

What did they do?

The field of study of domestic graduates

2008-2016

This report forms part of a series called Learners in tertiary education. Other topics covered by the series are access, pathways, support, participation, retention and qualification completions.

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www.educationcounts.govt.nz

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SUMMARY

THIS REPORT ANALYSES THE FIELD OF STUDY OF DOMESTIC GRADUATES IN THE NEW ZEALAND TERTIARY EDUCATION SYSTEM BETWEEN 2011 AND 2016 FOR BELOW BACHELORS LEVEL AND BETWEEN 2008 AND 2016 FOR BACHELORS LEVEL OR HIGHER.

Our analysis shows that:

- in Level 1 and 2 certificates, there was an increase in the proportion of graduates in the Mixed programme field. Changes in the focus of this level of qualification (to give greater emphasis to foundation-level skills) is likely to have driven a change in content
- in Level 3 to 7 certificates/diplomas, fields such as Society and culture, and Health showed increases in the share of graduates
- at the bachelors or higher level, there was an increase in the proportion of graduates in fields such as Health, Information technology, and Engineering and related technologies
- at the bachelors or higher level, universities had the highest number of graduates in every field of study
- women continued to be more likely to graduate in fields such as Health and Education, while men continued to make up a higher proportion of graduates in areas such as Engineering and related technologies
- Māori and Pasifika continued to have relatively lower proportions of graduate in fields such as Natural and physical sciences and Engineering and related technologies at the bachelors or higher level
- the largest proportion of younger graduates were in fields such as Natural and physical sciences and Tourism

This report analyses the New Zealand Standard Classification of Education (NZSCED) field(s) of study of domestic graduates in the New Zealand tertiary education system. This is the third edition of this report and is a complementary analysis to a report that looked at the field of study of students/learners in the tertiary education system – *What are they doing? The field of study of domestic students/learners 2008-2016*.

In this analysis, we focus on three broad levels of qualification: Level 1 and 2 certificates, Level 3 to 7 certificates/diplomas, and bachelors or higher. For bachelors or higher we look at graduates between 2008 and 2016, while for levels below bachelors (and in total) we look at graduates between 2011 and 2016. This smaller window of analysis is due to limitations in the industry training data. We also include the number of graduates enrolled in tertiary education providers as well as in workplace-based industry training to get an all-of-sector view.

The data for Level 1 and 2 certificates shows a significant increase in the proportion of graduates in the Mixed programme field between 2011 and 2016, although numbers peaked in 2014. This result reflects changes to the composition of qualifications, specifically the introduction of increased literacy and numeracy requirements, as well as changes in provision via the Level 1 and 2 tendering process, and the introduction of Youth Guarantee.

In Level 3 to 7 certificates/diplomas, the fields of study that showed an increase in share of graduates between 2011 and 2016 included Society and culture and Health.

At the bachelors or higher level, there was a trend of increasing shares of graduates in fields such as: Health, Information technology, and Engineering and related technologies. Conversely, the share of graduates in fields such as Society and culture, Management and commerce, and Education declined. However, Society and culture remained the largest field of study at this level. There are signs that the declines in share in Society and culture and Management and commerce may be coming to an end, with data on starting enrolments showing a stabilisation in the share of starters in these fields in recent years.

The profiles of the 12 broad NZSCED fields show a mixed picture. In some broad fields, the share of graduates in the largest fields of study declined over time at all levels of study (Education declined at both the Level 3 to 7 certificate/diploma level and the bachelors or higher level). Others declined at one level while increasing at another (Information technology, which showed growth in share of graduates at the bachelors or higher level and a decline in share in Level 3 to 7 certificates/diplomas).

The focus on selected narrow fields of study at the bachelor's degree or bachelors with honours level shows a mixed picture, with the share of graduates in fields such as Medical studies and Nursing increasing over time, while the share of graduates in Language and literature decreased.

The data shows that provision varied across the sub-sectors by field of study. As would be expected, universities dominated provision at the bachelors or higher level, with an especially high proportion of graduates in Natural and physical sciences (97 percent).

At the non-degree level, industry training organisations (ITOs) had significant proportions of graduates in Agriculture and environmental studies, Engineering and related technologies, and Food, hospitality and personal services. Wānanga also had a significant proportion of graduates in Society and culture. Polytechnics showed high proportions of graduates in Architecture and building, Health and Creative arts.

In terms of demographic characteristics, the data shows that a high proportion of graduates in fields such as Health and Education continued to be women. Men, on the other hand, continued to make up a high proportion of graduates in the various Engineering and related technologies and Information technology fields.

When we analyse the data by ethnic group, we see that Māori and Pasifika tended to have relatively high proportions of graduates in fields such as Society and culture and Management and commerce, with relatively lower proportions in fields such as Natural and physical sciences and Engineering and related technologies.

Looking at the age distribution across narrow fields of study, we see that there were higher proportions of younger graduates in the Natural and physical sciences (especially in narrow fields such as Physics and astronomy). The narrow fields of Tourism and Graphic and design studies also exhibited a relatively high proportion of graduates, the latter at bachelors or higher level in particular.

1 INTRODUCTION

This report uses the New Zealand Standard Classification of Education (NZSCED) to analyse the field(s) of study of domestic graduates from the tertiary education system. This is the third edition of this report and complements a report on the field of study of students/learners enrolled in the tertiary education system – *What are they doing? The field of study of domestic students/learners 2008-2016*. These reports should be read in unison to get an understanding of the progression of domestic student/learners/graduates as they pass through the tertiary education system.

We look at the number of graduates from tertiary education providers and workplace-based training to get an all-of-sector view. Due to limitations on the industry training data before 2011, we focus on trends in the number of people completing qualifications at the non-degree level between 2011 and 2016. For bachelors or higher, we look at trends between 2008 and 2016.

Specifically, we examine trends in fields of study at the broad and narrow NZSCED at three broad levels of qualification: Level 1 and 2 certificates, Level 3 to 7 certificates/diplomas, and bachelors or higher. For bachelors or higher we look at graduates between 2008 and 2016, while for levels below bachelors (and in total) we look at graduates between 2011 and 2016. This smaller window of analysis is due to limitations in the industry training data.

As well as looking at the distribution of graduates across fields of study in 2016, we also look at how the distribution has changed over time to get a sense of the dynamics of change in the tertiary education system.

To derive the field of study of a domestic graduate at tertiary education providers we look at the NZSCED code of the courses they studied in that qualification to derive a richer level of detail about their field of study. Specifically, for each graduate we report the field(s) of study where they had the highest study load.

We do this because some providers offer relatively broad qualifications, which can make it difficult to determine the field of study from the qualification level NZSCED code assigned by tertiary providers. For example, a student who is enrolled in a Bachelor of Science might be specialising in Computer science, but the qualification NZSCED code might report them as being in Natural and physical sciences rather than Information technology.

The method for deriving field(s) of study for graduates is now the same as that used to derive the field(s) of study for student enrolments. This means the data on the field of study of graduates may differ from that published in previous years, although the trends remain similar. More detail on the approach used to derive field of study is provided in a methodology factsheet.¹

The structure of the report is as follows:

- In chapter 2 we examine graduates at the broad field of study level and by broad level of qualification.
- In chapter 3 we present profiles of each of the 12 broad NZSCED fields of study.

¹ See www.educationcounts.govt.nz/publications/tertiary_education/occasional-papers/method-to-determine-the-predominant-fields-of-study-of-students-and-graduates-in-provider-based-tertiary-education.

- In chapter 4 we look at trends in selected narrow fields of study at the bachelor's degree or bachelors with honours level.
- Finally, in chapter 5 we analyse the field of study by selected characteristics, including sub-sector, gender, ethnic group and age group.

In this report, we use the NZSCED classification to determine a graduate's field of study. This has three levels of classification: broad, narrow and detailed. For the purposes of this report we limit the analysis to broad and narrow levels of NZSCED. Table 1 presents the 12 broad NZSCED fields, along with the narrow fields. Among the largest broad fields is Society and culture, which covers disciplines ranging from Law to Sports and recreation. The Mixed field programmes broad field covers areas such as Employment skills and Social skills programmes.²

² See www.educationcounts.govt.nz/data-services/collecting-information/code-sets-and-classifications/new_zealand_standard_classification_of_education_nzsced for more detail.

Table 1

Description of the New Zealand Standard Classification of Education (NZSCED)

Broad field NZSCED	Descriptor	Narrow NZSCED fields
01. Natural and physical sciences	The systematic study or body of knowledge that aims through experiment, observation and deduction to produce reliable explanations of phenomena with reference to the material and physical world. Natural sciences are the earth sciences and the life sciences, which study the earth and all living organisms.	Mathematical sciences, Physics and astronomy, Chemical sciences, Earth sciences, Biological sciences.
02. Information technology	The study of processing and transmitting information by various technologies including computing, telecommunications and microelectronics.	Computer science, Information systems.
03. Engineering and related technologies	The study of the design, composition, manufacture, maintenance and functioning of machines, products, systems and structures. It also includes the measurement and mapping of the earth's surface and its natural and constructed features.	Manufacturing, engineering and technology, Process and resources engineering, Automotive engineering and technology, Mechanical and industrial engineering and technology, Civil engineering, Geomatic engineering, Electrical and electronic engineering and technology, Aerospace engineering and technology, Maritime engineering and technology.
04. Architecture and building	The study of the art, science and techniques involved in designing, constructing, adapting and maintaining public, commercial, industrial and residential structures and landscapes. It involves the study of the planning, art and science of designing and adapting the surrounds of buildings and other external environments.	Architecture and urban environment, Building.
05. Agriculture, environmental and related studies	The study of the theory and practice of growing, gathering, reproducing and caring for plants and animals. It also includes the study of the interaction between people and the environment and the application of scientific knowledge to the environment to protect it from further deterioration.	Agriculture, Horticulture and viticulture, Forestry studies, Fisheries studies, Environmental studies.
06. Health	The study of maintaining and restoring the physical and mental well-being of humans and other animals.	Medical studies, Nursing, Pharmacy, Dental studies, Optical science, Veterinary studies, Public health, Radiography, Rehabilitation therapies, Complementary therapies.
07. Education	The study of the learning process and the theories, methods and techniques of imparting knowledge and skills to others.	Teacher education, Curriculum and education studies.
08. Management and commerce	The study of the theory and practice of planning, directing, organising, motivating and co-ordinating the resources of private and public organisations and institutions. It also includes the merchandising and provision of goods and services and personal development.	Accountancy, Business and management, Sales and marketing, Tourism, Office administration, Banking, finance and related fields.
09. Society and culture	The study of the physical, social and cultural organisation of human society.	Political science and policy studies, Studies in human society, Human welfare studies and services, Behavioural science, Law, Justice and law enforcement, Librarianship, information management and curatorial studies, Language and literature, Philosophy and religious studies, Economics and econometrics, Sport and recreation.
10. Creative arts	The study of creating and performing works of art, music, dance and drama. It includes the study of clothing design and creation and communication through media.	Performing arts, Visual arts and crafts, Graphic and design studies, Communication and media studies.
11. Food, hospitality and personal services	The study of preparing, displaying and serving food and beverages, providing hospitality services, and caring for the hair and body for grooming and beautification.	Food and hospitality, Personal services.
12. Mixed field programmes	Programmes providing multi-field education.	General education programmes, Social skills programmes, Employment skills programmes.

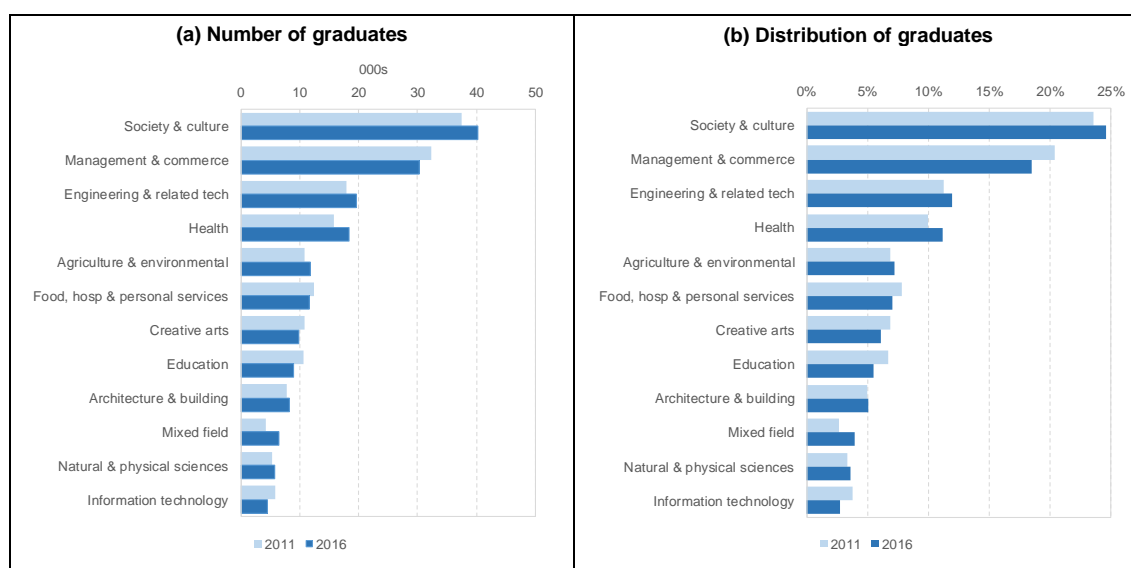
2 BROAD FIELD OF STUDY BY LEVEL OF QUALIFICATION

The number of domestic graduates by broad field of study at all levels of qualifications is shown in Figure 1. In 2016, there were 163,000 graduates, compared with 158,000 in 2011, an increase of 3.4 percent. In terms of field of study, the largest number of domestic graduates in 2016 were in the fields of Society and culture (40,300) and Management and commerce (30,300).

The distribution of graduates across broad fields of study is presented in Figure 1 which shows only a relatively small change between 2011 and 2016. Among fields to show an increase in share of graduates were Health (from 10 percent in 2011 to 11 percent in 2016), Society and culture (from 24 percent to 25 percent), and Mixed field programmes (from 2.7 percent to 3.9 percent).

The fields to show declines in the share of graduates included Management and commerce (down 1.9 percentage points), Education (down 1.2 percentage points), and Information technology (down 1.0 percentage points).

Figure 1
Domestic graduates by field of study in 2011 and 2016 – all levels of qualifications



The distribution of graduates across the fields of study varies by level of study. In the sections that follow, we examine the field of study of domestic graduates at three broad levels of qualification:

- Level 1 and 2 certificates
- Level 3 to 7 certificates and diplomas
- Bachelors or higher.

Level 1 and 2 certificates capture foundation-level qualifications, while Level 3 to 7 certificates/diplomas capture the remainder of non-degree provision, including many technical, trades and vocational qualifications. The bachelors or higher qualifications category is the final category we analyse in this report.³

³ Although we limit our analysis to these three broad levels of qualification, web tables published on the Education Counts website present the data at a more detailed level of qualification breakdown.

