

INSTRUCTIONS FOR CODING THE AUSTRALIAN GRADUATE SURVEY

Coding the AGS involves matching numeric codes to text responses on survey forms, and writing these codes in specific locations on the forms. A text response is matched with a code using code frames (most developed by the Australian Bureau of Statistics (ABS)). The text responses to be coded on the AGS form include those related to fields of education, countries, universities, occupations and industry of employment. Each type of response (e.g. occupation) has a separate code frame consisting of a list of related categories (e.g. plumber, fire-fighter) and a corresponding numeric code (e.g. plumber = 334111). Coders must match the text response on the form to the most appropriate category in the relevant code frame and enter the corresponding number on the correct part of the same survey form. Both speed and accuracy are important in the process of coding. Coders must try to get the correct code as quickly as possible.

Sorting Forms

There are four types of survey forms:

- Green forms (titled GDS & CEQ) dated October 2007
- Green forms (titled GDS & CEQ) dated April 2008
- Purple forms (titled GDS & PREQ) dated October 2007
- Purple forms (titled GDS & PREQ) dated April 2008

The green and purple colouring on the forms looks like this:



The easiest way to identify the different dates is to look at the question on age at the top right-hand corner on the front of the form. See below for an example of the green form (titled GDS & CEQ) dated April 2008:

Australian Graduate Survey
GDS & CEQ

your feedback is confidential

• please mark responses LIKE THIS: • use BLOCK LETTERS
• mark only ONE BOX, unless instructed • use a DARK pen

your qualification(s)

What is the FULL TITLE of the qualification(s) you completed in 2007 at your institution? (Please include combined/double degrees.)

For example: BACHELOR OF COMMERCE, DIPLOMA OF EDUCATION, BACHELOR OF ARTS / BACHELOR OF LAWS



about you

What was your age in years on 30 April 2008?

What is your sex?

female male

Were you in Australia on 30 April 2008?

yes no

Would you describe yourself as having a disability?

Forms are typically separated into different batches based on these forms types. They should also be sorted according to the general area of study associated with the graduate.

Items for Coding

The questions on the AGS form that need to be coded (if there are responses to them) are outlined below. Reviewing the colour coded example form will also help to understand which questions are coded to where.

Section	Page	Question text	Coded to:
your qualifications(s)	Page 1	What were the major fields of education in your qualification?	Maj1, Maj2, Maj3, Maj4

Notes:

- Up to four responses are allowed
- Code to MAJ1-MAJ4 using the Australian Standard Classification of Education (ASCED)

Question on form

What were the major fields of education in your qualification(s)?
For example: ACCOUNTING, PSYCHOLOGY, GENERAL NURSING, INFORMATION SYSTEMS

Coding boxes on form

OFFICE USE ONLY

maj1 (ASCED)	<input type="text"/>						
maj2 (ASCED)	<input type="text"/>						
maj3 (ASCED)	<input type="text"/>						
maj4 (ASCED)	<input type="text"/>						

Section	Page	Question text	Coded to:
about you	Page 1	What is your country of residence?	PERMNAT

Notes:

- Code to PERMNAT using the Standard Australian Classification of Countries (SACC)

Question on form

If no, what is your country of permanent residence?

Coding boxes on form

permnat (SACC)	<input type="text"/>						
----------------	----------------------	----------------------	----------------------	----------------------	----------------------	----------------------	----------------------

Section	Page	Question text	Coded to:
your course experience	Page 2	Major field 1, Major field 2	CEQMAJ1, CEQMAJ2

Notes:

- Code Major field 1 and Major field 2 to CEQMAJ1 and CEQMAJ2 using ASCED
- This is not required for PREQ forms

Question on form

MAJOR FIELD ONE	MAJOR FIELD TWO
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>

Coding boxes on form

OFFICE USE ONLY

ceqmaj1 (ASCED)	<input type="text"/>						
ceqmaj2 (ASCED)	<input type="text"/>						

Section	Page	Question text	Coded to:
your main paid work on [DATE]	Page 3	What was your employer's main business?	INDUSTRY

Notes:

- Code to INDUSTRY using the Australian and New Zealand Standard Industrial Classification (ANZSIC)

Question on form

What was your employer's main business?
 For example: FINANCIAL SERVICES, EDUCATION, HEALTH

Coding boxes on form

industry (ANZSIC)

Section	Page	Question text	Coded to:
your main paid work on [DATE]	Page 3	If you were working in a country other than Australia, in what country were you based?	EMPSTAT

Notes:

- Code to EMPSTAT coding box using SACC

Question on form

If no, in what country was your employment based?

