





### Skill Shortages Sydney

	1996 (a)	1997 (a)	1998	1999	2000	2001	2002	2003	2004	2005 (b)
Tour Guide – Japanese Speaking	X	X								
Urban and Regional Planner										
Vehicle Painter				X	X	X	X	X	X	X
Welder*	X			X	X	X		X	X	X
Wood Machinist*					X	X	X	X	X	X

X = shortage

\* shortages are restricted to specialist skills. For information on specialisations in shortage, see original lists.

(a) Prior to the Skill Shortage Lists released for 1999, ratings were provided only at the State level with few exceptions. Occupations assessed as in shortage in a State or Territory in 1996 or 1997, have been included in both the metropolitan and regional lists unless the comment indicated the shortage was limited to one or the other.

(b) 2005 Lists for Professions and ICT skills have not yet been released for 2005



### Skill Shortages regional New South Wales

	1996 (a)	1997 (a)	1998	1999	2000	2001	2002	2003	2004	2005 (b)
Physiotherapist*	X	X	X	X			X	X	X	X
Plumber*				X					X	X
Podiatrist									X	
Printing Machinist									X	
Radiation Therapist	X	X	X	X	X	X	X	X	X	X
Refrigeration and Airconditioning Mechanic*										
Registered Mental Health Nurse	X	X	X	X	X	X	X	X	X	X
Registered Midwife	X	X	X	X	X	X	X	X	X	X
Registered Nurse*	X	X	X	X	X	X	X	X	X	X
Roof Slater and Tiler										
Secondary School Teacher*										
Sheetmetal Worker* - First Class	X	X	X	X	X	X	X	X		X
Shipwright/Boatbuilder										
Social Worker									X	
Solid Plasterer									X	X
Sonographer									X	
Specialist Medical Practitioner	X	X	X	X	X	X	X	X		
Speech Pathologist										
Surveying Associate										
Toolmaker*	X	X	X	X	X		X	X	X	X
Tour Guide - Japanese Speaking	X	X	X	X						
Urban and Regional Planner										
Vehicle Painter										
Welder*	X			X		X	X	X	X	X
Wood Machinist*					X	X	X	X	X	X

X = shortage

\* shortages are restricted to specialist skills. For information on specialisations in shortage, see original lists.

(a) Prior to the Skill Shortage Lists released for 1999, ratings were provided only at the State level with few exceptions. Occupations assessed as in shortage in a State or Territory in 1996 or 1997, have been included in both the metropolitan and regional lists unless the comment indicated the shortage was limited to one or the other.

(b) 2005 Lists for Professions and ICT skills have not yet been released for 2005

### Skill Shortages Melbourne

	1996 (a)	1997 (a)	1998	1999	2000	2001	2002	2003	2004	2005 (b)
Accountant*	X									
Architectural/Civil Engineering Associate		X							X	
Audioologist										
Automotive Electrician				X	X	X	X	X	X	X
Baker										
Binder and Finisher								X		
Boilermaker*				X	X	X		X	X	X
Bricklayer				X	X			X		
Cabinetmaker				X	X			X	X	
Carpenter*	X									
Chef*	X			X	X	X		X	X	X
Child Care Coordinator		X	X	X	X	X	X	X	X	X
Child Care Worker*		X	X	X	X	X	X	X	X	X
Civil Engineer*		X	X	X	X	X	X	X	X	X
Communication Trades*	X									
Computer/ICT Professional*	X	X	X	X	X	X	X			
Cook*	X									
Dentist*								X	X	X
Electrical Engineer*							X	X	X	X
Electrical Mechanic/Fitter/Armature Winder*										
Electrical Powerline Trades									X	X
Electronic Equipment Trades*										X
Electronic Instrument Trades*										X
Electronics Engineer*										X
Electroplater	X		X							
Enrolled Nurse	X	X	X	X			X	X	X	X

### Skill Shortages Melbourne

	1996 (a)	1997 (a)	1998	1999	2000	2001	2002	2003	2004	2005 (b)
Fibrous Plasterer	X			X	X				X	
Furniture Finisher	X	X	X	X	X				X	
Furniture Upholsterer	X	X	X	X	X	X	X	X	X	X
Hairdresser		X	X	X	X	X	X	X	X	X
Legal Professional*	X					X				
Medical Diagnostic Radiographer	X			X	X	X	X			
Metal Fitter*		X	X	X	X	X	X	X	X	X
Metal Machinist*		X	X	X	X	X	X	X	X	X
Metal Polisher	X	X	X	X	X	X	X			
Mining Engineer*	X	X								
Motor Mechanic*	X	X	X	X	X	X	X	X	X	X
Nail Technician	X									
Nuclear Medicine Technologist					X	X				
Occupational Therapist*	X				X	X	X	X	X	X
Panel Beater				X	X	X	X	X	X	X
Pastrycook*		X		X	X	X	X	X	X	X
Pharmacist*				X	X	X	X	X	X	X
Physiotherapist*	X			X	X	X	X	X	X	X
Plumber										X
Podiatrist									X	
Radiation Therapist					X	X	X	X	X	X
Refrigeration and Airconditioning Mechanic				X	X	X	X	X	X	X
Registered Mental Health Nurse	X	X	X	X	X	X	X	X	X	X
Registered Midwife				X	X	X	X	X	X	X
Registered Nurse*	X	X	X	X	X	X	X	X	X	X
Roof Slater and Tiler					X	X	X	X	X	X

### Skill Shortages Melbourne

	1996 (a)	1997 (a)	1998	1999	2000	2001	2002	2003	2004	2005 (b)
Secondary School Teacher*	X	X	X	X	X	X	X	X	X	
Sheetmetal Worker* – First Class		X	X	X	X	X	X	X	X	X
Solid Plasterer			X	X	X	X	X	X	X	
Sonographer		X	X	X	X	X	X	X	X	
Speech Pathologist*										
TCF Mechanic	X							X	X	
Textiles Patternmaker/Grader	X									
Toolmaker*		X	X	X	X	X	X	X	X	X
Vehicle Painter			X	X	X		X	X	X	X
Welder*				X	X	X		X	X	X
Wood Machinist	X								X	X

X = shortage

\* shortages are restricted to specialist skills. For information on specialisations in shortage, see original lists.

(a) Prior to the Skill Shortage Lists released for 1999, ratings were provided only at the State level with few exceptions. Occupations assessed as in shortage in a State or Territory in 1996 or 1997, have been included in both the metropolitan and regional lists unless the comment indicated the shortage was limited to one or the other.

(b) 2005 Lists for Professions and ICT skills have not yet been released for 2005





### Skill Shortages regional Victoria

	1996 (a)	1997 (a)	1998	1999	2000	2001	2002	2003	2004	2005 (b)
Panel Beater				X	X	X	X	X	X	X
Pastrycook*		X	X	X	X	X	X	X	X	X
Pharmacist*	X		X	X	X	X	X	X	X	
Physiotherapist*	X		X		X	X	X	X	X	
Plumber										X
Podiatrist										
Radiation Therapist					X	X	X	X	X	X
Refrigeration and Airconditioning Mechanic				X	X	X	X	X	X	X
Registered Mental Health Nurse	X	X	X	X	X	X	X	X	X	
Registered Midwife					X	X	X	X	X	
Registered Nurse*	X	X	X	X	X	X	X	X	X	
Roof Slater and Tiler					X	X	X	X	X	
Secondary School Teacher*	X	X	X	X	X	X	X	X	X	
Sheetmetal Worker* - First Class				X	X	X	X	X	X	X
Social Worker				X	X	X	X	X	X	
Solid Plasterer				X	X	X	X	X	X	X
Sonographer				X	X	X	X	X	X	
Speech Pathologist*		X	X	X	X	X	X	X	X	
TCF Mechanic	X									
Textiles Patternmaker/Grader	X									
Toolmaker*					X	X	X	X	X	X
Tour Guide - Japanese Speaking		X	X	X	X	X	X	X	X	X
Vehicle Painter				X	X	X	X	X	X	X
Welder*				X	X	X	X	X	X	X
Wood Machinist	X			X	X	X	X	X	X	X

X = shortage

\* shortages are restricted to specialist skills. For information on specialisations in shortage, see original lists.

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### Skill Shortages Brisbane

	1996 (a)	1997 (a)	1998	1999	2000	2001	2002	2003	2004	2005 (b)
Registered Nurse*	X	X	X	X	X	X	X	X	X	
Roof Slater and Tiler								X		
Secondary School Teacher*	X	X	X	X	X	X	X	X		
Sheetmetal Worker* - First Class	X	X		X	X	X	X	X	X	X
Shipwright/Boatbuilder					X					
Sonographer	X			X	X	X	X	X	X	
Spatial Information Systems Technician	X		X							
Speech Pathologist							X	X	X	
Toolmaker*	X	X	X	X	X	X	X	X	X	X
Vehicle Painter	X	X	X	X	X	X	X	X	X	X
Waiter	X									
Welder*	X	X		X	X	X	X		X	X
Wood Machinist					X					
Wood Turner					X					

X = shortage

\* shortages are restricted to specialist skills. For information on specialisations in shortage, see original lists.

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Skill Shortages regional Queensland

	1996 (a)	1997 (a)	1998	1999	2000	2001	2002	2003	2004	2005 (b)
Panel Beater	X	X	X	X	X	X	X	X	X	X
Pastrycook*	X	X	X	X	X	X	X	X	X	X
Pharmacist*			X	X	X	X	X	X	X	
Physiotherapist	X	X	X	X	X	X	X	X	X	
Plumber*										X
Podiatrist*									X	X
Printing Machinist								X	X	X
Radiation Therapist					X	X	X	X	X	X
Refrigeration and Airconditioning Mechanic				X	X	X	X	X	X	X
Registered Mental Health Nurse	X	X	X	X	X	X	X	X	X	
Registered Midwife	X	X	X	X	X	X	X	X	X	
Registered Nurse*	X	X	X	X	X	X	X	X	X	
Roof Slater and Tiler								X		
Secondary School Teacher*	X	X	X	X	X	X	X	X		
Sheetmetal Worker* - First Class	X	X	X	X	X	X	X	X	X	X
Shipwright/Boatbuilder					X					
Social Worker	X									
Sonographer	X	X	X	X	X	X	X	X	X	
Spatial Information Systems Technician	X									
Speech Pathologist							X	X	X	
Toolmaker*	X	X	X	X	X	X	X	X	X	X
Vehicle Painter	X	X	X	X	X	X	X	X	X	X
Waiter	X									
Welder*	X	X		X	X	X	X		X	X
Wood Machinist					X					
Wood Turner					X					

X = shortage

\* shortages are restricted to specialist skills. For information on specialisations in shortage, see original lists.

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(b) 2005 Lists for Professions and ICT skills have not yet been released for 2005





**Skill Shortages Adelaide**

	1996 (a)	1997 (a)	1998	1999	2000	2001	2002	2003	2004	2005 (b)
Hairdresser			X	X	X	X		X	X	X
Metal Fitter*						X		X	X	X
Metal Machinist				X	X	X	X	X	X	X
Mining Engineer			X							
Motor Mechanic		X	X	X	X	X	X	X	X	X
Occupational Therapist	X									
Osteopath	X							X		
Painter and Decorator						X				
Panel Beater	X	X	X	X	X	X	X	X	X	X
Pharmacist	X	X	X	X	X	X	X	X	X	X
Physiotherapist	X							X		
Plumber				X		X		X		X
Podiatrist*										
Printing Machinist			X					X		
Radiation Therapist								X	X	
Refrigeration and Airconditioning Mechanic			X	X	X	X	X	X	X	X
Registered Mental Health Nurse	X			X	X			X	X	X
Registered Midwife							X	X	X	
Registered Nurse*					X	X	X	X	X	X
Secondary School Teacher*						X		X	X	X
Sheetmetal Worker – First Class			X	X	X			X	X	X
Solid Plasterer		X	X	X	X			X	X	X
Sonographer		X	X	X		X	X	X	X	X
Speech Pathologist										
Toolmaker*		X	X		X	X	X	X	X	X
Vehicle Body Maker	X	X	X		X	X	X	X	X	X
Vehicle Painter	X	X	X		X					
Vehicle Trimmer	X	X	X		X					

**Skill Shortages Adelaide**

	1996 (a)	1997 (a)	1998	1999	2000	2001	2002	2003	2004	2005 (b)
Viticulturist	X									
Wall and Floor Tiler						X				
Welder			X					X	X	X
Wood Machinist					X				X	

*X = shortage*

*\* shortages are restricted to specialist skills. For information on specialisations in shortage, see original lists.*

*(a) Prior to the Skill Shortage Lists released for 1999, ratings were provided only at the State level with few exceptions. Occupations assessed as in shortage in a State or Territory in 1996 or 1997, have been included in both the metropolitan and regional lists unless the comment indicated the shortage was limited to one or the other.*

*(b) 2005 Lists for Professions and ICT skills have not yet been released for 2005*



Skill Shortages regional South Australia

	1996 (a)	1997 (a)	1998	1999	2000	2001	2002	2003	2004	2005 (b)
Pastrycook										X
Pharmacist	X	X	X	X	X	X	X	X	X	
Physiotherapist	X		X	X	X		X	X	X	
Plumber			X	X		X				X
Podiatrist*								X	X	
Printing Machinist			X							
Radiation Therapist			X				X	X	X	
Refrigeration and Airconditioning Mechanic	X		X	X	X	X	X	X	X	X
Registered Mental Health Nurse			X	X			X	X	X	
Registered Midwife			X	X			X	X	X	
Registered Nurse*			X	X	X	X	X	X	X	
Secondary School Teacher*			X	X	X	X	X	X	X	
Sheetmetal Worker - First Class			X	X	X	X	X	X	X	X
Solid Plasterer		X		X		X		X	X	X
Sonographer		X	X	X		X		X	X	
Speech Pathologist		X		X		X		X	X	
Toolmaker*		X	X	X		X		X	X	
Vehicle Body Maker	X	X	X			X	X	X	X	X
Vehicle Painter	X	X	X		X				X	X
Vehicle Trimmer	X	X	X							
Viticulturist	X									
Wall and Floor Tiler						X				
Welder			X		X			X	X	X
Wood Machinist									X	X

X = shortage

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Skill Shortages Perth

	1996 (a)	1997 (a)	1998	1999	2000	2001	2002	2003	2004	2005 (b)
Toolmaker*		X	X							X
Vehicle Body Maker		X	X							
Vehicle Painter*		X	X		X				X	X
Veterinarian			X	X	X					
Welder	X		X	X				X	X	X
Wood Machinist	X		X	X						

X = shortage

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## Skill Shortages regional Western Australia

	1996 (a)	1997 (a)	1998	1999	2000	2001	2002	2003	2004	2005 (b)
Occupational Therapist*	X	X	X			X	X	X		
Panel Beater	X			X	X	X	X		X	X
Pastrycook	X	X	X	X	X	X	X	X	X	X
Pharmacist			X	X	X	X	X	X	X	
Physiotherapist*		X	X	X	X	X	X	X	X	X
Plumber*			X	X	X	X		X	X	
Podiatrist*										
Psychiatrist*	X	X	X	X						
Radiation Therapist						X	X	X		
Refrigeration and Airconditioning Mechanic*	X	X		X	X	X	X	X	X	X
Registered Mental Health Nurse	X		X	X	X	X	X	X	X	
Registered Midwife	X		X	X	X	X	X	X	X	
Registered Nurse*	X	X	X	X	X	X	X	X	X	
Scaffolder and Rigger	X									
Screen Printer	X									
Secondary School Teacher*		X		X	X	X	X			
Sheetmetal Worker* - First Class	X	X	X	X	X	X			X	X
Shipwright/Boatbuilder		X								
Social Worker	X									
Solid Plasterer										X
Sonographer	X	X	X	X	X	X	X	X	X	
Speech Pathologist		X		X	X	X	X			
Toolmaker*		X	X	X	X	X	X			X
Vehicle Body Maker		X	X	X	X	X	X			X
Vehicle Painter*		X	X	X	X	X	X		X	X
Veterinarian			X	X	X					
Welder	X	X	X	X	X			X	X	X
Wood Machinist	X									

X = shortage

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(b) 2005 Lists for Professions and ICT skills have not yet been released for 2005

## Skill Shortages Hobart

	1996 (a)	1997 (a)	1998	1999	2000	2001	2002	2003	2004	2005 (b)
Accountant*					X			X	X	
Audiologist							X			
Automotive Electrician	X	X	X			X	X	X	X	X
Baker										
Boilermaker	X	X	X						X	X
Bricklayer								X	X	X
Building Inspector	X	X								
Cabinetmaker*					X	X	X	X		X
Carpenter									X	X
Chef*	X	X	X	X	X	X	X	X		X
Child Care Coordinator		X	X	X	X	X	X	X	X	X
Child Care Worker*	X	X	X	X	X	X	X	X	X	
Computer/ICT Professional*	X	X	X	X	X	X	X	X		
Cook*	X				X					
Dentist								X		
Diagnostic Radiographer	X	X	X	X	X	X	X	X	X	
Electrical Engineer					X		X			
Electrical Mechanic/Fitter/Armature Winder	X	X			X	X	X		X	X
Electrical Powerline Trades										X
Electronic Equipment Trades*							X		X	X
Electronic Instrument Trades						X	X		X	X
Electronics Engineer					X	X	X			
Enrolled Nurse							X	X		
Environmental Health Officer	X	X	X							
Fibrous Plasterer						X				
Furniture Polisher*	X	X			X					X
Furniture Upholsterer	X	X	X	X		X	X	X	X	X
Hairdresser		X	X	X	X	X	X	X	X	X
Legal Professional*										
Metal Fitter	X	X	X						X	X
Metal Machinist										
Motor Mechanic	X	X	X	X		X	X		X	X
Nuclear Medicine Technologist	X	X	X	X		X	X	X	X	X
Occupational Therapist	X	X	X							

## Skill Shortages Hobart

	1996 (a)	1997 (a)	1998	1999	2000	2001	2002	2003	2004	2005 (b)
Panel Beater	X	X	X	X		X	X	X	X	X
Pastrycook*					X				X	X
Pharmacist			X	X	X	X	X	X	X	
Physiotherapist	X	X	X	X	X					
Plumber									X	X
Podiatrist*	X	X	X						X	
Printing Machinist	X	X								
Radiation Therapist	X	X	X			X	X	X	X	
Refrigeration and Airconditioning Mechanic			X	X	X	X	X	X	X	X
Registered Mental Health Nurse		X	X		X	X	X	X	X	
Registered Midwife					X	X	X	X	X	
Registered Nurse*	X	X	X	X	X	X	X	X	X	
Secondary School Teacher*	X	X	X							
Sheetmetal Worker - First Class	X	X	X	X		X		X	X	X
Solid Plasterer*									X	X
Sonographer*	X			X	X		X	X	X	
Speech Pathologist							X	X	X	
TCF Mechanic		X	X				X	X	X	
Toolmaker*	X	X	X	X						
Vehicle Painter	X	X	X	X		X		X	X	X
Welder	X	X	X						X	X

