

**Life Impact**



**Graduate Diploma in Computer Science  
Bachelor of Computer Science**

**Student Handbook  
2009**

**The University of Adelaide Singapore Campus**

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# IMPORTANT DATES FOR ENROLMENT

## A reminder to students

If you need to amend your enrolment please remember the dates below:

2009 Amendments to Enrolments						
	Beginning of Term date	Last day a student can add a class	Last day to withdraw (Census date)	Withdraw No Fail (WNF) Date	Withdraw Fail (WF) date	End of Term
Term 1	16-Jan-09	9-Feb-09	<b>13-Feb-09</b>	<b>14-Feb-09 to 22-Mar-09</b>	<b>23-Mar-09 to 17-Apr-09</b>	20-Apr-09
Term 2	17-Apr-09	4-May-09	<b>8-May-09</b>	<b>9-May-09 to 9-Jun-09</b>	<b>10-Jun-09 to 3-Jul-09</b>	6-Jul-09
Term 3	3-Jul-09	27-Jul-09	<b>31-Jul-09</b>	<b>1-Aug-09 to 1-Sep-09</b>	<b>2-Sep-09 to 25-Sep-09</b>	28-Sep-09
Term 4	2-Oct-09	19-Oct-09	<b>23-Oct-09</b>	<b>24-Oct-09 to 24-Nov-09</b>	<b>25-Nov-09 to 18-Dec-09</b>	21-Dec-09

## Glossary

Census date	Courses removed before this date will not appear on your academic transcript.
Withdraw No Fail date	If you withdraw between the dates shown above a “WNF” (Withdraw No Fail) will appear on your transcript.
Withdraw Fail date	If you withdraw between the dates shown above a “WF” (Withdraw Fail) appear on your transcript.
	You may not withdraw from a course after the WF date.

Due to timetabling constraints the teaching intensives and examinations for some courses may not fall entirely within the official term dates.

### **Forfeiture of full course fees:**

If a student withdraws from the course after the first class they will be charged the full course fee.

### **Forfeiture of \$380 of the course fee:**

If a student withdraws from a course after collecting their course materials and before the date of the first class they will forfeit \$380 of the course fee.

**NOTE:** Course materials **MUST** be returned in good condition and contain no hand written notes in them.

- Terms consist of a 12-week teaching period that typically involves 2 teaching intensives and 1 exam session according to the timetable.

- Please note all dates are established by the University. The Faculty Office and NAAEC are not able to rectify oversights in this regard

## University's Contact Information

### Faculty of Engineering, Computer and Mathematical Sciences (ECMS)

Phone : +61 8 8303 4738

Email : [ecms\\_office@adelaide.edu.au](mailto:ecms_office@adelaide.edu.au)

### Jake Kroker

#### International Student Liaison Officer, Student Services

Phone : +61 8 8303 4738

Fax : +61 8 8303 6492

E-mail: [jake.kroker@adelaide.edu.au](mailto:jake.kroker@adelaide.edu.au)

### WEBSITE:

**For Enrolment / Forms:** <http://www.adelaide.edu.au/ecms>

**Enrolment Steps / Course Availability:** <http://www.adelaide.edu.au/enrol>

**Office hours: Monday to Friday 8.30 am – 5.00 pm**

### Academic and Teaching Staff:

<b>Prof David Suter</b>	Email: <a href="mailto:dsuter@cs.adelaide.edu.au">dsuter@cs.adelaide.edu.au</a>
<b>Dr Brad Alexander</b>	Email: <a href="mailto:brad@cs.adelaide.edu.au">brad@cs.adelaide.edu.au</a>
<b>Dr Peter Ashenden</b>	Email: <a href="mailto:peter@ashenden.com.au">peter@ashenden.com.au</a>
<b>Dr Fred Brown</b>	Email: <a href="mailto:fred@cs.adelaide.edu.au">fred@cs.adelaide.edu.au</a>
<b>Dr Nick Buchdahl</b>	Email: <a href="mailto:nicholas.buchdahl@adelaide.edu.au">nicholas.buchdahl@adelaide.edu.au</a>
<b>Dr Bob Clarke</b>	Email: <a href="mailto:robert.clarke@adelaide.edu.au">robert.clarke@adelaide.edu.au</a>
<b>Dr Henry Detmold</b>	Email: <a href="mailto:henry@cs.adelaide.edu.au">henry@cs.adelaide.edu.au</a>
<b>Dr Katrina Falkner</b>	Email: <a href="mailto:katrina@cs.adelaide.edu.au">katrina@cs.adelaide.edu.au</a>
<b>Dr Nick Falkner</b>	Email: <a href="mailto:jnick@cs.adelaide.edu.au">jnick@cs.adelaide.edu.au</a>
<b>Dr Cruz Izu</b>	Email: <a href="mailto:cruz@cs.adelaide.edu.au">cruz@cs.adelaide.edu.au</a>
<b>Mr Peter Kelly</b>	Email: <a href="mailto:pmk@cs.adelaide.edu.au">pmk@cs.adelaide.edu.au</a>
<b>Mr David Knight</b>	Email: <a href="mailto:davidk@cs.adelaide.edu.au">davidk@cs.adelaide.edu.au</a>
<b>Dr Li Jiang</b>	Email: <a href="mailto:ljiang@cs.adelaide.edu.au">ljiang@cs.adelaide.edu.au</a>
<b>Mr Lim Kwang Hua</b>	Email: <a href="mailto:kwanghualim@yahoo.com">kwanghualim@yahoo.com</a>
<b>Dr Lye</b>	Email: <a href="mailto:kwlye@hotmail.com">kwlye@hotmail.com</a>
<b>Dr David Parrott</b>	Email: <a href="mailto:david.parrott@adelaide.edu.au">david.parrott@adelaide.edu.au</a>
<b>Dr Cheryl Pope</b>	Email: <a href="mailto:cheryl@cs.adelaide.edu.au">cheryl@cs.adelaide.edu.au</a>
<b>Dr Michael Sheng</b>	Email: <a href="mailto:qsheng@cs.adelaide.edu.au">qsheng@cs.adelaide.edu.au</a>
<b>Dr Andrew Wendelborn</b>	Email: <a href="mailto:andrew@cs.adelaide.edu.au">andrew@cs.adelaide.edu.au</a>
<b>Dr Alison Wolff</b>	Email: <a href="mailto:alison.wolff@adelaide.edu.au">alison.wolff@adelaide.edu.au</a>

