

NSW Schools Programs Update

June 2021



ENGINEERS
AUSTRALIA

In this update:

- Student Engagement Programs Years 7-10
- Programs focussing on Years 11 & 12
- What has been happening in the Engineering world?

Engagement Programs for Years 7-10

This year we have continued to provide online in-school Engineering immersions for students in Years 7-10

Activity challenges are devised & facilitated by University students, assisted by Young Engineers. These workshops are zoomed into classrooms via live stream - all technical equipment is provided at no charge to your school.

Students are assigned engineering tasks which require them to design, build and test their solutions using Engineering Design Process

(aka Project based Learning & Design Thinking)

Discover Engineering for all students Years 7-10

Do you have 20-40 innovative & inquisitive students?
Do you have a large classroom with access to water, the outdoors, and a large screen with WIFI?

Activities are created and facilitated by University students representing Engineers without Borders, Cool Aeronautics, Western Sydney University.

Students are provided with
Certificates of Achievement

[Register here](#)

Wednesday 18 August

- in-school immersion via Zoom

Thursday 16 September

- onsite immersion at ANSTO *

* ANSTO will facilitate a number of activities; as well as Cool Aeronautics and Western Sydney University

Experience it! for female students Years 7-10

Thursday 28 October *(please note: formerly 9 Nov)*
- In-school immersion via Zoom

As with Discover Engineering, this program will be held online with 12 school groups participating from across NSW/ACT.

This program is for girls who like designing solutions to problems, and want to make a difference to their communities and the world!

Activities are created and facilitated by University students from UNSW, USYD, UTS, Macquarie, Western Sydney, and Engineers without Borders

Students are provided with
Certificates of Achievement

[Register here](#)

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"Engineers use Maths, Science & Technology to solve world problems. It is the clever ways that Engineers use this knowledge that makes them unique." Prof Mark Hoffman, UNSW Dean of Engineering & IT 2015-20

Programs focussing on Years 11 & 12 (& open to all!)

Between July - Dec 2020 in response to the cancellation of all Careers Fairs, and our Autumn & Summer School Programs - EA designed & delivered the Engineering your Future Winter Program - a week long event; and The Future - happening now! investigation series.

This Year: we will be "blending" the two.

Twice monthly commencing in mid/late August - we aim to provide a mix of experiences for students interested in understanding the breadth of the Engineering profession and the opportunities it represents.

Dates: Commencing late August through to December

Program will consist:

- * Pre-recorded site visits of restricted sites across our mega projects & iconic companies;
- * Face to face & online opportunities to speak with the Engineers involved.
- * Informal presentations by Innovators leading Australia's journey into the future.

Students, Advisors & Teachers should register their interest - to receive notifications

Register now

Engineering Summer School - Sun 5 - Fri 10 December - planning is progressing well!
This 5 day residential program is for 100 school students - sitting their HSC or equivalent in 2022.
Registration will open mid August and is open to a maximum of 4 students per school.

So... what has been happening in the Engineering world?

Last week was a very busy one for Engineers Australia's CEO!

On Monday 14 June, Dr Bronwyn Evans has been recognised for her "significant service to Engineering, to Standards and to Medical Technology" - being appointed a Member of the Order of Australia (AM) in the Queens Birthday Honours list.

On Thurs 17 June, she presented at the **Annual Careers Advisors Australia's Industry Update** [click here](#) for Bronwyn Evans' presentation on the future and the role of Engineers in it!

Other news!

- * Australian Engineers are some of the country's highest earners! [click here](#)
- * Melbourne Engineer, Kate Nguyen wants to ensure a fire like London's Grenfell Tower fire - never happens again [click here](#)
- * Dr Veronica Gray - pushing materials to the limit! [click here](#)

You and your students can subscribe for weekly updates! at no charge!

* Subscribe to **Create Digital** for daily/weekly updates into your inbox!

<https://www.createdigital.org.au/subscribe/>

* There is also the amazing Engineering Heroes podcast! another bit of Engineering fabulousness!