X = shortage

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### Skill Shortages regional Tasmania

	1996 (a)	1997 (a)	1998	1999	2000	2001	2002	2003	2004	2005 (b)
Accountant*					X				X	
Audiologist							X			
Automotive Electrician	X	X	X			X	X		X	X
Boilermaker	X	X	X						X	X
Bricklayer									X	X
Building Inspector	X	X								
Cabinetmaker*					X	X	X			X
Carpenter					X	X	X		X	X
Chef*	X	X	X	X	X	X	X			X
Child Care Coordinator		X	X	X	X	X	X		X	X
Child Care Worker*		X	X	X	X	X	X		X	X
Computer/ICT Professional*	X	X	X	X	X	X	X		X	X
Cook*	X	X	X	X	X	X	X			
Dentist								X		
Diagnostic Radiographer	X	X	X	X	X	X	X	X	X	
Electrical Engineer					X	X	X			
Electrical Mechanic/Fitter/Armature Winder	X	X			X	X	X		X	X
Electrical Powerline Trades										X
Electronic Equipment Trades*						X	X		X	X
Electronic Instrument Trades						X	X		X	X
Electronics Engineer					X	X	X			X
Enrolled Nurse								X	X	
Environmental Health Officer	X	X	X							
Fibrous Plasterer						X			X	
Furniture Polisher*	X	X			X					
Furniture Upholsterer	X	X	X	X		X	X		X	X
Hairdresser					X	X	X		X	X
Legal Professional*						X	X		X	
Metal Fitter	X	X	X							X
Metal Machinist										X
Motor Mechanic	X	X	X	X		X	X		X	X
Nuclear Medicine Technologist	X	X	X	X						
Occupational Therapist	X	X	X	X				X	X	
Panel Beater	X	X	X	X		X	X		X	X
Pastrycook*					X				X	X
Pharmacist				X	X	X	X		X	X

### Skill Shortages regional Tasmania

	1996 (a)	1997 (a)	1998	1999	2000	2001	2002	2003	2004	2005 (b)
Physiotherapist	X	X	X	X	X	X	X	X	X	X
Plumber	X	X	X	X	X	X	X	X	X	X
Podiatrist*	X	X	X	X	X	X	X	X	X	X
Printing Machinist	X	X	X	X	X	X	X	X	X	X
Radiation Therapist	X	X	X	X	X	X	X	X	X	X
Refrigeration and Airconditioning Mechanic	X	X	X	X	X	X	X	X	X	X
Registered Mental Health Nurse	X	X	X	X	X	X	X	X	X	X
Registered Midwife	X	X	X	X	X	X	X	X	X	X
Registered Nurse*	X	X	X	X	X	X	X	X	X	X
Secondary School Teacher*	X	X	X	X	X	X	X	X	X	X
Sheetmetal Worker – First Class	X	X	X	X	X	X	X	X	X	X
Social Worker	X	X	X	X	X	X	X	X	X	X
Solid Plasterer*	X	X	X	X	X	X	X	X	X	X
Sonographer*	X	X	X	X	X	X	X	X	X	X
Speech Pathologist	X	X	X	X	X	X	X	X	X	X
TCF Mechanic	X	X	X	X	X	X	X	X	X	X
Toolmaker*	X	X	X	X	X	X	X	X	X	X
Vehicle Painter	X	X	X	X	X	X	X	X	X	X
Welder	X	X	X	X	X	X	X	X	X	X

X = shortage

\* shortages are restricted to specialist skills. For information on specialisations in shortage, see original lists.

(a) Prior to the Skill Shortage Lists released for 1999, ratings were provided only at the State level with few exceptions. Occupations assessed as in shortage in a State or Territory in 1996 or 1997, have been included in both the metropolitan and regional lists unless the comment indicated the shortage was limited to one or the other.

(b) 2005 Lists for Professions and ICT skills have not yet been released for 2005



## Skill Shortages Darwin

	1996 (a)	1997 (a)	1998	1999	2000	2001	2002 (c)	2003	2004	2005 (b)
Panel Beater	X	X						X	X	X
Pastrycook		X	X	X	X		X	X	X	
Pharmacist		X	X		X	X		X		
Physiotherapist								X	X	
Plumber*	X		X					X	X	X
Podiatrist*								X	X	
Refrigeration and Airconditioning Mechanic	X	X	X	X				X	X	X
Registered Midwife								X	X	
Registered Nurse*	X	X	X	X	X	X		X	X	
Registered Psychiatric Nurse	X	X	X	X	X	X	X	X	X	
Secondary School Teacher*								X		
Sheetmetal Worker – First Class		X	X	X	X	X		X	X	X
Social Worker								X	X	
Solid Plasterer				X						X
Tour Guide – Japanese Speaking	X									
Ultrasonographer				X					X	
Vehicle Painter	X	X							X	
Welder*	X	X	X	X					X	X

X = shortage

\* shortages are restricted to specialist skills. For information on specialisations in shortage, see original lists.

(a) Prior to the Skill Shortage Lists released for 1999, ratings were provided only at the State level with few exceptions. Occupations assessed as in shortage in a State or Territory in 1996 or 1997, have been included in both the metropolitan and regional lists unless the comment indicated the shortage was limited to one or the other.

(b) 2005 Lists for Professions and ICT skills have not yet been released for 2005

(d) Skill shortage ratings for the Northern Territory in 2002, are available only for Nursing and Food Trades.

**Skill Shortages regional Northern Territory**

	1996 (a)	1997 (a)	1998	1999	2000	2001	2002(c)	2003	2004	2005 (b)
Accountant*	X	X			X	X				
Audiologist									X	
Automotive Electrician	X	X	X	X	X	X		X	X	X
Baker			X	X					X	
Blocklayer*			X	X					X	
Boilermaker*		X	X	X				X	X	X
Cabinetmaker	X		X	X				X	X	X
Carpenter*			X	X				X	X	X
Chef*	X	X	X	X	X	X	X	X	X	X
Child Care Coordinator			X	X	X	X	X	X	X	X
Child Care Worker	X	X	X	X	X	X				
Civil Engineer	X	X	X	X	X	X				
Computer Professional*				X	X			X	X	X
Cook*	X			X	X		X	X	X	X
Dental Assistant							X	X	X	X
Dentist*								X	X	X
Electrical Engineer	X	X	X	X	X	X				
Electrical Mechanic/Fitter/Armature Winder	X	X	X	X	X	X		X	X	X
Electrical Powerline Trades									X	X
Electronic Equipment Trades									X	X
Electronic Instrument Trades									X	X
Electronics Engineer	X				X	X				
Enrolled Nurse								X	X	X
Fibrous Plasterer				X					X	
Floor and Wall Tiler				X						
Furniture Upholsterer	X			X						
Hairdresser		X						X	X	X
Medical Diagnostic Radiographer								X	X	X
Metal Fitter*		X		X				X	X	X
Metal Machinist				X				X	X	X
Mining Engineer	X	X	X	X				X	X	X
Motor Mechanic	X	X	X	X	X	X		X	X	X
Occupational Therapist								X	X	X
Painter and Decorator	X							X	X	X
Panel Beater	X	X		X	X			X	X	X



### Skill Shortages regional Northern Territory

	1996 (a)	1997 (a)	1998	1999	2000	2001	2002(c)	2003	2004	2005 (b)
Pastrycook		X	X	X	X	X	X	X	X	
Pharmacist		X	X		X	X	X	X		
Physiotherapist					X	X		X	X	
Plumber*	X		X	X				X	X	X
Podiatrist*										
Refrigeration and Airconditioning Mechanic	X	X	X	X				X	X	X
Registered Midwife					X	X		X	X	
Registered Nurse*	X	X	X	X	X	X	X	X	X	
Registered Psychiatric Nurse	X	X	X	X	X	X		X		
Secondary School Teacher*		X	X	X	X	X		X	X	
Sheetmetal Worker – First Class		X	X	X	X	X		X	X	X
Social Worker								X		
Solid Plasterer				X				X		X
Tour Guide – Japanese Speaking	X			X						
Ultrasonographer				X					X	
Vehicle Painter	X	X		X	X			X	X	X
Wall and Floor Tiler*				X	X					
Welder*	X	X	X	X				X	X	X

X = shortage

\* shortages are restricted to specialist skills. For information on specialisations in shortage, see original lists.

(a) Prior to the Skill Shortage Lists released for 1999, ratings were provided only at the State level with few exceptions. Occupations assessed as in shortage in a State or Territory in 1996 or 1997, have been included in both the metropolitan and regional lists unless the comment indicated the shortage was limited to one or the other.

(b) 2005 Lists for Professions and ICT skills have not yet been released for 2005

(d) Skill shortage ratings for the Northern Territory in 2002, are available only for Nursing and Food Trades.

# National and State Skill Shortage Lists Australia – 2004

Attachment 2

Contact: Nerida Coulter via email

The National and State Skill Shortage Lists are based on labour market intelligence undertaken by DEWR. Methodological information is provided in the Explanatory Notes. The Skill Shortage Lists cover Trades, Professionals and Information and Communication Technology (ICT) skills. Shortages are described as being state-wide (S), regional (R) or metropolitan (M). The lists also identify recruitment difficulties (D) in situations where 'skill shortages' are not evident, but where some employers have experienced recruitment problems.

The Skill Shortage Lists incorporate information on specialisations in shortage in particular States. For some occupations on the National Skill Shortage List, shortages are restricted to specialist skills – see details on 'Skill Shortage List – Professionals' and 'Skill Shortage List – Trades'.

Information on, and reports from, the industry-led skill shortage working groups, managed by the Department of Education, Science and Training (DEST), is available at [www.skillsinitiative.gov.au](http://www.skillsinitiative.gov.au).

## National Skill Shortage (NSS) List – Australia 2004

### PROFESSIONALS (March 2004)

- Child Care Coordinator
- Child Care Worker
- Civil Engineer
- Accountant
- Registered Nurse
  - Accident/Emergency
  - Aged Care
  - Cardiothoracic
  - Community
  - Critical/Intensive Care
  - Indigenous Health
  - Neonatal Intensive Care
  - Neurology
  - Oncology
  - Operating Theatre
  - Paediatric
  - Palliative Care
  - Perioperative
  - Rehabilitation
  - Renal/Dialysis
  - Registered Midwife
  - Mental Health Nurse
- Enrolled Nurse
- Dentist
- Pharmacist (Hospital/Retail)
- Occupational Therapist
- Physiotherapist
- Speech Pathologist
- Podiatrist
- Diagnostic Radiographer
- Radiation Therapist
- Nuclear Medicine Technologist
- Sonographer

## ICT SKILLS – SPECIALISATIONS ONLY (October 2004)

No National Shortages

## TRADES (December 2004)

*(Note that some shortages are for specialist skills only – see detailed State listing below)*

### *Engineering Trades*

- Metal Fitter
- Metal Machinist
- Toolmaker
- Metal Fabricator
- Welder
- Sheetmetal Worker

### *Automotive Trades*

- Motor Mechanic
- Auto Electrician
- Panel Beater
- Vehicle Painter

### *Electrical & Electronic Trades*

- Electrician
- Refrigeration and Air Conditioning Mechanic
- Electrical Powerline Trades
- Electronic Instrument Trades
- Electronic Equipment Trades

### *Construction Trades*

- Carpenter and Joiner
- Fibrous Plasterer
- Bricklayer
- Solid Plasterer
- Plumber
- Cabinetmaker

### *Food Trades*

- Chef
- Cook
- Pastrycook

### *Other Trades*

- Hairdresser
- Furniture Upholsterer

## Skill Shortage List - Professionals March 2004

ASCO	Occupation	AUST	NSW	VIC	QLD	SA	WA	TAS	NT
<b>CHILD CARE</b>									
1295-11	Child Care Coordinator*	N	M* R-D	S*	S	D	R	S	D
6312-11sp	Child Care Worker*	N	M R-D	S*	S	S	S	S	D
<b>ENGINEERS</b>									
2124	Civil Engineer*	N	S*	S	S*	S	S*		D
2125-11	Electrical Engineer* <sup>1</sup>		M*	S*			S*		
2125-13	Electronics Engineer <sup>1</sup>		R						
<b>ACCOUNTANTS*</b>									
		N	S	S*	S*	S		S*	D
<b>REGISTERED NURSES*</b>									
2323-11	Registered Nurse (general)*	N	S	S	S	S	S	S*	S
	Accident/Emergency	N	S	S	S	S	S	S	S
	Aged Care*	N	S	S	S	S	S	S*	S
	Cardiothoracic	N	S	S	S	S	S	S	S
	Community*	N	S		S	S	S	S*	S
	Critical/Intensive Care	N	S	S	S	S	S	S	S
	Indigenous Health*	N	*		S	S	S		S
	Neonatal Intensive Care	N	S	S	S	S	S	S	S
	Neurological	N	S	S	S	S	S	S	S
	Oncology	N	S	S	S	S	S	S	
	Operating Theatre*	N	S	S	S	S	S	S*	S
	Paediatric	N	S	S	S	S	S	S	S
	Palliative Care	N	S	S	S	S	S	S	
	Perioperative*	N	*	S	S	S	S	S	S
	Rehabilitation*	N	S	S	S	S	S	S*	S
	Renal	N	S	S	S	S	S	S	S
2324-11	Registered Midwife	N	S	S	S	S	S	S	S
2325-11	Mental Health Nurse	N	S	S	S	S	S	S	
3411	Enrolled Nurse*	N	S*	S	S	S	S	S	S

ASCO	Occupation	AUST	NSW	VIC	QLD	SA	WA	TAS	NT <sup>1</sup>
<b>HEALTH SPECIALISTS</b>									
2381	Dentist*	N	S*	R*	S		S*		S*
2382-11,15	Pharmacist (Hospital/Retail)*	N	S	S*	S	S	R		D
2383-11	Occupational Therapist*	N	S*	S*	S	D	D*	S	R
2385-11	Physiotherapist*	N	S*	S*	S	S	S*	S	S
2386-11	Speech Pathologist*	N	M	S*	S	R		S	D
2388	Podiatrist*	N*	*	*	*	*	*	*	*
2391-11	Diagnostic Radiographer*	N	S*		S			S	S
2391-13	Radiation Therapist	N	S	S	S	S	S	S	
2391-15	Nuclear Medicine Technologist	N	D		S		S	S	
2391-17	Sonographer	N	S		S	S	S	S	S
2399-11	Audiologist <sup>1</sup> *			S	S				S
<b>SECONDARY TEACHERS</b>									
2413-11	Secondary Teacher*		D*	*	R-D*	*	*	*	S*
	Manual Arts/Tech Studies*		D	S*	D	S	R-D*		
	Maths/Science		D		D	S		R-D	S
	Physics/Chemistry*				D		R-D*		S
	General Science*			S*	D				
	Maths*			S	D		R-D*		S
	LOTE*			S*	D	S*	R-D*		
	Home Economics*					S	R-D*		
	Information Technology			S	D				
	Special Education*						R-D*		
	Religious Education								S
	Physical Education			S					
2511	Social Worker <sup>1</sup>		R	R-D				R	R-D
2521	Lawyer <sup>1</sup> *		R-D*	R-D*	S		S	S*	

1. Not all occupations assessed in all States

\* = Shortages may be restricted to specialist skills. Occupations marked with an asterisk have qualifying comments below

N = National shortage

S = State-wide shortage

M = Shortage in metropolitan areas

R = Shortage in regional areas

R-D = Recruitment difficulties in regional areas

D = Recruitment difficulties

**Child Care Coordinator:** NSW: shortages are mainly for degree qualified coordinators in long day care centres. VIC: shortages are for qualified child care coordinators. WA: shortage is greatest in some regional and outer metropolitan areas.

**Child Care Worker:** NSW: shortages are particularly evident in long day care centres. VIC: shortages are for qualified child care workers.

**Civil Engineer:** NSW: shortages especially for senior Civil Engineers in: design; consulting engineers with a good understanding of building codes and; structural engineers with experience of high rise building services. QLD: shortages are particularly evident for Civil Engineers experienced in water, roads and structural engineering. WA: shortage particularly for civil engineers specialising mining work.

**Electrical Engineer:** NSW: shortages especially for Electrical Engineers with experience in building services, consulting and electrical substation or railway design. VIC: shortage restricted to Electrical Engineers experienced in working with high voltage. WA: shortage particularly for electrical engineers specialising mining work.

**Accountant:** VIC: shortages are restricted to accountants in internal audit, compliance and specialist taxation roles. QLD: shortages are especially for accountants with experience in audit and taxation. TAS: shortages are most apparent for accountants experienced in public practice.

**Registered Nurse:** NSW: indigenous health is not recognised as a separate specialisation in NSW. Separate information on perioperative nursing is not available for NSW. TAS: shortages for registered nurses are particularly apparent in the specialisations of operating theatre, rehabilitation, community nursing, aged care, and for positions outside Hobart.

**Enrolled Nurse:** NSW: shortages are especially for mothercraft, mental health and acute care.

**Dentist:** NSW: shortages are especially in the public sector and regional/rural areas. WA: shortage is greatest in rural and in public health. NT: shortage is greatest in public sector.

**Pharmacist:** VIC: shortages of pharmacists particularly acute in retail pharmacy, rural areas and hospitals. SA: shortage of pharmacists is particularly evident in the retail sector.

**Occupational Therapist:** NSW: shortages especially for Occupational Therapists in senior roles and for specialists in mental health. VIC: shortages of Occupational Therapists is particularly acute in aged care, paediatrics, disability/rehabilitation services and rural practice. Senior positions and those in regional and outer metropolitan regions are also particularly difficult to fill. QLD: shortages are for experienced Occupational Therapists in specialisations such as mental health services and aged care. WA: recruitment difficulties are evident in aged care facilities.

**Physiotherapist:** NSW: shortages are especially in the public sector. VIC: shortages of physiotherapists are particularly evident in aged care, women's health, working with children with disabilities, cardio-thoracic and rural areas. QLD: shortage is most apparent for Physiotherapists experienced in specialisations such as gerontology and for locum work. SA: shortages are particularly evident in the aged care and public hospital sector. WA: shortage is greatest for paediatric physiotherapists and for physiotherapists in rural areas.