Level 1 and 2 certificates

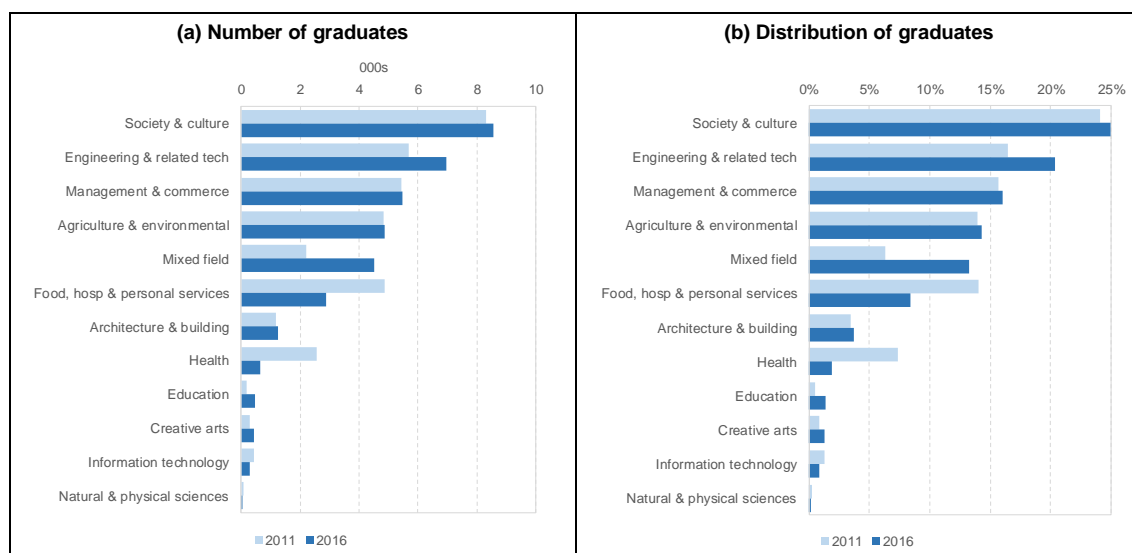
Figure 2 shows data on the broad field of study of graduates with Level 1 and 2 certificates. In 2016, Society and culture had the greatest number of graduates (8,550) at these levels of qualification, followed by Engineering and related technologies (6,975), and Management and commerce (5,485).

These foundation-level qualifications have seen the largest shifts in the distribution of graduates across fields of study. Between 2011 and 2016, the largest increase in share of graduates was in Mixed field programmes, which increased from 6.3 percent in 2011 to 13 percent in 2016. Other fields to increase in share included: Engineering and related technologies (up 3.9 percentage points) and Education (up 0.8 percentage points).

Fields of study which declined in share included: Food, hospitality and personal services (down by 5.7 percentage points between 2011 and 2016) and Health (down by 5.5 percentage points). The decline in the share of graduates who studied Health reflects a decision to cease government funding of lower-level stand-alone occupational health and safety qualifications in industry training. This decision was made as health and safety is a responsibility of employers and is not necessarily skill development. Occupational health and safety at lower levels has now been embedded across a range of industry training qualifications which do not necessarily sit within the Health broad field. The decrease in the share of graduates who studied Food, hospitality, and personal services reflects a shift to higher-level qualifications resulting from the NZQA Targeted Review of Qualifications.

The significant increase in share of graduates in Mixed field programmes was due, in part, to the introduction and expansion of the Youth Guarantee, and also the reallocation of Student Achievement Component equivalent full-time students (EFTS) via the Level 1 and 2 tendering process. Also contributing to this was the deliberate move to refocus Level 1 and 2 on literacy/numeracy and foundation skills.

Figure 2
Domestic graduates by field of study in 2011 and 2016 – Level 1 and 2 certificates



Level 3 to 7 certificates/diplomas

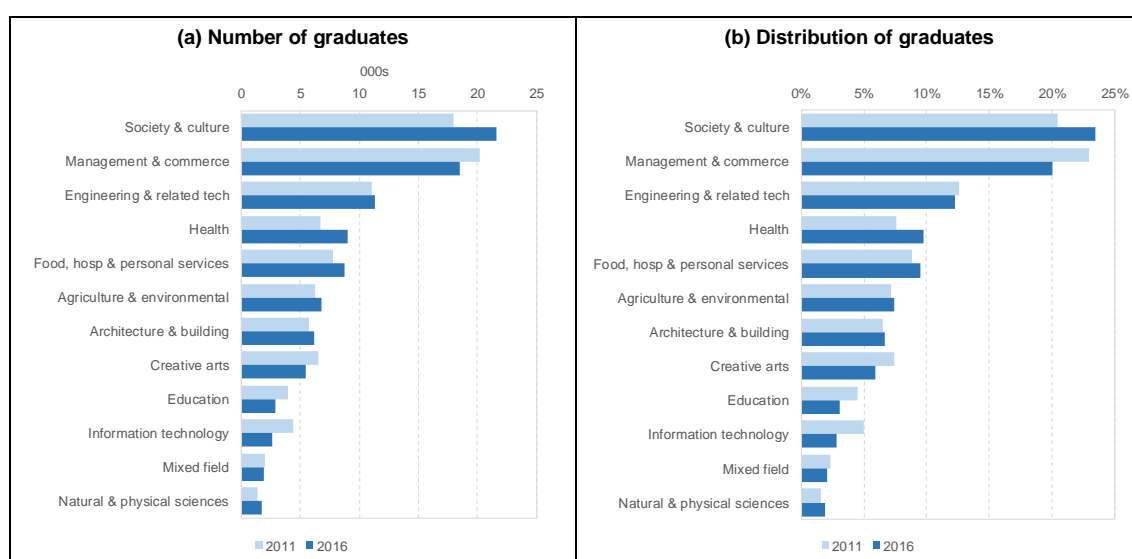
Data on the broad fields of study of graduates with Level 3 to 7 certificates/diplomas is shown in Figure 3. In 2016, the fields of Society and culture (21,700) and Management and commerce (18,500) were the largest fields by some margin.

Between 2011 and 2016, fields which showed increases in share of graduates included Society and culture (up from 20 percent to 23 percent) and Health (up from 7.6 percent to 9.7 percent).

Fields that showed a decrease in the share of graduates at this level included: Management and commerce (down from 23 percent in 2011 to 20 percent in 2016) and Information technology (down from 5.0 percent to 2.8 percent). In Information technology, this reflects a shift in enrolments towards higher-level qualifications.

Figure 3

Domestic graduates by field of study in 2011 and 2016 – Level 3 to 7 certificates/diplomas



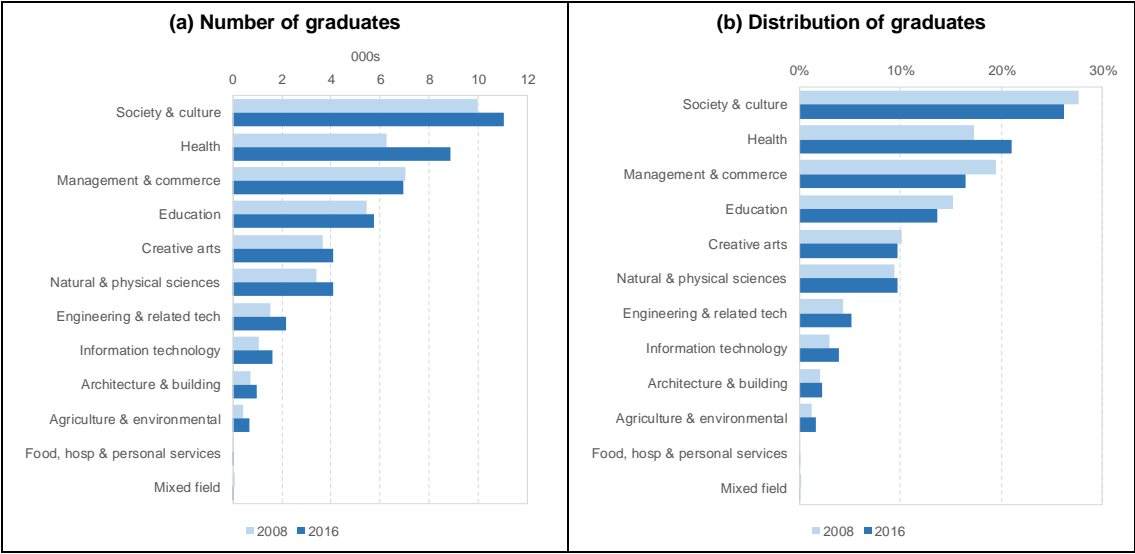
Bachelors or higher

Data on the broad field of study for graduates at the bachelors or higher level is shown in Figure 4. In 2016, the largest field of study was Society and culture (11,000), followed by Health (8,840), and Management and commerce (6,925).

The field of Health had the largest increase in share of graduates between 2008 and 2016 (from 17 percent in 2008 to 21 percent in 2016). There were also increases in shares of graduates in Information technology and Engineering and related technologies (both up by 0.9 percentage points between 2008 and 2016).

Fields which declined in share included: Management and commerce (from 19 percent in 2008 to 16 percent in 2016), Society and culture and Education (both down 1.5 percentage points between 2008 and 2016).

Figure 4
Domestic graduates by field of study in 2008 and 2016 – bachelors or higher



3 FIELD OF STUDY PROFILES

In this section we present statistical profiles of the 12 broad fields of study. For each broad field we:

- show the number of graduates and share of graduates by broad level of qualification. To get a sense of the flow of graduates in a field, we look at the number of graduates over time. For bachelors level or higher, we look at graduates between 2008 and 2016. Due to limitations in the workplace-based training data, for levels below bachelors level (and in total) we look at the number of graduates between 2011 and 2016
- show the percentage point change in share of total graduates at the broad and narrow field between 2011 and 2016 at levels below bachelors degrees and in total, while for bachelors or higher we look at the change between 2008 and 2016
- present key points identifying the main trends in the data.

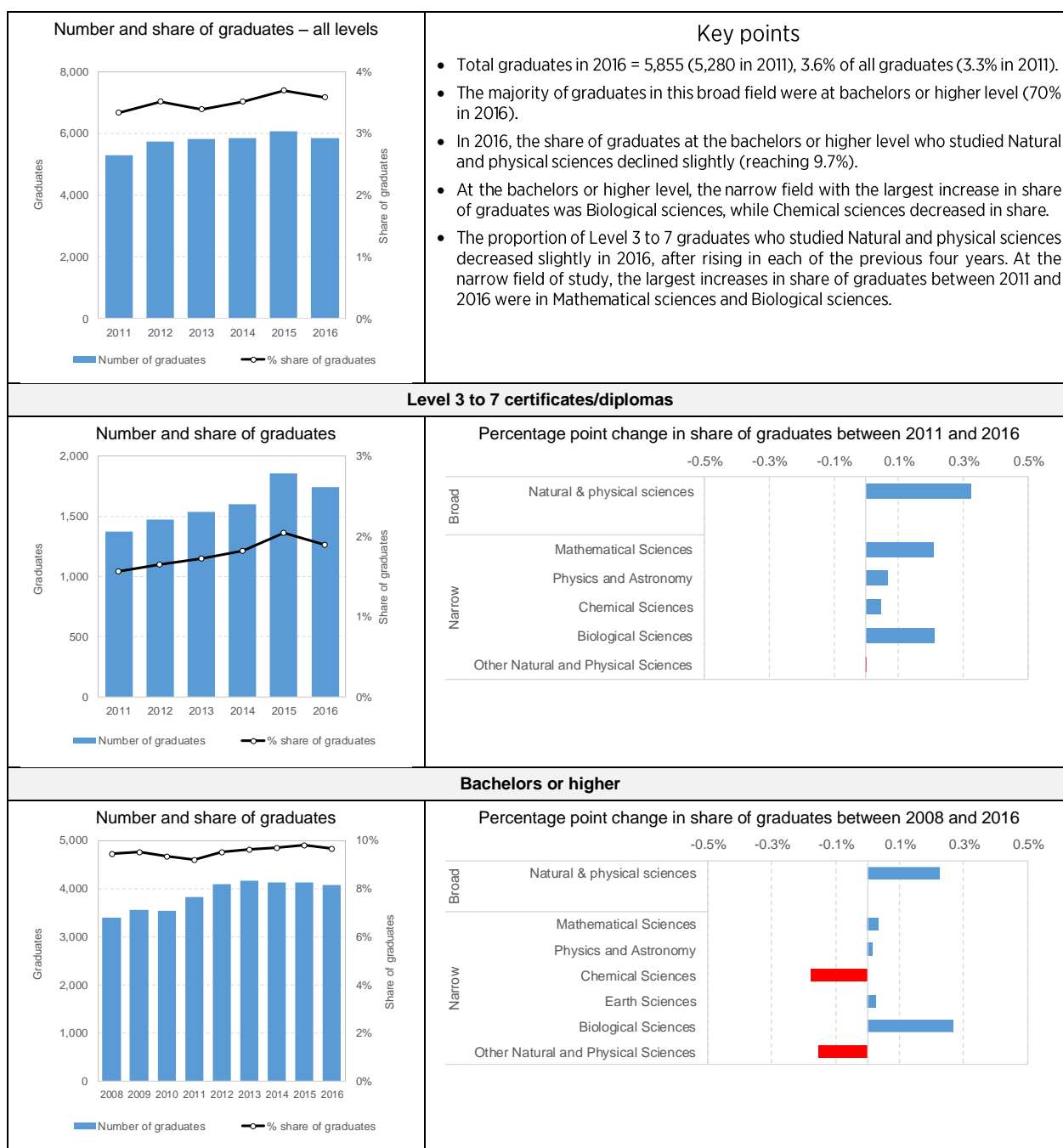
The purpose of these statistical profiles is to identify which narrow fields of study were driving the trends at the broad level. For example, for bachelors or higher, underlying the increase in share of graduates in the broad field of Engineering and related technologies was an increase in the share of graduates who studied in the narrow field of Civil engineering.

The profiles also make it easier to identify trends in a broad field, such as shifts between levels of qualifications. For example, although the number of graduates in Information technology at Level 3 to 7 certificate/diploma level has been declining, this has been offset to an extent by a rise in the number of graduates at the bachelors or higher level.

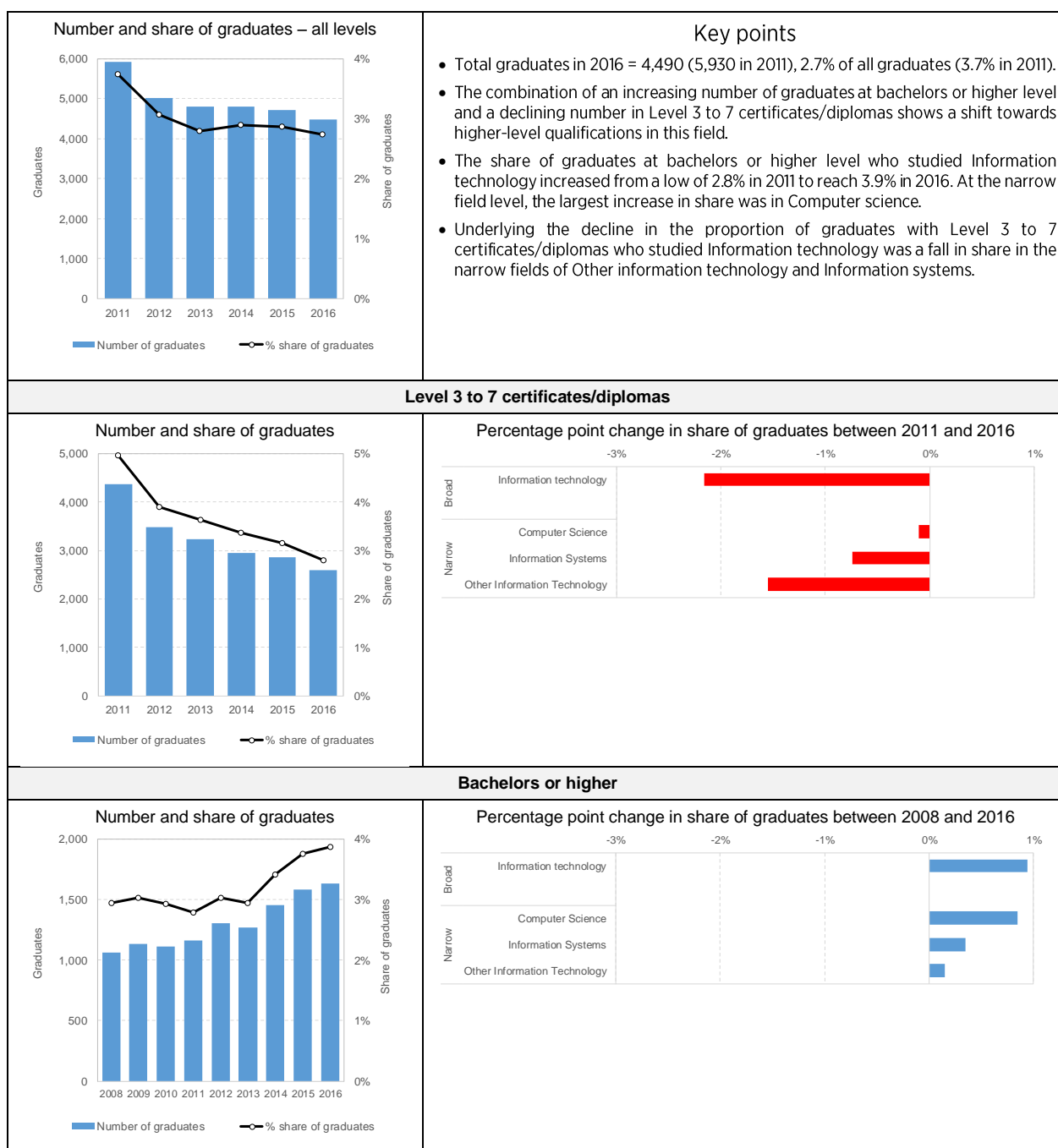
Note that where the number of graduates at a particular level of qualification was relatively small, we do not report this data in the statistical profiles.