# NAAEC Contact Information

**Postal Address:** Ngee Ann-Adelaide Education Centre  
97 Tank Road, Level 4, Teochew Building  
Singapore 238066

**Telephone:** +65 6738 2910

**Fax:** +65 6738 3314

**Website:** [www.adelaide.edu.au/sg](http://www.adelaide.edu.au/sg)

**Manager – Ms Lim Mei Mei**

**Email:** [meilim@naaec.com.sg](mailto:meilim@naaec.com.sg)

**Program Executive – Ms Elena Yong**

**Email:** [elenayong@naaec.com.sg](mailto:elenayong@naaec.com.sg)

**Opening hours:**

<b>Admin office, #04-01:</b>	<b>Monday to Friday</b>	<b>9.00 a.m. – 7.00 p.m.</b>
	<b>Saturday</b>	<b>9.00 a.m. – 3.00 p.m.</b>
<b>Student Service Centre, #04-04:</b>	<b>Monday to Thursday</b>	<b>10.00 a.m. – 7.00 p.m.</b>
	<b>Friday</b>	<b>9.00 a.m. – 10.00 p.m.</b>
	<b>Saturday</b>	<b>9.00 a.m. – 8.00 p.m.</b>
	<b>Sunday</b>	<b>9.00 a.m. – 5.00 p.m.</b>

# Introduction

## **NAAEC**

In 1997 the University of Adelaide combined with the Ngee Ann Kongsi - a major education and charitable foundation in Singapore, to establish high quality management education activities at the **Ngee Ann-Adelaide Education Centre (NAAEC)** in Singapore.

## ***School of Computer Science***

The School of Computer Science at University of Adelaide boasts a world class staff with research interests including: parallel processing, distributed high performance computing, computer vision, programming languages, software engineering, persistent systems, computer architecture and numerical analysis. The staff is also extensively involved in professional consultancies for the industry.

These interests and industrial relationships bring a unique authority to the undergraduate and post graduate courses taught for Computer Science awards.

## ***Bachelor of Computer Science***

This is an articulation program which is designed for IT or Engineering Diploma holders from Singapore's polytechnics. It provides an valuable means for a student to upgrade their qualification from a Diploma to a highly respected degree and will open doors for graduates wishing to pursue a career in IT industry.

## ***Graduate Diploma in Computer Science***

This is a graduate conversion program. It prepares graduates with degrees in an area other than Computer Science for a career in the field of Information Technology. Ideal for graduates seeking a career change, the program provides a good foundation in technical computer science knowledge and skills at the same level as that of a degree in Computer Science.

# Student Access to NAAEC Facilities

## **Office Hours**

The NAAEC occupies Level 4 of the Teochew Building at 97 Tank Road, Singapore. All classes and examinations are held in this building. The NAAEC Office is open from 9.00am - 7.00pm from Monday – Friday and 9.00am - 3.00pm on Saturday.

## **Student Service Centre hours**

The Student Service Centre is open from 10.00am - 7.00pm from Monday - Thursday, 9.00am – 10.00pm on Friday, 9.00am – 8.00pm on Saturday and 9am – 5pm on Sunday.

## **Student Facilities**

The Student Lounge is available from 9am – 10pm throughout the year. Access to the meeting rooms and computer lab at other times can be arranged through the Administrative staff (see below). Your cooperation in keeping the student lounge and other areas in a clean and tidy condition will ensure a pleasant working environment for all students.

## **Room Booking**

Rooms can be booked with minimum of 2 students for private group study or class discussion on weekdays and on weekends, including public holidays, until 10.00pm. Students must submit their request to the Administrative staff at +65 6738-2910 or email [studentservice@naaec.com.sg](mailto:studentservice@naaec.com.sg) two working days prior to the day they require a room. Please provide a contact telephone number and email address. For access to computers, students can use the Student Lounge located at Level 4, no booking is required.

## **Use of Computer Lab, Room 04-09 (outside teaching hours)**

Operating hours:

Monday to Sunday (inclusive of public holiday)	9am – 10pm
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### **Please check in at the security counter at Level 1 upon arrival at all times.**

You will have to deposit your Student Card / NRIC / other forms of identification with Security in exchange for an access card to enter the lab during its operating hours. Each student will need to obtain his own access card for entry.

All access cards must be returned to Security after each lab session, within the same day. Please note that a fine of \$20 will be levied for the loss and non-return of each access card on the same day. The fine has to be paid at the admin office on the next working day before the identification pass can be returned.

