

Honeywell



HONEYWELL ENGINEERING SUMMER SCHOOL

6 – 11 DECEMBER 2009

Presented by: Honeywell Limited
Engineers Australia, Sydney Division
Rotary International
University of Technology, Sydney
University of New South Wales (Hosting University)
University of Sydney
University of Western Sydney
University of Wollongong
Macquarie University, Sydney



**ENGINEERS
AUSTRALIA**
Sydney Division

Welcome

The Honeywell Engineering Summer School (HESS) 2009 will run from Sunday, 6 December 2009 to Friday, 11 December 2009. HESS 2009 will bring together 100 students from across NSW and ACT who are about to enter their final year of high school (Year 12) and who are faced with choices which will influence their future careers.

Engineers cultivate creative, enquiring minds, a strong interest in mathematics, science and the environment and want to contribute to improving the quality of life for everyone. Engineers work alone and in teams, in private industry and government service, in their own countries and overseas. Within each engineering specialisation there are many career paths from management to research and teaching, from construction and maintenance to sales and marketing. Engineering is a prestigious profession and is essential for a nation's future development, creating wealth and employment which increases living standards throughout our societies.

Successful applicants will spend 6 days living at Sydney University Village. During HESS 2009, students will attend lectures/demonstrations at the following Universities: University of New South Wales, University of Sydney, University of Technology, Sydney, University of Western Sydney, University of Wollongong and Macquarie University - Sydney.

Through these interactive sessions, HESS will provide students with valuable insights into the many aspects of a wide range of engineering disciplines. Along with attending university lectures, there will be industrial visits where students can see the different engineering disciplines at work.

The Engineering Summer School is proudly sponsored by: **Honeywell**

HESS 2009 will be a great experience full of practical engineering activities, with lots of fun activities as well as evening social programs.

Background Objectives

HESS 2009 is an initiative supported by Honeywell, Engineers Australia - Sydney Division, NSW 'Engineering' Universities and participating Rotary Districts. The Honeywell Engineering Summer School is in its eleventh session and the major aim of the summer school is to give NSW and ACT high school students a better understanding of what engineering is and how it works in every day life.

Students will meet and interact with professional engineers employed by government, private companies, researchers and academics in a wide range of engineering disciplines. They will gain valuable insight into career opportunities available to men and women in engineering. Visits to industry will provide a valuable opportunity to gain first hand experience in the role of Professional Engineers in a wide range of activities, including the management of major projects.

Participants will learn about the role of Professional Engineers in society and different disciplines within engineering, including:

- Aeronautical Engineering:** the design, construction and operation of aircraft, aerospace vehicles and propulsion systems.
- Biomedical Engineering:** the application of engineering methods to find solutions to problems in the area of medicine and other life sciences.
- Chemical Engineering:** the design, development and management of chemical processes in such industries as petrochemical, plastics, oil refining, food processing, industrial chemicals, water treatment and waste treatment.
- Civil Engineering:** the design and construction of roads, bridges, building structures, harbour works, water and sewage treatment facilities, coastal protection, and the implementation of construction and management practices.
- Environmental Engineering:** the assessment of the impact of society's activities on the environment and determination of strategies which safeguard the integrity of the environment.
- Electrical Engineering:** the design, development and management of systems and devices in the fields of communications, computing and electric power.
- Computer Engineering:** the application, design and construction of computer-based systems for information processing, communications or control.
- Mechanical Engineering:** the design, operation and maintenance of machines, manufacturing processes, heating and air conditioning and bulk materials handling.
- Mining Engineering:** the application of engineering principles to underground and above ground mining including materials handling and treatment.
- Mechatronic Engineering:** allows engineers to create products such as robotic lawn mowers and robot floor cleaners. Mechatronic engineers must be familiar with mechanical engineering, computing, electronics.

Rotary International

Rotary Clubs, with their continuing interest in the youth of Australia, provide invaluable assistance in selecting students to participate in HESS 2009. Rotary will be assisted by school principals, teachers and Neighbourhood Engineers in the student selection process. Applications do not have to be made through Rotary.

Program

HESS 2009 will convene on the afternoon of Sunday, 6 December 2009 at Sydney University Village. Students are required to make their own travel arrangements to Sydney. A coach shuttle service will operate during the afternoon to collect country students from the Domestic Airport and the Country Train terminal at Central Station. The school will end on the afternoon of Friday, 11 December 2009.

Hosting University

The Faculty of Engineering at UNSW is the largest in Australia, is ranked the nation's best and in 2009 is celebrating 60 years of sustained excellence in teaching and research. It offers the widest choice of engineering disciplines including combined and concurrent degrees and all programs provide practical and theoretical training supported by small group tutorials, laboratory classes and modern computing facilities. All students initially study the basic sciences, mathematics and engineering fundamentals; specialisation increases progressively through the programs. Students may enrol directly into specific discipline programs or into the flexible first year program and transfer to a specific discipline later. The Faculty has important links with overseas universities for both teaching and research and sees great value in international student exchanges. Its major scholarship program rewards academic excellence in students from all backgrounds. For further information regarding the Faculty and programs offered please visit: www.eng.unsw.edu.au.

Houseparents

A team of houseparents look after the participants for the week. The houseparents are all undergraduates at the University of New South Wales and accompany the students to all their tours, site visits and activities. They are also in residence at the same accommodation as the students.