We present the fields of study in order of the broad NZSCED code.

01. Natural and physical sciences



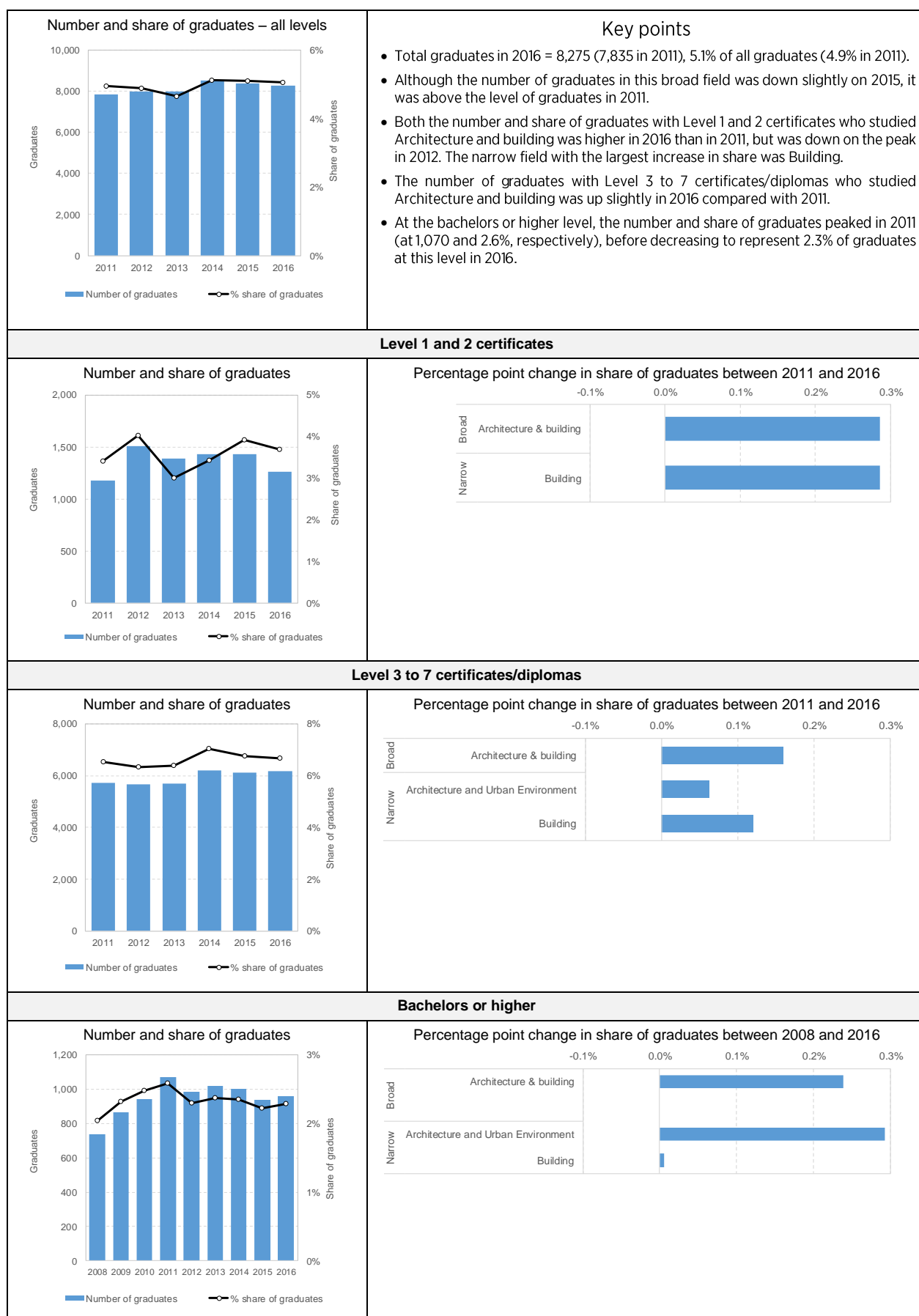
02. Information technology



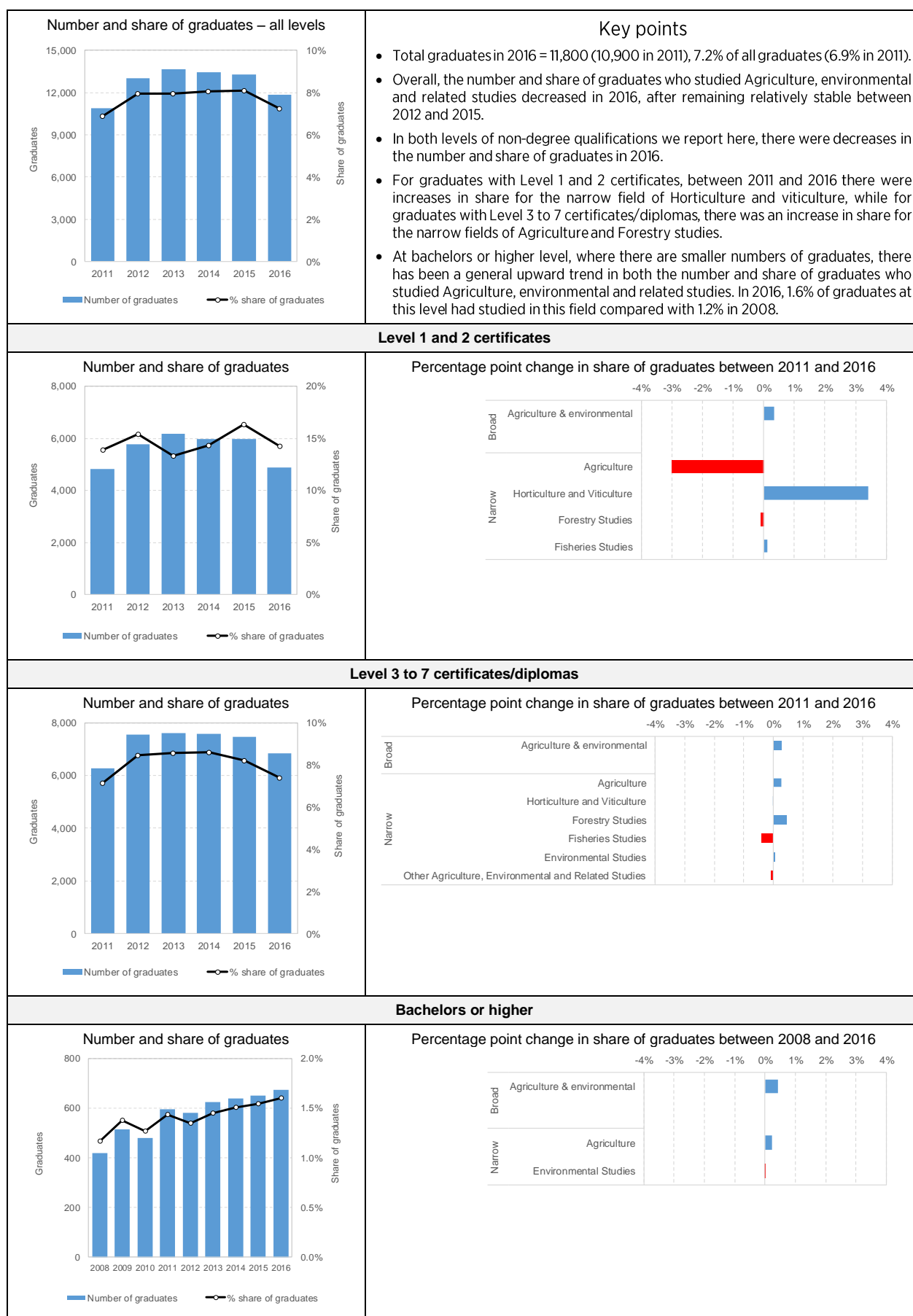
03. Engineering and related technologies



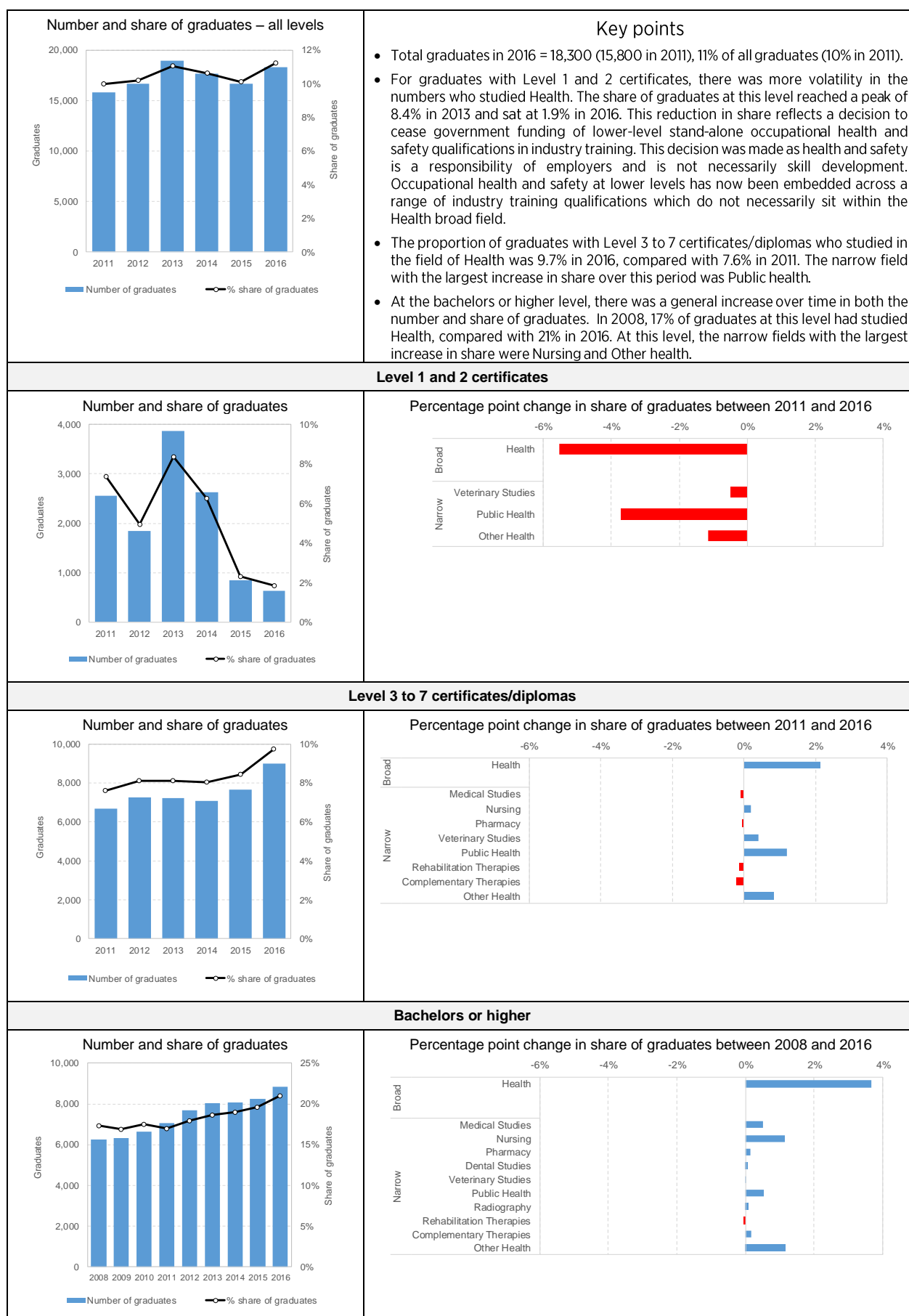
04. Architecture and building



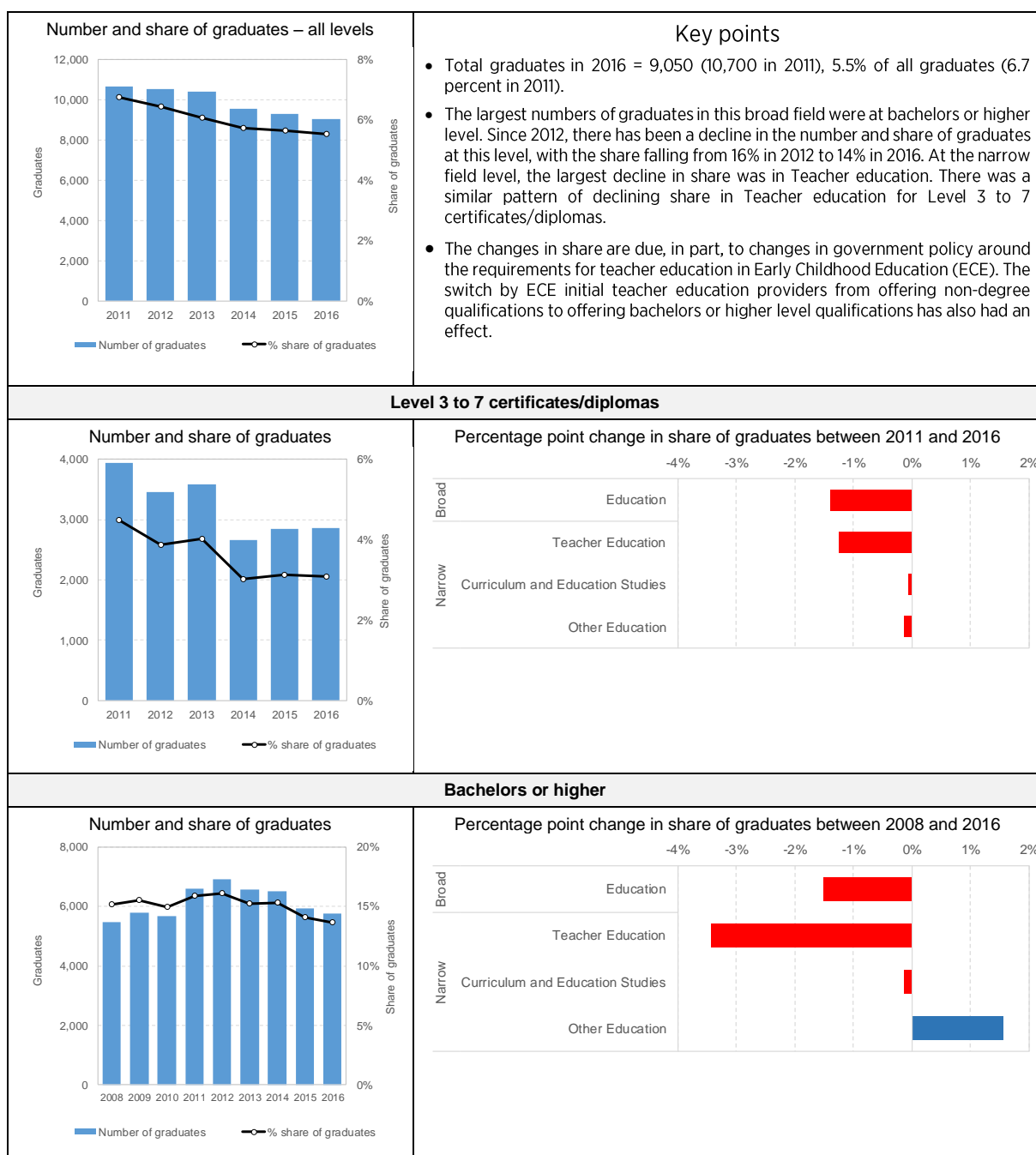
05. Agriculture, environmental and related studies