### **Students should take note that there should be ‘No Eating and Drinking’ in the lab.**

## **Journals and magazines**

Students are welcome to read the journals and magazines located in the Student Lounge. In order that all students and staff may have equal access, journals and magazines are not to be removed. Your cooperation in returning them to their correct place would be appreciated.

### ***Photocopying***

For any personal photocopying, you may use our card-operated photocopier in the Students' Lounge. The photocopying cards are available for sale at the Student Service Centre.

\$5 – 150 copies

### ***Library Membership***

Students may apply for library membership at one of these institutions. They include the National University of Singapore, Nanyang Technological University, Ngee Ann Polytechnic, Nanyang Polytechnic, Singapore Polytechnic and Temasek Polytechnic. NAAEC will reimburse students for personal memberships during their course of study. Students should obtain a letter of recommendation from NAAEC before they approach the library for membership application.

### ***Student name plates***

Name plates for students will be made available in class. Students should display these nameplates in order that the academic staff may acquaint themselves with students.

### ***Car Parking***

Please be informed that there are public car parks along Tank Road, at Fort Canning Hill or nearby UE Square carpark. Students can use these car parks at their own risk and the Management will not be responsible for any loss or damage to your vehicle.

Within the Teochew Building premise, parking is available on first come first served basis, at a flat rate of \$21.40 (incl 7% G.S.T) per school term. Parking is available only on Friday, Saturday and Sunday during the term.

All enquiries concerning the Car Park facilities should be directed to the administrative staff at 6738 2910 or email [alicia@naaec.com.sg](mailto:alicia@naaec.com.sg)

# Ngee Ann-Adelaide Scholarship

NAAEC provides awards of scholarship to selected candidates of the University of Adelaide's **Bachelor of Computer Science program** conducted at the Singapore Campus.

## Eligibility:

- Current Student of the University of Adelaide programs conducted at the Singapore Campus.
- Students should attain Distinction grades and above for at least 2 courses.
- Students who are currently not in receipt of, or seeking any sponsorship, bursary and scholarship from their employers or any other organisations.

## Terms:

- This is a bond-free scholarship.
- Scholarship quantum is half the tuition fees of enrolled program. Scholarship recipient is expected to pay the fees for the first half of the program. Remaining half of the program fees will be met by the scholarship, and recipient will not be required to pay tuition fees for the second half of the program.
- Satisfactory academic performance is expected of the Scholarship recipient. Poor performance in the program may result in withdrawal of the scholarship.
- The duration of the scholarship is for a maximum period of four years with effect from the date a student commences in the program. It is expected that the Scholarship recipient completes the program in a lesser period of time.
- If no suitable candidate can be determined, no award will be made.
- The Panel's decision is final.

## Selection Criteria:

- Academic qualifications and performance.
- Professional career record.
- Financial position.
- Potential to contribute to the Singapore business community or society.

## Selection Period:

- New students enrolled in the 1<sup>st</sup> and 2<sup>nd</sup> term of the academic year will be selected for the awards in October of the same year.
- New students enrolled in the 3<sup>rd</sup> and 4<sup>th</sup> term of the academic year will be selected for the awards in April of the following year.

# Course Administration

## ***Change of Personal Information***

During your course of study, should you have any change of personal details, you are to update the details via Access Adelaide AND notify NAAEC office regarding the change(s). Personal Details includes your mailing address, email, mobile and home number, change of name, etc.

## ***Administration***

Enrolment advice, such as choice of courses and sequence of enrolment is provided by the Program Executive. If your questions concern an academic aspect of a particular course for which you are enrolled, you should first consult the lecturer concerned.

Questions of a general administrative nature and concerning tuition fee payments should also be addressed to the Program Executive.

If students have particular issues relating to their studies, there is a number of staff who is able to assist them. The correct procedure to follow if you are having problems relating to a particular course is to email or phone the Lecturer in charge of the course. If that person is unable to resolve the issue, the Head of School is available to deal with concerns.

## ***Planning and organising your studies***

It is important that you plan and organise your study program carefully. Should you have any concern, you should contact Ms Elena Yong at NAAEC.

Phone: 6738 2910 or e-mail: [elenayong@naaec.com.sg](mailto:elenayong@naaec.com.sg)

In planning your enrolment, students should consult the Specific Course Rules that govern the University of Adelaide's BCS or GD Program. (Specific Course Rules must be read in conjunction with the Specific Program Rules). The General Course Rules are contained in the University Calendar and up to date copies may be accessed via the University of Adelaide's website:

<http://www.adelaide.edu.au/calendar/pg/eng> for Graduate Diploma in Computer Science

<http://www.adelaide.edu.au/calendar/ug/eng> for Bachelor of Computer Science

It is extremely **IMPORTANT** that you visit the online handbook created for NAAEC students at <https://cs.adelaide.edu.au/for/students/naecheandbook> to study the details.

## **USEFUL WEBSITES:**

The University of Adelaide

[www.adelaide.edu.au](http://www.adelaide.edu.au)

NAAEC

[www.adelaide.edu.au/sg](http://www.adelaide.edu.au/sg)

Faculty of Engineering, Computer and Mathematical Sciences

[www.ecms.adelaide.edu.au](http://www.ecms.adelaide.edu.au)

School of Computer Science

[www.cs.adelaide.edu.au](http://www.cs.adelaide.edu.au)

### ***How many courses to enrol in***

The School does not make a rigid distinction between "full-time" and "part-time" students and allows students to determine their own study load. Students who work during the day usually undertake one or two courses per term.