**Podiatrist:** a national assessment was made for Podiatrist and separate state/territory ratings are not available. Shortages are considered to be widespread, and the occupation is considered to be in national shortage.

**Speech Pathologist:** VIC: Shortages of speech pathologists are particularly evident in paediatrics, education, disability services, for locum positions and regional and outer metropolitan areas.

**Diagnostic Radiographer:** NSW: Shortages especially for Diagnostic Radiographers with experience in MRT, mammography and CT.

**Secondary Teacher:** Specialist shortages only as listed. NSW: Recruitment difficulties are for maths/science, technical and applied studies, especially in the public sector in some locations. QLD: Recruitment difficulties are evident generally in remote areas, and recruitment difficulties are State-wide

for the specialist teaching areas of mathematics, science, IT, manual arts and LOTE. **WA:** Recruitment difficulties persist in some regional and remote areas of WA, particularly in inland rural, Pilbara and North West, for specialist education, home economics, design and technology, mathematics, special education, Indonesian and Japanese and physics. **NT:** Shortage of teachers is evident for non-executive teachers with the ability to teach in multiple subject areas.

**Manual Arts/Technology: VIC:** Shortages especially for auto, wood, food and metal.

**General Science: VIC:** shortage is restricted to general science teachers for years 7 to 10.

**LOTE Teachers: VIC:** Shortages especially Indonesian, Japanese, Italian and French. **SA:** Shortages especially for Asian languages.

**Social Worker: VIC:** Recruitment difficulties for social workers are restricted to some regional areas and specialist areas such as aged care and trauma counselling.

**Lawyer: NSW:** Shortages particularly for Lawyers with experience in family law. **VIC:** Recruitment difficulties for lawyers are restricted to rural practices and speciality areas of workplace relations, funds management, family law and property and finance. **QLD:** Shortages are more pronounced for lawyers experienced in the areas of property, mining or town planning. **WA:** Shortages are particularly evident for lawyers with 2- 5 years experience. **TAS:** Shortages are particularly evident in northern Tasmania and the north-west coast, and for lawyers experienced in family and criminal law.

## Skill Shortage List – Trades

December 2004

ASCO	Occupation	AUST	NSW	VIC	QLD	SA	WA	TAS	NT
<b>ENGINEERING TRADES</b>									
4112-11	Metal Fitter*	N	S*	S	S*	S	S*	S	S*
4112-13	Metal Machinist*	N	S*	S	S*	S	S	S	S
4113-11	Toolmaker*	N	S*	S	S	S	S	S*	na
4122-11	Metal Fabricator*	N	M-D,R*	S	S	S	S	S	S*
4122-15	Welder*	N	S*	S	S	S	S*	S	S*
4124-11	Sheetmetal Worker*	N	M-D,R*	S	S*	S	S	S	S
<b>VEHICLE TRADES</b>									
4211-11	Motor Mechanic*	N	S*	S	S	S	S*	S	S
4212-11	Auto Electrician*	N	S	S	S	S	S*	S	S
4213-11	Panel Beater*	N	S*	S	S	S	S	S	S
4214-11	Vehicle Painter	N	S	S	S	S	S	S	S
<b>ELECTRICAL/ELECTRONICS</b>									
4311-11,13	Electrician*	N	S*	S	S*	S	S*	S	S
4312-11	Refrigeration and Airconditioning Mechanic*	N	S*	S	S	S	S	S	S
4313-11	Electrical Powerline Trades* Electronic Instrument Trades*	N	S*	S	S	S	S	S	S
4314	Electronic Equipment Trades*	N	S*	S*	S	D	S	S	M-D,R
4315-11	Business Machine Mechanic*	N	S*	S*	S	D*	S	S	S
4315-13			D*					S	S
<b>CONSTRUCTION TRADES</b>									
4411-11	Carpenter and Joiner*	N	Se*	M-D,R	S*	Se	S	S	S*
4412-11	Fibrous Plasterer*	N	Se*	M-D,R	na	Se	S	S	S
4414-11	Bricklayer*	N	Se*	M-D,R	S	S	S	S	M*
4415-11	Solid Plasterer*	N	Se	M-D,R	na	Se	S	S*	S
4431-11	Plumber*	N	Se*	S	S*	S	S*	S	S*
<b>FOOD TRADES</b>									
3322	Chef*	N	S	S*	S	R	S*	S	S
4512-11	Baker*		S*	na	na	na	na	na	na
4513-11	Cook	N	S	S*	S				S
4512-13	Pastrycook*	N	R*	S*	S	R	S	S*	D
<b>PRINTING TRADES</b>									
4911-11	Graphic Pre-press Trades				S				
4912	Printing Machinist		R		S	D			
4913-11	Binder and Finisher			D	S				
<b>WOOD TRADES</b>									
4921-11	Wood Machinist*		S*	na	na	na	na	na	na
4922-11	Cabinetmaker*	N	S*	M-D,R*	S*	S		S	S
<b>OTHER TRADES</b>									
4931-11	Hairdresser	N	S	S	S	S	S	S	S
4942-11	Furniture Upholsterer*	N	S*	S	S	S	S	S	na

N = National shortage	S = State-wide shortage
M = Shortage in metropolitan areas	R = Shortage in regional areas
D = Recruitment difficulties	R-D = Recruitment difficulties in regional areas
M-D = Recruitment difficulties in metropolitan areas	na = Not assessed
e = shortage easing over the next 12 months	* = see comments on specialisation



**Metal Fitter:** NSW: shortages are evident for basic trades skills but especially for hydraulics and for shut-down and maintenance work. QLD: Fitters who have the skills to work underground on mining equipment and who have high level skills in parts replacement for heavy earthmoving equipment are in particular shortage. WA: shortages are especially for heavy duty fitters. NT: shortages are especially evident for Metal Fitters with heavy duty and underground experience.

**Metal Machinist:** NSW: shortages are especially evident for Metal Machinists with experience in CNC machinery and hand-operated heavy industrial machinery. QLD: Metal machinists who have high level CNC machine operating skills are in particularly strong demand.

**Toolmaker:** NSW: shortages are particularly for Toolmakers with broad trade skills, hand-operated tooling, CNC machining, plastic injection moulding, precision jobbing. TAS: Toolmaker is a very small occupation in Tasmania.

**Metal Fabricator:** NSW: shortages are especially for Metal Fabricators with ability to work from plans, multiskilled tradespersons and those with experience in weld purging. NT: shortages are particularly evident for fabricators with new construction (setting and mark-out skills) and aluminium and stainless steel experience.

**Welder:** NSW: shortages are especially for Welders with skills in stainless steel, aluminium, TIG and MIG welding. WA: shortages are most evident for coded welders highly skilled in specialist procedures. NT: shortages are particularly for welders with TIG welding experience.

**Sheetmetal Worker:** NSW: shortages are especially for Sheetmetal Workers with welding skills. QLD: shortages are particularly evident in the manufacture of aluminium hull boats, switchboards and stainless steel fittings.

**Motor Mechanic:** NSW: shortages are especially for Motor Mechanics with specialist skills and experience in suspension, wheel alignment, engine reconditioning, used car dealerships and four wheel drives. WA: shortages are particularly evident for truck and diesel mechanics.

**Panel Beater:** NSW: recruitment is particularly difficult for panel beaters with skills in prestige vehicle repairs.

**Auto Electrician:** WA: shortages are particularly evident for auto electricians experienced in working with heavy equipment in the mining industry.

**Electrician:** NSW: shortages are apparent across most sectors including commercial and industrial work, domestic building maintenance, communications cabling and electrical fitting. QLD: Shortages are particularly acute for electrical appliance servicing and industrial electricians. WA: shortages are evident for electricians with cabling licences and data/communications experience.

**Refrigeration and Airconditioning Mechanic:** NSW: shortages are apparent across most sectors, but especially for commercial airconditioning in Sydney.

**Electrical Power Line Tradesperson:** NSW: shortages are evident in maintenance and new supply work in both the power generation and distribution sectors.

**Electronic Instrument Trades:** NSW: shortages are especially being experienced for positions requiring highly specialised experience in specified types of PLCs and control systems and positions requiring dual qualifications in electrical and instrumentation work.

**Electronic Equipment Trades:** NSW: shortages are mostly for repairers experienced in specific equipment makes and models. VIC: shortages are restricted to radio and TV repair. SA: shortages are restricted to radio and TV repair.

**Business Machine Mechanics:** NSW: isolated recruitment difficulties exist for positions requiring experience in particular business machinery makes and models.

**Communications Trades:** NSW: shortages are less severe for cabling technicians.

**Carpenter:** NSW: shortages are most apparent for new residential building, residential maintenance and formwork carpentry. QLD: shortage is particularly for carpenters specialising in building staircases and balustrading. NT: shortages are particularly evident for carpenters skilled in large scale construction projects.

**Fibrous Plasterer:** NSW: shortages include plasterboard fixing, cornice fixing and ornate plastering.

**Bricklayer:** NSW: shortages are restricted to trade-level bricklayers. NT: shortages are evident for bricklayers skilled in large scale construction projects.

**Solid Plaster:** TAS: solid plastering is a very small occupation in Tasmania.

**Plumber:** NSW: shortages are evident in both the commercial and residential sectors and for roof plumbers. QLD: Mechanical Services Plumbers are particularly hard to recruit. WA: shortages are especially evident for roof plumbers. NT: shortage is particularly apparent for plumbers skilled in the maintenance of existing domestic plumbing.

**Chef:** VIC: shortage is especially evident in Asian cuisines generally and Indian cuisine. WA: in metropolitan areas, the shortage is restricted to some Asian cuisines, particularly Japanese, Indian and Thai, although more general shortages are evident in regional areas.

**Baker:** NSW: shortage is mainly confined to broad trades skills, hand moulding skills and experience in specialised breads such as sourdough, gluten-free etc.

**Pastrycook:** NSW: shortage is mainly confined to broad trade skills and experience in making pastries from scratch. VIC: shortages are especially for skills in European and Asian pastry. TAS: shortages are particularly for specialist dessert chefs, specialist patisserie pastry cooks.

**Wood Machinist:** NSW: shortages are especially for CNC skills, a range of experience with panel saws, spindle moulders, also experience in solid timber, laminated wood or composite material.

**Cabinetmaker:** NSW: shortages are especially for the detailed joinery and fine furniture sector. VIC: shortage is of specialist furniture makers. QLD: shortages are most evident for Cabinetmakers skilled in high quality or meticulous and visible craftwork.

**Furniture Upholsterer:** NSW: shortages are especially for positions requiring quality re-upholstering/re-covering experience, but there is also a short supply of combination skills required for tasks like re-covering/automobile trimming and making custom built furniture for refurbishments.

**National and State ICT Skill Shortages (surveyed May 2004, released October 2004)**  
**ICT Employment Trends and Skill Shortage Survey 2004 - Powerpoint Presentation**

ICT SPECIALISATION	AUST*	NSW	VIC	QLD	SA	WA	TAS	ACT	NT
<b>Database</b>									
DB2		D		D	D				
Oracle		D		D	D			D	D
Microsoft SQL Server		D			D			D	
Sybase SQL Server		D		D	D				
<b>General Application</b>									
<b>Development/Software Engineering</b>									
PowerBuilder		D		D	D	D			
Java		D		D				D	D
Java Script		D						D	D
C++		D		D	D				
.Net technologies		S	D	D		S		D	
Delphi		D		D	D				
Lotus Notes		S	D	D	D			D	D
Progress		S	D	D	D			D	
Powerhouse		D	D	D	D	D		D	
<b>Internet, Networking/Lan/WAN</b>									
IPX		D							
SNA		D			D				
Advanced Web Design		D							
ASP									
Xml				D					
Firewall/Internet security		S	D	D	S	D		D	
Java Security (mainly J2EE) and		D	D	D	D			D	D
<b>Office/E-mail/Groupware</b>									
Groupwise		D	D	D	D				
Lotus Notes		D	D	D	D				
CC:Mail		D			D				
Netscape		D			D				
Eudora		D							
<b>Client/Server applications</b>									
COBOL		D		D	D			D	
SAP		S	D	D	S	D		D	
PeopleSoft		S	D	D		D		D	
Siebel		S	D	D	S	S			
<b>System Software Support</b>									
Help Desk									
Data Warehousing		S	D	D	D	D			
<b>Operating Systems</b>									
Unix		D		D	D	D			
Windows									
Windows NT									
Solaris		D		D	D				
Linux		S		D		D			
HP-UX		D		D	D	D			
VMS		D		D	D	D			

	AUST*	NSW	VIC	QLD	SA	WA	TAS	ACT	NT
<b>Communications</b>									
Radio		D			D				
SDH		D			D				
WDM		D			D				
GSM		D			D				
CDMA		D			D				
Broadband CDMA		D			D				
Satellite design		D		D	D				
TDMA		D		D	D				
VSAT		D		D	D				
Photonics		D		D					
<b>Process &amp; Systems management</b>									
Project Management		D							D
Systems analysis		D		D					D
Broad commercial business		D							D
<b>E-Commerce (eg business/financial management/analysis/customer service)</b>									
E-commerce security (non Security)		S	D	D	D				
<b>Security</b>									
Network Security		S		D	D	D		D	
Risk Management		S		D	D	D		D	
CISSP #		S	D	D	S	D		D	
PKI		D	D	D		D		D	
Geographical Information Systems									
GIS (eg Mapinfo)		S	D	D	D			D	
<b>Other specialisations not listed above</b>									
DS 390/MVS System Programmers						D			
Visual Basic 6						D			
IDMS					D				
ADA					D				
S = Shortage									
D = Recruitment Difficulties									
* no ICT skills in national shortage									
# Certified Information Systems Security Professional									

### National and State Skill Shortage Lists – Explanatory Notes

The Department of Employment and Workplace Relations (DEWR) is the Australian Government agency with prime portfolio responsibility for monitoring skill shortages. DEWR assesses skill shortages by a number of means including contact with employers, industry, employer and employee organisations and education and training providers. The prime focus of DEWR's agency approach is surveying employers who have recently advertised vacancies for selected skilled occupations. In assessing skill shortages, this industry and employer intelligence is considered in conjunction with statistical information on demand and supply trends for the selected occupations. Skill shortage assessments cover Trades, Professionals and Information and Communication Technology (ICT) skills.

DEWR, through its Labour Supply and Skills Branch and Labour Economics Offices (LEOs) in each State capital and Darwin, monitors and assesses skill shortages. Although skill shortages are monitored closely, there may be localised or specialist shortages which are not reflected in these lists. The reasons for shortages are complex and varied, and may result from economic or demographic change, cyclical fluctuations in labour demand, emerging demands of new technology, lack of flexibility in wages and regional mismatches.

The specific occupations and skills to be included in the annual skill shortage assessment program (six monthly, in the case of ICT skills) are determined through consultations with peak industry bodies, other key stakeholders and DEWR State Offices. The program is conducted through Labour Economics Offices (LEOs) in DEWR State Offices.

There is considerable ambiguity about the term 'skill shortages' in industry and media discussions, and in developing guidelines for training, migration, labour market programs and regional skills analysis. The term 'skill shortages' is often a surrogate for more general recruitment difficulties, or skill gaps (deficiencies in the skills of existing workers). DEWR skill shortage monitoring and assessment focuses mainly on skill shortages as defined below. Shortage ratings refer to experienced workers and the labour market for new graduates may differ.

### **Skill shortages**

Skill shortages exist when employers are unable to fill or have considerable difficulty in filling vacancies for an occupation, or specialised skill needs within that occupation, at current levels of remuneration and conditions of employment, and reasonably accessible location.

Shortages are typically for specialised and experienced workers, and can coexist with relatively high unemployment overall or in the occupation. An occupation may be assessed as in shortage even though not all specialisations are in shortage. Occupations may be in shortage in particular geographical areas and not in others. Although skill shortages are monitored closely, there may be localised or specialised shortages that are not reflected in these lists.

For each State, skill shortages are rated as evident in the capital city only (M – metropolitan), in regional areas (R – other than the capital city) or statewide (S). If there are shortages in the three largest States, or in a majority of States, then the occupation is rated as being in national shortage (N). Skill shortages involve skills that require a significant period of training and/or experience to acquire.

As a result of consultation with industry, particularly peak industry bodies, DEWR has increased the focus on specialisations in shortage as well as the employability skills and personal attributes of most concern to employers. Where these skills/attributes impact upon skill shortages, details are provided in explanatory notes at the end of the relevant skill shortage list.

In the National and State skill shortage lists, especially ICT skills, the term 'recruitment difficulties' is used as a way of signalling a degree of skill shortage - shown as "D" in the skill shortage lists. This provides an option for recognising skills where employers are experiencing some difficulty in finding suitable workers even though a broader skill shortage is not evident.

The reasons for skill shortages are complex and varied and may result from economic or demographic change, those not completing training and qualified workers (not working in the occupation for which they are qualified and/or experienced), cyclical fluctuations in labour demand, emerging demands of new technology, lack of flexibility in wages and regional mismatches.

### **Recruitment difficulties**

Recruitment difficulties occur when employers have some difficulty in filling vacancies for an occupation. There may be an adequate supply of skilled workers, but employers are still unable to attract and recruit sufficient suitable employees.

The recruitment difficulties may be due to characteristics of the industry, occupation or employer, such as: relatively low remuneration, poor working conditions, poor image of the industry, unsatisfactory working hours, location hard to commute to, ineffective recruitment advertising and processes or organisation-specific and highly-specialised skill needs.

Skill shortages may exist outside those included in the skill shortage lists. For example, an occupation or skill, particularly where the number employed is very small, may not be identified in consultations with industry bodies and other key stakeholders, and pockets of shortage may exist in isolated locations. In addition, variations in national or regional industry activity may cause shortages not apparent at the time when skill shortage lists are being prepared. The lists do not include skill shortages involving skills that require only a very limited period of training and/or experience to acquire.

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## National and State Skill Shortage Lists Australia – 2004

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The National and State Skill Shortage Lists are based on labour market intelligence undertaken by DEWR. Methodological information is provided in the [Explanatory Notes](#). The Skill Shortage Lists cover Trades, Professionals and Information and Communication Technology (ICT) skills. Shortages are described as being state-wide (S), regional (R) or metropolitan (M). The lists also identify recruitment difficulties (D) in situations where 'skill shortages' are not evident, but where some employers have experienced recruitment problems.