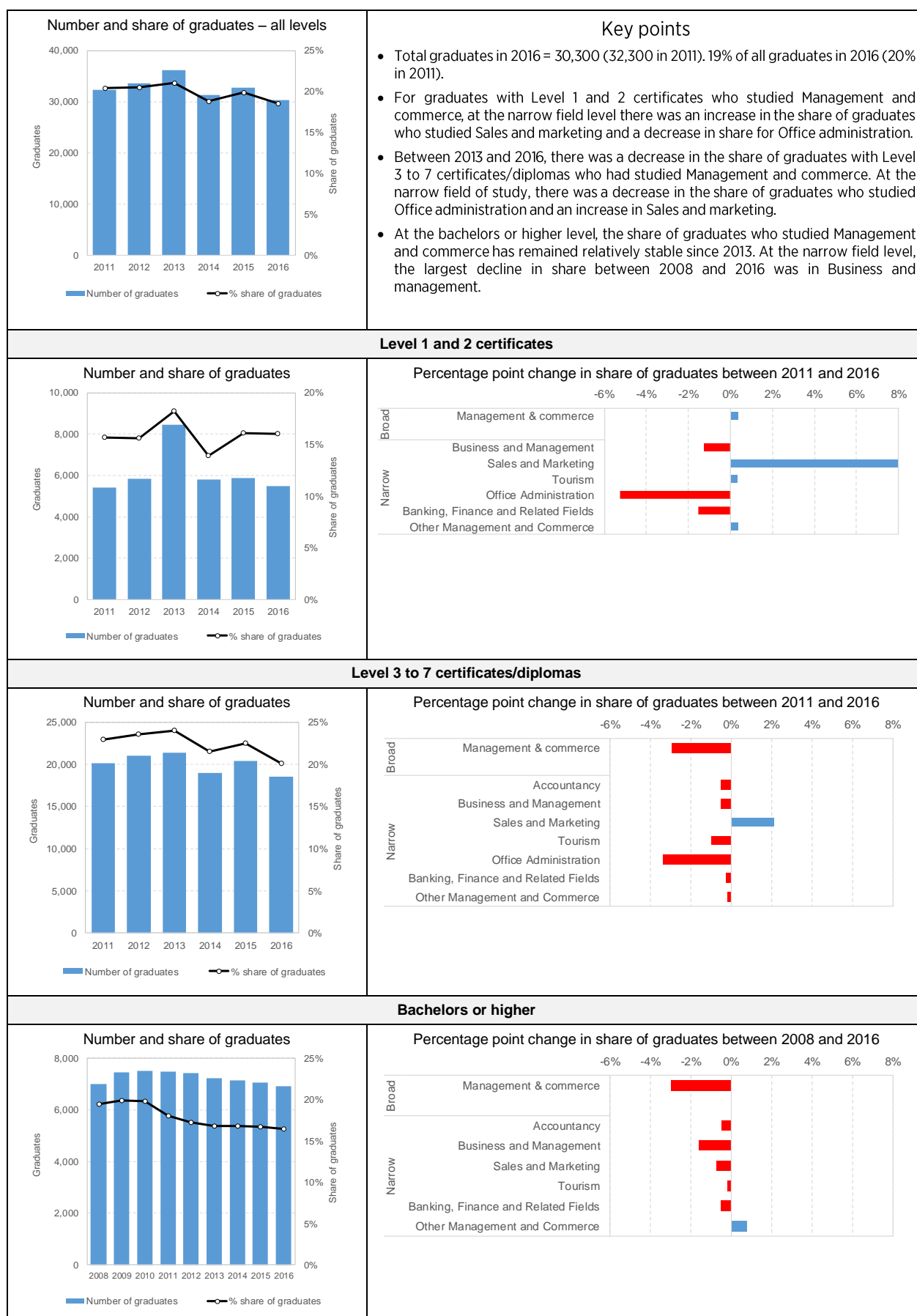
06. Health



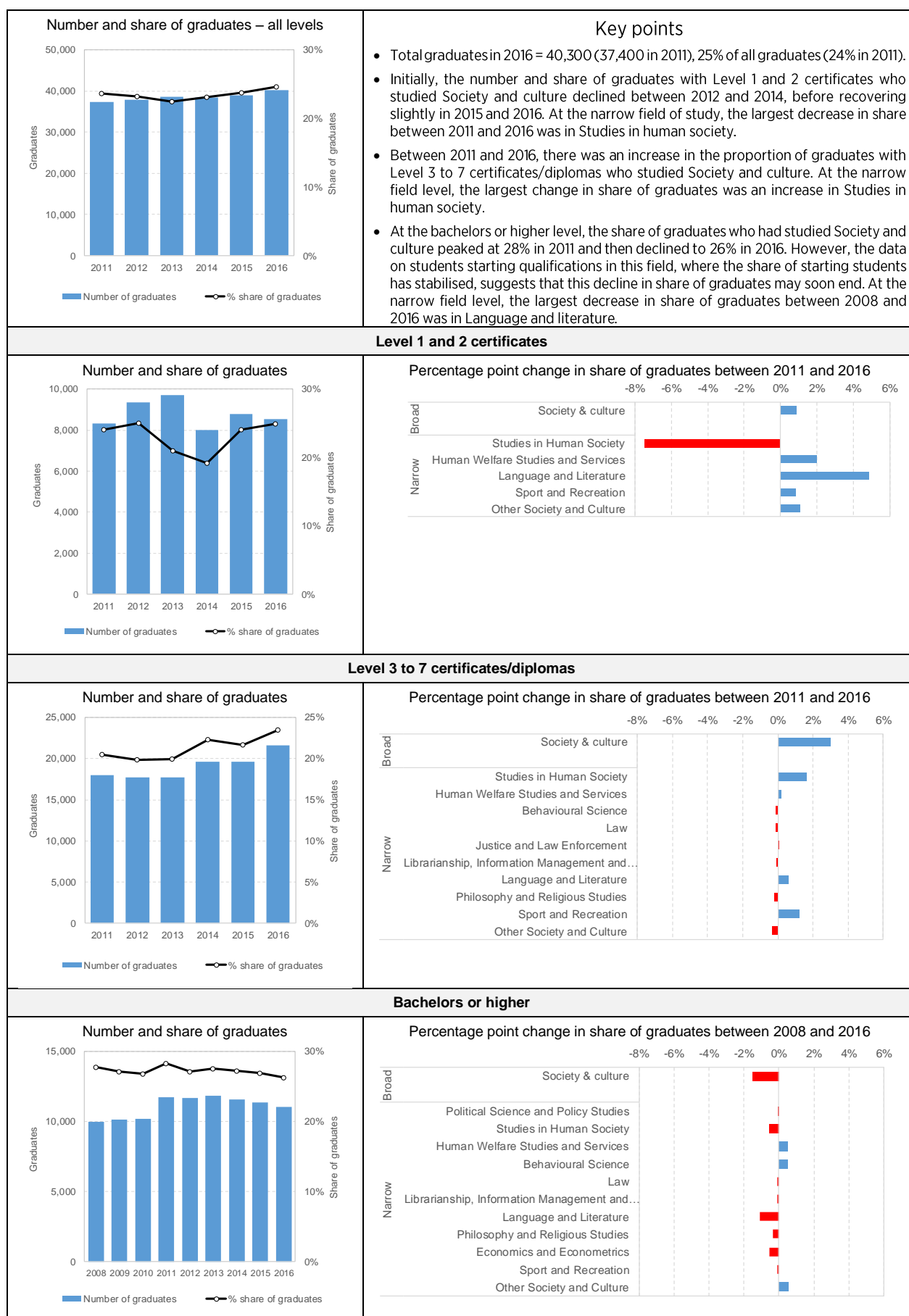
07. Education



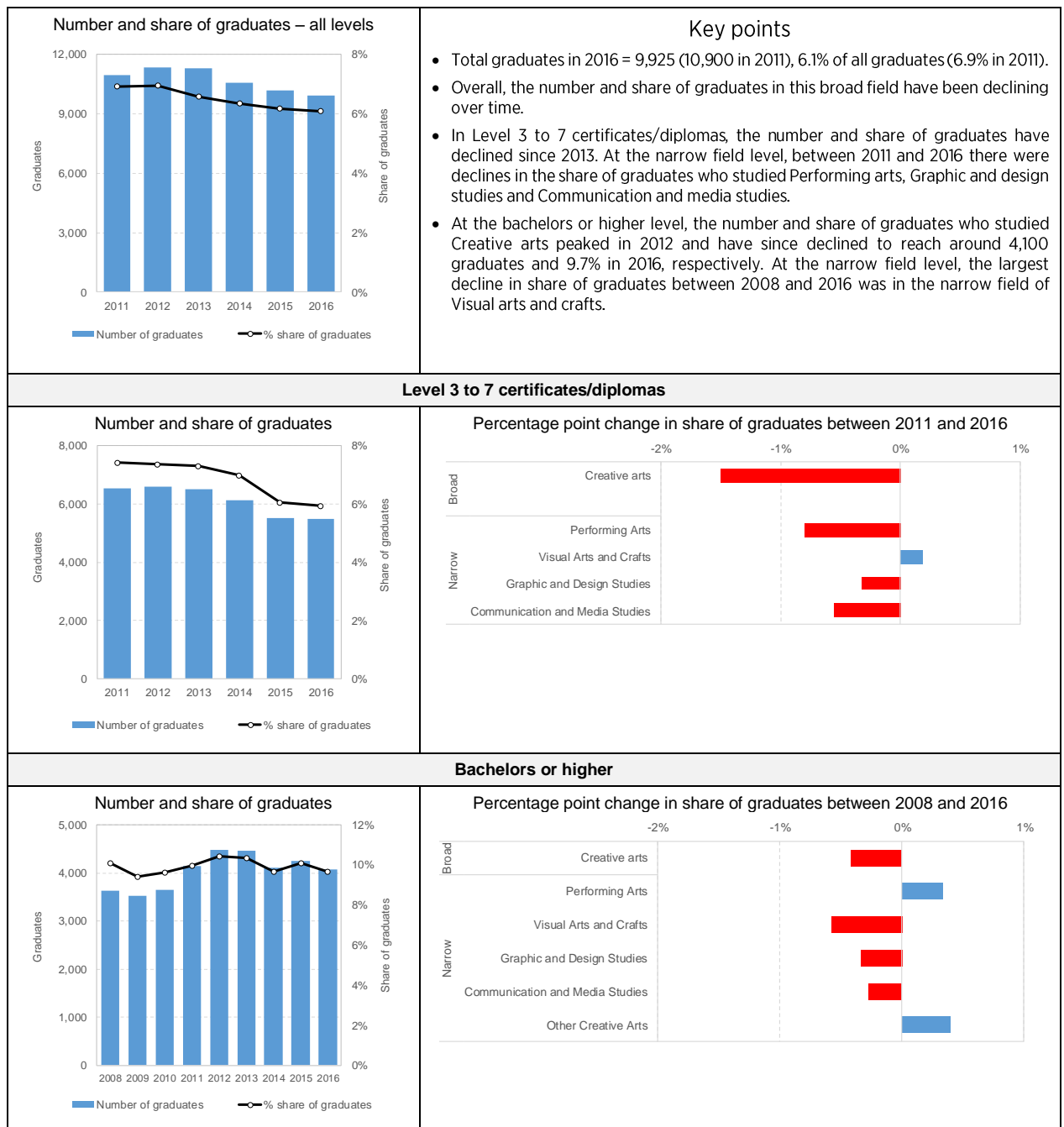
08. Management and commerce



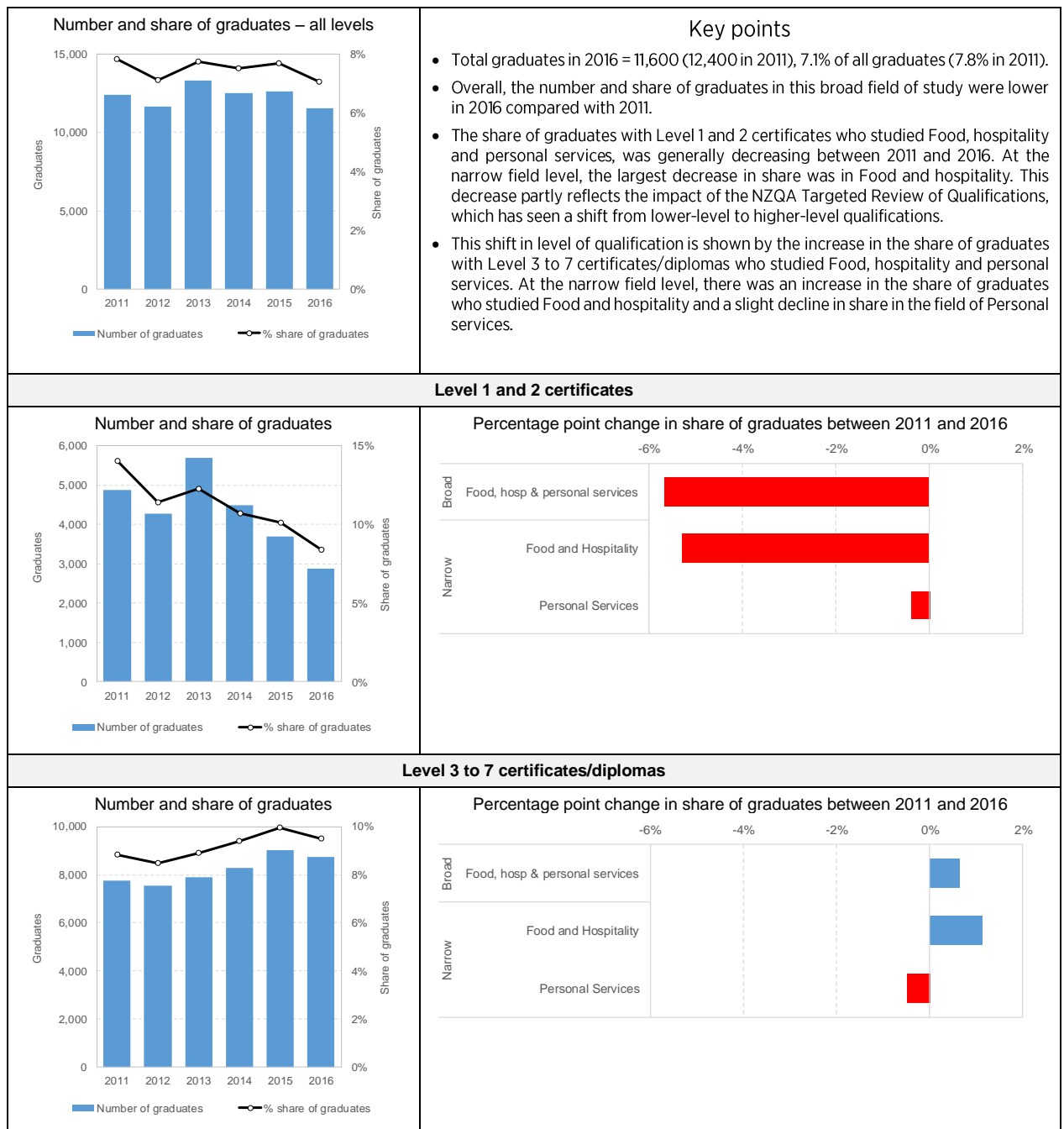
09. Society and culture



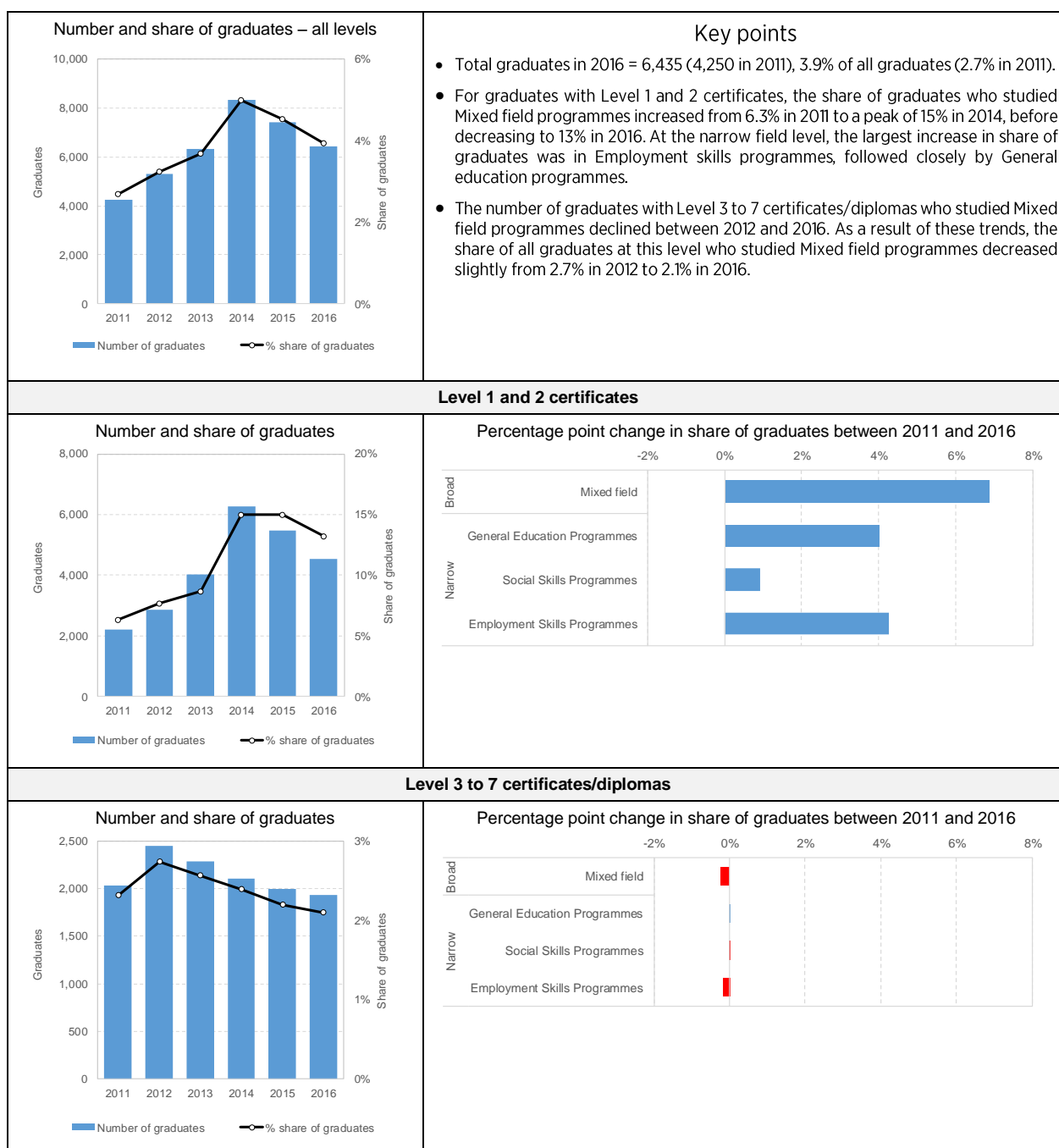
10. Creative arts



11. Food, hospitality and personal services



12. Mixed field



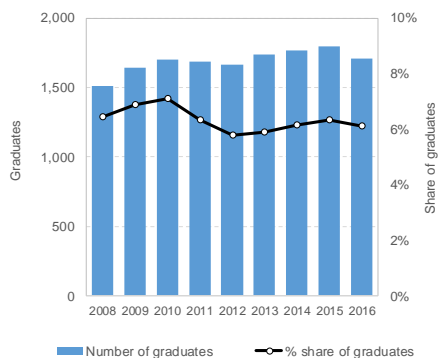
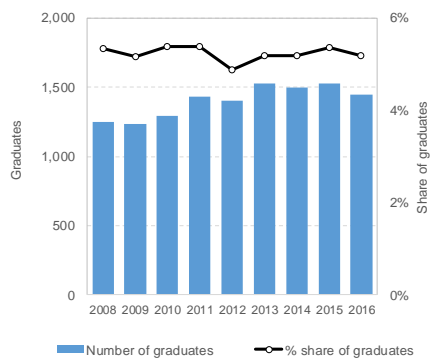
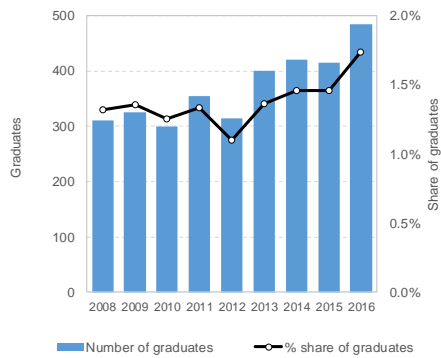
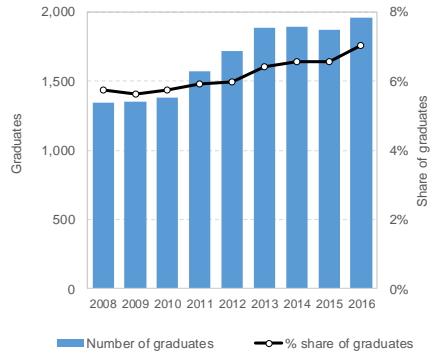
4 ANALYSIS OF SELECTED NARROW FIELDS OF STUDY

In this chapter, we look at trends in the number of domestic graduates in selected narrow fields at the bachelors degree or bachelors with honours level. We look at these combined levels of study as some qualifications have shifted between bachelors degree and bachelors with honours level (engineering for example). So to understand trends over time, we need to look at them in combination.

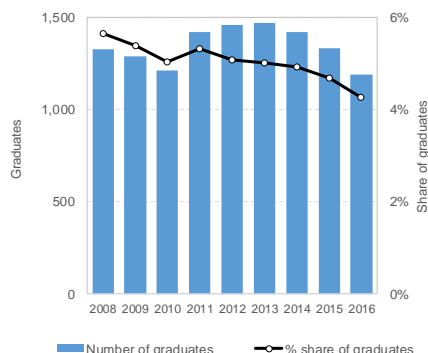
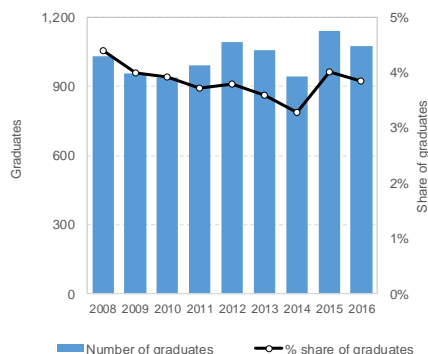
The six narrow fields we look at cover a number of vocational areas, as well as being some of the largest in terms of domestic graduates. For each narrow field, we present data on the number and share of graduates. Some key points shown by the data are also presented.

It is important to note that the data presented in this section should not be seen as showing the number of people that have completed qualifications recognised by professional bodies. The graduates in these fields can include people who have completed qualifications that are not recognised by professional bodies, but still sit within the NZSCED field of study.

Selected narrow fields – bachelors degree or bachelors with honours level

Accountancy																															
 <table><thead><tr><th>Year</th><th>Number of graduates</th><th>% share of graduates</th></tr></thead><tbody><tr><td>2008</td><td>1500</td><td>6.1%</td></tr><tr><td>2009</td><td>1650</td><td>6.7%</td></tr><tr><td>2010</td><td>1700</td><td>7.1%</td></tr><tr><td>2011</td><td>1700</td><td>6.5%</td></tr><tr><td>2012</td><td>1650</td><td>6.0%</td></tr><tr><td>2013</td><td>1750</td><td>6.3%</td></tr><tr><td>2014</td><td>1750</td><td>6.5%</td></tr><tr><td>2015</td><td>1800</td><td>6.7%</td></tr><tr><td>2016</td><td>1750</td><td>6.1%</td></tr></tbody></table>	Year	Number of graduates	% share of graduates	2008	1500	6.1%	2009	1650	6.7%	2010	1700	7.1%	2011	1700	6.5%	2012	1650	6.0%	2013	1750	6.3%	2014	1750	6.5%	2015	1800	6.7%	2016	1750	6.1%	<p>In 2016, the number of graduates in the narrow field of Accountancy decreased, following on from three years of increases. The share of graduates at this level was 6.1% in 2016, compared with a peak of 7.1% in 2010.</p>
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2008	1250	5.2%																													
