

... develop and apply actuarial, mathematical, statistical and quantitative principles and techniques to solve problems in a range of fields such as business and finance, scientific and social research, and engineering.

Note: Only Actuaries eligible for professional registration as Fellows or Accredited members of the Institute of Actuaries of Australia (IAAust) are included on the Skilled Occupations List (SOL). Mathematicians and Statisticians have not been included on the SOL.

Indicative Skill Level

Most occupations in this unit group have a level of skill commensurate with a Bachelor degree or higher qualification. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification (ANZSCO Skill Level 1).

Skilled Occupation Criteria

Long-lead time

Actuaries meet the criteria for long lead time, as entry to this occupation requires a substantial training commitment.

- ▶ Employment as an Actuary generally requires the completion of an approved three year undergraduate qualification (full-time equivalent), such as a Bachelor of Actuarial Studies plus satisfactory completion of Parts II and III of the Institute of Actuaries of Australia's Education Program and subsequent approval by the Institute's Council. Part II requirements can be met by the equivalent of an additional year of full time study (such as honours or fourth-year coursework subjects). Part III is met by sitting exams that are run through the Institute.

High use

Actuaries meet one aspect of the criteria for high use, showing that the skills which people have acquired through education and training are being deployed for the uses intended.

- ▶ As professionals, Actuaries are expected to have a level of skill commensurate with a Bachelor degree or higher qualification. Of those employed as Actuaries, 70% were found to possess this level of skill (*ABS Survey of Education and Work, 2010*).¹

High risk

Actuaries also meet the criteria for high risk/high disruption. This indicates that the occupation is important for the effective operation of an enterprise and/or the broader economy.

- ▶ Actuaries are required to register with the Institute of Actuaries of Australia (IAAust) prior to employment. Only Fellows and Accredited members of the Institute may use the title 'Actuary'.
- ▶ Actuaries are important to meet government policy priorities at both the Commonwealth and state level. These include financial decision-making and regulation, and initiatives such as the Superannuation Prudential Framework.

¹ Analysis for the Skilled Occupations List (SOL) was conducted using the latest available data, including the 2010 ABS Survey of Education and Work (SEW). Percentages may therefore differ from those cited in the 'Occupation Trends' analysis (over the page), which uses alternative sources in some instances (e.g. the 2008 ABS Survey of Education and Work). Small sample sizes for some occupations may also result in fluctuations in the SEW data between 2008 and 2010. The specific data sources used for the Occupation Trends analysis can be found on the Skills Australia website: <http://www.skillsaustralia.gov.au/SOLsummarysheets.shtml>.

Mathematicians and Statisticians have not been included on the SOL, as these occupations generally do not require long lead time (i.e. a three year undergraduate degree is usually sufficient to enter employment).

Occupation trends

ANZSCO: 2241

Actuaries, Mathematicians and Statisticians

Employment level	4300 A high proportion of workers (89.4%) are employed full-time.
6 digit employment (2006 Census)	224111 Actuary 1080 224112 Mathematician 350 224113 Statistician 2580
Employment growth	Over the five years to August 2010, employment decreased by 41.7% (compared with growth of 12.1% for all occupations). Employment is expected to rise by 17.1% over the next five years (compared with projected growth of 9.5% for all occupations).
Unemployment rate	Below average (around 1.1%) compared with all occupations.
Educational profile	Around 87.5% have a Bachelor degree or higher qualification.
Vacancies	The Internet Vacancy Index (IVI) rose by 61.0% over the 12 months to September 2010 to 172.5 (March 2006=100). Vacancies for all occupations increased by 19.4%.
Gender	Around 37.1% of workers are female (compared with 45.4% for all occupations).
Labour turnover	Around 12.7% of workers leave this occupation in a year compared with 13.1% for all occupations.
Age profile	The median age is 42 years and 49.6% are aged 45 years and over (compared with 38.5% for all occupations).
Earnings	Median full-time weekly earnings (before tax) are high (\$1731).
Graduate outcomes	Graduate Careers Australia data show that 83% of Bachelor degree graduates in mathematics seeking full-time work were working four months after graduation, 30% of whom were working as Business, Information and Marketing Professionals, 15% as Education Professionals and 14% as Clerical and Administrative Workers.
Skill shortages	Not assessed

Labour market

224111 Actuary: Not assessed

224112 Mathematician: Not assessed

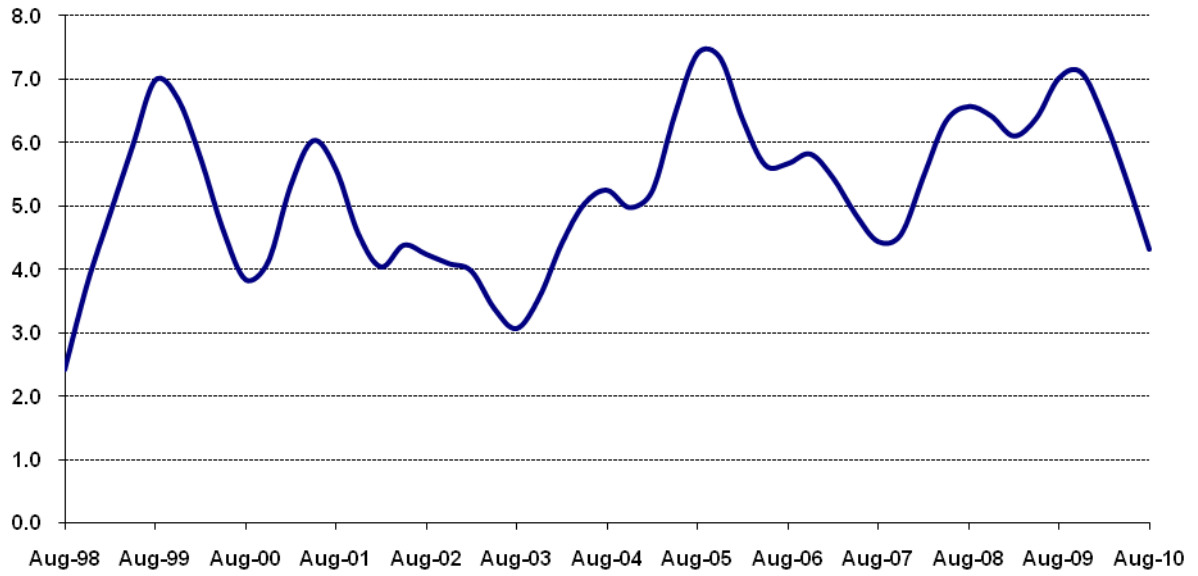
224113 Statistician: Not assessed

Summary

Although data have a relatively high standard error for this small occupational group and should be used cautiously, it is interesting to note that employment has fallen markedly while vacancy levels have risen strongly since early 2010. Unemployment is below average.

For Actuary specifically 2006 Census data show employment of slightly more than 1000 and a high qualification profile, with 88% of workers holding Bachelor degree or higher qualifications. It is highly concentrated in the Financial and Insurance Services industry (74%) and has a relatively young age profile.

Actuaries, Mathematicians and Statisticians
Employed Persons ('000s) Aug 1998 to Aug 2010



Internet Vacancy Index (IVI) - 3 Monthly Average - Nov 2006 - Sept 2010
Actuaries, Mathematicians and Statisticians (March 2006 = 100)

