB.NET
- HIT8149 Analysis, Modelling and Design
- HIT7017 Database 2
- HIT7037 Programming in Java
- HIT7072 C++ for Programmers
Subject Details

HIT8012 Current Issues in Information Systems
(Pre-requisite: At least 4 years relevant industry experience. Requires approval of MIS program manager.)
This subject encourages students to critically appraise state of the art developments and evaluate them for relevance to their own environment. Students will examine recent trends and their impact on business and management and the anticipated directions within the computer industry.

HIT8018 Database 3
(Pre-requisite: HIT7017 Database 2 or equivalent.)
This subject examines the physical design and implementation issues in local and distributed databases.

HIT8023 Human-Computer Interaction
(No pre-requisite requirement.)
This subject concentrates on the design of highly useable interactive system. Key areas covered include useability testing and evaluation, user modelling and profiling, participative design techniques and visual interface design.

HIT8030 Information Systems Modelling Project
(Pre-requisite: HIT 6016 Database 1 or equivalent.)
In this project-based subject, students perform a change analysis and requirements specification process for an information system. Several different modelling notations are used, in order to reflect the current state of information systems practice. Phases of the work include design recovery, user-requirements analysis, information modelling, behaviour modelling, and reconciliation of information and behaviour models.

HIT8032 Information Systems Management
(Pre-requisite: At least 4 years relevant industry experience. Requires approval of MIS program manager.)
This subject examines the role of information systems (IS) and IS management in an organisation, including corporate and IS strategic planning and operational issues confronting IS management.

HIT8033 Information Systems Development Project (25 CP)
(Pre-requisite: HIT6016 Database 1 or equivalent)
As the convergence of object and relational databases continues, in the form of object-relational database management systems, database designers are faced with more complex design choices than hitherto. This project-based subject offers students the opportunity to investigate the capabilities of modern database products and to apply suitable design methods.

HIT 8035 IT Effectiveness
(Pre-requisite: At least 4 years relevant industry experience. Requires approval of MIS program manager.)
This subject introduces students to the complexities and considerations associates with making effective investments in IT. Students are exposed to both financial and strategic perspectives in assessing the effectiveness of an organisational IT portfolio.

HIT8041 Advanced Web Development
(Pre-requisite: some programming experience. Preclusions: HIT5091 Web Development, HIT6092 Advanced Web Technologies)
This subject explores the technical issues relating to both client side and server side web development including style sheets, dynamic HTML, CGI scripting and ASP development. Interface design and development methodologies are also addressed.

HIT8055 Software Maintenance Project
(Pre-requisite: HIT8159 Software Quality Management and HIT7037 Programming in Java or equivalent)
This subject provides students with a small team project experience involving significant corrective and enhancement maintenance on an existing software system. The taught component will address major conceptual and process issues associated with software maintenance.

HIT8057 Software Testing and Reliability
(Pre-requisite: A university level software engineering subject and some C++ or Java programming experience)
This subject aims at providing students with the concepts and methodologies of software testing and reliability. Key areas covered include selection of test cases, program instrumentation, data flow analysis, domain testing strategy, mutation analysis, basics of reliability theory and reliability modelling.

HIT8060 Systems Project Management
This subject explores the genesis of project management and its importance to improving the success of information technology projects. It covers the constraints of project management, project management knowledge areas and process groups, as specified in the Project Management Body of Knowledge (PMBOK), the project life cycle, project selection methods, work breakdown structures, cost estimation, earned value analysis, motivation theory and team building.

**HIT8063 UNIX Systems Programming**  
(Pre-requisite: HIT7072 C++ for Programmers or equivalent.)  
This subject provides the in-depth knowledge of Open Systems programming needed to write software that communicates between client and server processes over the Internet.

**HIT8066 Software Tools**  
(Pre-requisite: A university level software engineering subject)  
The aim of this subject is to examine theoretical and practical issues relating to the use of tools in software development. The subject will include practical experience with tools for analysis and design, automated testing tools, configuration management tools and performance testing and analysis tools.