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2012	1400	4.9%																													
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2014	1500	5.3%																													
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Selected narrow fields continued...

Language and literature																															
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2008	1050	4.4%																													
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5 FIELD OF STUDY BY SELECTED CHARACTERISTICS

In this chapter we analyse the field of study data for selected characteristics. These include: sub-sector, gender, ethnic group and age group. The purpose of this chapter is to give an indication of some of the broad patterns in these characteristics, rather than present a detailed and comprehensive view of the data.

Sub-sector

In this section we focus on the distribution of graduates across each of the sub-sectors at each combination of broad levels of qualification and broad field of study.

Figure 5 presents the distribution of graduates in 2016 in each of the broad fields of study. For each broad field, we have split the level of qualification into the levels used in the previous sections – Level 1 and 2 certificates, Level 3 to 7 certificates/diplomas, and bachelors or higher.

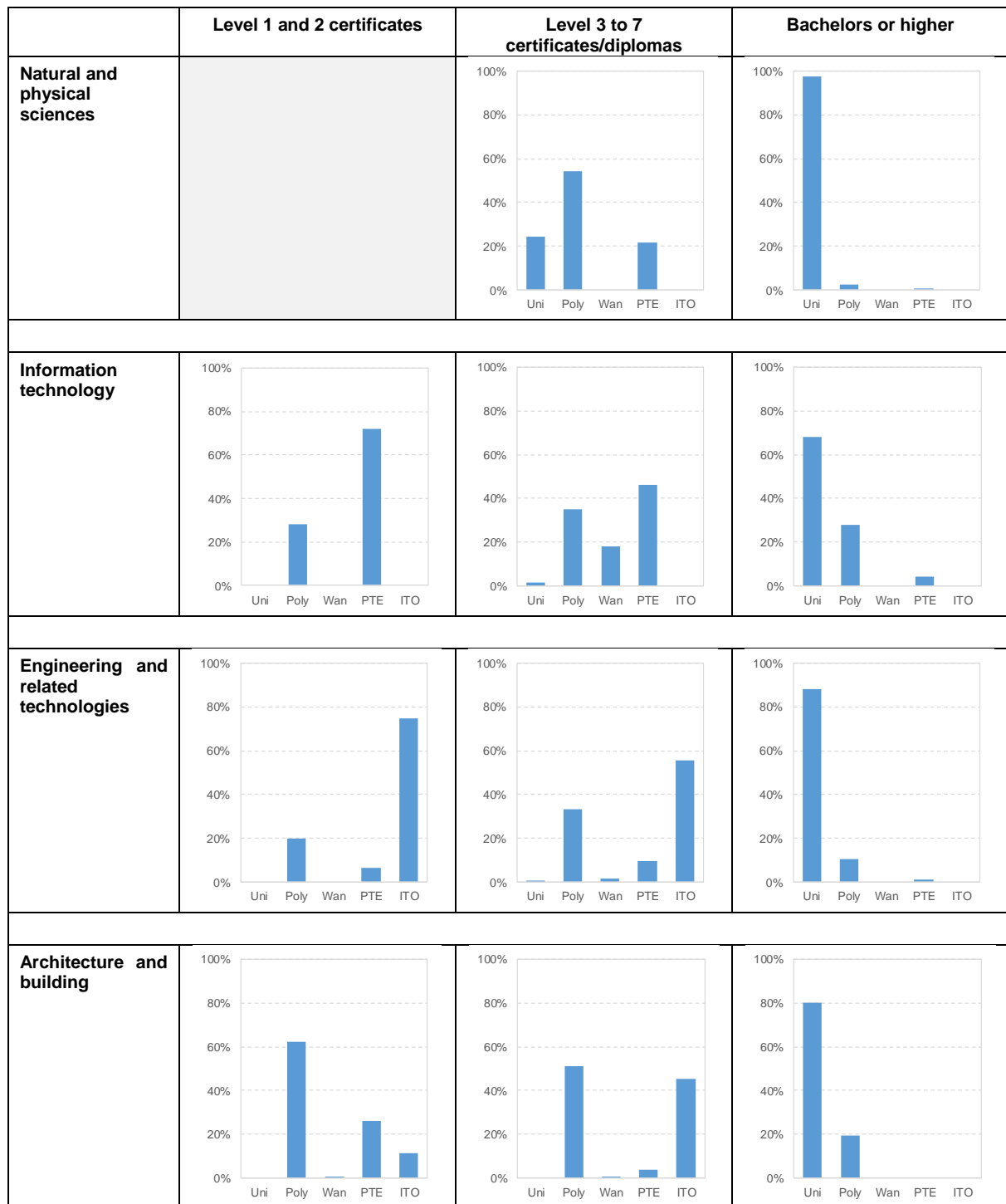
For Level 1 and 2 certificates, graduates from workplace-based learning organised by industry training organisations (ITOs) dominated a number of fields of study. These included: Engineering and related technologies, Agriculture, environmental and related studies, Management and commerce, and Food, hospitality and personal services. At this level of qualification, graduates at polytechnics were prevalent in Architecture and building, Health, and Creative arts, while wānanga produced significant proportions of graduates in Society and culture. Private training establishments (PTEs) dominated provision in the fields of Information technology and Education.

For Level 3 to 7 certificates/diplomas, polytechnics had the largest share of graduates in Natural and physical sciences, Architecture and building, Health, Creative arts, and Mixed field programmes. Learners from ITOs were in large proportions in Agriculture and environmental studies and Engineering and related technologies. Wānanga provided the greatest percentage of graduates in Society and culture. PTEs had large proportions in Information technology and Education.

Universities dominated provision at the bachelors or higher level, with an especially high proportion of enrolments in Natural and physical sciences (97 percent). Polytechnics had significant proportions of enrolments in the broad fields of Information technology and Health. PTEs featured most prominently in Education. Wānanga had limited provision at this level of study.