Coding boxes on form

empstat (SACC)

Section	Page	Question text	Coded to:
your main paid work on [DATE]	Page 3	What were the main tasks or duties of your job?	DUTIES

Notes:

- Code to DUTIES coding box using the Australian and New Zealand Standard Classification of Occupations (ANZSCO)

Question on form

What were the main tasks or duties in your job?
 Describe as fully as possible. For example: ENGINEERING DESIGN FOR BRIDGE CONSTRUCTION, TEACHING PRIMARY SCHOOL CHILDREN, AUDITING AS A MEMBER OF AN AUDIT TEAM

Coding boxes on form

duties (ANZSCO)

Section	Page	Question text	Coded to:
your further study	Page 4	What were your major fields of education in that qualification?	FURMAJ1, FURMAJ2

Notes:

- Up to two responses allowed
- Code to FURMAJ1 and FURMAJ2 coding boxes using ASCED

Question on form

What were your major fields of education in that qualification?
 For example: ACCOUNTING, MANAGEMENT, HISTORY, MEDICINE

Coding boxes on form

furmaj1 (ASCED)

furmaj2 (ASCED)

Section	Page	Question text	Coded to:
your further study	Page 4	At which institution were you enrolled?	FURINST

Notes:

- Code to FURINST using institution codes

Question on form

At which institution were you enrolled?

Coding boxes on form

furinst (E308)					
-------------------	--	--	--	--	--

General Coding Points

1. Coders need to ensure that their codes are written neatly and clearly within code boxes with black biro pen (ink or felt pens may bleed through the paper and affect the responses on the reverse side).

Sometimes, number and letter characters can be confused by data entry personnel or computer scanners (6s for 0s, for example) so neater lettering and numbering can ensure cleaner data. The following examples show the best numerical style for coding, and how poorly written characters can lead to confusing 1 with 7, 3 with 8, 4 with 9, and 6 with 0.

1	2	3	4	5	6	7	8	9	0	
1	2	3	4	5	6	7	8	9	0	✓
1	2	3	4	5	6	7	8	9	0	✗

2. Make sure that you make a note of any complicated or tricky coding examples you come across that are not straight forward or common. Documenting these cases will help if a similar case arises in your, or someone else's batch. Make a note on a communal note board of any codes that you think are particularly useful for others to refer to.
3. It's important to know that we discourage the use of the 'nec' codes (more on 'nec' codes in the following section) unless absolutely necessary. Sometimes, further investigation of other responses on the survey form when a response you are coding is obscure or vague can help to clarify the issue.
4. Use a computer to search the full Australian Bureau of Statistics PDFs to assist you to classify fields of education and occupations which are obscure or unfamiliar. These PDFs are very large documents, and include much additional detail about particular categories that is not included in the concise spreadsheet code lists. Using CTRL+F activates the search function in Adobe reader. Think carefully about the key term you search with – trying a few different synonyms will usually result in resolving your query. Read the explanation around the term and see if the category does in fact fit with the case you are dealing with. If there are items you can't find codes for (or if you aren't confident of the code you selected) query them with someone else.
5. As a general principal, coders should familiarise themselves with the particular coding schemes they will be using, especially the Australian Standard Classification of Education (ASCED), **OR** the Australian and New Zealand Standard Industrial Classification (ANZSIC) *and* the Australian and New Zealand Standard Classification of Occupations (ANZSCO). These three classification schemes are large and complex and include many terms with which you may not be familiar.
6. In some cases, you may be familiar with a particular field of study, industry or occupation but not recognise the corresponding term given within the relevant code frame, or where this fits within the coding structure. Familiarity with the appropriate code frames will help to reduce the instances of this occurring. Coders should take time to read their simple code frame and highlight any categories they are not familiar with, or would have trouble defining. Then refer to the full ABS PDF relating to that code frame, and read the corresponding definition. Notes can then be made on the simple code frame to remind the coder and help them understand the category when this is referred to in future.

