



ENGINEERS
AUSTRALIA

Engineering your Future

School Student Engagement Programs
for Years 7-12

*Current Activities & Dates for 2022
for your planning purposes*

Events Calendar 2022

New South Wales & ACT Schools:

Engineers Australia with the support of our Industry & University partners, aims to continue to deliver experiential activity opportunities for school students in a combination of face-2-face & online events.

Discover Engineering & Experience it! for Years 7-10 will continue as "hybrid" events with sessions zoomed into classrooms to continue vital student engagement. The difference will be the addition of Engineers in the classroom assisting teachers & students across NSW & ACT when possible.

We are planning an additional week long program for Year 11 - **Winter Engineering School**. **WES22** aims to address demand resulting from disruptions encountered over the past 2 years.

Engineering your Future returns for the 3rd year as a series of small informal chat sessions between school students, University students & Engineers - everything you ever wanted to know about Engineering and what lies ahead!

DATE	EVENT	Register here
22 February	Experience It! for female school students Years 7-10 livestreamed with Engineers in the classroom	Years 7-10
14 March	Discover Engineering livestreamed with Engineers in the classroom	Years 7-10
19-22 April	Autumn School of Engineering 4 day program visiting Universities & Industry projects	Year 12 <i>fully booked</i>
31 May	Discover Engineering livestreamed with Engineers in the classroom	Years 7-10
4-8 July	Winter Engineering School 5 day program visiting Universities & Industry projects	Year 11 <i>Register your interest</i>
9 August	Discover Engineering livestreamed with Engineers in the classroom	Years 7-10
27 Sept.	Experience It! for female school students Years 7-10 on Campus@UTS & livestreamed into classrooms	Years 7-10
11-16 Dec	Engineering Summer School 2022 5 day fully residential Engineering immersion - visit 5 Engineering Universities; and 5 Engineering projects/ organisations.	HSC Year 2023 <i>Register your interest</i>

There will be supervised accommodation & catering packages for students living more than 1.5hr from Sydney CBD who wish to attend **Cochlear Autumn School** or **Winter Engineering School**. **Engineering Summer School** is fully residential, all students stay on campus at Sydney University.

We thank the Office of NSW Chief Scientist & Engineer whose enthusiastic support enables our NSW schools engagement programs to reach thousands of school students every year.



Office of the
Chief Scientist
& Engineer

Engineering is the practical application of Science, Mathematics & Technology for the benefit of the community. Engineers use maths & science to solve world problems – it is the clever ways that engineers use their knowledge that makes them unique.

– UNSW Engineering.



Programs in more detail:

Discover Engineering *(facilitated online activity, zoomed into your classroom)*

Full Day Immersion & Workshop For Years 7, 8, 9 & 10



With the support of Industry partners, the program will continue to be Zoomed into classrooms across NSW & ACT.

The day consists of 3 activities/challenges for school groups to complete.

The activities are facilitated by students from Engineers without Borders, Western Sydney University, Cool Aeronautics, IEEE (Institute of Electrical & Electronic Engineers) Live via Zoom.

- Technical & specific equipment required is provided at no cost to your school

- Where & when possible your students & Teachers will be supported by Engineers in your classroom.

Key Learnings:

- The Engineering Design Process - how Engineers apply "design thinking"
- Use EDP to create your own designs, then build, test, and innovate.
- Use your Maths & Science knowledge + Technical skills to solve set tasks!

Discover Engineering is supported by the Office of NSW Chief Scientist & Engineer WestConnex | Transurban



Experience It! *(facilitated online activity, zoomed into your classroom)*



Full Day Immersion & Workshops for female students from Years 7, 8, 9 & 10

For girls who love to solve problems, are creative, and want to make a difference in the world!

6 university teams collaborating with 6 engineering organisations to facilitate group activities. Led by Engineers Australia's Women in Engineering - we aim to inspire girls to know that they can achieve many, and great things. 3 facilitated workshops allowing students to apply their logic, maths, science & technical skills to solve set tasks. This is what Engineering is all about!

- Technical & specific equipment required is provided at no cost to your school

Universities include: USYD, UNSW, UTS, Macquarie; UoW; WSU; Newcastle

[Video >](#)

The Experience It! program is supported by The Office of NSW Chief Scientist & Engineer WestConnex | Transurban, the Longstaff/Cynloch Family Trust



Autumn School of Engineering



4 Day Program for Year 12 Students

Engineering immersion for 100 x Year 12 school students studying Science, Technology, Engineering Studies and Maths - find out what to do with this knowledge & these skills to make a difference to the community.

Find out more about the great opportunities and scope represented by Engineering.

Enjoy immersive workshops and "behind the scenes" opportunities at University of Sydney, University of NSW, UTS, Western Sydney University, Macquarie University; and where possible Engineering sites including RAAF Richmond, UGL/ Metro Trains Sydney etc

Includes: Career Chats with Young Engineers & Graduates

Students depart each morning from UTS campus, Central Station area.

Accommodation assistance is available on application, for Regional and Remote Students wishing to attend.



Winter Engineering School



Monday 4 - Friday 8 July 2022 - for Year 11 Students

Engineering immersion for 100 x Year 11 school students studying Science, Technology, Engineering Studies and Maths - find out what to do with this knowledge & these skills to make a difference to the community. Find out more about the great opportunities and scope represented by Engineering.

Enjoy immersive workshops and "behind the scenes" opportunities at University of Sydney, University of NSW, UTS, Western Sydney University, Macquarie University ;

Includes: Career Chats with Young Engineers & Graduates

Residential & Non Residential Program – departing each morning from UTS campus, Central Station area. Accommodation assistance is available on application, for Regional and Remote Students wishing to attend.