The Skill Shortage Lists incorporate information on specialisations in shortage in particular States. For some occupations on the National Skill Shortage List, shortages are restricted to specialist skills – see details on 'Skill Shortage List – Professionals' and 'Skill Shortage List – Trades'.

Information on, and reports from, the industry-led skill shortage working groups, managed by the Department of Education, Science and Training (DEST), is available at [www.skillsinitiative.gov.au](http://www.skillsinitiative.gov.au).

### ● National Skill Shortage (NSS) List – Australia 2004

#### PROFESSIONALS (March 2004)

- Child Care Coordinator
- Child Care Worker
- Civil Engineer
- Accountant
- Registered Nurse
  - Accident/Emergency
  - Aged Care
  - Cardiothoracic
  - Community
  - Critical/Intensive Care
  - Indigenous Health
  - Neonatal Intensive Care
  - Neurology
  - Oncology
  - Operating Theatre
  - Paediatric
  - Palliative Care
  - Perioperative
  - Rehabilitation
  - Renal/Dialysis
  - Registered Midwife
  - Mental Health Nurse
- Enrolled Nurse
- Dentist
- Pharmacist (Hospital/Retail)
- Occupational Therapist
- Physiotherapist
- Speech Pathologist
- Podiatrist
- Diagnostic Radiographer
- Radiation Therapist
- Nuclear Medicine Technologist
- Sonographer

## ICT SKILLS – SPECIALISATIONS ONLY (December 2003)

No National Shortages

### TRADES (December 2003)

- Metal Fitter
- Metal Machinist
- Toolmaker
- Metal Fabricator
- Welder
- Sheetmetal Worker
- Motor Mechanic
- Auto Electrician
- Panel Beater
- Vehicle Painter
- Electrician
- Refrigeration and Air Conditioning Mechanic
- Carpenter and Joiner
- Fibrous Plasterer
- Bricklayer
- Solid Plasterer
- Plumber
- Chef
- Cook
- Pastrycook
- Cabinetmaker
- Hairdresser
- Furniture Upholsterer



## Skill Shortage List - Professionals March 2004

ASCO	Occupation	AUST	NSW	VIC	QLD	SA	WA	TAS	NT
<b>CHILD CARE</b>									
1295-11	Child Care Coordinator*	N	M* R-D	S*	S	D	R	S	D
6312-11sp	Child Care Worker*	N	M R-D	S*	S	S	S	S	D
<b>ENGINEERS</b>									
2124	Civil Engineer*	N	S*	S	S*	S	S*		D
2125-11	Electrical Engineer* <sup>1</sup>		M*	S*			S*		
2125-13	Electronics Engineer <sup>1</sup>		R						
<b>ACCOUNTANTS*</b>									
		N	S	S*	S*	S		S*	D
<b>REGISTERED NURSES*</b>									
2323-11	<b>Registered Nurse (general)*</b>	N	S	S	S	S	S	S*	S
	Accident/Emergency	N	S	S	S	S	S	S	S
	Aged Care*	N	S	S	S	S	S	S*	S
	Cardiothoracic	N	S	S	S	S	S	S	S
	Community*	N	S		S	S	S	S*	S
	Critical/Intensive Care	N	S	S	S	S	S	S	S
	Indigenous Health*	N	*		S	S	S		S
	Neonatal Intensive Care	N	S	S	S	S	S	S	S
	Neurological	N	S	S	S	S	S	S	S
	Oncology	N	S	S	S	S	S	S	
	Operating Theatre*	N	S	S	S	S	S	S*	S
	Paediatric	N	S	S	S	S	S	S	S
	Palliative Care	N	S	S	S	S	S	S	
	Perioperative*	N	*	S	S	S	S	S	S
	Rehabilitation*	N	S	S	S	S	S	S*	S
	Renal	N	S	S	S	S	S	S	S
2324-11	<b>Registered Midwife</b>	N	S	S	S	S	S	S	S
2325-11	<b>Mental Health Nurse</b>	N	S	S	S	S	S	S	
3411	<b>Enrolled Nurse*</b>	N	S*	S	S	S	S	S	S

ASCO	Occupation	AUST	NSW	VIC	QLD	SA	WA	TAS	NT <sup>1</sup>
<b>HEALTH SPECIALISTS</b>									
2381	Dentist*	N	S*	R*	S		S*		S*
2382-11,15	Pharmacist (Hospital/Retail)*	N	S	S*	S	S	R		D
2383-11	Occupational Therapist*	N	S*	S*	S	D	D*	S	R
2385-11	Physiotherapist*	N	S*	S*	S	S	S*	S	S
2386-11	Speech Pathologist*	N	M	S*	S	R		S	D
2388	Podiatrist*	N*	*	*	*	*	*	*	*
2391-11	Diagnostic Radiographer*	N	S*		S			S	S
2391-13	Radiation Therapist	N	S	S	S	S	S	S	
2391-15	Nuclear Medicine Technologist	N	D		S		S	S	
2391-17	Sonographer	N	S		S	S	S	S	S
2399-11	Audiologist <sup>1</sup> *			S	S				S
<b>SECONDARY TEACHERS</b>									
2413-11	Secondary Teacher*		D*	*	R-D*	*	*	*	S*
	Manual Arts/Tech Studies*		D	S*	D	S	R-D*		
	Maths/Science		D		D	S		R-D	S
	Physics/Chemistry*				D		R-D*		S
	General Science*			S*	D				
	Maths*			S	D		R-D*		S
	LOTE*			S*	D	S*	R-D*		
	Home Economics*					S	R-D*		
	Information Technology			S	D				
	Special Education*						R-D*		
	Religious Education								S
	Physical Education			S					
2511	Social Worker <sup>1</sup>		R	R-D				R	R-D
2521	Lawyer <sup>1</sup> *		R-D*	R-D*	S		S	S*	

1. Not all occupations assessed in all States

\* = Shortages may be restricted to specialist skills. Occupations marked with an asterisk have qualifying comments below

N = National shortage

S = State-wide shortage

M = Shortage in metropolitan areas

R = Shortage in regional areas

R-D = Recruitment difficulties in regional areas

D = Recruitment difficulties

**Child Care Coordinator:** NSW: shortages are mainly for degree qualified coordinators in long day care centres. VIC: shortages are for qualified child care coordinators. WA: shortage is greatest in some regional and outer metropolitan areas.

**Child Care Worker:** NSW: shortages are particularly evident in long day care centres. VIC: shortages are for qualified child care workers.

**Civil Engineer:** NSW: shortages especially for senior Civil Engineers in: design; consulting engineers with a good understanding of building codes and; structural engineers with experience of high rise building services. QLD: shortages are particularly evident for Civil Engineers experienced in water, roads and structural engineering. WA: shortage particularly for civil engineers specialising mining work.

**Electrical Engineer:** NSW: shortages especially for Electrical Engineers with experience in building services, consulting and electrical substation or railway design. VIC: shortage restricted to Electrical Engineers experienced in working with high voltage. WA: shortage particularly for electrical engineers specialising mining work.

**Accountant:** VIC: shortages are restricted to accountants in internal audit, compliance and specialist taxation roles. QLD: shortages are especially for accountants with experience in audit and taxation. TAS: shortages are most apparent for accountants experienced in public practice.

**Registered Nurse:** NSW: indigenous health is not recognised as a separate specialisation in NSW. Separate information on perioperative nursing is not available for NSW. TAS: shortages for registered nurses are particularly apparent in the specialisations of operating theatre, rehabilitation, community nursing, aged care, and for positions outside Hobart.

**Enrolled Nurse:** NSW: shortages are especially for mothercraft, mental health and acute care.

**Dentist:** NSW: shortages are especially in the public sector and regional/rural areas. WA: shortage is greatest in rural and in public health. NT: shortage is greatest in public sector.

**Pharmacist:** VIC: shortages of pharmacists particularly acute in retail pharmacy, rural areas and hospitals. SA: shortage of pharmacists is particularly evident in the retail sector.

**Occupational Therapist:** NSW: shortages especially for Occupational Therapists in senior roles and for specialists in mental health. VIC: shortages of Occupational Therapists is particularly acute in aged care, paediatrics, disability/rehabilitation services and rural practice. Senior positions and those in regional and outer metropolitan regions are also particularly difficult to fill. QLD: shortages are for experienced Occupational Therapists in specialisations such as mental health services and aged care. WA: recruitment difficulties are evident in aged care facilities.

**Physiotherapist:** NSW: shortages are especially in the public sector. VIC: shortages of physiotherapists are particularly evident in aged care, women's health, working with children with disabilities, cardio-thoracic and rural areas. QLD: shortage is most apparent for Physiotherapists experienced in specialisations such as gerontology and for locum work. SA: shortages are particularly evident in the aged care and public hospital sector. WA: shortage is greatest for paediatric physiotherapists and for physiotherapists in rural areas.

**Podiatrist:** a national assessment was made for Podiatrist and separate state/territory ratings are not available. Shortages are considered to be widespread, and the occupation is considered to be in national shortage.

**Speech Pathologist:** VIC: Shortages of speech pathologists are particularly evident in paediatrics, education, disability services, for locum positions and regional and outer metropolitan areas.

**Diagnostic Radiographer:** NSW: Shortages especially for Diagnostic Radiographers with experience in MRT, mammography and CT.

**Secondary Teacher:** Specialist shortages only as listed. NSW: Recruitment difficulties are for maths/science, technical and applied studies, especially in the public sector in some locations. QLD: Recruitment difficulties are evident generally in remote areas, and recruitment difficulties are State-wide

for the specialist teaching areas of mathematics, science, IT, manual arts and LOTE. **WA:** Recruitment difficulties persist in some regional and remote areas of WA, particularly in inland rural, Pilbara and North West, for specialist education, home economics, design and technology, mathematics, special education, Indonesian and Japanese and physics. **NT:** Shortage of teachers is evident for non-executive teachers with the ability to teach in multiple subject areas.

**Manual Arts/Technology: VIC:** Shortages especially for auto, wood, food and metal.

**General Science: VIC:** shortage is restricted to general science teachers for years 7 to 10.

**LOTE Teachers: VIC:** Shortages especially Indonesian, Japanese, Italian and French. **SA:** Shortages especially for Asian languages.

**Social Worker: VIC:** Recruitment difficulties for social workers are restricted to some regional areas and specialist areas such as aged care and trauma counselling.

**Lawyer: NSW:** Shortages particularly for Lawyers with experience in family law. **VIC:** Recruitment difficulties for lawyers are restricted to rural practices and speciality areas of workplace relations, funds management, family law and property and finance. **QLD:** Shortages are more pronounced for lawyers experienced in the areas of property, mining or town planning. **WA:** Shortages are particularly evident for lawyers with 2- 5 years experience. **TAS:** Shortages are particularly evident in northern Tasmania and the north-west coast, and for lawyers experienced in family and criminal law.

# Skill Shortage List – Trades

December 2003

ASCO	Occupation	AUST	NSW	VIC	QLD	SA	WA	TAS	NT
<b>ENGINEERING TRADES</b>									
4112-11	Metal Fitter*	N	S*	S	S	S	S		S
4112-13	Metal Machinist*	N	S*	S	S	S	S		S
4113-11	Toolmaker*	N	S*	S	S	S	D		
4122-11	Metal Fabricator*	N	S*	S	S	S	S	S	R
4122-15	Welder*	N	S*	S	S	S	S	S	R
4124-11	Sheetmetal Worker*	N	M*	S	S	S	S	S	S
<b>VEHICLE TRADES</b>									
4211-11	Motor Mechanic*	N	S*	S	S	S	S	S	S
4212-11	Auto Electrician	N	S	S	S	S	S	S	S
4213-11	Panel Beater	N	S	S	S	S	S	S	S
4214-11	Vehicle Painter	N	S	S	S	S	S	S	S
<b>ELECTRICAL/ELECTRONICS<sup>1</sup></b>									
4311-11,13	Electrician*	N	S*	R-D	S*	S		S	D
4312-11	Refrigeration and Airconditioning Mechanic*	N	S*	S	S	S		S	S
4313	Electrical Powerline Trades			S					
4314	Electronic Instrument Trades				D				
4315	Electronic Equipment Trades*		S*		D	S*		S	
4316	Communication Trades*		S*						
<b>CONSTRUCTION TRADES<sup>1</sup></b>									
4411-11	Carpenter and Joiner*	N	M*	R-D	S			S	D
4412-11	Fibrous Plasterer*	N	S*	S				S	
4413-11	Roof Slater and Tiler			R-D					
4414-11	Bricklayer	N	S	R,M-D	S	S	S	S	S
4415-11	Solid Plasterer	N	S	S			D	S	
4431-11	Plumber*	N	S	D*	M, R-D	S	S	S	S
<b>FOOD TRADES<sup>1</sup></b>									
3322	Chef*	N	S*	S	R		S*	R-D	S
4512-11	Baker		S						S
4513-11	Cook	N	S	S	R				S
4512-13	Pastrycook*	N	S*	S	S			S	S
<b>PRINTING TRADES</b>									
4911-11	Graphic Pre-press Trades				S				
4912	Printing Machinist		R		S	D			
4913-11	Binder and Finisher			D	S				
<b>WOOD TRADES<sup>1</sup></b>									
4921-11	Wood Machinist*		S*			S			
4922-11	Cabinetmaker	N	S	S	S	S	S		D
<b>OTHER TRADES</b>									
4931-11	Hairdresser	N	S	S	S	S	S	S	S
4942-11	Furniture Upholsterer*	N	S*	S	S	S	S	S	

<sup>1</sup> = Not all occupations assessed in all States

\* = See comments on specialisations

N = National shortage

M = Shortage in metropolitan areas

D = Recruitment difficulties

M-D = Recruitment difficulties in metropolitan areas

S = State-wide shortage

R = Shortage in regional areas

R-D = Recruitment difficulties in regional areas

**Metal Fitter: NSW:** shortages are most severe for Metal Fitters with good skills in hydraulics and pneumatics.

**Metal Machinist: NSW:** shortages are especially for Metal Machinists with skills in cnc machining, radial drill, mould bench work and various type of lathes.

**Toolmaker: NSW:** Shortages are especially for Toolmakers with skills in cnc machining, plastic injection moulding.

**Metal Fabricator: NSW:** shortages are especially for Metal Fabricators with experience in welding earthmoving attachments and an ability to work off plans.

**Welder: NSW:** shortages are especially for Welders with skills in stainless steel, aluminium and TIG welding.

**Sheetmetal Worker: NSW:** shortages are especially for Sheetmetal Workers specialising in stainless steel.

**Motor Mechanic: NSW:** shortages are especially for Motor Mechanics for heavy vehicles; recruitment problems for skills with reconditioning engines and combinations including air conditioning/ diesel engines, suspension /wheel alignment.

**Electrician: NSW:** shortages are especially for supervisory positions and those requiring skills in areas such as switchboards, security systems and PLC equipment. **QLD:** shortages are restricted to electrical appliance serviceperson and industrial electrician.

**Refrigeration and Airconditioning Mechanic: NSW:** shortages across most sectors including commissioning work and domestic and commercial installations and maintenance. CFC accreditation and experience in chillers are particularly hard to fill.

**Electronic Equipment Trades: NSW:** shortages across a range of specialisations including: digital cameras, televisions, video equipment and hi-fi equipment and for Business Equipment Mechanics.

**SA:** shortages are most evident for security technicians and some business machine mechanics (eg faxes and printers).

**Communications Trades: NSW:** shortages are less severe for cabling technicians.

**Carpenter: NSW:** shortages are especially in formwork and joinery.

**Fibrous Plasterer: NSW:** shortages are especially in renovation and restoration work, setting of cornices and ceilings.

**Plumber: Vic:** recruitment difficulties for maintenance and gas appliance specialists.

**Chef: NSW:** shortages of particular skills in combination of cold larder, fine dining, pastry, especially European-style pastry making. **WA:** shortages are restricted to Asian cuisines, notably Indian, Japanese and Thai.

**Pastrycook: NSW:** shortages are especially in speciality cakes, sophisticated pastries, pastries of Italian or Portuguese style, ability to use machines.

**Wood Machinist: NSW:** shortages are especially for cnc skills, a range of experience with panel saws, spindle moulders, also experience in solid timber, laminated wood or composite material.

**Furniture Upholsterer: NSW:** shortages are for especially for positions requiring quality re-upholstering/re-covering experience; also short supply of skills requiring combination of tasks like re-covering/automobile trimming and making custom built furniture for refurbishments.

National and State ICT Skill Shortages (surveyed October 2003, released December 2003)

ICT Employment Trends and Skill Shortage Survey 2003 - Powerpoint Presentation

**SKILL SHORTAGES\* by ICT**

**SPECIALISATION**

AUST NSW VIC QLD SA WA TAS<sup>(1)</sup> ACT NT<sup>(1)</sup>

*Database*

DB2		D		D					
Oracle		D		D	D	D			
MS Access									D
Microsoft SQL Server		D		D	D			D	D
Sybase SQL Server		D		D	D	D			

*General Application*

*Development/Software Engineering*

PowerBuilder		D		D				D	
Java		D	D	D					D
Java Script				D					D
C++		D		D					
Perl		D	D	D					
Lotus Notes		D		D	D			D	D
Progress		S	D	D				D	
Powerhouse		D		D				D	

*Internet, Networking/Lan/WAN*

IPX		D		D					
SNA		D		D					D
Advanced Web Design		D		D	D				D
Xml		D		D		D			
Firewall/Internet security		S	D	D	D	D		D	S
Java Security (mainly J2EE) and electronic commerce		D	D	D	D	D	D		

*Office/E-mail/Groupware*

Groupwise		D	D	D					
Lotus Notes		D		D	D			D	
CC:Mail				D					
Netscape		D		D					
Eudora				D					

*Client/Server applications*

COBOL		D		D					
SAP		D	D	D	D	D			
PeopleSoft		D	D	D	D	D			
Siebel		D	D	D	D	D		D	

*System Software Support*

Help Desk									D
Data Warehousing		D	D	D	D	D			

*Operating Systems*

Unix		D		D					D
Windows									D

*Operating Systems (Cont.)*

Windows NT									D
Solaris		D		D					
Linux		D	D	D					
HP-UX		D		D					
VMS		D		D		D			

**SKILL SHORTAGES\* by ICT**

**SPECIALISATION**

AUST NSW VIC QLD SA WA TAS ACT NT

*Communications*

Radio		S							
SDH		S							
WDM		D							
GSM		S							
CDMA		S	D						
Broadband CDMA		S							
Satellite design		S							
TDMA		S							
VSAT		S							
Photonics		S							

*Process & Systems management*

Project Management		D					D		D
Systems analysis		D							D
Broad commercial business understanding		D	D						S

*E-Commerce (eg business/financial*

*management/analysis/customer service)*

E-commerce security (non programming)		S		D	D	D			S
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*Security*

Network Security		D		D	D	D			S
Risk Management		D		D	D	D			D
CISSP*		S		D	D	D			
PKI		D		D	D	D		D	

*Other specialisations not listed*

<i>above</i>									
GIS, Mapinfo		S		D	D	D			
JNET								D	
Rational Rose/UML								D	
Main Frame System Administrators									D
.Net technologies		D		D		D		D	
Pick Universe developer								S	

● = Shortage

D = Recruitment Difficulty

(i) TAS and NT data was collected in May 2003

**National and State Skill Shortage Lists – Explanatory Notes**

The Department of Employment and Workplace Relations (DEWR) is the Australian Government agency with prime portfolio responsibility for monitoring skill shortages. DEWR assesses skill shortages by a number of means including contact with employers, industry, employer and employee organisations and education and training providers. The prime focus of DEWR's agency approach is surveying employers who have recently advertised vacancies for selected skilled occupations. In assessing skill shortages, this industry and employer intelligence is considered in conjunction with statistical information on demand and supply trends for the selected occupations. Skill shortage assessments cover Trades, Professionals and Information and Communication Technology (ICT) skills.