Field of Education Coding Notes: *Australian Standard Classification of Education (ASCED)*

The federal Department of Education, Employment and Workplace Relations (DEEWR) notes that the ASCED field of education classification is used to describe higher education courses, specialisations and units of study. The main purpose of the classification is to ensure courses, specialisations and units of study with the same or similar **vocational emphasis** are reliably classified to the same field of education code. It is intended also to aid people who design data collections, respond to requests for data, and compile, verify and analyse data.

As such, the classification may be viewed as a dictionary clarifying where particular courses, specialisations and units of study data should be categorised. It is important to note that this classification has been developed to be used nationally in all administrative and survey collections which incorporate data on education by field.

ASCED codes are six digit numbers that decompose into three levels: Broad Field of Education (BFOE), Narrow Field of Education (NFOE) and Detailed Field of Education (DFOE). BFOE is determined by the first two digits, NFOE is determined by the first four digits and DFOE is determined by all six digits.

For example, in code 010501, the first two digits (01) represent the broad field of 'natural and physical sciences', the first four digits (0105) represent the narrow field of 'chemical sciences', and the full six digits (010501) represent the detailed field of organic chemistry.

Other/not elsewhere classified (n.e.c.) and not further defined (n.f.d)

Category labels beginning with 'Other' or ending 'n.e.c.' are included for use where the field of education given does not clearly fit into its own category even though there is specific information available. Examples of this are multi-disciplinary courses where there are no obvious predominant fields of education, or where the field is so unusual as to not warrant its own category at the detailed level. For example, colloid science is a specific field of chemical sciences, but is so rare it comes under *Chemical Sciences, n.e.c.* along with analytical chemistry, theoretical chemistry and others. Not elsewhere classified codes always end in 9.

Category labels ending with n.f.d. are used where the information available is not specific enough to code to the detailed level. These are sometime referred to as 'umbrella codes'. Not further defined codes end in 00 (such as 010500 - chemical sciences) and are only used when there is enough information to code to a broad or narrow level (e.g. 'chemical sciences') but not enough to code to a detailed level.

As mentioned earlier, we discourage the use of both Other/n.e.c. and n.f.d. codes unless absolutely necessary.

Using qualification title

The primary source of information for coding AGS data with ASCED are the major fields of education. However, there are instances where the qualification title may provide supplementary, or in some cases better information, with regards to the **vocational emphasis** of the relevant course of study.

For example, a graduate may have completed a degree in nursing and indicated this in the title of their qualification, but written "anatomy" and "health sciences" in response their major fields of education. While technically not incorrect, their major field of education was in fact "nursing". In this instance, their first major field of education (maj1 in the office use only area of the form) should be coded as "nursing", followed by "anatomy" (maj2) and "health sciences" (maj3). Another example is where a graduate with a Bachelor in Education might list their major fields of education as French and history. Because this respondent has clearly trained to be a teacher, their first major should be coded as teacher education, not French. If, however, the qualification title had been Bachelor of Arts, then the first major would be coded as French, because a liberal arts qualification does not have a vocational focus beyond the nature of the specific topics studied.

It's hard to give a definitive rule for this situation, but generally we want to capture information which is pertinent to graduate careers. It's no use having a lot of people reporting their field of education as anatomy and working as physiotherapists when they've obviously studied physiotherapy in the first place. Where a qualification generally leads to a particular occupation or profession, it's better to code the field of education pertinent to the occupation. However, be very cautious about assuming you know the vocational focus of the qualification. Except for obvious cases such as nursing and teacher

education outlined above, if you believe there is a legitimate conflict between the field of education indicated by the qualification title and the majors listed, you should seek advice from a more senior coder or supervisor.

