



## International students studying science, technology, engineering and mathematics in the higher education sector

This snapshot gives an overview of international higher education student enrolments in science, technology, engineering and mathematics (STEM) courses in 2019. In 2019, 46 per cent (442,219) of all international student enrolments were in the higher education sector and 33 per cent of all international higher education enrolments were in STEM courses (145,528).<sup>1</sup> Figure 1 shows that STEM enrolments have grown by an average of 8 per cent per annum since 2002 and since 2014 that average rate has increased to 17 per cent per annum, led by a 27 per cent average annual growth in Information Technology enrolments. In 2019, students from China made up 31 per cent of international STEM enrolments, followed by India (29%) and Nepal (8%).

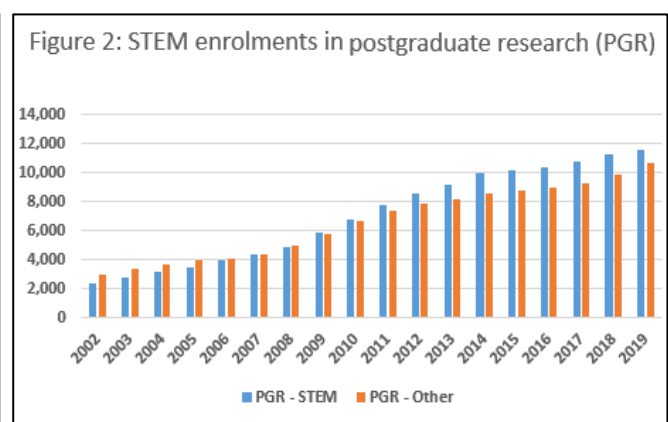
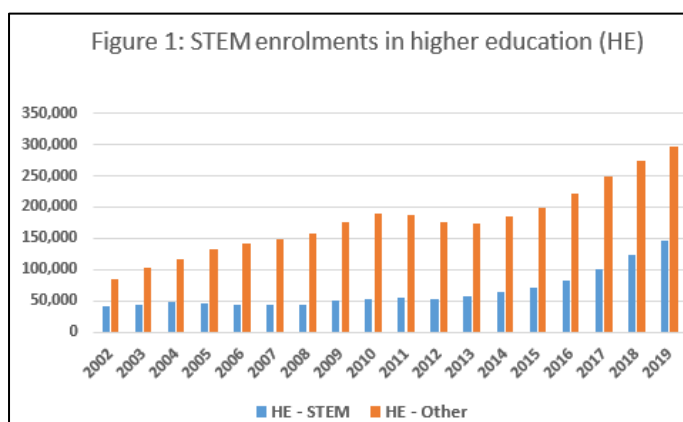


Figure 2 shows that more than half (52%) of international postgraduate research enrolments in 2019 were in STEM-related courses. International postgraduate research enrolments in STEM grew by an annual average growth rate of 10 per cent over the 18 years up to 2019. The number of international postgraduate research enrolments in STEM fields have surpassed those in other fields since 2009.

In 2018, 35 per cent of all postgraduate research students studying in Australian higher education institutions were international students<sup>2</sup>. Even higher proportions were in STEM fields, notably in Engineering and Related Technologies (58%) and Information Technology (55%) (Table 1, far right column).

**Table 1. International student enrolments in Higher Education: STEM Fields by Level of Study**

Broad Field of Education	International students <sup>1</sup>				International student proportion of total students in post-graduate research <sup>2</sup>
	Under-graduate	Post-graduate (Research)	Post-graduate (Other)	Total (Higher Education)	
Engineering and Related Technologies	21,147	5,013	20,552	46,712	58%
Information Technology	27,091	902	43,575	71,568	55%
Agriculture, Environmental and Related Studies	1,198	729	2,206	4,133	46%
Natural and Physical Sciences <sup>3</sup>	13,270	4,734	3,479	21,483	42%
Mathematics related <sup>4</sup>	347	206	1,079	1,632	38%
<b>Total all STEM fields</b>	<b>62,706</b>	<b>11,378</b>	<b>69,812</b>	<b>143,896</b>	<b>49%</b>
All other broad field of education	147,587	10,684	138,420	296,691	23%
<b>Total (Higher Education)</b>	<b>210,640</b>	<b>22,268</b>	<b>209,311</b>	<b>442,219</b>	<b>35%</b>

<sup>1</sup> International student enrolment data, available at: <https://internationaleducation.gov.au/research/international-student-data/pages/default.aspx>

<sup>2</sup> Data sourced from unpublished Higher Education Statistics: *Selected Higher Education Statistics – 2018 full year data*.

<sup>3</sup> Excludes Mathematics related.

<sup>4</sup> A sub-category of 'Natural and Physical Sciences' and comprises Mathematical Sciences, Mathematics and Statistics.