DEWR, through its Economic and Labour Market Analysis Branch and Labour Economics Offices (LEOs) in each State capital and Darwin, monitors and assesses skill shortages. Although skill shortages are monitored closely, there are may be localised or specialist shortages which are not reflected in these lists. The reasons for shortages are complex and varied, and may result from economic or demographic change,



cyclical fluctuations in labour demand, emerging demands of new technology, lack of flexibility in wages and regional mismatches.

The specific occupations and skills to be included in the annual skill shortage assessment program (six monthly, in the case of ICT skills) are determined through consultations with peak industry bodies, other key stakeholders and DEWR State Offices. The program is conducted through Labour Economics Offices (LEOs) in DEWR State Offices.

There is considerable ambiguity about the term 'skill shortages' in industry and media discussions, and in developing guidelines for training, migration, labour market programs and regional skills analysis. The term 'skill shortages' is often a surrogate for more general recruitment difficulties, or skill gaps (deficiencies in the skills of existing workers). DEWR skill shortage monitoring and assessment focuses mainly on skill shortages as defined below.

### **Skill shortages**

Skill shortages exist when employers are unable to fill or have considerable difficulty in filling vacancies for an occupation, or specialised skill needs within that occupation, at current levels of remuneration and conditions of employment, and reasonably accessible location.

Shortages are typically for specialised and experienced workers, and can coexist with relatively high unemployment overall or in the occupation. An occupation may be assessed as in shortage even though not all specialisations are in shortage. Occupations may be in shortage in particular geographical areas and not in others. Although skill shortages are monitored closely, there may be localised or specialised shortages that are not reflected in these lists.

For each State, skill shortages are rated as evident in the capital city only (M – metropolitan), in regional areas (R – other than the capital city) or statewide (S). If there are shortages in the three largest States, or in a majority of States, then the occupation is rated as being in national shortage (N). Skill shortages involve skills that require a significant period of training and/or experience to acquire.

As a result of consultation with industry, particularly peak industry bodies, DEWR has increased the focus on specialisations in shortage as well as the employability skills and personal attributes of most concern to employers. Where these skills/attributes impact upon skill shortages, details are provided in explanatory notes at the end of the relevant skill shortage list.

In the National and State skill shortage lists, especially ICT skills, the term 'recruitment difficulties' is used as a way of signalling a degree of skill shortage - shown as "D" in the skill shortage lists. This provides an option for recognising skills where employers are experiencing some difficulty in finding suitable workers even though a broader skill shortage is not evident.

The reasons for skill shortages are complex and varied and may result from economic or demographic change, those not completing training and qualified workers (not working in the occupation for which they are qualified and/or experienced), cyclical fluctuations in labour demand, emerging demands of new technology, lack of flexibility in wages and regional mismatches.

### **Recruitment difficulties**

Recruitment difficulties occur when employers have some difficulty in filling vacancies for an occupation. There may be an adequate supply of skilled workers, but employers are still unable to attract and recruit sufficient suitable employees.

The recruitment difficulties may be due to characteristics of the industry, occupation or employer, such as: relatively low remuneration, poor working conditions, poor image of the industry, unsatisfactory working hours, location hard to commute to, ineffective recruitment advertising and processes or organisation-specific and highly-specialised skill needs.

Skill shortages may exist outside those included in the skill shortage lists. For example, an occupation or skill, particularly where the number employed is very small, may not be identified in consultations with industry bodies and other key stakeholders, and pockets of shortage may exist in isolated locations. In addition, variations in national or regional industry activity may cause shortages not apparent at the time when skill shortage lists are being prepared. The lists do not include skill shortages involving skills that require only a very limited period of training and/or experience to acquire.

Contact for enquiries: Nerida Coulter (02) 6121 6610 or email: [nerida.coulter@dewr.gov.au](mailto:nerida.coulter@dewr.gov.au).

# National and State Skill Shortage Lists Australia – 2003

Contact: Nerida Coulter via [email](#)

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The National and State Skill Shortage Lists are based on labour market intelligence undertaken by DEWR. Methodological information is provided in the [Explanatory Notes](#). The Skill Shortage Lists cover Trades, Professionals and Information and Communication Technology (ICT) skills. Shortages are described as being state-wide (S), regional (R) or metropolitan (M). The lists also identify recruitment difficulties (D) in situations where 'skill shortages' are not evident, but where some employers have experienced recruitment problems.

The Skill Shortage Lists incorporate information on specialisations in shortage in particular States. For some occupations on the National Skill Shortage List, shortages are restricted to specialist skills – see details on 'Skill Shortage List – Professionals' and 'Skill Shortage List – Trades'.

Information on, and reports from, the industry-led skill shortage working groups, managed by the Department of Education, Science and Training (DEST), is available at [www.skillsinitiative.gov.au](http://www.skillsinitiative.gov.au).

## National Skill Shortage (NSS) List – Australia 2003

### PROFESSIONALS (February 2003)

- Child Care Coordinator
- Child Care Worker
  
- Civil Engineer
  
- Registered Nurse
  - Accident/Emergency
  - Aged Care
  - Cardiothoracic
  - Community
  - Critical/Intensive Care
  - Indigenous Health
  - Neonatal Intensive Care
  - Neurology
  - Oncology
  - Operating Theatre
  - Paediatric
  - Palliative Care
  - Perioperative
  - Renal/Dialysis
  - Registered Midwife
  - Mental Health Nurse
  - Enrolled Nurse
  
- Dentist
- Pharmacist (Hospital/Retail)
- Occupational Therapist
- Physiotherapist
- Speech Pathologist
- Diagnostic Radiographer
- Radiation Therapist
- Nuclear Medicine Technologist
- Sonographer

- Secondary Teacher (specialisations only)
  - Manual Arts/Tech Studies
  - Maths
  - Physics/Chemistry
  - General Science

## **ICT SKILLS – SPECIALISATIONS ONLY (October 2002)**

- SAP
- Java Security and Electronic Commerce
- PeopleSoft
- CISSP

## **TRADES (December 2002)**

- Metal Fitter
- Metal Machinist
- Toolmaker
- Metal Fabricator
- Welder
- Sheetmetal Worker
- Motor Mechanic
- Auto Electrician
- Panel Beater
- Vehicle Painter
- Electrician
- Refrigeration and Air Conditioning Mechanic
- Bricklayer
- Plumber
- Chef
- Cook
- Pastrycook
- Cabinetmaker
- Hairdresser
- Furniture Upholsterer

## Skill Shortage List - Professionals February 2003

ASCO	Occupation	AUST	NSW	VIC	QLD	SA	WA	TAS	NT
<b>CHILD CARE</b>									
1295-11	Child Care Coordinator *	N	S*	S	S	D	S*	S	S
6312-11sp	Child Care Worker *	N	S*	S	S	S	S*	S	RD
<b>ENGINEERS</b>									
2124	Civil Engineer*	N	S*	S		S	S*		S
2125-11	Electrical Engineer*			S*		D	D*	D	
2125-12	Electronics Engineer*		MD*			D			
2129-17	Chemical Engineer						S		
<b>ACCOUNTANTS</b>									
			RD	S*	S	D	M*R	S	RD
<b>REGISTERED NURSES</b>									
2323-11	<b>Registered Nurse (general)</b>	N	S	S	S	S	S	S	S
	Accident/Emergency	N	S	S	S	S	S	S	S
	Aged Care	N	S	S	S	S	S	S	S
	Cardiothoracic	N	S	S	S	S	S	S	S
	Community	N	S		S	S	S	S	S
	Critical/Intensive Care	N	S	S	S	S	S	S	S
	Indigenous Health	N			S	S	S		S
	Neonatal Intensive Care	N	S	S	S	S	S	S	S
	Neurological	N	S	S	S	S	S	S	
	Oncology	N	S	S	S	S	S	S	
	Operating Theatre	N	S	S	S	S	S	S	S
	Paediatric	N	S	S	S	S	S	S	S
	Palliative Care	N	S		S	S	S	S	
	Perioperative	N	S	S	S	S	S	S	S
	Renal	N	S	S	S	S	S	S	S
2324-11	<b>Registered Midwife</b>	N	S	S	S	S	S	S	S
2325-11	<b>Mental Health Nurse</b>	N	S	S	S	S	S	S	S
3411	<b>Enrolled Nurse</b>	N	S	S	S	S	S	S	S

ASCO	Occupation	AUST	NSW	VIC	QLD	SA	WA	TAS	NT <sup>1</sup>
<b>HEALTH SPECIALISTS</b>									
2381	Dentist* <sup>1</sup>	N			S	S	S*	S	
2382-11,15	Pharmacist* (Hospital/Retail)	N	S*	S	S*	S	S	S	S
2383-11	Occupational Therapist*	N	S*	S	S	S	S*	S	S
2385-11	Physiotherapist*	N	S	S*	S	S	S*	S	S
2386-11	Speech Pathologist <sup>1</sup>	N	S	S	S		RD	S	
2391-11	Diagnostic Radiographer*	N	S*		S	S	R	S	
2391-13	Radiation Therapist <sup>1</sup>	N	S	S	S	S	S	S	
2391-15	Nuclear Medicine Technologist	N	S	D	S		S	S	D
2391-17	Sonographer*	N	S*		S	S	S	S	
2399-11	Audiologist <sup>1*</sup>				R*	S	S*		
6391	Dental Assistant <sup>1</sup>				S	D			S
<b>SECONDARY TEACHERS</b>									
2413-11	Secondary Teacher*	*	*	*	*	*		*	*
	Manual Arts/Tech Studies*	N	S	S*	S	S			
	Maths	N	S	S	S	S		R	S
	Physics/Chemistry	N	S		S	S		R	S
	General Science	N	S	S	S			R	
	Music			S					
	LOTE*			S*	S	S			
	Home Economics					S			
	Information Technology			S	S				
	Senior English							R	
	Special Needs				S				
	Agricultural Science				S				
	Physical Education			S					
2511	Social Worker <sup>1</sup>			RD		D		RD	S
2521	Lawyer*		S*	D*	S	D	D*	R*	

1. Not all occupations assessed in all States

\* = Shortages are for specialist skills, see comments below

N = National shortage

M = Shortage in metropolitan areas

RD = Recruitment difficulties in regional areas

MD = Recruitment difficulties in metropolitan areas

S = State-wide shortage

R = Shortage in regional areas

D = Recruitment difficulties

Feb 2003

**Child Care Worker:** NSW: Shortages are greatest in the western suburbs of Sydney and for long day care. WA: Shortage is greatest in some regional and outer metropolitan areas.

**Child Care Coordinator:** NSW: Shortages are greatest in the western suburbs of Sydney and for long day care. WA: Shortage is greatest in some regional and outer metropolitan areas.

**Civil Engineer:** NSW: Current shortages especially for Civil Engineers in design, general project management, water supply, drainage and sewerage and local government. WA: Shortage particularly for those with oil and gas and/or design experience.

**Electrical Engineer:** VIC: Shortage restricted to Electrical Engineers experienced in working with high voltage. WA: Recruitment difficulties for Electrical Engineers with oil and gas experience.

**Electronics Engineer:** NSW: Recruitment difficulties for senior Engineers in Sydney with specialised experience in areas such as avionics, defence technology and firmware.

**Accountant:** VIC: Shortages of Chartered Accountants and taxation specialists. WA: In metropolitan areas, shortage is restricted to experienced tax and insolvency (chartered or certified practising) accountants. More general shortages are apparent in regional areas.

**Lawyer:** NSW: Shortages particularly for Lawyers with experience in financial services, banking, property, fund management, commercial litigation and general corporate and commercial work. VIC: Recruitment difficulties for lawyers experienced in taxation. WA: Recruitment difficulties for Lawyers experienced in commercial and corporate law, and in regional and remote areas for Lawyers experienced in family law. TAS: Shortages are particularly evident in northern Tasmania and the north-west coast, and for lawyers experienced in family and criminal law.

**Dentist:** WA: Shortage is greatest in rural and remote areas and in public health.

**Pharmacist:** NSW: Shortages most severe for hospital pharmacists. QLD: Shortages of Retail Pharmacists are more acute in regional areas.

**Occupational Therapist:** NSW: Shortages in most specialisations, especially mental health. WA: Shortage is greatest in aged care facilities and rural areas.

**Physiotherapist:** VIC: Shortages in paediatrics and geriatrics, and more general regional shortages. WA: Shortage is greatest for paediatric physiotherapists and for physiotherapists in rural areas.

**Diagnostic Radiographer:** NSW: Shortages especially in theatre, mammography and CT.

**Sonographer:** NSW: Shortages for generalists and in most specialisations, including vascular and echo-cardiology.

**Audiologist:** QLD: Shortage is evident in regional areas outside south east Queensland. WA: Shortage is greatest in rural areas.

**Secondary Teacher:** Specialist shortages only as listed. QLD: Specialist shortages as listed are State-wide, but more general shortages are apparent in all areas except south-east Queensland. SA: Shortages restricted to specialist subject areas as listed. TAS: Shortages restricted to specialist subjects as listed in regional areas.

**Manual Arts/Technology:** VIC: Shortages especially for auto, wood and metal.

**LOTE Teachers:** VIC: Shortages especially Indonesian, Japanese, German, Italian and French.

Feb 2003

# Skill Shortage List – Trades

December 2002

ASCO	Occupation	AUST	NSW	VIC	QLD	SA	WA	TAS	NT
<b>ENGINEERING TRADES</b>									
4112-11	Metal Fitter*	N	D	S*		S	S*		S
4112-13	Metal Machinist*	N	R*	S*	S	S	S		S
4113-11	Toolmaker*	N	S*	S*	S	S	D		
4122-11	Metal Fabricator*	N	S*	S		D	S		R
4122-15	Welder	N	S	S		S	S		R
4124-11	Sheetmetal Worker*	N	S*	S*	S	S		S	S
<b>VEHICLE TRADES</b>									
4211-11	Motor Mechanic*	N	S*	S	S	S	R*		S
4212-11	Auto Electrician	N	S	S	S	S	S	S	S
4213-11	Panel Beater	N	S	S	S	S		S	S
4214-11	Vehicle Painter	N	S	S	S	D		S	R
<b>ELECTRICAL/ELECTRONICS</b>									
4311-11,13	Electrician*	N	S*	R	S*	S*		R-D	S
4312-11	Refrigeration and Airconditioning Mechanic*	N	S*	S	S	D		S	S
4314, 4316	Electronic Instrument Trades*		R*					R-D	
4315-11	Electronic Equipment Trades*		S	D*				R-D	
<b>CONSTRUCTION TRADES<sup>1</sup></b>									
4411-11	Carpenter and Joiner			R-D	S	S			R-D
4413-11	Roof Slater and Tiler			S					
4414-11	Bricklayer	N	M	S	S	M	S	S	S
4415-11	Solid Plasterer			S					
4421-11	Painter and Decorator				S				
4431-11	Plumber*	N	M*	D*		S	S*	S	S
<b>FOOD TRADES</b>									
3322	Chef*	N	S	S	S*		S*	S*	S
4513-11	Cook	N	S	S	R				S
4512-13	Pastrycook*	N	S	S	S*		S		S
<b>PRINTING TRADES</b>									
4911-11	Graphic Pre-press Tradesperson				R				
4912	Printing Machinist		M	R	R	S			
4913-11	Binder and Finisher			S	R				
<b>WOOD TRADES</b>									
4921-11	Wood Machinist		S						
4922-11	Cabinetmaker*	N	S*	S	S	S	S	S	R
<b>OTHER TRADES</b>									
4931-11	Hairdresser	N	S	S	S	S	S	S	R
4942-11	Furniture Upholsterer*	N	S*	S	S	S		S	

<sup>1</sup> = Not all occupations assessed in all States

\* = See comments on specialisations

N = National shortage

S = State-wide shortage

M = Shortage in metropolitan areas

R = Shortage in regional areas

D = Recruitment difficulties

R-D = Recruitment difficulties in regional areas

**Metal Fitter:** VIC: shortage especially for cnc/cad/cam; pneumatics; hydraulics; grinding; centre lathe turning; continuous process; TIG, MIG, OXY welding; sheetmetal machining; and reading drawings. WA: shortages are particularly for diesel and mobile plant mechanics.

**Metal Machinist:** NSW: shortage for specialisations in lathe and milling, grinding, boring and honing. VIC: shortage especially for cnc/cad/cam, reading drawings and working to fine tolerances, as well as sound experience in machining, milling, grinding and toolmaking.



**Toolmaker:** NSW: shortage especially for skills in machine setting, CAD, CNC milling and press tools.

VIC: shortage especially for cnc/cad/cam. QLD: shortage of cnc/nc skills.

**Metal Fabricator:** NSW: shortages especially for tube and pipe welding and ability to work off plans.

**Sheetmetal Worker:** NSW: shortage especially for stainless steel specialisation. VIC: shortage especially for skills in stainless steel, aluminium, air-conditioning duct work, ship building and marking out.

**Motor Mechanic:** NSW: shortages especially for skills in heavy vehicle, reconditioning engines, LPG conversion. WA: shortage particularly evident for truck mechanics.

**Electrician:** NSW: shortage for lift mechanics only. QLD: shortage of electrical appliance serviceperson and industrial electrician. SA: recruitment difficulties for programmable logic control (PLC) skills and special class electricians.