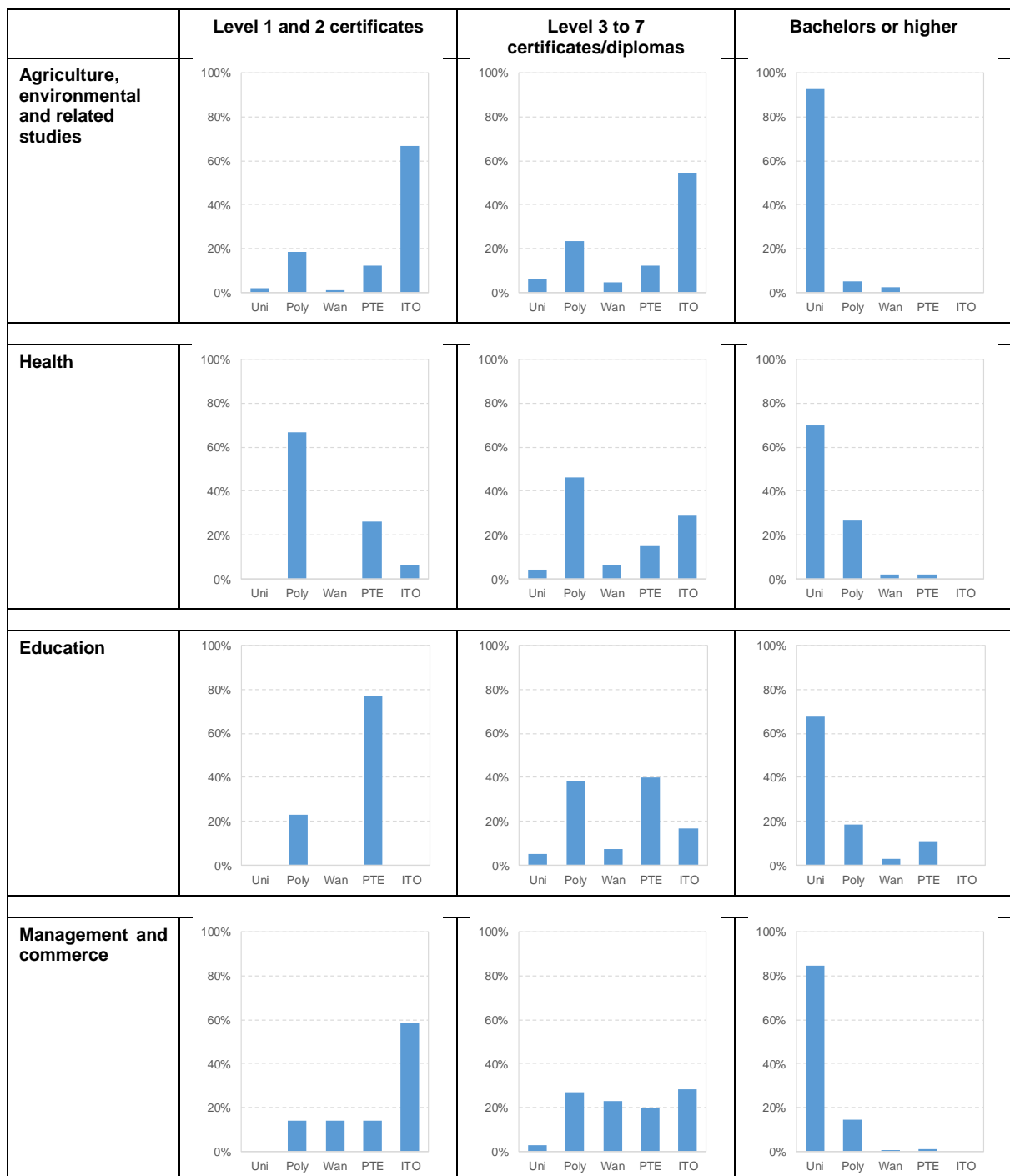
Figure 5

Distribution of domestic graduates by field of study, sub-sector and type/level of qualification in 2016



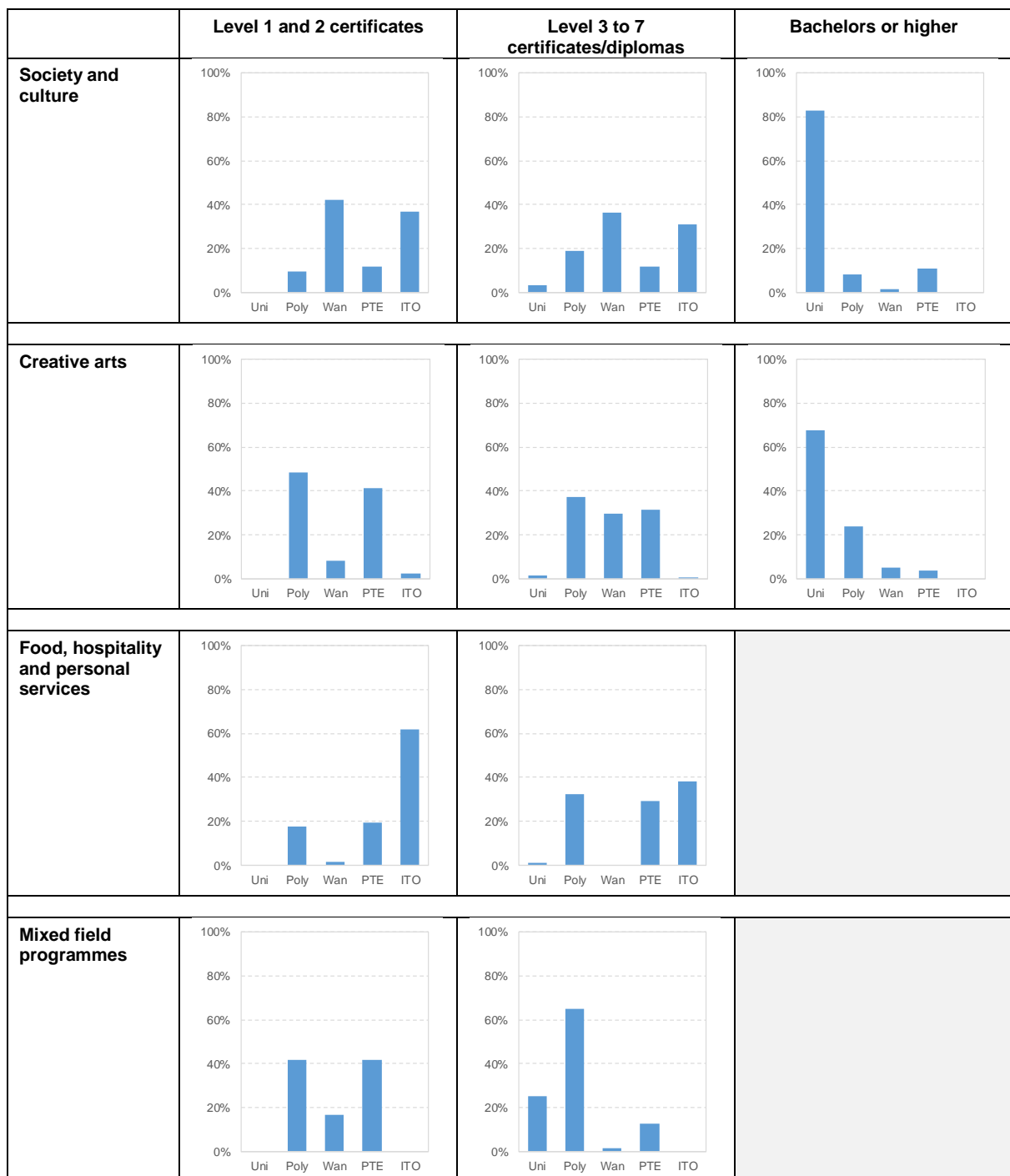
Note: Uni = universities; Poly=polytechnics; Wan=Wānanga; PTE=private training establishments; ITO=industry training organisations.

Figure 5 continued



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Figure 5 continued



Note: Uni = universities; Poly=polytechnics; Wan=Wānanga; PTE=private training establishments; ITO=industry training organisations.

Gender

In this section we examine the proportions of women and men in narrow fields of study. We look at the proportion of women graduates in those narrow fields in 2016 and compare this with earlier years to see how much it has changed over time. The percentage of women graduates with Level 1 and 2 certificates in narrow fields of study is presented in Figure 6, those at Level 3 to 7 certificates/diplomas in Figure 7, and those at bachelors or higher in Figure 8.

In 2016, women made up 47 percent of graduates with Level 1 and 2 certificates, 53 percent of graduates with Level 3 to 7 certificates/diplomas, and 64 percent of graduates at bachelors or higher level.

For Level 1 and 2 certificates, the fields of study with the highest proportion of women in 2016 were Personal services (97 percent) and Veterinary studies (94 percent). Men had a high proportion of graduates in the engineering and building fields. The highest proportion of men studied Electrical and electronic engineering and technology (98 percent).

At this level, there have been some substantial changes in the distribution of graduates by gender. The biggest shifts in gender distribution between 2011 and 2016 were in the fields of Other management and commerce (the proportion of women graduates increased from 13 percent to 60 percent) and Studies in human society (the proportion of women graduates decreased from 82 percent to 35 percent).

In Level 3 to 7 certificates/diplomas, women had the highest proportion of graduates in 2016 in fields such as Pharmacy (95 percent) and Veterinary studies (93 percent). Men comprised the highest proportion of graduates in several engineering fields, with the highest share of 97 percent in the narrow field of Electrical and electronic engineering and technology.

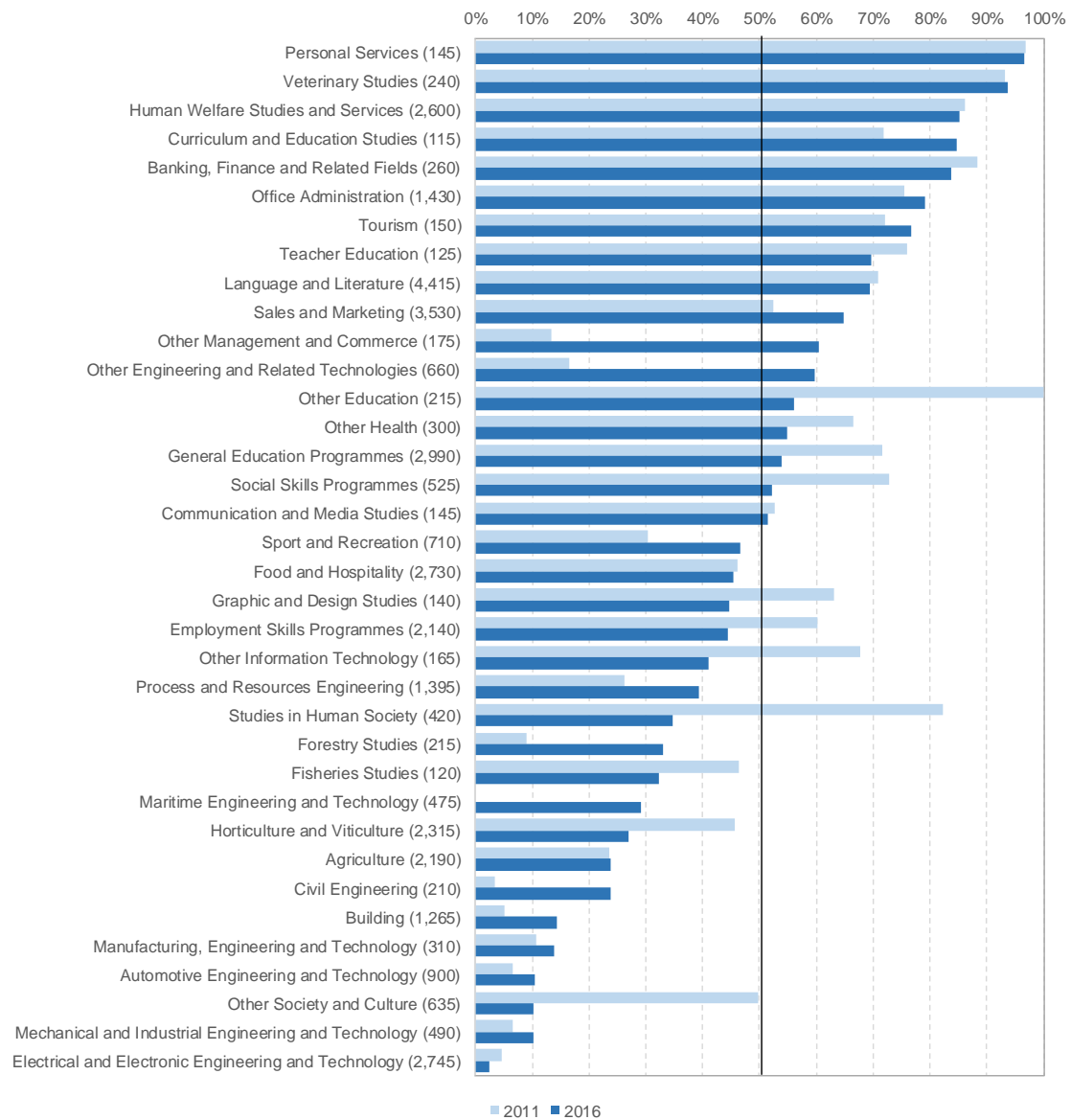
At this level, the biggest shifts in gender distribution between 2011 and 2016 were in the fields of Banking, finance and related fields (the proportion of women graduates increased from 45 percent to 69 percent), and Aerospace, engineering and technology (the proportion of women decreased from 54 percent to 36 percent).

At bachelors or higher level, women had a high proportion of graduates in 2016 in fields such as Nursing (91 percent) and Human welfare studies and services (83 percent). Men had a high proportion of graduates in several engineering fields, with the highest proportion being 87 percent in the narrow field of Mechanical and industrial engineering.

Between 2008 and 2016, the biggest shifts in gender distribution at this level were in the field of Tourism (the proportion of women increased from 64 percent in 2008 to 74 percent in 2016), while the proportion of women in Agriculture decreased from 65 percent in 2008 to 59 percent in 2016.

Figure 6

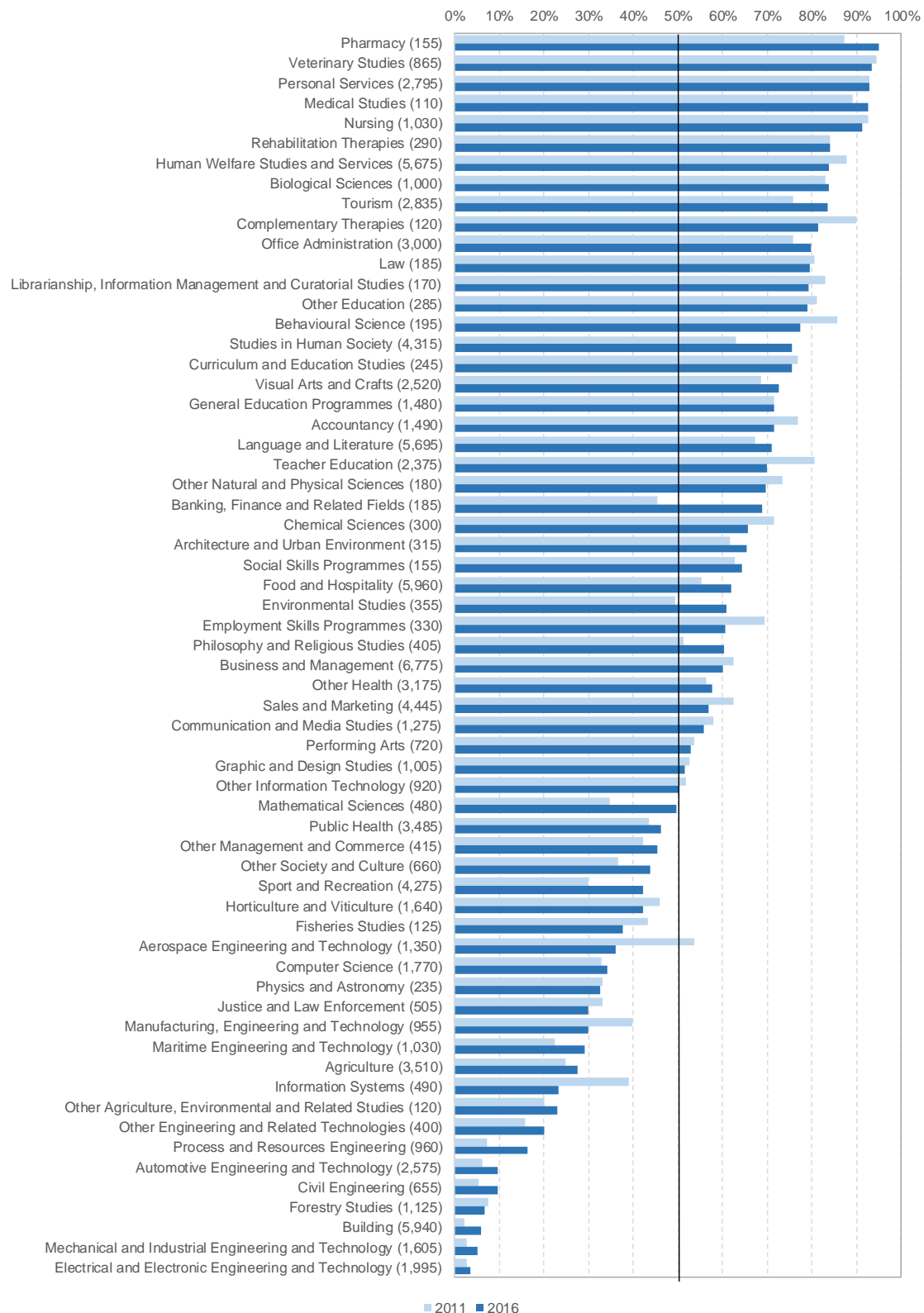
Percentage of female domestic graduates in narrow fields of study – Level 1 and 2 certificates



Note: The numbers in brackets after the name of the field show the number of graduates in that narrow field in 2016.