Register
your Interest

Engineering Summer School 2022



Sunday 11 - Friday 16 December 2022

Fully residential school for students sitting their HSC/IB in 2023.

The Engineering Summer School supported by the Office of NSW Chief Scientist & Engineer, has been running for 23 Years and is Engineers Australia's premier schools program.

100 Students from across NSW gather in Sydney to experience a fast paced and exacting program. They meet Engineering students & Lecturers from 5 Universities, and visit 5 iconic companies - meeting the Engineers working there. They "find their tribe" of like-minded young people who want to make a difference in the world, and the relationships they make during the week endure.

Students are accommodated in Sancta Sophia College on campus at University of Sydney from Sunday 4 through to Friday 9 December.

In 2021 the students enjoyed immersive workshops at University of Sydney, University of NSW, UTS, Macquarie & University of Wollongong; and saw behind the scenes at RAAF Richmond, ANSTO, Western Sydney Airport site; HARS Aviation, and Metro Trains/Sydney Metro (*the program will vary slightly for 2022*)

Includes:

Career Chats with Young Engineers & Graduates/ Official Awards Dinner.

Register
your Interest

Please note: The courses Experience It!, Engineering Summer, Autumn & Winter Schools are recognised by involved universities. Attendance is acknowledged and can contribute to supporting students' application into Engineering degree courses



Engineering your Future 2022

Students Years 10-12



School Students engaging online with Engineering Students & Graduates

Engineering your Future has been a successful series of webinars held in 2020 and 2021 - providing thousands of students with indepth insights into iconic companies, and nation building projects as presented by the Engineers key to their delivery and success.

In 2022 we aim to provide these opportunities in a student led format - with small group chats via Video link.

- Meet and chat with University students studying in many of the key Engineering disciplines to get a better understanding of University life as well as hints on HSC survival!
- There will be numerous opportunities to speak with Graduates and Professional Engineers working in the huge variety of areas which come under the umbrella "Engineering"
- Special events focussing on eg Quantum & other future technologies; Mega Projects; "Which Engineering discipline" & "Which University?"

More information will follow as we re-imagine experiences during 2022 - the 3rd year of restrictions. If you have your own ideas for activity for Years 10-12 please share!

Contact: Caryn Morgan, Engineers Australia e: stemsw@engineersaustralia.org.au

Register
your Interest

Girls Talk evening - June 2022



For school girls from Years 7-12

Come to our 'Girls Talk' evening in Newcastle where you'll hear from female engineers from various specialty areas including some you might never have even heard of! They'll share information on projects they've worked on, give a snapshot of what their day to day engineering life entails, tell you where their career has taken them and what inspired them to choose engineering as a profession.

This presentation is for female students from years 7-12 who are interested in a career in engineering, maths or science or just want to hear what engineering is about. Bring along your parents or your Maths & Science teachers. You'll have the chance to talk to representatives from the University of Newcastle and the Hunter Institute of TAFE about course information and the best subjects to select.

Contact Vincent Guo, STEM Coordinator, Newcastle office via email newc@engineersaustralia.org.au

Engineering Studies Teachers support program



Engineers Australia's Newcastle Division has been supporting teachers across NSW for over 5 years.

Following the Year 11 & Year 12 Syllabus our Engineers offer teachers support by providing the latest Industry updates; innovations; case studies and resource materials.

Teachers also have access to four years of great content that is continuously updated.

Contact Vincent Guo, STEM Coordinator, Newcastle office via email newc@engineersaustralia.org.au

Engineering your Future – In School opportunities

Engineers Australia's support to your school

Please contact **Caryn Morgan** on the details below regarding Engineers Australia's involvement in your Careers Nights or Expos. We are keen to be involved where we can!

Inspiring engineering futures – in the classroom!

It is also possible to source Engineers Australia's members to engage with your students in the classroom!

Engineers Australia Sydney Division has more than 23,000 members – many wishing to be involved in S.T.E.M. activities in schools. They want to support your teachers and inspire your students.

We have regional groups all over NSW who work in Engineering – who would be thrilled to come to talk about their work and work within your area!

Potential for industry assistance with Senior Students' Depth Studies

Career nights & careers fairs

EA Sydney Division is involved in various school cluster careers nights from Sydney Metropolitan area to as far as Coffs Harbour in the North to Gundagai in the Central West, and Mildura in the South.

Activities: Young Engineers from EA Partner companies; activities by our Discover Engineering Team, talks by EA Sydney President and General Manager

Information from You: If your region has an annual Careers Fair, or your school is part of a group of schools (eg: North Shore 5); or you have plans of your own—let us know the dates and we will endeavour to be there!

Engineering Q&A Panels

Available as part of School Careers Fairs & Careers Nights

Also ideal for Parents, Teachers & Careers Advisors.

We invite members of Engineers Australia's Young Engineers and Women in Engineering Societies; our University partners; and leaders from industry to answer questions directly from the audience. Our panellists describe their engineering journeys and illustrate the amazing variety available.

Key Questions:

- What is Engineering? How do you become an Engineer?
- What maths should their children be studying? To Year 10, and in Year 11 & 12?
- What are the study options? TAFE v. Degree
- What support is available to students and to parents & teachers?
- What does the future look like? IoT, digital, systems and of course Quantum

Caryn Morgan

Engineers Australia

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Engineers Australia extends our thanks
and appreciation to the
NSW Office of Chief Scientist & Engineer
WestConnex | Transurban
The Cynloch Family Trust

and

our Universities, Industry Partners, affiliated member
organisations, and the Engineering profession,
for their ongoing support of our
NSW Schools Engagement program.