**Refrigeration and Airconditioning Mechanic:** NSW: shortage especially for airconditioning commissioning technicians.

**Electronic Instrument Trades:** NSW: recruitment difficulties for General Communication Tradesperson.

**Electronic Equipment Trades:** VIC: recruitment difficulties for radio and television repairer. TAS: shortages especially for PLC skills.

**Plumber:** NSW: shortage especially in residential sector. VIC: recruitment difficulties for maintenance and gas appliance specialists statewide, and more general recruitment difficulties in regional areas, especially roof plumbers. WA: shortages for roof plumber only.

**Chef:** QLD: metropolitan shortages are restricted to top level international chefs. WA: shortages exist in some ethnic cuisines, notably Japanese, Indian, Thai and traditional Italian. TAS: shortages for head chefs.

**Pastrycook:** QLD: shortages most acute in regional tourist centres such as the Gold Coast and Cairns.

**Cabinetmaker:** NSW: shortage are especially severe for CNC and Cabinetmakers specialising in kitchens.

**Furniture Upholsterer:** NSW: shortage in manufacturing, repair and restoration of custom furniture.

Dec 2002

# National and State ICT Skill Shortages (surveyed late 2002, released February 2003)

## ICT Employment Trends and Skill Shortage Survey 2002 - Powerpoint Presentation

SKILL SHORTAGES* by ICT SPECIALISATION	AUST	NSW	VIC	QLD	SA	WA	TAS	ACT	NT
<b>Database</b>									
DB2		D		D				D	
Oracle				D	D	D	D	D	D
MS Access									
Microsoft SQL Server				D	D	D			D
Sybase SQL Server		D		D	S			D	
<b>General Application Development/Software Engineering</b>									
PowerBuilder				D	S				
Java				D	D			D	D
Java Script								D	
C++				D	D				
Delphi		D		D	D			D	
Visual Basic									
Lotus Notes					D	D			S
Progress		D		D	S				
Powerhouse		D		D	D				
<b>Internet, Networking/Lan/WAN</b>									
Novell Netware									
TCP/IP									D
IPX									
SNA		D		D					D
Microsoft NT Server									D
Ethernet									D
Advanced Web Design		D		D	D			D	D
HTML									D
ASP					D				D
Xml		D			D	D		D	D
Firewall/Internet security		D	D	D	S	D		D	D
Java Security (mainly J2EE) and electronic commerce	S	S		S	S	D		D	D
<b>Multimedia</b>									
Graphics									
Multimedia									
<b>Office/E-mail/Groupware</b>									
Groupwise				D	D				D
Lotus Notes				D	D	D			D
Microsoft Exchange					D	D			
CC:Mail				D					D
Netscape									D
Eudora									D
<b>Client/Server applications</b>									
COBOL								S	
SAP	S	S		D	S	S		D	S
PeopleSoft	S	D	D	S	S	D		D	S
Siebel		D	D	S	S	D		D	
<b>System Software Support</b>									
Help Desk									D
Data Warehousing		D	D	D	D	D		D	D
<b>Operating Systems</b>									
Unix		D		D	D	D		D	D
Windows									D
SKILL SHORTAGES* by ICT SPECIALISATION	AUST	NSW	VIC	QLD	SA	WA	TAS	ACT	NT
<b>Operating Systems (Cont.)</b>									

Windows NT							D
Solaris	D		D	D	D	D	S
Linux	D		D	D			D
HP-UX	D		D	D			S
VMS	D		D	D	D		D
<b>Communications</b>							
Radio	S	D		S			D
SDH	D			S			
WDM	D		D	D			
GSM	S	D		D			
CDMA	S			D			
Broadband CDMA	S	D	D	D			
Satellite design	S	D	D	D			S
TDMA	S		D	S			
VSAT	D		D	S			
Photonics	S		D	S			
<b>Process &amp; Systems management</b>							
Project Management							D
Systems analysis					D	D	D
Broad commercial business understanding						D	S
<b>E-Commerce (eg business/financial management/analysis/customer service)</b>							
E-commerce security (non programming)	D	D	D	S	D	D	S
<b>Security</b>							
Network Security	D		D	D	D	D	D
Risk Management	D	D	D	D	D		D
CISSP*	S	S	D	D	S		D
PKI	S	S	D	D	S		D
<b>Other specialisations not listed above</b>							
GIS, Mapinfo	S		D	D	D		
IDMS					D		
ADA in Defence					D		
C#			D				
Cisco Certified Internetwork Expert (CCIE)			S				
Crystal Reporting							D
M204 Programming/Analysis							S
Visual C++					D		
Hi Level Cool-Gen							S
GIS (eg Mapinfo)			D	D	D		
.Net technologies			S		S <sup>1</sup>		S
TELON							S
Pro IV					S <sup>1</sup>		
SMS					S <sup>1</sup>		

\* S = Shortage D = Recruitment Difficulty

1 = Based on only one response

Feb 2003

## National and State Skill Shortage Lists – Explanatory Notes

The Department of Employment and Workplace Relations (DEWR) is the Australian Government agency with prime portfolio responsibility for monitoring skill shortages. DEWR assesses skill shortages by a number of means including contact with employers, industry, employer and employee organisations and education and training providers. The prime focus of DEWR's agency approach is surveying employers who have recently advertised vacancies for selected skilled occupations. In assessing skill shortages, this industry and employer intelligence is considered in conjunction with statistical information on demand and supply trends for the selected occupations. Skill shortage assessments cover Trades, Professionals and Information and Communication Technology (ICT) skills.

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The specific occupations and skills to be included in the annual skill shortage assessment program (six monthly, in the case of ICT skills) are determined through consultations with peak industry bodies, other key stakeholders and DEWR State Offices. The program is conducted through Labour Economics Offices (LEOs) in DEWR State Offices.

There is considerable ambiguity about the term 'skill shortages' in industry and media discussions, and in developing guidelines for training, migration, labour market programs and regional skills analysis. The term 'skill shortages' is often a surrogate for more general recruitment difficulties, or skill gaps (deficiencies in the skills of existing workers). DEWR skill shortage monitoring and assessment focuses mainly on skill shortages as defined below.

## **Skill shortages**

Skill shortages exist when employers are unable to fill or have considerable difficulty in filling vacancies for an occupation, or specialised skill needs within that occupation, at current levels of remuneration and conditions of employment, and reasonably accessible location.

Shortages are typically for specialised and experienced workers, and can coexist with relatively high unemployment overall or in the occupation. An occupation may be assessed as in shortage even though not all specialisations are in shortage. Occupations may be in shortage in particular geographical areas and not in others. Although skill shortages are monitored closely, there may be localised or specialised shortages that are not reflected in these lists.

For each State, skill shortages are rated as evident in the capital city only (M – metropolitan), in regional areas (R – other than the capital city) or statewide (S). If there are shortages in the three largest States, or in a majority of States, then the occupation is rated as being in national shortage (N). Skill shortages involve skills that require a significant period of training and/or experience to acquire.

As a result of consultation with industry, particularly peak industry bodies, DEWR has increased the focus on specialisations in shortage as well as the employability skills and personal attributes of most concern to employers. Where these skills/attributes impact upon skill shortages, details are provided in explanatory notes at the end of the relevant skill shortage list.

In the National and State skill shortage lists, especially ICT skills, the term 'recruitment difficulties' is used as a way of signalling a degree of skill shortage - shown as "D" in the skill shortage lists. This provides an option for recognising skills where employers are experiencing some difficulty in finding suitable workers even though a broader skill shortage is not evident.

The reasons for skill shortages are complex and varied and may result from economic or demographic change, those not completing training and qualified workers (not working in the occupation for which they are qualified and/or experienced), cyclical fluctuations in labour demand, emerging demands of new technology, lack of flexibility in wages and regional mismatches.

## **Recruitment difficulties**

Recruitment difficulties occur when employers have some difficulty in filling vacancies for an occupation. There may be an adequate supply of skilled workers, but employers are still unable to attract and recruit sufficient suitable employees.

The recruitment difficulties may be due to characteristics of the industry, occupation or employer, such as: relatively low remuneration, poor working conditions, poor image of the

industry, unsatisfactory working hours, location hard to commute to, ineffective recruitment advertising and processes or organisation-specific and highly-specialised skill needs.

Skill shortages may exist outside those included in the skill shortage lists. For example, an occupation or skill, particularly where the number employed is very small, may not be identified in consultations with industry bodies and other key stakeholders, and pockets of shortage may exist in isolated locations. In addition, variations in national or regional industry activity may cause shortages not apparent at the time when skill shortage lists are being prepared. The lists do not include skill shortages involving skills that require only a very limited period of training and/or experience to acquire.

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National and State ICT Skill Shortages (Surveyed October 2002)

SKILL SHORTAGES\* by ICT SPECIALISATION

	AUST	NSW	VIC	QLD	SA	WA	TAS	ACT	NT
<b>Database</b>									
DB2		D		D				D	
Oracle				D	D	D	D	D	D
MS Access									
Microsoft SQL Server				D	D	D			D
Sybase SQL Server		D		D	S			D	
<b>General Application Development/Software</b>									
<b>Engineering</b>									
PowerBuilder				D	S				
Java				D	D			D	D
Java Script								D	
C++				D	D				
Delphi		D		D	D			D	
Visual Basic									
Lotus Notes					D	D			S
Progress		D		D	S				
Powerhouse		D		D	D				
<b>Internet, Networking/Lan/WAN</b>									
Novell Netware									
TCP/IP									D
IPX									
SNA		D		D					D
Microsoft NT Server									D
Ethernet									D
Advanced Web Design		D		D	D			D	D
HTML									D
ASP					D				D
Xml		D			D	D		D	D
Firewall/Internet security		D	D	D	S	D		D	D
Java Security (mainly J2EE) and electronic commerce	S	S		S	S	D		D	D
<b>Multimedia</b>									
Graphics									
Multimedia									
<b>Office/E-mail/Groupware</b>									
Groupwise				D	D				D
Lotus Notes				D	D	D			D
Microsoft Exchange					D	D			
CC:Mail				D					D
Netscape									D
Eudora									D
<b>Client/Server applications</b>									
COBOL								S	
SAP	S	S		D	S	S		D	S
PeopleSoft	S	D	D	S	S	D		D	S
Siebel		D	D	S	S	D		D	
<b>System Software Support</b>									
Help Desk									D
Data Warehousing		D	D	D	D	D		D	D

<b>Operating Systems</b>									
Unix		D		D	D	D		D	D
Windows									D
Windows NT									D
Solaris		D		D	D	D		D	S
Linux		D		D	D				D
HP-UX		D		D	D				S
VMS		D		D	D	D			D
<b>Communications</b>									
Radio		S	D		S				D
SDH		D			S				
WDM		D		D	D				
GSM		S	D		D				
CDMA		S			D				
Broadband CDMA		S	D	D	D				
Satellite design		S	D	D	D				S
TDMA		S		D	S				
VSAT		D		D	S				
Photonics		S		D	S				
<b>Process &amp; Systems management</b>									
Project Management									D
Systems analysis					D	D			D
Broad commercial business understanding						D			S
<b>E-Commerce (eg business/financial management/analysis/customer service)</b>									
E-commerce security (non programming)		D	D	D	S	D		D	S
<b>Security</b>									
Network Security		D		D	D	D		D	D
Risk Management		D	D	D	D	D			D
CISSP*	S	S	D	D	S			D	S
PKI		S	D	D	S			D	D
<b>Other specialisations not listed above</b>									
GIS, Mapinfo		S		D	D	D			
IDMS					D				
ADA in Defence					D				
C#				D					
Cisco Certified Internetwork Expert (CCIE)				S					
Crystal Reporting									D
M204 Programming/Analysis									S
Visual C++					D				
Hi Level Cool-Gen									S
GIS (eg Mapinfo)				D	D	D			
.Net technologies				S		S <sup>1</sup>			S
TELON									S
Pro IV						S <sup>1</sup>			
SMS						S <sup>1</sup>			

\* S = Shortage D = Recruitment Difficulty  
1 = Based on only one response

National and State ICT skill shortages (September 2003)									
ICT specialisation	AUST*	NSW	VIC	QLD	SA	WA	TAS	ACT	NT
<b>Database</b>									
DB2		D		D					
Oracle		D	D	D	D	D			
MS Access									D
Microsoft SQL Server					D				D
Sybase SQL Server		D	D	D	D	D			
<b>General Application Development/Software</b>									
PowerBuilder		D	D	D	D	D			
Java		D		D	D	D		D	D
Java Script								D	D
C++		D		D	D				
Delphi		D	D	D	D	D			
Lotus Notes			D	D	D	D		D	D
Progress		D	D	D	D	D			
Powerhouse		D		D	D	D			
<b>Internet/Networking/Lan/WAN</b>									
IPX					D				
SNA		D		D	D				D
Advanced Web Design				D		D			D
ASP		D		D				D	
Xml		D		D				D	
Firewall/Internet security		D		D	D	D		S	S
Java Security (mainly J2EE) and electronic commerce		S		D	D	D	D	D	
<b>Office/E-mail/Groupware</b>									
Groupwise		D		D	D				
Lotus Notes				D	D	D			
CC:Mail		D			D				
Netscape				D					
Eudora		D							
<b>Client/Server applications</b>									
COBOL				D		D			
SAP		D	D	D	S	S			
PeopleSoft		D	D	D	S	S			
Siebel		D	D	D	S	S			
<b>System Software Support</b>									
Help Desk									D
Data Warehousing		D		D	D	D			
<b>Operating Systems</b>									
Unix		D		D		D			D
Windows									D
Windows NT									D
Solaris		D		D		D			
Linux		D		D		D			
HP-UX		D		D		D			
VMS		D		D		D			

\* no ICT skills in national shortage



	AUST*	NSW	VIC	QLD	SA	WA	TAS	ACT	NT
<b>Communications</b>									
Radio		D							
SDH		D							
WDM		D		D					
GSM		D		D		D			
CDMA		D		D					
Broadband CDMA		D		D		D			
Satellite design		S							
TDMA		D							
VSAT		D				D			
Photonics		S							
<b>Process &amp; Systems management</b>									
Project Management		D						D	D
Systems analysis		D		D				D	D
Broad commercial business understanding		D		D		D		D	S
<b>E-Commerce (eg. business/financial)</b>									
E-commerce security (non programming)		D	D	D	D	D			S
<b>Security</b>									
Network Security		D	D	D	D	D		D	S
Risk Management		D	D	D	D	D		D	D
CISSP*		D		S	D	D			
PKI		D		D		D		S	
<b>Other specialisations not listed above</b>									
GIS (eg Mapinfo)		D	D	D	S	D			
IDMS					D				
ADA in Defence					D				
C#		D							
Cisco Certified Internetwork Expert (CCIE)				S					
M204 Programming/Analysis								S	
Visual C++					D				
Hi Level Cool-Gen		D						S	
.Net technologies		D		D		D		S	
PL/1		D							
JDEdwards		D							
CRM		D							
Main Frame System Administrators									D
Rational Rose/UML							D		
JNET							D		

S = Shortage D = Recruitment Difficulty

\* no ICT skills in national shortage



**National and State Skill Shortage Lists - February 2002**

A printable version of the [Skill Shortage Lists](#) (58Kb 11pp) is available in PDF format requiring Adobe Acrobat Reader.

Note: State shortage lists are in an Microsoft Excel format - If you do not have Microsoft Excel, or your version of Microsoft Windows does not support on-line spreadsheet access, please contact Nerida Coulter: phone (02) 6121 6610 or via [email](#) to obtain a copy in a different format.

- [National Skill Shortage \(NSS\) List](#)
- [Professionals](#)
- [Trades](#)
- [Information and Communication Technology \(ICT\) Skills](#)
- [Explanatory Notes](#)

The National and State Skill Shortage Lists for 2002 are based on labour market intelligence undertaken by DEWR in the second half of 2001. Information about the compilation of the lists is available in the explanatory notes.

The Skill Shortage Lists incorporate information on specialisations in shortage in particular States.

Information about the extent of shortages, that is whether they are state wide (S), regional (R) or metropolitan (M), is provided.

The lists also make use of the concept of recruitment difficulties where 'skill shortages' are not evident, but some employers have experienced recruitment problems.

Information on, and reports from, the industry-led skill shortage working groups, managed by the Department of Education, Science and Training (DEST), is available at [www.skillsinitiative.gov.au](http://www.skillsinitiative.gov.au)

**National Skill Shortage (NSS) List - Australia February 2002**

**PROFESSIONALS**

- Child Care Coordinator
- Child Care Worker
- Accountant
  
- Registered Nurse
  - Accident/Emergency
  - Aged Care
  - Cardiothoracic
  - Community
  - Critical/Intensive Care
  - NeoNatal Intensive Care
  - Neurology
  - Oncology
  - Operating Theatre
  - Orthopaedics
  - Paediatric
  - Palliative Care
  - Perioperative
  - Rehabilitation
  - Renal/Dialysis
  - Respiratory
  - Registered Midwife
  - Mental Health Nurse
  - Enrolled Nurse

- Pharmacist (Hospital/Retail)
- Occupational Therapist
- Physiotherapist
- Diagnostic Radiographer
- Radiation Therapist
- Sonographer
  
- Secondary Teacher (specialisations only)
  - Manual Arts
  - Maths
  - Physics/Chemistry
  - General Science
  - Information Technology

#### ICT SKILLS - SPECIALISATIONS ONLY

- Sybase SQL Server
- C++
- Progress
- Firewall/Internet security
- XML
- Java Security And Electronic Commerce
- SAP
- Peoplesoft
- Siebel
- Satellite Design
- E-Commerce Security (Non-programming)
- CISSP

#### TRADES

- Metal Fitter
- Metal Machinist
- Toolmaker
- Sheetmetal Worker
- Motor Mechanic
- Auto Electrician
- Panel Beater
- Vehicle Painter
- Refrigeration and Airconditioning Mechanic
- Chef
- Cook
- Pastrycook
- Cabinetmaker
- Hairdresser
- Furniture Upholsterer


#### **Skill Shortages- National and State**

The following Skill Shortage Lists, National (Australia), for each State of Australia and where available, the Northern Territory and the ACT, are based on assessments undertaken in the second half of 2001. They cover Trades, Professionals and Information and Communication Technology (ICT) skills and are based on a number of indicators, most importantly on contact with employers who have recently advertised for skilled workers.

DEWR, through the Economic and Labour Market Analysis Branch and Labour Economics Offices (LEOs) in each State capital, monitors and assesses skill shortages. Although skill shortages are monitored closely, there may be localised or specialised shortages that are not reflected in these lists.