Figure 7

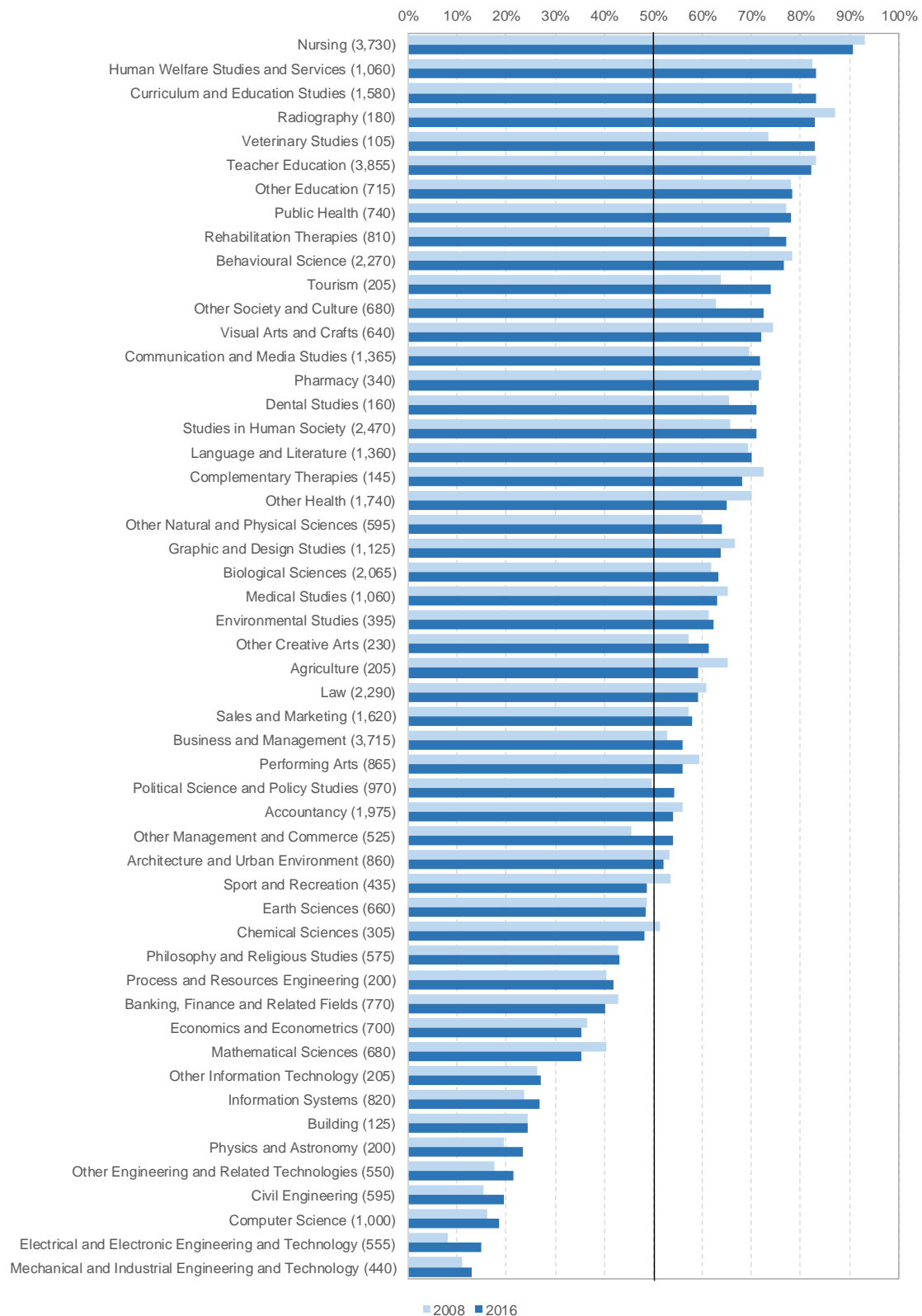
Percentage of female domestic graduates in narrow fields of study – Level 3 to 7 certificates/diplomas



Note: The numbers in brackets after the name of the field show the number of graduates in that narrow field in 2016.

Figure 8

Percentage of female domestic graduates in narrow fields of study – bachelors or higher



Note: The numbers in brackets after the name of the field show the number of graduates in that narrow field in 2016.

Ethnic group

In this section we look at the distribution of domestic graduates of four selected ethnic groups (European, Māori, Pasifika and Asian) across the 12 broad fields of study. In each case, we compare the distribution of graduates in each ethnic group across fields of study in 2016 with earlier years. As with previous chapters, we look at the field of study at the three broad levels of study: Level 1 and 2 certificates, Level 3 to 7 certificates/diplomas, and bachelors or higher.

At each of the levels we report here, the data shows there were significant differences in the distribution of the ethnic groups by broad field of study.

Figure 9 shows the distribution of graduates with Level 1 to 2 certificates. The data shows that in 2016 Māori had a relatively high proportion of graduates in Society and culture, Pasifika had a high proportion in Agriculture and environmental studies, Europeans had high proportions in Engineering and related technologies, and Asians had a relatively high proportion in Society and culture.

Between 2011 and 2016, Europeans and Māori showed an increase in the proportion of graduates in Mixed field programmes. The increase in the proportion of graduates in Mixed field programmes reflects the introduction of increased literacy and numeracy requirements, as well as changes in provision via the Level 1 and 2 tendering process and the introduction of the Youth Guarantee. Pasifika also exhibited an increase in the proportion of graduates in Agricultural and environmental studies. For Māori, the increase in Mixed field programmes was mirrored by a decrease in the proportion of graduates in Society and culture, while for Pasifika there was a decrease in the proportion of graduates in Management and commerce. Asians exhibited an increase in the proportion of graduates who studied Society and culture, Engineering and related technologies and Agricultural and environmental studies. This was mirrored by a decrease in the proportion of graduates in the field of Food, hospitality and personal services.

In Level 3 to 7 certificates/diplomas, in 2016 Māori had a relatively high proportion of graduates in Society and culture (see Figure 10). Pasifika had a relatively high proportion of graduates in Management and commerce. Asians had a relatively high proportion of graduates in the field of Society and culture; and Europeans had relatively high proportions of graduates in Engineering and related technologies and Architecture and building.

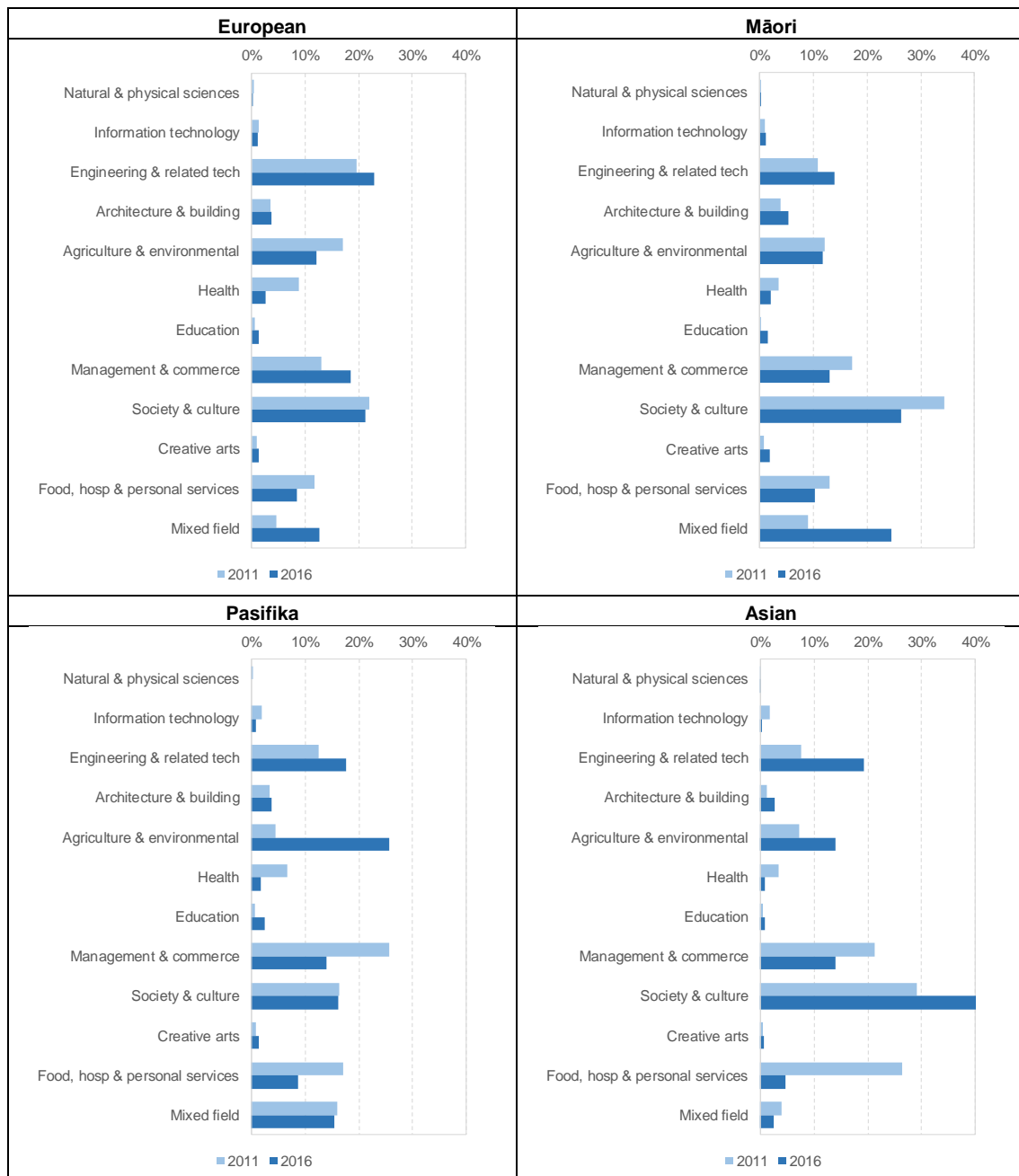
Between 2011 and 2016, the proportion of Māori graduates at this level increased in fields such as: Society and culture and Health. There were declines in fields such as Information technology and Management and commerce. For Pasifika, there was an increase in the proportion of graduates in Engineering and related technologies, Health and Food, hospitality and personal services. There was an associated decline in the proportion of graduates in the field of Management and commerce. For Europeans, there were increases in the proportion of graduates in Society and culture and Health. There were decreases in Creative arts and Education. Asians exhibited an increase in the proportion of graduates in Food, hospitality and personal services and Agriculture and environmental studies. This was matched by a decline in the proportion of graduates in Information technology and Society and culture.

At bachelors or higher level, Figure 11 shows that Māori and Pasifika had relatively high proportions of graduates in 2016 in the fields of Society and culture and Education. Asians had relatively high proportions in Natural and physical sciences, Information technology, and Engineering and related technologies. Europeans had a relatively high proportion of graduates in Natural and physical sciences.

Between 2008 and 2016, Māori exhibited increases in the proportion of graduates at bachelors level or higher in fields such as Health and Creative arts. This was mirrored by decreases in proportions of graduates in Society and culture and Education. Pasifika exhibited an increase in the proportion of graduates in Health, with associated declines in the proportion of graduates in Education. For Europeans, there was an increase in the proportion of graduates in Health and a decrease in Education. Asians exhibited increases in Health and associated decreases in Management and commerce and Society and culture.

Figure 9

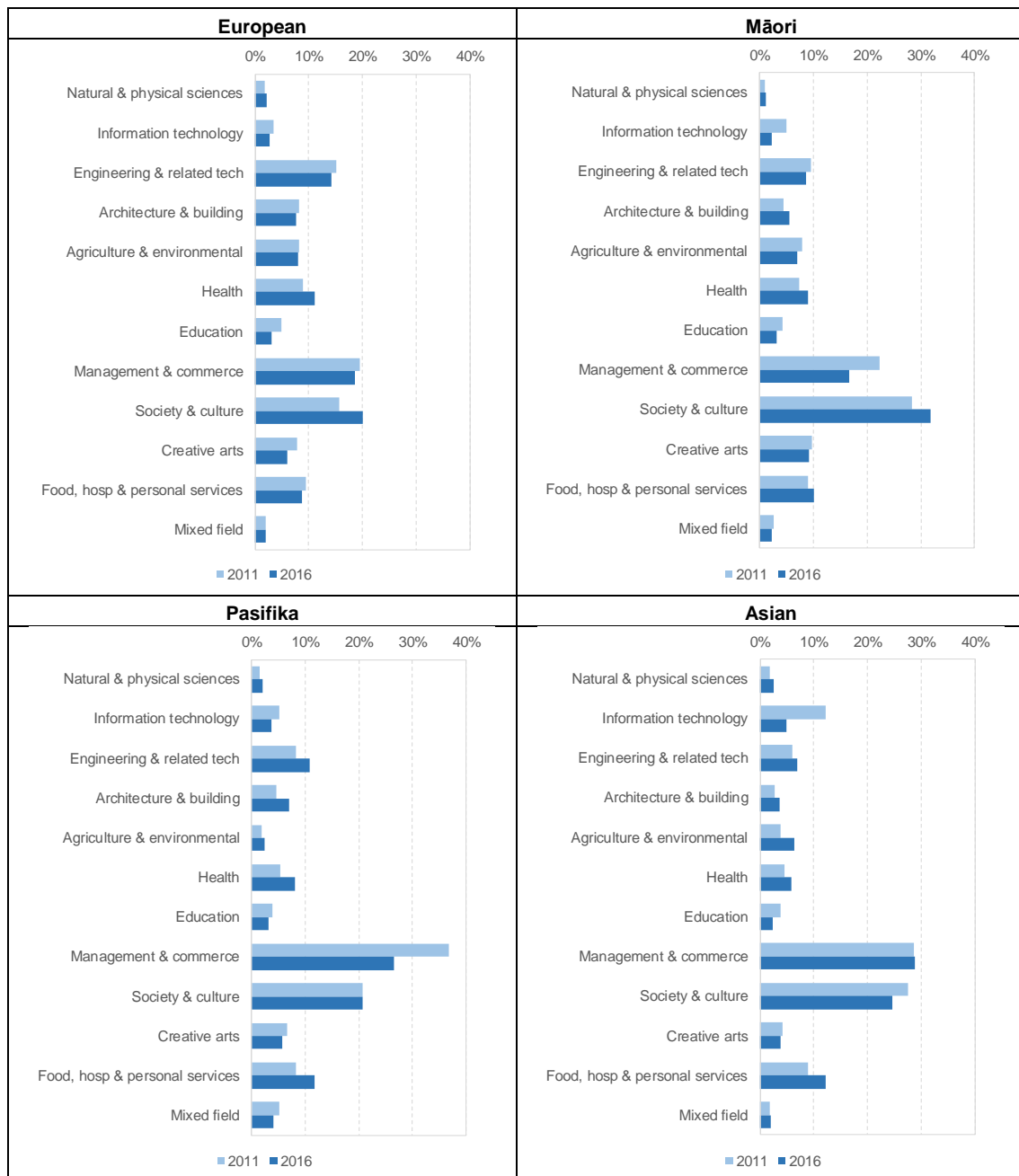
Distribution of domestic graduates by ethnic group and broad field of study – Level 1 and 2 certificates



Note: In 2016 there were 15,500 European graduates in Level 1 and 2 certificates; 10,100 Māori; 4,530 Pasifika; and 4,980 Asians.