Common difficulties when coding with ASCED

- In the case of law courses, initial law training courses (LLBs) should be coded 090900 and post-initial but pre-registration courses (practical legal training) should be coded 090913.
- Coding qualification title instead of field of education when this is not appropriate. For example, coding a graduate with a Bachelor in Business and majors in accounting and finance as business management (in maj1) instead of accounting.
- Coding field of education instead of qualification title where the qualification title actually gives better information about the core purpose of the course. For example, coding a graduate with a Bachelor in Education with majors in French and history as French and history instead of teacher education.
- Not coding to six digits when detail is available. For example, coding construction engineering (030901) as civil engineering (030900).
- Coding to 'nec (not elsewhere classified)' when not enough detail is available. For example, coding civil engineering (030900) as 'civil engineering not elsewhere classified' (030999).

Industry Coding Notes: *Australian and New Zealand Standard Industrial Classification (ANZSIC)*

The Australian and New Zealand Standard Industrial Classification (ANZSIC) codes comprise four hierarchical levels: division, sub-division, group and class. Graduate Careers Australia (GCA) uses a **sub-set of ANZSIC codes which excludes most class-level codes**. It is therefore important that when referring to the full ANZSIC document published by the ABS, any relevant class-level code found be checked against the GCA list to ensure that it is valid. ANZSIC codes are comprised of four digits: the first indicates the division, the second the sub-division, the third the group and the fourth the class. There are 2003 and 2006 editions of ANZSIC. GCA uses the 2006 edition.

Other/not elsewhere classified (n.e.c.) and not further defined (n.f.d)

Category labels beginning with 'Other' or ending 'n.e.c.' are included for use where the field of education given does not clearly fit into its own category even though there is specific information available. For example, explosives manufacturing is a specific industry, but is so unusual it is simply classified under *Other Basic Chemical Product Manufacturing*, along with photographic products and other small chemical product manufacturing industries.

Category labels ending with n.f.d. are used where the information available is not specific enough to code to the detailed level. These are sometime referred to as 'umbrella codes'. Not further defined codes end in 00 (such as 4100 – food retailing nfd) and are only used when there is enough information to code to more detailed level.

As mentioned earlier, we discourage the use of both Other/n.e.c. and n.f.d. codes unless absolutely necessary.

Common difficulties when coding industry information:

- Respondents sometimes give misleading or ambiguous industry information and this should be checked against their occupation details. For example, a respondent who writes they are working for the NSW Department of Education and lists their employer's main business as 'Government' might indicate they are working as a secondary school teacher. Their industry should therefore be coded as 'Secondary School Education', not 'State Government Administration'. This is also often the case for nurses working in the public sector. However, in all cases take care not to mis-classify the industry of persons who are working directly for a government department, for example secondary school curriculum advisors working within a department of education.
- No response to employer's main business question. If the respondent has provided the employers name, you may use this to code their industry of employment. If no employer is shown, you can not code industry based on occupation information. Where coding from the employers name only, unless very certain about the employers main business, determine the nature of the organisation by a quick internet search.
- Certain businesses straddle two or more categories. For example, there are separate codes for electricity transmission (2620) and electricity distribution (2630), while some companies do both. In such cases, the industry can be 'coded up' to a relevant umbrella code/nfd level. For example, a company involved in both electricity transmission and electricity distribution can be coded as Electricity Supply nfd (2600). However there may be no relevant umbrella code, for example, there is no umbrella/nfd code covering a company providing gas supply (2700) and electricity transmission (2620). In such cases:
 - Firstly, if you aware that the employer is predominantly associated with one of the specific codes then code to that industry.
 - Secondly, if the graduate's occupation is related to one of the specific industry codes (for example, transmission line technician) then code to that industry (electricity transmission).
 - Thirdly, if the graduate's study was in an area clearly related to one of the specific codes (for example, Electrical Engineering) then code to that industry (electricity transmission)
 - Lastly, simply choose one of the codes at random.