Skill shortages exist when employers are unable to fill or have considerable difficulty in filling vacancies for an occupation, or specialised skill needs within that occupation, at current levels of remuneration and conditions of employment, and reasonably accessible location. Shortages are typically for specialised and experienced workers, and can coexist with relatively high unemployment overall or in the occupation. An occupation may be assessed as in shortage even though not all specialisations may be in shortage. Occupations may be in shortage in particular geographical areas and not in others.

The reasons for skill shortages are complex and varied and may result from economic or demographic change, those not completing training and qualified workers (not working in the occupation for which they are qualified and/or experienced), cyclical fluctuations in labour demand, emerging demands of new technology, lack of flexibility in wages and regional mismatches.

[Skill Shortage List - Professionals - February 2002- Excel Spreadsheet](#) 

#### **Professionals - comments on specialisations in shortage**

**Child Care Worker:** WA: shortages are greatest in some regional and outer metropolitan areas.

**Child Care Coordinator:** WA: shortages are greatest in some regional and outer metropolitan areas.

**Civil Engineer:** NSW: current shortages especially for Civil Engineers in design, general project management, water supply, drainage and sewerage. VIC: shortages restricted to traffic engineers and engineers with managerial/design experience in large scale infrastructure projects. WA: shortage restricted to highly skilled and experienced structural engineers, especially in offshore oil and gas

**Electrical Engineer:** VIC: shortage of Electrical Engineers experienced in working with high voltage. WA: shortage restricted to manufacturing and mineral processing maintenance.

**Mechanical Engineer:** WA: in the short term, a shortage of senior Mechanical Engineers with resource experience is expected.

**Mining Engineer:** WA: shortages restricted to experienced planning, scheduling and underground Mining Engineers.

**Chemical Engineer:** WA: shortages restricted to experienced Chemical Engineers in the mineral processing sector.

**Accountant:** VIC: some managerial shortages only. WA: Metropolitan shortages of Certified Practising or Chartered Accountants with 3-5 years experience in taxation or insolvency. More general shortages of Accountants in regional areas.

**Lawyer:** NSW: shortage restricted to personal injury specialists, and recruitment difficulties evident for senior Lawyers who have international corporate experience. VIC: Regional shortage, and state-wide shortage of Lawyers with experience in litigation, mergers and acquisitions. QLD: shortage of commercial Lawyers. WA: shortages are greatest for 2 to 5 years experienced Lawyers in litigation, mergers and acquisitions, and banking and finance. Regional shortages are more severe. TAS: recruitment difficulties especially on the North-West Coast.

**Occupational Therapist:** NSW: statewide shortage especially for cardiac, respiratory, and rehabilitation case management. WA: shortages are especially in aged residential care facilities and rural areas.

**Physiotherapist:** NSW: shortages especially in HIV/AIDS and geriatric palliative care, but also musco-skeletal, manipulative, exercise-based rehabilitation. VIC: State-wide shortages some physiotherapy specialisations: paediatrics, geriatrics, oncology, neurology, cardio-thoracic and palliative care, and more general regional shortages. SA: shortage in rural areas, and recruitment difficulties in metropolitan areas.

**Diagnostic Radiographer:** NSW: shortages especially in mammography and CT.

**Manual Arts/Home Economics Teachers:** VIC: shortages especially for food technology, hospitality, wood and metal.

**LOTE Teachers:** VIC: shortages especially Indonesian, Japanese, German, French

**Secondary Teacher:** specialist shortages only as listed.

**Social Worker:** VIC: regional shortage and state-wide recruitment difficulties in health, aged care and trauma. TAS: recruitment difficulties especially on the North-West Coast.

**Clinical Psychologist:** VIC: recruitment difficulties in regional areas and in rehabilitation.

[Skill Shortage List - Trades - February 2002 - Excel Spreadsheet](#)

#### Trades - comments on specialisations in shortage

**Metal Fitter:** NSW: shortages in metropolitan Sydney are for injection moulding, blow moulding, plant mechanics and diesel mechanics. Regional shortages are general. VIC: shortage especially for cnc/cad/cam; pneumatics; hydraulics; grinding; center lathe turning; continuous process; TIG, MIG, OXY welding; sheetmetal machining; and reading drawings. SA: shortage for diesel, heavy machinery and hydraulics. WA shortage restricted to mobile plant fitters.

**Metal Machinist:** VIC: shortage especially for cnc/cad/cam, reading drawings and working to fine tolerances, as well as sound experience in machining, milling, grinding and toolmaking. QLD: shortage of cnc/nc skills. WA: shortage restricted to cnc/nc skills.

**Toolmaker:** NSW: shortage especially for skills in plastic injection moulding and CNC machining.

VIC: shortage especially for cnc/cad/cam. QLD: shortage of cnc/nc skills.

**Metal Fabricator:** WA: shortage of aluminium fabricators.

**Welder:** NSW: regional shortages chronic in Dubbo, Parkes and Cowra. QLD: shortage restricted to stainless

steel. WA: shortage of aluminium welders.

**Sheetmetal Worker:** VIC: shortage especially for skills in stainless steel, aluminium, air-conditioning duct work, ship building and marking out. QLD: shortage restricted to stainless steel/jobbing

**Motor Mechanic:** NSW: shortages especially for heavy vehicles. VIC: shortage especially for skills in electronic systems and fuel injection.

**Electrician:** NSW: recruitment difficulties particularly in the domestic, light commercial and industrial sectors. VIC: recruitment difficulties restricted to programmable logic control (PLC) skills. SA: recruitment difficulties for programmable logic control (PLC) skills and special class electricians.

**Electronic Instrument Trades:** NSW: shortage especially in particular brands of scientific and medical equipment and in regional areas extended to consumer electronics technicians. VIC: recruitment difficulties restricted to PLC skills.

**Electronic Equipment Trades:** NSW: shortages in Sydney are confined to industrial electronics. Regional shortages extend to consumer electronics. VIC: recruitment difficulties restricted to PLC skills. TAS: shortages especially for PLC skills.

**Printing Machinist:** VIC: recruitment difficulties for highly skilled tradespeople and general recruitment difficulties in regional areas.

**Chef:** NSW: shortage across the board for highly skilled Chefs in Western, modern, Indian, Thai, Japanese and Korean cuisines. VIC: shortage especially for Asian cuisines including Indian, Japanese, regional Chinese. QLD: most acute shortages are for sous and head chefs. SA: recruitment difficulties in Asian cuisines. WA: shortages particularly for demi, commis and chef de partie.

**Cook:** NSW: Asian cuisines. VIC: shortages especially in Asian cuisines. SA: shortage of skilled Asian cooks.

**Pastrycook:** QLD: shortages most acute in regional tourist centres such as the Gold Coast and Cairns.

**Wood Machinist:** NSW: shortage of CNC and traditional machinery.

**Furniture Upholsterer:** NSW: shortage in manufacture of custom furniture, and repair and restoration.

## Skill Shortage List - ICT - February 2002- Excel Spreadsheet

### National and State Skill Shortage Lists - Explanatory Notes

The Department of Employment and Workplace Relations (DEWR) is the Australian Government agency with prime portfolio responsibility for monitoring skill shortages. DEWR assesses skill shortages by a number of means including contact with employers, industry, employer and employee organisations and education and training providers. The prime focus of DEWR's agency approach is surveying employers who have recently advertised vacancies for selected skilled occupations. In assessing skill shortages, this industry and employer intelligence is considered in conjunction with statistical information on demand and supply trends for the selected occupations. Skill shortage assessments cover Trade, Professional and Information and Communication Technology (ICT) skills and occupations.

The specific occupations and skills to be included in the annual skill shortage assessment program (six monthly, in the case of ICT skills) are determined through consultations with peak industry bodies, other key stakeholders and DEWR State Offices. The program is conducted through Labour Economics Offices (LEOs) in DEWR State Offices.

There is considerable ambiguity about the term 'skill shortages' in industry and media discussions, and in developing guidelines for training, migration, labour market programs and regional skills analysis. The term 'skill shortages' is often a surrogate for more general recruitment difficulties, or skill gaps (deficiencies in the skills of existing workers). DEWR skill shortage monitoring and assessment focuses mainly on skill shortages defined as below:

#### Skill shortages

Skill shortages exist when employers are unable to fill or have considerable difficulty in filling vacancies for an occupation, or specialised skill needs within that occupation, at current levels of remuneration and conditions of employment, and reasonably accessible location.

Shortages are typically for specialised and experienced workers, and can coexist with relatively high unemployment overall or in the occupation. An occupation may be assessed as in shortage even though not all specialisations are in shortage. Occupations may be in shortage in particular geographical areas and not in others.

For each State, skill shortages are rated as evident in the capital city only (M - metropolitan), in regional areas (R - other than the capital city) or statewide (S). If there are shortages in the three largest States, or in a majority of States, then the occupation is rated as being in national shortage (N). Skill shortages involve skills

that require a significant period of training and/or experience to acquire.

As a result of consultation with industry, particularly peak industry bodies, DEWR has increased the focus on specialisations in shortage as well as the generic skills and personal attributes of most concern to employers. Where these skills/attributes impact upon skill shortages, details are provided in explanatory notes at the end of the relevant skill shortage list.

In the National and State skill shortage lists, especially ICT skills, the term 'recruitment difficulties' is used as a way of signalling a degree of skill shortage - shown as "D" in the skill shortage lists. This provides an option for recognising skills where employers are experiencing some difficulty in finding suitable workers even though a broader skill shortage is not evident.

### **Recruitment difficulties**

Recruitment difficulties occur when employers have some difficulty in filling vacancies for an occupation. There may be an adequate supply of skilled workers, but employers are still unable to attract and recruit sufficient suitable employees.

The recruitment difficulties may be due to characteristics of the industry, occupation or employer, such as: relatively low remuneration, poor working conditions, poor image of the industry, unsatisfactory working hours, location hard to commute to, ineffective recruitment advertising and processes or firm-specific and highly-specialised skill needs.

Skill shortages may exist outside those included in the skill shortage lists. For example, an occupation or skill, particularly where the number employed is very small, may not be identified in consultations with industry bodies and other key stakeholders and pockets of shortage may exist in isolated locations. In addition, variations in national or regional industry activity may cause shortages not apparent at the time when the skill shortage lists are being prepared. The lists do not include skill shortages involving skills that require only a very limited period of training and/or experience to acquire.

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ASCO	Occupation	AUST	NSW	VIC	QLD	SA	WA	TAS	NT <sup>1</sup>	ACT <sup>1</sup>
<b>CHILD CARE</b>										
1295-11	Child Care Coordinator	N	S	S	S		S	S		
6312-11sp	Child Care Worker	N	S	S	S		S	S		
<b>ENGINEERS</b>										
2124	Civil Engineer		S	*			S*			
2125-11	Electrical Engineer		R-D	*			S*	S		
	Renewable Energy Engineer			S				S		
2125-12	Electronics Engineer				S	S		S		
2126-11	Mechanical Engineer						*			
2127-11	Mining Engineer						*			
2129-17	Chemical Engineer						*			
<b>ACCOUNTANTS</b>										
2211-11	Accountant	N	R	*	S	S	M*			
2521sp	Lawyer		*	R*	S*		S*	R*		
<b>REGISTERED NURSES</b>										
2323-11	<b>Registered Nurse (general)</b>	N	S	S	S	S	S	S	S	S
	Accident/Emergency	N	S	S	S	S	S	S		
	Aged Care	N	S	S	S	S	S	S		S
	Cardiothoracic	N	S	S	S	S	S	S		
	Community	N	S		S	S	S	S	S	
	Critical/Intensive Care	N	S	S	S	S	S	S		S
	Indigenous Health				R	S	S		S	
	Neo-Natal Intensive Care	N	S	S	S	S	S	S		
	Neurology	N	S	S	S	S	S			
	Oncology	N	S	S	S	S	S	S		S
	Operating Theatre	N	S	S	S	S	S	S	S	S
	Orthopaedics	N	S		S	S	S	S		
	Paediatric	N	S	S	S	S	S	S		
	Palliative Care	N	D	S	S	S	S			
	Perioperative	N	S	S	S	S	S			
	Rehabilitation	N	S		S	S	S	S		
	Renal/Dialysis	N	D	S	S	S	S	S	S	
	Respiratory	N	S		S	S	S			
2324-11	<b>Registered Midwife</b>	N	S	S	S	S	S	S		
2325-11	<b>Registered Mental Health</b>	N	S	S	S	R	S	S		S
3411	<b>Enrolled Nurse</b>	N	S	S	S	S	S	S		
<b>HEALTH SPECIALISTS</b>										
2382-11,15	Pharmacist (Hospital/Retail)	N	S	S	S	S	S	S		
2383-11	Occupational Therapist	N	S	S	S	D	S*	S		
2385-11	Physiotherapist*	N	S*	R	S	<del>M</del> R	S	S		
2386-11	Speech Pathologist		R-D	R-D	S		S	S		
2391-11	Diagnostic Radiographer	N	S	S	S		S	S		
2391-13	Radiation Therapist	N	S	S	R		S	S		
2391-15	Nuclear Medicine Technologist				S		S	S		
2391-17	Sonographer	N	S	S	S	S	S	S		
2399-11	Audiologist		R-D	R-D	R	S	S	S		
<b>SECONDARY TEACHERS</b>										
2413-11	Secondary Teacher*	N	*	*	R	*	*	*		
	Manual Arts	N	S	S*	S	D				
	Maths	N	S	S	S		R			

	Physics/Chemistry	N	S		S		S
	General Science	N	S	S	S		S
	LOTE			S*	S	R	S
	Home Economics			S*	R	D	
	Information Technology	N	S	S	R		S
	Senior English				R	R	
	Music		D		R	D	S
2511	Social Workers		S	R*		D	R-D*
2514-11	Clinical Psychologist			R-D*			

1. Ratings for the ACT and Northern Territory are available only for Nurses and Food Trades

\* = See comments on specialisations

N = National shortage

S = State-wide shortage

M = Shortage in metropolitan areas

R = Shortage in regional areas



## Skill Shortage List - Trades

February 2002

ASCO	Occupation	AUS	NSW	VIC	QLD	SA	WA	TAS	NT1	ACT1
<b>METAL TRADES</b>										
4112-11	Metal Fitter*	N	S*	S*		S*	S*			
4112-13	Metal Machinist*	N		S*	S*	S	S*			
4113-11	Toolmaker*	N	S*	S*	S*	S	D			
4122-11	Metal Fabricator*		M-D	R			*			
4122-15	Welder*		R*		S*		*			
4124-11	Sheetmetal Worker*	N	S	S*	S*					
<b>VEHICLE TRADES</b>										
4211-11	Motor Mechanic*	N	S*	S*	R	S	S	S		
4212-11	Auto Electrician	N		S	S	S	S	S		
4213-11	Panel Beater	N	S	S	S	S	S	S		
4214-11	Vehicle Painter	N	S	S	S	D		S		
<b>ELECTRICAL/ELECTRONICS</b>										
4311-11,13	Electrician*		D*	D*		D*		S		
4312-11	Refrigeration and Aircon	N	S	S	R	S		S		
4314, 4316	Electronic Instrument Trades*	S*		D*		D		S		
4315-11	Electronic Equipment Trades*	S*		D*				S*		
<b>FOOD TRADES</b>										
	3322 Chef*	N	S*	S*	S*	D*	S*	S	S	S
4513-11	Cook*	N	S*	S*	S	D*	R		S	S
4512-13	Pastrycook*	N	M	S	S*		S		S	S
<b>PRINTING TRADES</b>										
	4912 Printing Machinist			D-R*						
<b>WOOD TRADES</b>										
4921-11	Wood Machinist*		S*							
4922-11	Cabinetmaker	N	S	D		S	D	S		
<b>OTHER TRADES</b>										
4931-11	Hairdresser	N	M	S	S	D	S	S		
4942-11	Furniture Upholsterer*	N	S*	S	S	S	S	S		

1. Ratings for the ACT and Northern Territory are available only for Food Trades and Nurses.

\* = See comments on specialisations

N = National shortage

M = Shortage in metropolitan areas

D = Recruitment difficulties

S = State-wide shortage

R = Shortage in regional areas

**SKILL SHORTAGES\* by ICT SPECIALISATION**

February 2002

	AUST	NSW	VIC	QLD	SA	WA	TAS	ACT
<b>Database</b>								
DB2		S		S	D	D	D	D
Oracle		S	D	D	D		D	D
MS Access							D	D
Microsoft SQL Server		D		D	D		D	D
Sybase SQL Server	S	S	S	D	D	D	S	D
<b>General Application Development/Software Engineering</b>								
PowerBuilder		D		S	D	S		
Java			D	D	D	S	D	D
Java Script		D			D		D	D
C++	S	S	D	S	D	D	D	S
Delphi		D	S	D	D	D	D	D
Visual Basic							D	D
Lotus Notes		D		D	D	D	D	D
Progress	S	S	S	D	S	S		
Powerhouse		D		S	D	S		
<b>Internet Networking/Intranet/WAN</b>								
Novell Netware		D						D
TCP/IP		D					D	D
IPX		D			D		D	
SNA		D		D	D		D	
Microsoft NT Server		D		D				
Internet		D					D	
Advanced Web Design		D		D	S		D	D
ASP		D	D	D	D		D	
Firewall/Internet security	S	S	D	S	S	D		S
Xml	S	S	S	S	D	D		S
Java Security and electronic commerce	S	S	D	S	S	D	D	S
Network Design		D						
<b>Multimedia</b>								
Multimedia							D	
<b>Office/E-mail/Groupware</b>								
Groupwise		D		D	D		D	D
Lotus Notes		D		D	D		D	D

	AUST	NSW	VIC	QLD	SA	WA	TAS	ACT
Microsoft Exchange		D					D	D
CC:Mail		D		D	D		D	D
Netscape		D					D	D
Eudora		D					D	
<b>Client/Server applications</b>								
COBOL				D			D	
SAP	S	S	S	D	S	S	D	
PeopleSoft	S	S	S	S	S	S	D	
Siebel	S	S	S	S	S	S	D	D
<b>System Software Support</b>								
Data Warehousing		D		S	D			D
<b>Operating Systems</b>								
Unix		D		D	D			D
Solaris		D			D		D	D
Linux		D					D	D
HP-UX		D		D	D		D	D
VMS		D		D	S	D	D	D
<b>Communications</b>								
Radio		D			D	D		
SDH					D	D		
WDM		D	D		D	D		
GSM				D	D	D		
CDMA		D		S	D	D		
Broadband CDMA		D		S	D	D		
Satellite design	S	S	D	S	S	D		
CDMA		D		D	D	D		
3AT		D		D	D	D		
Photonics		S	D	D	D	D		D
<b>Process &amp; Systems management</b>								
Project Management				D			S	D
Systems analysis		D		D			S	
Broad commercial business understanding		D		D			D	D
<b>E-Commerce (eg business/financial management analysis/customer service)</b>								
e-commerce security (non programming)	S	S	D	S	S	D		S