Accommodation

Participants will be accommodated at Sydney University Village. The Village is located in Newtown and students will be staying in apartment style accommodation in groups of 5 per apartment. Each student has their own lockable room. See www.suv.com.au for further information.

Rules

There will be a STRICT BAN on drugs, alcohol and smoking from all students participating.

Cost

The cost to attend HESS 2009 will be \$595.00 inclusive of GST. If selected to attend, this amount will need to be paid prior to the commencement of the School. This cost covers all meals, accommodation and transport while attending HESS 2009. Travel expenses from home to Sydney and return are the responsibility of the student. Country students unable to obtain transportation home on Friday, 11 December 2009 are welcome to remain overnight at the SUV for an additional cost of \$75 per person.

Closing Date

Applications are accepted on a first come, first served basis. Please register early to avoid disappointment.

Application Form

The application form is attached for your completion. Photocopied forms are acceptable. Forms are also available on the HESS pages of Sydney Division's website: www.engineersaustralia.org.au/sydney. Sections A, B, C & D are to be completed by the applicant. Section E is to be completed by a Rotary Club if applicable. Please note that applications can be made through your local Rotary District or direct to Engineers Australia, Sydney Division. If you have any problems contacting your local Rotary Club, contact Rotary International South Pacific & Philippines Office on 02 9635 3537.

Applications should be sent to Robyn Worthing, Deputy Director, Manager Events.

Engineers Australia, Sydney Division, Level 3, 8 Thomas Street, Chatswood NSW 2067.



Notification

Successful applicants will be notified as soon as practicable after receipt of the application. Applicants are welcome to phone for an update of the progress of their application at any time. The letter of acceptance will request full payment by 9 October 2009. More specific details on activities, clothes to bring etc, will be indicated in later correspondence.

Inquiries

Robyn Worthing, Engineers Australia, Sydney Division

Phone: 02 9410 5612 Fax: 02 9410 0000 E-mail: rworthing@engineersaustralia.org.au

Supported by:

Rotary International

University of Technology, Sydney

University of New South Wales

University of Sydney

University of Western Sydney

University of Wollongong

Macquarie University, Sydney

Sponsored by: **Honeywell**

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ENGINEERS
AUSTRALIA
Sydney Division

Application Form

Applicants must be entering Year 12 in a Government or Non-Government High School in 2010. Sections A, B, C, & D must be completed by the applicant. Section D must also be signed by the applicant's parent/guardian. Leave Section E Blank; it is to be completed by your local Rotary Club if applicable.

Your application can be made through your local Rotary Club and District or direct with Engineers Australia, Sydney Division. If you require information on your District, please contact Rotary International South Pacific & Philippines office on phone (02) 9635 3537.

All applications must have your last school report attached. If your report is not attached your application will be declined

Photocopied forms are acceptable. This form is also available for downloading on the HESS pages of the Sydney Division website: www.engineersaustralia.org.au/sydney

Application forms should be sent to Robyn Worthing. See overleaf for details.

Note: As HESS takes place during the school term, approval to attend must be gained from the student's teacher/school.

Section A

Family Name First Name

Male/Female D. O. B

Address (home)

..... State Postcode

Home Phone E-mail

Name of School

Address of School

Name of Science/ Industrial Arts Teacher (if applicable)

Section B

Write, in about 50 words, about yourself. How might you describe yourself to another?

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Section C

Indicate the areas of study you would prefer to follow at the Honeywell Engineering Summer School (HESS) 2009 by ticking the one or two main areas you are most interested in:

Biomedical Civil Computer Chemical Electrical

Mechanical Environmental Mining Aeronautical Mechatronic

Other.....

Section D

Declaration of participant:

I, the applicant, understand that I will be required to adhere to the instructions of the HESS management and staff during my participation in the program. In particular, I agree to the rules of the HESS management: no smoking, no alcohol, no drugs. I understand that should I fail to keep to these rules, I may be returned home by the first available transport, with any additional costs incurred being payable by my parent/guardian. I agree to the information in Section A & B, with the exception of personal address details, being used in press releases promoting HESS 2009.

Signature of applicant Date: / / 2009

Declaration of parent/guardian:

I, the parent/guardian of the above applicant, approve of the participation of my son/daughter in HESS in Sydney December 2009, and as required, agree to pay \$595 (incl. GST) being the cost of attendance at HESS 2009, plus additional costs which may be incurred. I understand that my son/daughter will be required to adhere to the instructions and rules of the HESS management and staff and that none of the aforementioned parties may be held responsible for accidental injury, sickness, or the consequences thereof during my son's/daughter's participation in the HESS 2009 program. I further authorise the HESS management and staff to consent (where it is impractical to communicate with me) to my son/daughter receiving such medical or surgical treatment as may be deemed necessary and I will meet such cost which may be incurred with this treatment.

Name of parent/guardian (please print)

Relationship

Signature of parent/guardian Date: / / 2009

Business phone

Home phone

Mobile

Section E

To be completed by Rotary Club (if applicable).

Submitted by Rotary Club of

Name (please print)

Signed

Phone

Address

Student will be financially assisted by Rotary to attend HESS 2009 YES NO

Date: / / 2009

If you have any questions in completing the application form, please contact:

Robyn Worthing, Deputy Director, Manager Events.

Engineers Australia, Sydney Division, Level 3, 8 Thomas Street, Chatswood NSW 2067

Phone: 02 9410 5612, Fax: 02 9410 0000, E-mail: rworthing@engineersaustralia.org.au