<https://engineeringheroes.com.au/>

Contact Us

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Summary of events- NSW Schools

New South Wales:

With COVID19 restrictions in mind - Engineers Australia with the support of our Industry & University partners, aims to continue to deliver online experiential activity opportunities for school students.

Improvements in the current situation will be reflected by the re-introduction of face to face programs as 2021 progresses. We also hope to re-introduce Industry site visits during Summer School. *Of course this will depend on continued improvement.*

DATE	EVENT	School Groups
Evenings during Aug - Dec	Engineering your Future - series of face to face & virtual events Virtual site tours & live chats with Engineers; University engagement opportunities - providing insight into education, the profession & your future in Engineering)	Years 11 -12 <i>but open to all!</i>
18 August	Discover Engineering in-school experiential program via Zoom	Years 7-10
17 September	Discover Engineering at ANSTO Onsite immersion at ANSTO's Lucas Heights Facility - <i>subject to COVID restrictions</i>	Years 7-10
28 October	Experience It! for school girls Years 7-10 in-school experiential program via Zoom	Years 7-10
5-10 December	Engineering Summer School 2021 5 night/5 day fully residential Engineering immersion - visit 5 Engineering Universities; and 5 Engineering projects/organisations.	HSC Year 2022



We thank the **Office of NSW Chief Scientist & Engineer** for their ongoing & enthusiastic support of our NSW schools engagement program.

*"Scientists investigate that which already is,
Engineers create that which has never been.."*

— Albert Einstein



Programs in more detail:

Discover Engineering

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



Discover Engineering Days historically have been hosted by schools across Metropolitan areas and regionally.

Due to COVID19, with the support of University & Industry partners, the program will roll out online through 2021.

The day consists of 4 activities/challenges for school groups to complete.

Students will benefit from guidance provided by Engineering students supported by Graduates & Young Engineers, as well as volunteers from Engineers without Borders, Robogals and Sunswift (to name a few!)

Key Learnings:

- What do Engineers do?
- Examples of Engineering Projects
- How do you become an Engineer?

Discover Engineering is supported by
WestConnex | Transurban

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Experience It!



Full Day Immersion & Workshops for School Girls from Years 7, 8, 9 & 10

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

8 universities collaborating with 8 engineering organisations to deliver group activities. Led by Engineers Australia's NSW Women in Engineering Experience It! aims to inspire girls to know that they can achieve many, and great things. 4 facilitated workshops allowing students to apply their logic, maths, science & technical skills to solve set tasks. This is what Engineering is all about!

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

[2018 Video >](#)

The Experience It! program is supported by WestConnex | Transurban
and the Longstaff/Cynloch Family Trust

WestConnex | Transurban

Engineering your Future - Series



August to December 2021

Online information & experiential sessions for Years 9 to 12

EyF was launched in July 2020 to address the lost engagement opportunities for students including Engineers Australia's schools programs, Careers Expos and University open days.

This year, this program will remain a key opportunity for students to learn more about the profession and the vast scope of opportunities that lie ahead.

The program will feature: virtual visits to key Engineering sites; Q&A time with Young Engineers working on some of Australia's most significant projects; Live Chat sessions with HSC & Uni survival tips from current Engineering students; presentations by key University lecturers about the degrees on offer; competitions & workshops.



Engineering Summer School 2021



Sunday 5 - Friday 10 December 2021

Fully residential school for students sitting their HSC/IB in 2022.

The Engineering Summer School (ESS) has been running for 22 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 International House on campus at University of Sydney from Sunday 5 through to Friday 10 December.

In 2019 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, Bluescope Steel, Cochlear, ANSTO, Thales and Sydney Metro (*the program will vary slightly for 2021*)

Includes:

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

Please note: The courses are recognised by involved universities. Attendance is acknowledged and can contribute to supporting students' application into Engineering degree courses

Inspiring Engineering Futures – In School

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



Inspiring Engineering Futures – In School

Career nights & careers fairs

Including Super Science Saturday as part of Science Week.

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

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