Figure 10

Distribution of domestic graduates by ethnic group and broad field of study – Level 3 to 7 certificates/diplomas



Note: In 2016 there were 53,700 European graduates in Level 3 to 7 certificates/diplomas; 23,800 Māori; 9,300 Pasifika; and 9,625 Asians.

Figure 11

Distribution of domestic graduates by ethnic group and broad field of study – bachelors or higher



Note: In 2016 there were 30,100 European graduates at the bachelors or higher level; 4,940 Māori; 2,700 Pasifika; and 7,175 Asians.

Age group

In this section we examine the age distribution of graduates across narrow fields of study. Specifically, we look at the percentage of graduates aged under 25 years in each narrow field and compare this with earlier years. We use the same three broad qualification levels as in the previous chapters (Level 1 and 2 certificates, Level 3 to 7 certificates/diplomas, and bachelors or higher).

In 2016, the percentages of graduates aged under 25 years were 37 percent with Level 1 and 2 certificates, 35 percent with Level 3 to 7 certificates/diplomas, and 52 percent of graduates at bachelors or higher level.

Figure 12 shows that in 2016 younger graduates with Level 1 and 2 certificates dominated fields such as Other education (98 percent were aged under 25) and Tourism (97 percent were under 25). Language and literature was the narrow field with the lowest proportion of graduates aged under 25 (11 percent).

Between 2011 and 2016, there were substantial shifts at this level in the percentage of under-25 graduates in a number of narrow fields. In particular, there was an increase in the percentage of graduates in the field of Other information technology. Overall, the proportions of graduates in the under-25-years age group increased in most narrow fields, reflecting a wider trend towards younger graduates.

Figure 13 shows that in 2016 relatively high proportions of graduates with Level 3 to 7 certificates/diplomas were aged under 25 years in fields such as Physics and astronomy (79 percent) and Chemical sciences (75 percent). The narrow field with the lowest proportion of graduates aged under 25 years was Complementary therapies (8 percent).

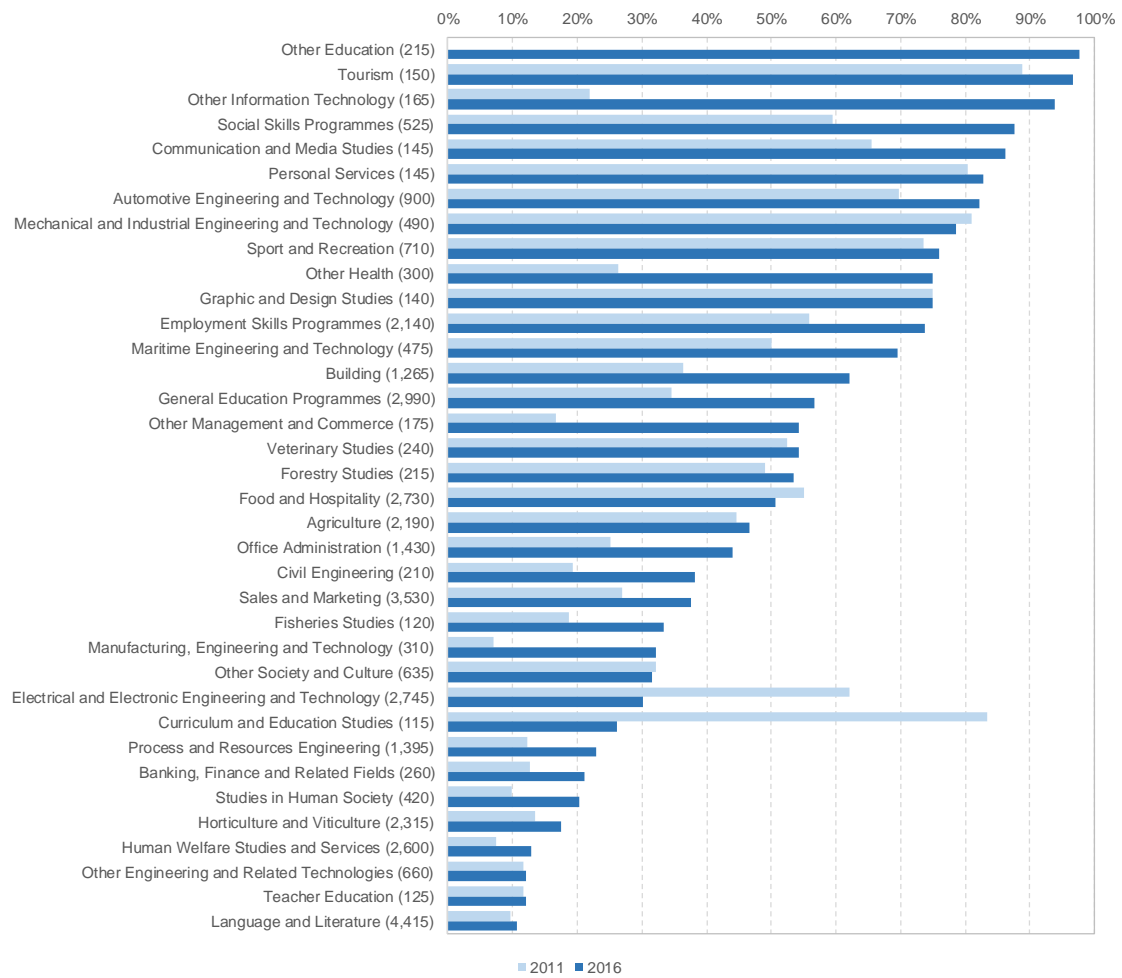
Between 2011 and 2016, the proportion of graduates aged under 25 years increased in narrow fields such as Other management and commerce and Nursing. There were declines in narrow fields such as Curriculum and education studies.

At the bachelors or higher level, Figure 14 shows that the largest proportion of graduates aged under 25 in 2016 were in fields such as Graphic and design studies (84 percent) and Sales and marketing (82 percent). The narrow field with the lowest proportion of graduates aged under 25 was Other education (1 percent).

Between 2008 and 2016, there were increases in the proportion of bachelors or higher graduates aged under 25 years in fields such as Other creative arts and Agriculture. Generally, most narrow fields exhibited an increase in the proportion of graduates aged under 25. However, there were declines in some narrow fields, such as Pharmacy and Radiography.

Figure 12

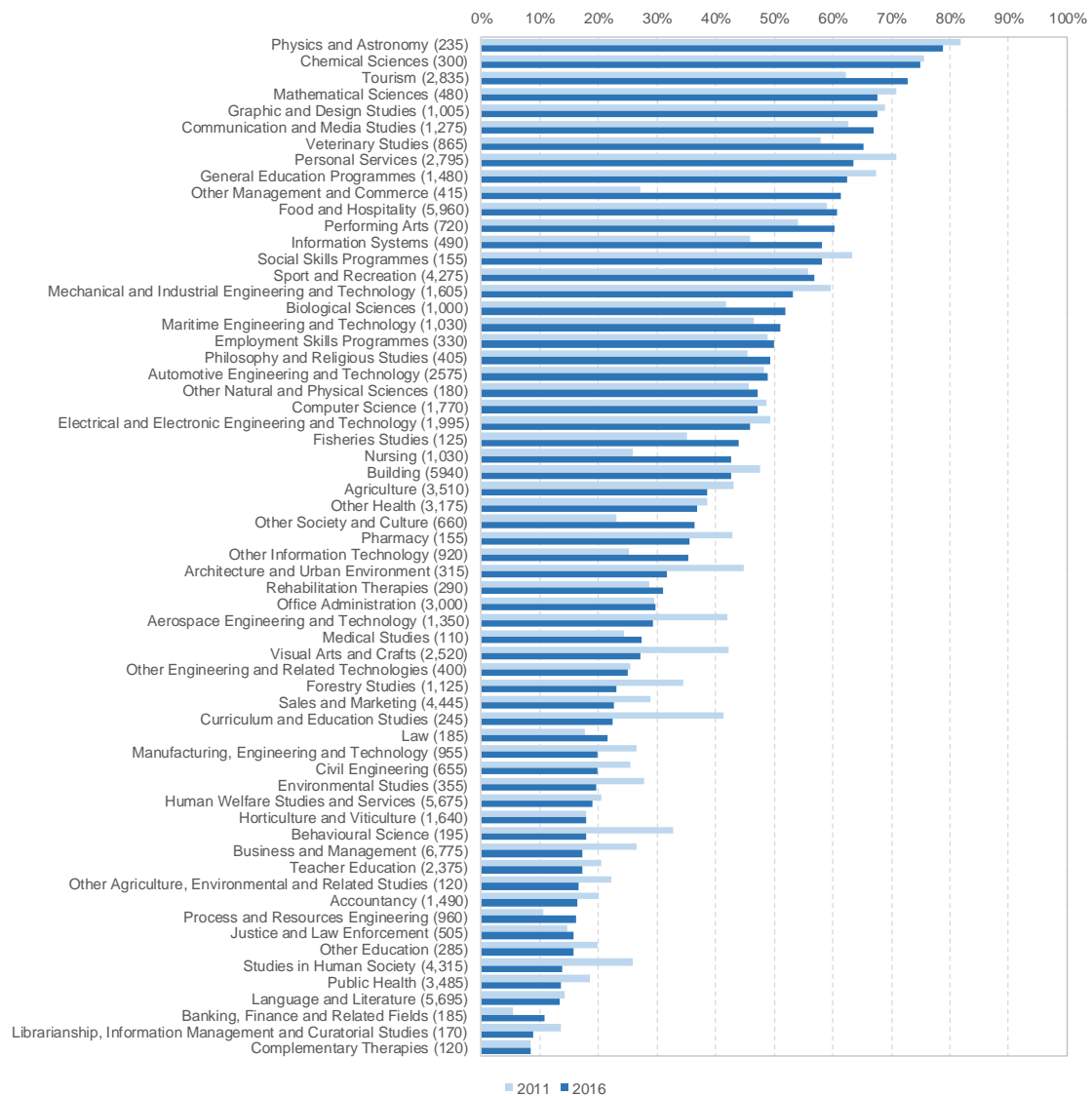
Percentage of domestic graduates aged under 25 years in narrow fields of study – Level 1 and 2 certificates



Note: The numbers in brackets after the name of the field show the number of graduates in that narrow field in 2016.

Figure 13

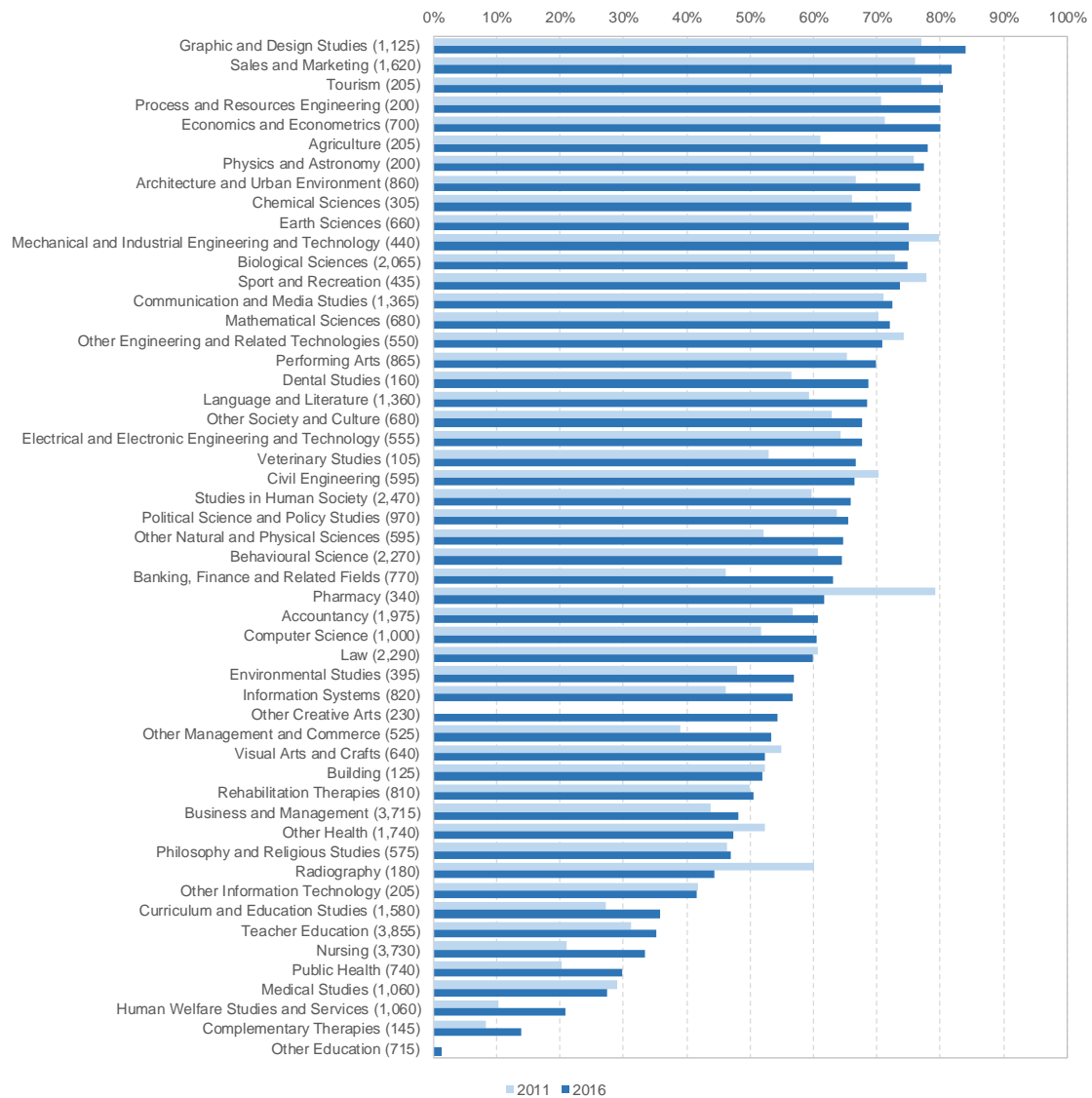
Percentage of domestic graduates aged under 25 years in narrow fields of study – Level 3 to 7 certificates/diplomas



Note: The numbers in brackets after the name of the field show the number of graduates in that narrow field in 2016.

Figure 14

Percentage of domestic graduates aged under 25 years in narrow fields of study – bachelors or higher



Note: The numbers in brackets after the name of the field show the number of graduates in that narrow field in 2016.

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