### ***Class attendance requirements***

Attendance at class is critical in the educational experience of the Adelaide CS program. Students who miss more than 20% of the intensive classes for a course will be expected to give reasons for their continued enrolment in the course. Approval for absence must be sought in writing and obtained from the lecturer, and to keep the Program executive in the loop. Acceptable reasons may include travel commitments required by the student's employer.

### ***Class size policy***

Generally class sizes will range from a minimum of 15 to a maximum of 35. However in some circumstances it may be necessary to go above these limits (e.g. because of staff constraints) or below (e.g. to ensure a viable study program for a particular intake).

The only exception is the course Software Engineering and Project which can only accommodate much smaller classes.

When all available places have been taken in a course, further enrolment in the course will be suspended. This is to allow the Program Executive to manage a manual waitlist of students waiting to enrol. Waiting students will be manually enrolled as places become available.

### ***NAAEC fees policy***

The CS program is one which full fees are charged. The tuition fee for the program is payable on a per course basis. All prices are inclusive of 7% G.S.T.

NAAEC reserves the right to change the course fee, without prior notice.

Tuition fees for the following term must be paid at least two weeks before the commencement of the term. Students will receive their course materials in the week prior to the start of teaching, provided that their fees have been paid.

Any students who have not settled financial obligations with NAAEC will have their enrolment cancelled.

If a student withdraws from a course after collecting their course materials and before the first class, they will forfeit the \$380 non-refundable component. If a student withdraws after the first day of the course, they will be charged the full course fee.

**See Pg 4 for the important dates relating to amendments to enrolment.**

### ***Students who are subsidised by their employer***

Students whose fees are subsidised by their employer must observe the above rules also. These students are required to pay their tuition fees at the commencement of each term, and seek reimbursement from their employer upon receipt of results. The NAAEC will be pleased to provide a letter of results on request. Please note that one week's notice is required for such letters.

### ***Interruption to studies***

Students are required to submit a 'Leave of Absence' form if they wish to interrupt their studies involving at least one term in a calendar year. Please inform the Program Executive about your intention and approval for any proposed interruption needs to be sought in advance.

Where the interruption involves more than four terms, a formal letter should be submitted and attention to the Program Executive, Singapore stating the dates for which interruption of studies is requested.

Deferment may not be granted for participants intending to undertake tertiary studies elsewhere. Leave from absence from your studies can be sought in the event of health, financial and personal difficulties. It is possible to be granted up to 12 months leave if a participant has good reason to be absent from studies, and if academic performance is of a standard sufficient to warrant a place in the program being reserved.

Leave is granted on the condition that participants undertake to inform the Faculty Office of their intentions to resume their program, one month before the end of the period of leave. Failure to do this is interpreted as termination of their program.

# Graduation Issues

## ***Process for Graduation – your responsibilities***

To be eligible to graduate, you must have fulfilled all the academic requirements specified in the General and Specific Course Rules related to your award.

If you would like to have your eligibility certified, you can request a degree check. You may wish to submit your degree check form at <http://www.ecms.adelaide.edu.au/students/>

To graduate, you need to submit an application to graduate ONLINE via the graduations website: [www.adelaide.edu.au/student/graduations/](http://www.adelaide.edu.au/student/graduations/)

You will need to check that all your personal details are correct; ensuring that your name appears in the proper order and that you specify which degree you are to be awarded with.

Confirmation of your application and eligibility will be retained ONLINE via access.adelaide.edu.au Eligibility will not be confirmed until after the closing date for applications.

Details regarding the hiring of gowns and additional tickets can be found on Graduations website.

There are two to three graduation ceremonies held each year, in Adelaide and its offshore campus.

In order to graduate, you must have completed your studies and have all your results recorded on your official academic transcript, and **lodged the ONLINE application to graduate.**

The entire graduation process is managed by the Graduations Office at the University of Adelaide. Any questions concerning graduation can be directed to them at [graduations@adelaide.edu.au](mailto:graduations@adelaide.edu.au)

## ***Obtaining an official academic transcript***

Students can apply for their official academic transcript by completing an application form from [www.adelaide.edu.au/student/current/student\\_services/transcript.html](http://www.adelaide.edu.au/student/current/student_services/transcript.html)

The charges for transcripts are as follows:

One transcript            A\$10.00

Four transcripts        A\$20.00

Additional copies

- produced simultaneously    A\$ 2.00

- produced at a later date      A\$20.00

Once the application has been successful, it will be posted to your home address.

Your transcript will contain a complete record of all academic study undertaken at the University of Adelaide. Please note that even though you have completed all your subjects, your academic transcript will not record that you have been conferred with your degree until after your graduation ceremony.

## ***Alumni Membership***

We warmly welcome your continuing connection with the University of Adelaide. To become a member of the alumni, please contact:

Mr Chan Veng Seng, President  
Adelaide University Alumni Association (Singapore)  
c/o Ngee Ann – Adelaide Education Centre  
97 Tank Road, Level 4, Teochew Building, Singapore 238066  
Phone: +65 67382910  
Fax: +65 6738 3314  
Email: [auaas@yahoo.com.sg](mailto:auaas@yahoo.com.sg)

For more information, please review the alumni pages of the University of Adelaide website:  
<http://www.adelaide.edu.au/sg/alumni/>

# Access to University of Adelaide Electronic Resources

## ***University of Adelaide Online Access***

Please find enclosed some guidelines to assist you in accessing information on University of Adelaide website at [www.adelaide.edu.au](http://www.adelaide.edu.au). This includes library resource access and student information.

## ***Username and Passwords***

Each student will have their own unique student ID and password allocated.