**HIT8087 Advanced Java**  
(Pre-requisite: HIT7037 Programming in Java or HIT6052 Software Development 2G.)  
The aims of this subject are to extend skills and understanding in the Java language especially in the area of its underlying architecture, performance and human computer interface. Topics covered include the JVM, performance, threads, serialisation, Java Beans, Swing and the Graphics 2D class libraries.

**HIT8088 eCommerce Management**  
(Pre-requisite: HIT7084 or a university level eCommerce subject. Requires approval of MIS program manager.)  
This advanced unit will explore the current practices and the fundamental theories pertaining to electronic commerce. The unit examines the ramifications of electronic commerce and how it is best managed within the modern organisation.

**HIT8093 XML Technologies**  
(Pre-requisite: HIT8041 Advanced Web Development or HIT5091 Web Development or equivalent)  
The Extensible Markup Language (XML) is a popular language for the World Wide Web and eCommerce. Developments of resources using XML and various areas applying XML are examined.

**HIT8096 .NET Architecture**  
(Pre-requisite: HIT8197 Advanced .NET Programming or HIT6110 Programming in VB.NET)  
Examines how the architectural design of Microsoft’s .NET Framework enables application developers to create Web services that can be combined into stateless, distributed, loosely-coupled software systems.

**HIT8098 Agile Development Project**  
(Pre-requisite: A university level software engineering subject and a university level object-oriented programming subject)  
This subject studies the recently defined approaches for the fast, iterative development of software systems with changing requirements. It examines approaches such as eXtreme Programming (XP) and SCRUM. Students will engage in a development project using one of these methods.

**HIT8099 Enterprise .NET**  
(Pre-requisite: HIT8197 Advanced .NET Programming or HIT6110 Programming in VB.NET)  
This subject covers the development of distributed enterprise systems within the .NET framework. It involves the use of technologies such as VB.NET, C#, ADO.NET, XML, ASP.NET.

**HIT8119 Enterprise Java**  
(Pre-requisite: HIT7037 Programming in Java or HIT6052 Software Development 2G)  
This subject focuses on the skills and understanding required to build secure, N-Tier web-based systems using J2EE including RMI, JDBC, EJB, Java Server Pages and Java Sevlets

**HIT8121 Internet Security**  
(Pre-requisite: A university level programming subject)
This subject examines Internet security from both a management and technical perspective. Management must ensure that security is implemented to an appropriate level and scope. Technically, the broad range of security technologies are investigated with specific examples from a range of web sites and software. There will be some practical work with security and monitoring tools.

**HIT8126 Advanced Data Modelling**  
(Pre-requisite: HIT6016 Database 1 or equivalent.)  
This subject is concerned with information modelling for both requirements specification and database design. The object-role method of conceptual modelling is used. Students learn how to create object-role models and how to derive other forms of conceptual and database models from them.

**HIT8127 Component Modelling and Design**  
(Pre-requisite: HIT6016 Database 1 or equivalent.)  
Although the need to model and specify the behaviour of information systems continues to grow in importance, there is in practice no dominant technique or notation. This subject covers many of the methods currently used, with a focus on the development of systems from re-usable components.

**HIT8140 Multimedia for the WWW**  
(Pre-requisite: HIT8041 Advanced Web Development or HIT5091 Web Development or equivalent.)  
This subject examines the media, hardware, software, networks and applications relevant to the use of multimedia over the WWW. Practical skills are developed in conjunction with a theoretical study of methodology and interface issues.

**HIT8142 Object-Oriented Modelling**  
(No pre-requisite requirement.)  
This subject concentrates on object-oriented analysis, and on processes for developing object-oriented systems. It focuses on the use of the UML language of Booch, Jacobson and Rumbaugh.

**HIT8150 Evolutionary and Neural Computing**  
(Pre-requisite: A university level artificial intelligence subject)  
This subject introduces and investigates non-deterministic computational methods and their application to complex problem domains including genetic algorithms, neural networks and fuzzy systems.