- Where two employers are listed and there is no indication of which is the **main** employer:
 - Firstly, if the graduate has given one occupation only (or indicated that one is the **main** occupation) and it is clear which one of the employers it is related to, then code to that industry. Note: in the case of two occupations, the corresponding **main** occupation should be coded to duties, rather than the secondary occupation.
 - Secondly, if the graduate's study was in an area clearly related to one of the specific codes (for example, Electrical Engineering) then code to that industry (electricity transmission)
 - Lastly, simply code the first employer listed.
- There is a certain degree of similarity between several building/construction categories and engineering services which occupy very different areas of ANZSIC. Pay close attention when categorising employers in this area and refer to the full ANZSIC document if necessary.
- The finance and insurance services section of ANZSIC is an area of industry which many people have found unclear with regards to the content of the specific categories. When coding within this area, please pay particular attention and refer to the full ANZSIC document if necessary.
- Commercial banks are classified under 'Depository Financial Intermediation'. The Reserve Bank of Australia (the bank of the Federal Government) should be coded under Central Banking.

Occupation Coding Notes: *Australian and New Zealand Standard Classification of Occupation (ANZSCO)*

The Australian and New Zealand Standard Classification of Occupations (ANZSCO) codes comprise five hierarchical levels: major, sub-major, minor, unit and group. GCA codes occupation consistently to the unit level, as much as is possible given the detail available in survey responses. Coders should familiarise themselves with the major groups and sub-groups by which the codes are organised and with the range and logic of available codes. As well as being divided into different areas of work (e.g. manufacturing occupations are included in one area, while finance-related occupations are in a different area), the codes are roughly ordered by 'skill level'. In effect, this means that more senior occupations are at the start of the code scheme, with less senior occupations towards the end. The major occupational groups reflect this hierarchy:

1. Managers
2. Professionals
3. Technicians and Trades Workers
4. Community and Personal Service Workers
5. Clerical and Administrative Workers
6. Sales Workers
7. Machinery Operators
8. Labourers

Using occupation title

Although ANZSCO codes should generally be based on the information provided in response to the question 'What were the main tasks or duties in your job?' (the 'duties' variable), this information is not always sufficient for coding purposes and coders may utilise other information on the form if required. The primary alternative is generally the title of occupation and in some cases, the industry of employment. Such information should only be used in the event that the response provided for 'duties' is not sufficient for coding, and that the supplementary information provides a reliable alternative guide to the occupation type, as occupation titles can sometimes be misleading. As a general rule, coders should be very cautious when coding using supplementary information. When sufficient information is not available to be confident of the correct code, it is best to avoid coding altogether. No code is preferable to an incorrect code.

Common difficulties when coding occupation:

- Two occupations listed where there is no clear indication as to which is the **main** occupation.
 - Firstly, if the graduate's main industry of employment is clearly more related to one of the specific occupations (for example, they have listed librarian and retail assistant as occupations, and their employer as a library) then code the occupation related to the industry
 - Secondly, if the graduate's study was in an area clearly related to one of the specific codes (for example, Electrical Engineering) then code to that occupation (transmission technician for example)
 - Lastly, simply code the first employer listed.
- When coding an occupation listed as 'research assistant', 'postdoctoral researcher' or similar, coders should treat the graduate as working professionally. For example, if an economics graduate is working as a research assistant, code the response as 'economist'. Not all occurrences will be as simple as this, but it gives an indication of how coding should be done. If in doubt, please consult a senior coder or supervisor.
- On occasion you may come across a form where a graduate has listed their occupation as 'PhD student' (or similar). This is NOT a full-time occupation and should not be coded as one, regardless of whether they are receiving a stipend, bursary, scholarship or other allowance related to their qualification. In such cases, present the form to your supervisor who may choose to remove certain responses from the form. This also applies for respondents who note they are drawing on superannuation in the occupation section – their response to the proceeding working question should be classified as 'not working'.

- Non-specific administrative positions that are more senior than a clerical level. As much as possible, occupations should be coded to the specific area to which they are related. However, occasionally ambiguous positions are listed which do not fit either at a management or clerical level. While the code 'Program or Project Administrator' (511112) may seem too low a level for some roles, it can be used cautiously where there is no specific relevant code.
- Defence force members. When coding defence force members, there are few relevant codes and the distinctions between these are more to do with the skill level than the type of role. Refer to the full PDF for more detail if necessary.