### ***A) Information on Student's Account***

The username for University of Adelaide resources is the student ID and must be prefixed by the letter 'a' (eg. a1234567).

All students have been allocated a password. If you are a new student, your password appears in the Welcome letter issued by the University, which will be distributed.

You can use this password to **access your student email, myUni, Access Adelaide and Computer Science course websites.**

If, for whatever reason, you have forgotten your password, then you will need to contact the Student Centre in Australia. You will have to complete the 'Request to Reset a Password' form and attach a photocopy of some form of photographic identification (student card / NRIC) and fax it to the Student Centre at +61 8 8303 4401.

The password will be reset and faxed or mailed to your home address, depending on your option. The Student Centre does not give out passwords over the telephone or via email for security reasons.

A copy of the Request to Reset a Password form can be obtained from the website:

<http://www.adelaide.edu.au/its/helpdesk/password/>

The Student Centre can be reached via telephone: +61 8 8303 5208 or by emailing them at [student.centre@adelaide.edu.au](mailto:student.centre@adelaide.edu.au)

## ***Online Enrolment via Access Adelaide***

The University has an Online Enrolment System through an interface with Access Adelaide. You will now have the ability to enrol and amend your enrolments wherever you have Internet access.

It is recommended that you plan your enrolments for the entire year. When planning your enrolments, you will have to keep in mind the pre-requisites of particular courses. Information on pre-requisites can be found on page 25 of this handbook.

Once you have logged on to Access Adelaide by using your username and password, you will be required to complete an Enrolment Checklist. This is a series of 8 steps ranging from checking and entering your address to entering your expected graduation year. All 8 steps must be completed before you will be allowed to enrol.

When enrolling in to a particular class, you will be required to enter a unique Class Number, this can be found on your timetable (available online at [www.adelaide.edu.au/sg](http://www.adelaide.edu.au/sg)). It is vital when

enrolling online to SAVE the class that you have added; if you do not do this you have not been added to the class.

**IMPORTANT:**

When amending your enrolments, it is very important that you are fully aware of the census dates and the related penalties that apply. Census dates can be found on Pg 4 of this handbook or from [http://www.adelaide.edu.au/student/dates/critical\\_dates\\_09/](http://www.adelaide.edu.au/student/dates/critical_dates_09/)

**Access to Results**

If you require a copy of your unofficial transcript, you can access this information online.

[www.access.adelaide.edu.au](http://www.access.adelaide.edu.au)

- Enter your Username and Password
- Select the link Academic Results
- You can then view and print your unofficial transcript, and check any upcoming enrolment details.

**B) Information on CS server**

The username and password to access this Computer Science server is the same as that of the Access Adelaide

In general, you can visit this website at <https://www.cs.adelaide.edu.au/> for learning resources.

**C) Information on NAAEC Lab**

The username to log on is the student ID and is prefixed by the letter 'a' (eg. a1234567).

**By default, the password is the same as your student ID.** This is needed when you log on to the pc terminal in the computer lab (Room 04-09) for your practical sessions.

Steps to change your default password:-

(Please note that this does not apply to students who have forgotten their passwords).

- Login
- In the terminal window, from command line (naaec →), type the Unix command “passwd” without the double quotes. Press the enter key.
- You will be asked to type your default password. Type your password, which does not appear on the terminal screen. Press the enter key.
- You will be asked to type your new password. Type, and enter.  
You will be prompted to type your new password again.

**If you have forgotten your password to the lab, please contact your Program Executive at 6738 2910 or email to: [elenayong@naaec.com.sg](mailto:elenayong@naaec.com.sg)**

## **Student Cards**

Students will be issued with student cards when the submission of their photos has been made and when their enrolment have been processed. The card will display your personalised student ID number and this ID should be taken note for future correspondence with the University.

This card is needed when you need to apply for any services or resources within the Singapore campus and also during the exam.

If you lose or misplace your student card, Card Services charges AUST\$20 to replace your card.

## **Communication with the University and NAAEC**

Most information from the School of Computer Science and NAAEC will be sent via e-mail. It is essential that you have a current e-mail address. It is **IMPORTANT** that students update their current address, contact number and e-mail address with the University and NAAEC at all times. This and other personal information will be kept strictly confidential.

All students will have their own Adelaide student email address. The University (which include academic lecturers and administrative staff) will send notices to all students at their student account address. All information regarding student email accounts is contained on the following website, including information on Dial-up access from home:

<http://webmail.adelaide.edu.au/>

You will need to set a forward FROM your STUDENT account TO your preferred email account.

Once you have logged in with your username and password, please do the following:

1. Click “Current Student” link
2. Click “Student Email” link
3. Log in using your Student ID and password
4. Click the “Accounts Manager” icon on the top toolbar
5. Click the “Forward” option link on the left hand side
6. Choose “set/install a forward to:” enter the email address you would like your student email address to be forwarded to
7. Remove the tick in the “Keep a copy in your mailbox” otherwise a copy will stay in your inbox, eventually filling it up.
8. Enter your password and click “submit”
9. Close the browser window

Mail will now not stay in your University student mail box, but will be forwarded to the address you set.

**If you have any questions please contact the ITS Helpdesk on + 61 8 8303 3000 or email to: helpdesk@adelaide.edu.au**

# Bachelor of Computer Science

To fulfil the requirements of obtaining a Bachelor of Computer Science, students are required to complete and pass the number of units as indicated in the Letter of Offer.