**HIT8156 Software Process Improvement**  
(Pre-requisite: HIT8159, HIT8060 or similar intermediate university level software engineering subject)  
This subject focuses on the technical and organisational processes necessary to develop or acquire high-quality software-based systems. Approaches covered include the Software Engineering Institute's CMMI, ISO 15504 (SPICE) and contemporary 'agile' methods.

**HIT8157 Large Scale System Design**  
(Pre-requisite: An intermediate university level software engineering subject)  
Large-Scale System Development deals with pre-implementation aspects of the software development life cycle. Modern software engineering practices recognize the interdependence of requirements and design, and generally espouse an iterative approach. The subject will consider large-scale system design issues, as well as issues involved in requirements elicitation, specification and maintenance.

**HIT8159 Software Quality Management**  
(Pre-requisite: A university level software engineering subject)  
The development of high quality software requires close attention to the process used. In this subject, key areas of the software process are studied in detail: for example, software quality assurance, software process improvement and metrics.

**HIT8164 Internet Networking Infrastructure**  
(Pre-requisite: HIT6020 Data Communications and (HIT7037 Programming in Java or HIT6052 Software Development 2G))  
In this subject MAN and WAN technologies currently in use such as DQDB, FDDI and SDH/SONET are reviewed and the protocols of the Internet are studied in detail. Emphasis is placed on TCP/IP protocol suite, routing in the Internet, RIP and OSPF, Internet multicasting, DNS, Internet security and firewall design. New developments such as IP over ATM and next generation Internet are also covered.

**HIT8165 Windows Programming .NET**  
(Pre-requisite: HIT7072 C++ for Programmers or equivalent.)  
This subject will cover programming the Windows operating system in C and C++ using the WIN32 API and the .NET framework. It will cover programming in managed C++ and interoperability issues of mixing managed and unmanaged C++ as well as programming GUI
applications, memory management, processes and threads. It will also consider some issues of converting legacy windows applications over to the new .NET environment.

**HIT8189 Usability Engineering**  
(Pre-requisite: (HIT6024 or equivalent) and a university level software engineering subject)  
This subject explores a range of human-computer interactions issues from a software engineering perspective including task analysis, user needs analysis methods and tools, formal approaches and visualisation.

**HIT8197 Advanced .NET Programming**  
(Pre-requisite: HIT6110 Programming in VB.NET or HIT7037 Programming in Java or HIT6052 Software Development 2G or equivalent)  
Investigates the implementation of local applications using VB.NET and the C# programming language. Focuses on advanced programming concepts such as multi-threaded applications, delegates, events, custom controls, GDI+, mobile computing, cryptography, and other .NET framework elements.

**HIT9060 IT Project Management**  
(Pre-requisite: Completion of 100 cp of electives in the Master of Science (Computing)(Honours). Preclusion: HIT8060 Systems Project Management)  
This subject explores project management and its importance to improving the success of information technology projects. It covers the constraints of project management, project management knowledge areas and process groups, as specified in the Project Management Body of Knowledge (PMBOK), the project life cycle, project selection methods, work breakdown structures, cost estimation, earned value analysis, motivation theory and team building. This subject will focus on the development of project management skills to support the Major IT Project.

**HIT9010 Research Methods**  
(Pre-requisite: Completion of 100 cp of electives in the Master of Science (Computing)(Honours))  
This subject examines the basic principles of academic research and the fundamental concepts of research. Students will develop skills to enable them to interpret and critically evaluate previously published research in a formal literature review, to use common research methods and to identify a research question and to produce a written research proposal. This subject will support the Minor Thesis.

**HIT9167 Minor Thesis A (12.5 cp)**  
(Pre-requisite: Completion of 100 cp of electives in the Master of Science (Computing)(Honours) with a Distinction average; Co-requisite: HIT9010 Research Methods)  
This subject will provide students with the opportunity to develop analytical, research and report writing skills while exploring a topic in depth. Students will work on an approved project under staff supervision. This subject will cover the initial stages of the minor thesis including project scoping, planning and literature review.

