

WOMEN IN ENGINEERING SCHOLARSHIP – INFORMATION FOR APPLICANTS

Rationale

HESA data shows that female students accounted for 57.1% of all students entering higher education in 2018/19, but only made up 19.1% of students entering Engineering and Technology Courses. Female students accounted for 52.1% of students entering courses within the science subject area (HESA 1-9 and A) in 2018/19, so there is good evidence that these students, who already have a proven aptitude in science, either choose subjects other than engineering due to a preconceived perception of engineering courses in general, or because they do not meet the traditional engineering pre-requisites such as having A-level Maths and/or Physics. Female candidates for Maths A-Levels made up 38.5% of total entries in 2019.¹ 22.2% of students starting A Level Physics in 2018 were female.² Only 25.4% of females aged 16-18 would consider a career in engineering compared to 51.9% of males of the same age.³

Furthermore, while women comprised 46.9% of the overall UK workforce in 2016, they only made up 20.5% of those working in engineering sector. This proportion is even lower when considering only those working in core and related engineering roles, at just 12.0%.⁴

TEDI-London's Strategic Plan 2020-2025 sets out our aim to 'help address the global shortage of engineers and provide a diverse engineering workforce which will transform the discipline, we will attract capable students from non-traditional engineering backgrounds'. Our Access and Participation Plan has a target of 50% of our students being female by 2025.

Response

To help address the shortage of women in engineering, TEDI-London is putting in place several actions including:

- Highlighting the social impact of engineers who can solve real-world challenges and making a difference in society on our website and in our promotional materials to challenge the perception of engineering.⁵
- Providing positive examples and stories about of women in engineering in our digital communications so that women can see the impact / success women have already had and are having on the profession.⁶
- Championing non-traditional entry requirements so that attitude, aptitude and ability are not measured by an A-Level in Mathematics or Physics, but through an assessment of a person's capability – thereby removing barriers to female participation in engineering due to educational background.

¹ <https://mathspire.com/the-gender-gap-in-a-level-maths/#:~:text=Over%20the%20last%20decade%2C%20the,total%20entries%20in%2020191>

² <https://www.wes.org.uk/content/wesstatistics>

³ <https://www.engineeringuk.com/research/engineering-uk-report/>

⁴ https://www.engineeringuk.com/media/1576/7444_enguk18_synopsis_standalone_aw.pdf

⁵ US study of prospective students in 2018 found gender differences in motivations with female prospective students more likely to seek roles where they could make a difference: [The Hidden Motivations Of Your Prospective Students | Enrollment Resources](#)

⁶ [Why girls don't do engineering.pdf \(aston.ac.uk\)](#) Ethnographic research suggesting lack of female role models and understanding of what engineering is about means they don't study engineering. [Bridging the gender gap: why do so few girls study Stem subjects? | Psychology | The Guardian](#) Article also calls for more female role models in STEM.

- Our Women in Engineering Scholarships (see below)

Scholarship Proposal

The TEDI-London Women in Engineering Scholarships provide the following package of support as a positive action in helping to address the low participation of women in higher education engineering courses and low participation the engineering workforce after graduation:

1. Scholarship recipients will receive a scholarship grant to the maximum value of £8,600 per year. It will be the applicant's choice as to how the money is used (e.g. to offset the money against their tuition fees or to use it for maintenance costs). The financial aspects of this scholarship aim to offer:
 - An added financial incentive to encourage women to consider engineering as an option for higher education study.
 - Support with any costs that the woman student might consider to be a perceived barrier to entering engineering courses and the engineering workforce.
2. Scholarship recipients will be offered financial support to the minimum value of £1,200 (£400 for each year of their degree) to attend engineering or career events, with this money being used to cover the cost of entry, transport, accommodation, or any other costs incurred. By lifting a financial barrier and encouraging attendance at engineering or careers events, we aim to help address the low participation by women in the engineering workforce.
3. Scholarship recipients will be assigned a 'Women in Engineering' mentor in their second year, to meet with on an informal basis once per term. It is envisaged that this mentor will provide both coaching and careers advice to the scholarship recipient and that they will be established female practitioners within TEDI-London's industry network.

Eligibility

Women and those who self-identify as female who have been made an offer to study at TEDI-London and are assessed as 'home' students for their fee status.

Assessment Criteria

Merit Based

Where scholarships are marked as 'merit based', eligible applicants will be asked to complete either:

A 2-minute Vlog

or

A 300-word Blog

On the question:

'How will the role of engineers in 2040 be different to the role of engineers today?'

or

'What do you feel is the biggest global challenge we are facing today and how will engineers be involved in meeting that challenge?'

Vlogs or Blogs will be marked against the same assessment criteria below. The Scholarships Committee would score submissions.

Scholarship awards will be made on a sliding scale, with the highest-scoring eligible candidate being offered the highest monetary value award available. The second highest-scoring eligible candidate would be offered the second highest monetary value award available etc. Candidates must achieve at least a score of out 8 out of 9.

Skill area					Score	Comments
Score	0	1	2	3	Total	
Independent thinking (Aptitude)	No evidence of independent thinking and research	Some, but little evidence of independent thinking and research	Evidence of independent thinking and research	Clear evidence of significant independent thinking and research		
Engagement & motivation (Attitude)	Not engaged with the topic, showing no motivation or engagement	Minimal engagement with the topic, little evidence of motivation or engagement	Engaged with chosen topic	Highly engaged with their chosen topic		
Vlog or Blog Content (Ability)	Significantly under or over word count or allowed time. Superficial exploration of a single idea within their chosen topic or exploration of ideas outside the scope of chosen topic.	May be significantly under or over word count or allowed time. In-depth exploration of a single idea within their chosen topic	Within 10% of allowed word count or allowed time. In-depth exploration of a single idea within their chosen topic	Within 10% of allowed word count or allowed time. In-depth exploration of multiple ideas within their chosen topic		

To apply for this scholarship, please email admissions@tedi-london.ac.uk.