A typical program of study to fulfil the requirements of the Bachelor of Computer Science is as follows:

<b>Core courses - compulsory</b>	<b>Units</b>	<b>Subject Area</b>
Computer Science Concepts (exempted for some)	3 units	Comp Sci
Data Structure and Algorithms	3 units	Comp Sci
<b>Core courses (Advanced) - compulsory</b>		
Computer Systems	3 units	Comp Sci
Mathematics for Information Technology I	3 units	Maths
<b>Level 3 Core course - compulsory</b>		
Software Engineering & Project	3 units	Comp Sci
<b>Level 3 courses (Select any 5)</b>		
Advanced Programming Paradigms	3 units	Comp Sci
Computer Architecture	3 units	Comp Sci
Computing Networks and Applications	3 units	Comp Sci
Distributed Systems	3 units	Comp Sci
Event Driven Computing	3 units	Comp Sci
Operating Systems	3 units	Comp Sci
Programming Techniques	3 units	Comp Sci

The University reserves the right to determine the courses offered as the courses are continually reviewed to determine the relevance to industry.

Note:

The availability of all courses is conditional upon the availability of staff and facilities.

# Graduate Diploma in Computer Science

To fulfil the requirements of obtaining a Graduate Diploma in Computer Science, students are required to complete and pass the **24 units** of study as indicated in the Letter of Offer.

A typical program of study to fulfil the requirements of the Graduate Diploma in Computer Science is as follows:

<b>Core courses - compulsory</b>	<b>Units</b>	<b>Subject Area</b>
Computer Science Concepts	3 units	Comp Sci
Data Structure and Algorithms	3 units	Comp Sci
<b>Core courses (Advanced) - compulsory</b>		
Computer Systems	3 units	Comp Sci
<b>Level 3 Core course - compulsory</b>		
Software Engineering & Project	3 units	Comp Sci
<b>Level 3 courses (Select any 4)</b>		
Advanced Programming Paradigms	3 units	Comp Sci
Computing Architecture	3 units	Comp Sci
Computer Networks and Applications	3 units	Comp Sci
Distributed Systems	3 units	Comp Sci
Event Driven Computing	3 units	Comp Sci
Operating Systems	3 units	Comp Sci
Programming Techniques	3 units	Comp Sci

The University reserves the right to determine the courses offered as the courses are continually reviewed to determine the relevance to industry.

Note:

The availability of all courses is conditional upon the availability of staff and facilities.

# Course Information

## ***Program Duration and Delivery***

The lectures will be held in a series of intensive sessions. The intensive lecture sessions are presented by the teaching faculty from the University of Adelaide and industry experts. All assignments and examinations are set by lecturing staff from the University of Adelaide and all course results are reviewed by a School of Computer Science examiners meeting prior to publication. The lecture series generally provide for 32 contact hours held over two visits by staff and require students to invest some of their weekend time. The sessions are designed to enable the lecturer to present the core material and interact with the students. These sessions may also involve case studies, exercises and discussion under the direct supervision of the lecturer in charge of the course.

A typical intensive teaching timing is as follows:

Fridays	7 pm – 10 pm
Saturdays	1 pm – 8 pm
Sundays	9 am – 5 pm

## ***Term System***

The School operates its programs at the NAAEC on a term system. Terms are recorded as follows by Enrolments Office (which has the responsibility for the central recording of all student information):

- Term 1
- Term 2
- Term 3
- Term 4

Please note that all students must use this method of designating terms when they enrol, re-enrol, or make an amendment to enrolment.

A typical timetable for the Teaching Schedule would be as follows:

Week 1	Pre-course reading
Week 2	Intensive teaching block 1
Week 3 – 5	Directed study, discussion, assignment preparation and submission
Week 6	Intensive teaching block 2
Week 7 – 10	Assignment preparation and submission, further directed study, preparation for exam.
Week 11	Examination and / or final assignment submission

## ***Examinations***

Examinations are held for all courses. The examinations are identified in the timetable by the abbreviation 'E'. Examinations will be held on either Saturdays or Sundays.

## **Academic Performance Assessment System**

The University of Adelaide uses the following grading system:

<b>Grade</b>	<b>Notation</b>	<b>Notation %</b>
High Distinction	HD	85 - 100
Distinction	D	75 - 84
Credit	C	65 - 74
Pass	P	50 - 64
Conceded Pass	CP	45 - 49
Fail	F	0 - 44

For every course taught, the assessment is made up of a combination of assignments / projects and examination. The academic staff will provide the students the assessment information during the classes and on the course website.

Your final grade will be checked for approval by the School of Computer Science before being published on your Access Adelaide account (<https://access.adelaide.edu.au>).

The Program Executive will send an email notification informing students once results are released.

### **Note:-**

Please note that every assignment that is to be assessed has to be submitted. Failure to do so will result in an 'IF' (Incomplete Fail) grade.

### **IMPORTANT rules:-**

#### **Graduate Diploma in Computer Science**

Students are not allowed to have any Conceded Pass in their program.

They are required to achieve the minimum of a Pass grade (50% and above) for all courses.

#### **Bachelor of Computer Science**

Students are required to achieve the minimum of a Pass grade (50% and above) for these courses:-

- Computer Science Concepts
- Data Structure and Algorithms
- Computer Systems
- Mathematics for Information Technology I
- Software Engineering and Project.

Only 1 Conceded Pass is allowed for any of the remaining Level 3 elective courses.

## **Supplementary Examination Policy**

### **Supplementary Application Procedure**

The following describes the implementation of The University of Adelaide's supplementary examination procedures for NAAEC.

### **Effective Date**

These procedures take effect from Term 1, 2009.