**HIT9267 Minor Thesis B (37.5 cp)**  
(Pre-requisite: HIT9010 Research Methods, HIT9167 Minor Thesis A)  
This subject will provide students with the opportunity to develop analytical, research and report writing skills while exploring a topic in depth. Students will work on an approved project under staff supervision. This subject will extend the preliminary work undertaken in HIT9167 Minor Thesis A through a theoretical or experimental investigation.

**HIT9158 Major IT Project A (12.5 cp)**  
(Pre-requisite: Completion of 100 cp of electives in the Master of Science (Computing)(Honours); Corequisite: HIT9060 IT Project Management)  
Students will apply software engineering principles to the development and successful implementation of a major piece of software which satisfies user needs. Students work as a team (typically 4 - 6 individuals) to develop a software product for a nominated external client. This initial subject involves preliminary work including project scoping, formal project management plan and a Software Requirements Specification document that are in accordance with currently accepted software engineering principles and practice.

**HIT9258 Major IT Project B (37.5 cp)**  
(Pre-requisite: HIT9258 Major IT Project A, HIT9060 IT Project Management)  
Students will apply software engineering principles to the development and successful implementation of a major piece of software which satisfies user needs. This subject follows the preliminary work in HIT9158 Major IT Project A to implement the software system as specified in the Software Requirements Specification. The final milestone will include a formal presentation of the completed software at which the client is present and an individual report.
Level 2 Subject Details

HIT6092 Advanced Web Technologies
(Pre-requisite: HIT5091 Web Development and (HIT7037 Programming in Java or HIT6052 Software Development 2G))
Server side web development using a range of current technologies such as ASP and PHP. Introduction to security and eCommerce.

HIT6110 Programming in VB.NET
(Pre-requisite: A university level programming subject)
Introduction to Visual Basic .NET and Object Oriented Programming. Console application and Windows application development. Introduction to Object Modelling. Introduction to working with Classes and Objects

HIT6149 Analysis, Modelling and Design
(Pre-requisite: A university level software engineering subject)
This subject will cover business analysis; modelling paradigms including structured, object-oriented and information modelling; high level design including distributed and N-tier and solution selection and evaluation.

HIT7017 Database 2
(Pre-requisite: HIT6016 Database 1 or equivalent)
Data Base Management Systems, especially relational databases - includes transaction management; recovery; stored procedures; designing of on-line Transaction Processing systems.

HIT7037 Programming in Java
(Pre-requisite: A university level programming subject)
This subject provides an introduction to all the facilities provided by the Java programming language, concentrating on features required for the development of distributed systems.

HIT7072 C++ for Programmers
(Pre-requisite: A university level programming subject)
Object-oriented programming in C++ for programmers.

Application Information

Admission Dates
Students may commence studies in either March or July/August.

Since it is most important that students allow enough time to settle in Australia before their course begins, we recommend that students arrive in Melbourne at least two weeks prior to the commencement of their course. Students will not be permitted to begin their studies after the commencement date. Students who will not be able to arrive prior to the commencement date should contact Swinburne's International Student Unit (see below) to get their offer changed to the next semester.

Applications should be forwarded to:
International Student Unit
Swinburne University of Technology
473 Burwood Road
Hawthorn Victoria 3122
Australia
Telephone +61 3 9214 8647/8712
Fax +61 3 9818 3648

Please include with your application:
1. An official and translated transcript of your academic results
2. A description of your subject details and relevant syllabus from your institution

Fees
For entry in 2004, fees are AUD $2250 per subject. The fee for the 200 Credit Point MIT is AUD $36,000. Students should also budget on up to AUD $12,000 per annum for living expenses and medical insurance.
Other costs

Textbooks are required for most subjects. Details are generally announced in the first lecture of a subject, and are purchased at the students’ expense. Many subjects involve the use of printed lecture notes, whose cost tends to be around $25 per subject.

Further Information

Ms Vicki Formosa
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