### **Related Documents**

1. *Examinations Policy*: <http://www.adelaide.edu.au/policies/465/>
2. *Supplementary Examination Procedures*: <http://www.adelaide.edu.au/student/current/exams/>
3. *Supplementary Examination Application Form*:  
[http://www.adelaide.edu.au/student/exams/pdfs/supp\\_applic.pdf](http://www.adelaide.edu.au/student/exams/pdfs/supp_applic.pdf)

### **Overview**

Students are entitled to apply for medical or compassionate supplementaries if they feel that their preparation for, or performance at, an exam has been impaired by a medical condition or other significant event. Students must apply for medical or compassionate supplementary examination, these are not granted automatically. This differs from Academic Supplementary examinations, which are offered automatically if the student has fallen into the appropriate marks range.

### **Types of Supplementary**

Students may apply for the following supplementary examinations, reproduced from the Supplementary Examination Application Form:

1. **Medical**: Where an illness or injury prevents a student attending an examination or significantly impairs his or her preparation for or performance in an examination.
2. **Compassionate**: Where exceptional personal circumstances prevent a student attending an examination or significantly impair his or her preparation for or performance in an examination.
3. **Combined Medical/Compassionate**: A combination of the above circumstances.
4. **Last course**: Where one final full-year course or one final semester course that could complete the program has been failed.

### **Timings**

Applications for supplementary examinations on medical or compassionate grounds must be lodged within given timelines. Students must not wait until they have received their marks to apply for supplementary examination – such late applications will automatically be rejected. Last course applications may be made after marks have been made available and should be made within 5 working days of the publication of final results for a course.

All application times are based on the delivery of the application form to NAAEC Administrative Office, not their date of delivery to Faculty of ECMS, Adelaide.

Where a significant medical event or exceptional personal circumstance affects a student during the term, they must apply for the supplementary within 7 working days of the event.

Where a student believes that their performance was impaired on the day of the primary examination, they must apply for the supplementary examination, with all supporting documentation, within 5 working days.

## **Forms**

Students must apply using the form found at

[http://www.adelaide.edu.au/student/exams/pdfs/supp\\_applic.pdf](http://www.adelaide.edu.au/student/exams/pdfs/supp_applic.pdf)

and must enclose all relevant documentation. A medical certificate by itself is not acceptable, your doctor must complete the section of the form dealing with medical supplementaries, including the section on degree of impairment.

When completed, the forms and associated documents must be lodged with the NAAEC administrative office within the timings outlined above. If your documentation is incomplete, the office will contact you to complete the paperwork before your application is sent to the Faculty in Adelaide.

## **Academic supplementary examination**

Students who are granted to do the **Academic supplementary examination** can obtain up to a maximum mark of 50 Pass.

## **Medical / Compassionate supplementary examination**

There is no restriction on the marks achievable for a **medical / compassionate supp**; which is granted subject to the Faculty's approval. Application should be made within 5 days of the date of the exam.

A candidate who has failed a course twice may not re-enrol in that course except by special permission from the Faculty.

## ***Plagiarism and Collusion***

Plagiarism, collusion and related forms of cheating are treated as very serious offences by the University of Adelaide. The full University policy, including how suspected cases of plagiarism and collusion may be addressed, is available on the University's website:

<http://www.adelaide.edu.au/policies/?230>

Briefly, plagiarism and collusion are defined as follows:

**Plagiarism:** using another person's ideas, designs, words or works without appropriate acknowledgement.

**Collusion:** another person assisting in the production of an assessment submission without the express requirement, or consent or knowledge of the assessor.

## **Consequences of Plagiarism and Collusion**

The penalties associated with plagiarism and collusion are designed to impose sanctions on offenders that reflect the seriousness of the University's commitment to academic integrity. Penalties may include: the requirement to revise and resubmit assessment work, receiving a result of zero for the assessment work, failing the course, expulsion and/or receiving a financial penalty.

# Pre-requisite List

<b>Core courses</b>	<b>Pre-Requisite</b>
Computer Science Concepts	None
Data Structure and Algorithms	Computer Science Concepts
<b>Core courses (Advanced)</b>	
Computer Systems	Computer Science Concepts and Data Structure and Algorithms
Mathematics for Information Technology I	Computer Science Concepts and Data Structure and Algorithms
<b>Level 3 Core course</b>	
Software Engineering and Project	Data Structure and Algorithms and Computer Systems (recommended to be done as a graduating module)
<b>Level 3 courses (Electives)</b>	
Advanced Programming Paradigms	Data Structure and Algorithms and Computer Systems
Computer Architecture	Data Structure and Algorithms and Computer Systems
Computer Networks and Applications	Data Structure and Algorithms and Computer Systems
Distributed Systems	Data Structure and Algorithms and Computer Systems
Event Driven Computing	Data Structure and Algorithms and Computer Systems
Operating Systems	Data Structure and Algorithms and Computer Systems
Programming Techniques	Data Structure and Algorithms and Computer Systems

# Course Description

Details can be viewed from <http://www.cs.adelaide.edu.au/courses/2009/>

## **Core Courses**

### **Computer Science Concepts**

Pre-requisite: None

Programming in Java: variables, control structures, methods, classes, input/output; object orientation, interfaces, inheritance; introduction to graphical user interfaces.  
Introduction to computer systems, system software and basic Unix.

Assessment: 2-hour exam, assignments.

### **Data Structures and Algorithms**

Prerequisite: Computer Science Concepts

Program development techniques including basic ideas of correctness; representation of lists, stacks, queues, sets, trees and hash tables. Notions of complexity and analysis; notion of abstract data type; sets and sequences as examples; searching and information retrieval illustrated with a 'table' abstract data type; various representations of a 'table' abstract data type; recursion.

Assessment: 2-hour exam, assignments.

## **Core Courses (Advanced)**

### **Computer Systems**

Pre-requisite: Computer Science Concepts, Data Structures and Algorithms

Information storage representation, Memory organisation and hierarchy, Processor fundamentals, assembler programming, assembler operation, subroutine calling mechanisms, linking/loading, input-output and device controllers requirements for supporting an operating and device drivers.

Assessment: 2-hour exam, assignments.

### **Mathematics for Information Technology I**

Pre-requisite: Computer Science Concepts, Data Structures and Algorithms

This course provides an introduction to a number of areas of discrete mathematics with wide applicability. Areas of application include: computer logic, analysis of algorithms, telecommunications, gambling and public key cryptography. It includes topics in sets, logic, graphs, difference equations, probability, counting and information security and encryption.

Assessment: Exam, assignments.

## **Level 3 Core**

### **Software Engineering and Project**

Prerequisite: Data Structures and Algorithms, Computer Systems  
(recommended to be done as a graduating module)

This course in software engineering provides an introduction to the production of high quality software solutions to large tasks.

Among the topics covered in this course are the following: models of the software life-cycle, requirements analysis and specification, program design techniques and paradigms, software specification techniques, configuration management and version control, quality assurance, integration and testing, project management, risk analysis, case study of ethical considerations in Software Engineering.

Assessment: 2-hour exam, major group project.

### **Level 3 Electives**

#### **Advanced Programming Paradigms**

Prerequisite: Data Structure and Algorithms, Computer Systems

A selection of topics from the following:

Fundamental models of computation, illustrated by the lambda calculus.

Different approaches to programming: functional and logic paradigms. Fundamental concepts of programming languages, including abstraction, binding, parameter passing, scope, control abstractions.

Programming models expressed via Scheme: substitution model; map/reduce programming; environment model; object oriented model; a compositional programming model.

Introduction to parallel computing: data parallelism, Java threads, and relationship to distributed computing.

Examples in application: map/reduce programming in Google; flow-oriented programming for composition of web-services. Ontologies in the semantic web.

Assessment: 2-hour exam, assignments.

#### **Computer Architecture**

Prerequisite: Data Structures and Algorithms, Computer Systems

Fundamentals of computer design; quantifying cost and performance; instruction set architecture; program behaviour and measurement of instruction set use; processor datapaths and control; pipelining, handling pipeline hazards; memory hierarchies and performance; I/O devices, controllers and drivers; I/O and system performance.

Assessment: 2-hour exam, assignments.

#### **Computer Networks and Applications**

Prerequisite: Data Structure and Algorithms, Computer Systems

Introduction to networks and digital communications with a focus on Internet protocols: Network layer model, Internet application architectures (client/server, peer-to-peer) and protocols (HTTP-web, SMTP-mail, etc), Transport protocols: UDP, TCP (reliable transport, congestion and flow control), IP (routing, addressing), Data Link layer operation (Ethernet, 802.11, PPP), selected current topics such as: security, multimedia protocols, Quality of Service, mobility, wireless networking, emerging protocols (IPv6).

Assessment: 2-hour exam, assignments.

## ***Distributed Systems***

Prerequisite: Data Structures and Algorithms, Computer Systems

A selection of topics from the following: the challenges faced in constructing client/server software: partial system failures, multiple address spaces, absence of a single clock, latency of communication, heterogeneity, absence of a trusted operating system, system management, binding and naming.

Techniques for meeting these challenges: RPC and middleware, naming and directory services, distributed transaction processing, 'thin' clients, data replication, cryptographic security, mobile code. Introduction to Java RMI.

Assessment: 2-hour exam, assignments.

## ***Event Driven Computing***

Prerequisite: Data Structures and Algorithms, Computer Systems

Event driven paradigm: Finite State Automata, their behavior and implementation. Correspondence with regular expressions. Examples of embedded systems. Introduction to interconnected state machines, Petri Nets, and concurrency. Concepts of state-space and relationship to testing.

Building Graphical User Interfaces: Model-View-Controller paradigm. Introduction to design patterns for managing complexity in large systems. Building GUIs with the Java Swing library. Comparison/contrast with other GUI toolkits. Ease of use and human-computer interaction issues.

Practical projects cover the use of FSAs for control logic and GUI design.

Assessment: 2-hour exam, assignments.

## ***Operating Systems***

Prerequisite: Data Structures and Algorithms, Computer Systems

OS purposes: resource management and the extended virtual computer; historical development.

Processes: critical sections and mutual exclusion, semaphores, monitors, classical problems, deadlock; process scheduling. Input and Output: hardware and software control. Memory management: multi-programming; swapping; virtual memory, paging and symbolic segmentation; File System: operations, implementation, performance.

Protection mechanisms: protection domains, access lists, capability systems, principle of minimum privilege.

Distributed systems: communication, RPC, synchronisation, distributed file systems, authentication.

Assessment: 2-hour exam, assignments.

## ***Programming Techniques***

Prerequisite: Data Structure and Algorithms, Computer Systems

Program development: methods of specification, design, implementations, testing and debugging, case studies. Graphs: construction, traversal, topological sorting, applications. Sorting and searching: internal and external algorithms, correctness and complexity analysis.

Assessment: 2-hour exam, assignments.