	AUST	NSW	VIC	QLD	SA	WA	TAS	ACT
Security								
Network Security		D		S	D	D	S	D
Risk Management		D		D	D		S	D
CISSP*	S	S	S	S	D	D		S
PKI		D	D	S	D	D		D
Other specialisations not listed above (eg. GIS, Mapinfo)								
Disaster recovery		D						
SANa		D						
IT recruiters		D						
OO technologies		D						
Voice over IP		D						
Optical		D						
Univers							S	
CRYSTAL							S	
ERP			S					
B2B			S					
CRM			S					
Hogan			D					
AS400			D					
IDMS					D			
Defence software engineers					D			
ADA in Defence					D			
Systems Engineer in defence					D			
C++ in Unix					D			
Visual C++					D			
Solutions Architect						D		
VBA						D		
OS/390						D		
CICS						D		
Hi Level Cool-Gen								D
Technical Pre-sales								D
Mapinfo				D	D	D	S	

\* S = Shortage D = Recruitment Difficulty

National and State ICT Skill Shortages (Surveyed April 2002, Released October 2002)

SKILL SHORTAGES* by ICT SPECIALISATION	AUST	NSW	VIC	QLD	SA	WA	TAS	ACT
<b>Database</b>								
DB2		D		D		D		
Oracle		D		D	D	D		
Microsoft SQL Server		D			D		D	
Sybase SQL Server		D		D	S	D		D
<b>General Application Development/Software Engineering</b>								
PowerBuilder		D		S	D	D		D
Java				D	D	D	D	D
Java Script					D			
C++				D	D		D	D
Delphi		D	D	D	D	D		
Lotus Notes		D		D	D	D	D	D
Progress	S	S	D	S	D	D	D	
Powerhouse		D		S	D	D		
<b>Internet, Networking/Lan/WAN</b>								
IPX		D				D		
SNA		D			D			
Advanced Web Design				D	D	D		
ASP						D		
Firewall/Internet security		D		D	D	D		D
Xml				D	D	D		
Java Security and electronic commerce	S	D	D	D	S	S		D
<b>Multimedia</b>								
Multimedia					D			
<b>Office/E-mail/Groupware</b>								
Groupwise				D	D	D		
Lotus Notes				D	D	D		
<b>Client/Server applications</b>								
COBOL					D	D		
SAP		S		D	D	D		D
PeopleSoft	S	S	D	D	S	S		
Siebel	S	D	D	S	S	D		
<b>System Software Support</b>								
Data Warehousing		D	D	S	D	D		D
<b>Operating Systems</b>								
Unix		D		D	D			
Solaris		D		D	D	D		
Linux		D		D				
HP-UX		D		D	D	D		
VMS		D		D		D		
<b>Communications</b>								
Radio				D	D	D		
SDH				D		D		
WDM		D		D		D		
GSM				D		D		
CDMA				D	D	D		
Broadband CDMA		D		D		D		
Satellite design		S		D	D	D		
TDMA		D		D		D		
VSAT		D		D		D		
Photonics		D	D			D		
<b>Process &amp; Systems management</b>								
Project Management								D
Systems analysis						D		
Broad commercial business understanding		D						

<b>E-Commerce (eg business/financial management/analysis/customer service)</b>								
e-commerce security (non programming)		D	D	D	S	D		D
<b>Security</b>								
Network Security		D		D	D	D		D
Risk Management		D		D	D	D		
CISSP*	S	D	D	S	D	S		D
PKI		D	D	D	D	D		
<b>Other specialisations not listed above (eg GIS, Mapinfo)</b>								
IDMS					S			
ADA in Defence					D			
Visual C++					D			
Hi Level Cool-Gen								D
Mapinfo		D		D	S	D		
MIMS/Ellipse				S				
IBM Mainframe						D		
Pro IV						D		
Test Analyst								D
* S = Shortage D = Recruitment Difficulty								

# National and State Skill Shortage Lists

- National Skill Shortage List
- Trades
- Professionals
- Information and Communications Technology (ICT) skills

The National and State Skill Shortage Lists for 2001 are based on labour market intelligence undertaken by DEWRSB in the second half of the year 2000, and consolidated in National Office.

The Skill Shortage lists this year incorporate a number of new elements. Additional information is provided on specialisations in shortage in particular States, as well as information on areas in which shortages are expected to ease over 2001.

Information about the extent of shortages, that is whether they are state-wide (S), regional (R) or metropolitan (M) is provided.

The lists also make greater use of the concept of recruitment difficulties where skill shortages are not evident, but some employers have experienced recruitment problems.

DEWRSB

FEBRUARY 2001

# National Skill Shortage (NSS) List – Australia

February 2001

## PROFESSIONALS

Child Care Coordinator  
Child Care Worker  
  
Electronics Engineer  
  
Accountant (particularly Taxation Accounting)  
Lawyer (some specialisations only)  
  
Registered Nurse  
    Operating Theatre  
    Accident/Emergency  
    Cardiothoracic  
    Neurological  
    NeoNatal Intensive Care  
    Paediatric  
    Critical/Intensive Care  
    Renal  
    Aged Care  
    Oncology  
    Palliative Care  
    Perioperative  
    Indigenous Health  
    Community Nursing  
    Registered Midwife  
    Mental Health Nurse  
  
Pharmacist (Hospital/Retail)  
Physiotherapist  
Diagnostic Radiographer  
Radiation Therapist  
Sonographer  
  
Secondary Teacher (specialisations only)  
    Manual Arts  
    Maths  
    Physics/Chemistry  
    Information Technology

## TRADES

Metal Fitter  
Metal Machinist  
Toolmaker  
Welder  
Sheetmetal Worker  
  
Motor Mechanic  
Auto Electrician  
Panel Beater  
Vehicle Painter  
  
Refrigeration and Airconditioning Mechanic  
  
Chef  
Cook  
Pastrycook  
  
Cabinetmaker  
Hairdresser  
Furniture Upholsterer



## Skill Shortage List - Trades February 2001

ASCO	Occupation	AUST	NSW	VIC	QLD	SA	WA	TAS	NT
<b>METAL TRADES</b>									
4112-11	Metal Fitter*	N	M <sup>e*</sup>	S*		S*			
4112-13	Metal Machinist*	N	M <sup>e</sup>	S*	S	S	S*		
4113-11	Toolmaker*	N	M <sup>e*</sup>	S*	S	S			
4122-11	Metal Fabricator*		M <sup>e</sup>	S*					
4122-15	Welder*	N	M <sup>e</sup>	S*	S*				
4124-11	Sheetmetal Worker*	N	M <sup>e*</sup>	S*	S*		S*	S	
<b>VEHICLE TRADES</b>									
4211-11	Motor Mechanic*	N	S*	S*	S	S		S	S
4212-11	Auto Electrician*	N	M*	S	S	S		S	S
4213-11	Panel Beater	N	S	S	S	S	S	S	
4214-11	Vehicle Painter*	N	S	S	S			S	
<b>ELECTRICAL/ELECTRONICS</b>									
4311-11,13	Electrician*		M <sup>e*</sup>	R*		S		S	
4312-11	Refrigeration and Airconditioning Mechanic*	N	S <sup>e</sup>	S	S	S	S*	S	
4314, 4316	Electronic Instrument and		S*	*		S	R	S	
4315-11	Communication Trades*								
<b>CONSTRUCTION TRADES</b>									
4411-11, 13,15	Carpenter and Joiner*			*					
4414-11	Bricklayer								S
4412-11	Fibrous Plasterer						S <sup>e</sup>	S	
4413-11	Roof Tiler			S					
4415-11	Solid Plasterer			S		S			
4416-11	Wall and Floor Tiler					S <sup>e</sup>			
4421-11	Painter and Decorator					S <sup>e</sup>			
4431-11, 13,15,17	Plumber*					S <sup>e</sup>	R*		
<b>FOOD TRADES</b>									
3322	Chef*	N	S*	S*	S	S*	R	S	S
4513-11	Cook*	N	M*	S*	S		R		
4512-13	Pastrycook	N	S <sup>e</sup>	S	S		S		S
<b>WOOD TRADES</b>									
4921-11	Wood Machinist*		S*						
4922-11	Cabinetmaker*	N	S*		S	S	S <sup>e</sup>	S	
<b>OTHER TRADES</b>									
4931-11	Hairdresser	N	S	S	S	S	S	S	
4942-11	Furniture Upholsterer*	N	S*	S	S	S	S	S	

\* = See comments on specialisations in shortage  
e = Shortage easing over 2001  
M = Shortage in metropolitan areas

S = State-wide shortage  
N = National shortage  
R = Shortage in regional areas

## **Trades – comments on specialisations in shortage**

**Metal Fitter:** NSW: shortages, especially for welding skills, electrical licences, CNC machining.  
VIC: shortage especially for cnc/cad/cam, welding and reading drawings. SA: shortage for diesel, heavy machinery and hydraulics.

**Metal Machinist:** VIC: shortage especially for cnc/cad/cam, reading drawings and working to fine tolerances. WA: shortage restricted to cnc/nc.

**Toolmaker:** NSW: shortage especially for skills in plastic injection moulding, CNC machining.  
VIC: shortage especially for cnc/cad/cam, injection moulding and working to fine tolerances.

**Metal Fabricator:** NSW: shortage especially for skills in stainless steel and plate welding.  
VIC: shortage especially for welding skills and ability to work from drawings.

**Welder:** VIC: shortage especially for MIG/TIG welding skills, ability to read from drawings.  
QLD: shortage restricted to stainless steel.

**Sheetmetal Worker:** NSW: shortage especially for skills in stainless steel and MIG/TIG.  
VIC: shortage especially for MIG/TIG welding skills, ability to read from drawings and CNC.  
QLD: shortage restricted to stainless steel/jobbing. WA: shortage restricted to stainless steel/jobbing.

**Motor Mechanic:** NSW: shortages especially for skills in front end diagnosis & repair, auto transmission and heavy vehicle. VIC: shortage especially for skills in electronic systems, transmissions, fuel injection and diesel.

**Auto Electrician:** NSW: shortage especially for skills in electronic fault diagnosis.

**Electrician:** NSW: especially programmable logic controls or specific industry experience.  
VIC: shortage restricted to PLC specialisation.

**Refrigeration and Airconditioning Mechanic:** WA: shortage restricted to commercial applications.

**Electronic Instrument and Communication Trades:** NSW: shortage for highly specialised and experienced eg programming of security access controls. VIC: shortage restricted to PABX installation.

**Carpenter and Joiner:** VIC: shortage restricted to stair builders. TAS: shortages in southern Tasmania.

**Plumber:** WA: shortage of full grade gasfitting and plumbing.

**Chef:** NSW: shortage especially in Asian cuisines. VIC: shortage especially for Asian cuisines including Indian, Japanese, regional Chinese. SA: shortage in Thai and Indian cuisines.

**Cook:** NSW: Asian cuisines. VIC: shortages especially in Asian cuisines.

**Pastrycook:** NSW: metropolitan shortages easing over 2001.

**Wood Machinist:** NSW: shortage of CNC, moulding, pro-filing and cutting grinders.

**Cabinetmaker:** NSW: shortage especially in CAD, timber veneer.

**Furniture Upholsterer:** NSW: shortage in manufacture of custom furniture, and repair of antique and custom furniture.

## Skill Shortage List - Professionals February 2001

ASCO	Occupation	AUST	NSW	VIC	QLD	SA	WA	TAS	NT
<b>CHILD CARE</b>									
1295-11	Child Care Coordinator	N	S	S	S	R	R	S	
6312-11sp	Child Care Worker	N		S	S	R		S	S
<b>ENGINEERS</b>									
2124	Civil Engineer*		M <sup>e*</sup>	*					
2125-11	Electrical Engineer*						S*		R
2125-12	Electronics Engineer*	N	S*	S	S*	S*		S	R
<b>ACCOUNTANTS</b>									
2211-11	Accountant*	N	S*	S	S	S	S		S
	Taxation (GST)	N	S	S	S	S	S		
2521sp	Lawyer*	N	S*	*	S*		S*	R	
<b>REGISTERED NURSES</b>									
2323-11	Registered Nurse	N	S	S	S	S	S	S	S
	Operating Theatre	N	S	S	S	S	S	S	S
	Accident/Emergency	N	S	S	S	S	S	S	S
	Cardiothoracic	N	D(r)	S	S	S	S	S	S
	Neurological	N	D(r)	S	S	S	S		S
	NeoNatal Intensive Care	N	D(r)	S	S	S	S	S	S
	Paediatric	N	D(r)	S	S	S	S		S
	Critical/Intensive Care	N	S	S	S	S	S	S	S
	Renal	N	D(r)	S	S	S	S		S
	Aged Care	N	S	S	S	S	S	S	S
	Oncology	N	S	S	S	S		S	S
	Palliative Care*	N	D(r)	S*	S	S	S		S
	Perioperative	N	D(r)	S	S	S	R		S
	Indigenous Health	N	D(r)	S	S		S		S
	Community Nursing	N	S	S	S		R		S
2324-11	Registered Midwife	N	S	S	S	R	S	S	S
2325-11	Mental Health Nurse	N	S	S	S	S	S	S	S
<b>HEALTH SPECIALISTS</b>									
2382-11,15	Pharmacist (Hospital/Retail)	N	S	S	S	S	S	S	S
2383-11	Occupational Therapist						R*		
2385-11	Physiotherapist*	N	M*	R	S		S <sup>e</sup>	S	R
2386-11	Speech Pathologist						S		
2391-11	Diagnostic Radiographer*	N	S <sup>e*</sup>	S	S		S	S	
2391-13	Radiation Therapist	N	S	S	S		S	S	
2391-15	Nuclear Medicine Technologist			S				S	
2391-17	Sonographer	N	S	S	S	S <sup>e</sup>	S		
2392-11	Veterinarian								
3411-11	Enrolled Nurse*						R*		
<b>SECONDARY TEACHERS</b>									
2413-11	Secondary Teacher*	N	*	*	*	*	*		S

ASCO	Occupation	AUST	NSW	VIC	QLD	SA	WA	TAS	NT
	Manual Arts	N	S	S	S	S			
	Maths	N	S	S	S		R	R	
	Physics/Chemistry	N	S	S	S	S		R	
	LOTE*			S*	S		R		
	Home Economics				S	S			
	Information Technology	N	S	S	S	S			
	Senior English						R		

\* = See comments for information on specialisations in shortage

S = State-wide shortage

N = National shortage

M = Shortage in metropolitan areas

e = Shortage easing over 2001

D(r) = Recruitment difficulties in regional areas

R = Shortage in regional areas

## **Professionals – comments on specialisations in shortage**

**Civil Engineer:** NSW: Current shortages especially for project management, traffic engineering, hydraulics, surveying and telecommunications VIC: shortages restricted to engineers with supervisory/managerial experience in large scale infrastructure projects

**Electrical Engineer:** WA: shortage restricted to manufacturing and mineral processing maintenance

**Electronics Engineer:** NSW: shortages especially for those with software engineering and computing skills including C++ and Delphi. QLD: shortages restricted to mobile telephony, wireless communication and data networking. SA: shortage restricted to radio and microwave communication technology

**Accountant:** NSW: shortage especially for skills in mergers and acquisitions, financial services, intellectual property and information technology

**Lawyer:** NSW: especially mergers & acquisitions, financial services, taxation, intellectual property and information technology. VIC: shortages restricted to banking and finance, corporate, commercial, property and IT/telecommunications. QLD: recruitment difficulties most evident for corporate law, commercial/property law, banking/finance law and intellectual property/IT law. WA: shortages in commercial, corporate, taxation, property, banking/finance, e-commerce, telecommunications, IT and intellectual property, and regional recruitment difficulties in family law.

**Palliative Care Nurse:** VIC: shortage of nurses with post graduate qualification.

**Occupational Therapist:** WA: rural shortages in aged care facilities

**Physiotherapist:** NSW: shortages especially in aged care, workplace-based rehabilitation, manual therapy and cardiac therapy

**Diagnostic Radiographer:** NSW: shortages especially in mammography, CT and magnetic resonance imaging (MRI)

**Enrolled Nurse:** WA: recruitment difficulties in aged care facilities

**Secondary Teacher:** specialist shortages only

**LOTE Teacher:** VIC: especially Indonesian, Japanese, German, French

# **National ICT Shortage List – Australia February 2001**

## **Database**

- Oracle
- Microsoft SQL Server
- Sybase SQL Server

## **General Application Development/Software Engineering**

- PowerBuilder
- Java
- Java Script
- C++
- Delphi
- Visual Basic

## **Networking/LAN Administration**

- Advanced Web Design

## **Internet and Multimedia**

- ASP
- Xml
- Java Security and Electronic Commerce  
(programming skills, not business skills)
- Firewall/Internet Security

## **Client/Server Applications**

- SAP
- PeopleSoft
- Siebel

## **System Software Support**

- Data Warehousing

## **Operating Systems**

- Unix
- Solaris
- Linux

## **Process and Systems Management**

- Project Management
- Systems Analysis
- Broad Commercial Business Understanding

## **E-Commerce**

- Overall e-commerce

# SKILL SHORTAGES\* - ICT SPECIALISATIONS February 2001

	AUST	NSW	VIC	QLD	SA	WA	TAS	ACT
<b>Database</b>								
DB2		D				D		
Oracle	S	S	S	S	D	S		
MS Access		D				D		
Microsoft SQL Server	S	S	S	D	D	D		
Sybase SQL Server	S	S	S	D	D	D		
<b>General Application Development/Software Engineering</b>								
PowerBuilder	S	S		S	D	D		
Java	S	S	S	S	S	S	D	S
Java Script	S	S	S	S		S		S
C++	S	S	S	S	D	S	S	S
Delphi	S	D	S	D	D	D	S	
Visual Basic	S	S				S		S
Lotus Notes	S	D		S	D	D		S
Progress		S			S	D		
Powerhouse		D			S	D		
<b>Networking/LAN Administration</b>								
Novell Netware		D		D				D
TCP/IP		S				D		D
IPX		D				D		
SNA		D				D		
Microsoft NT Server		D		D			S	D
Ethernet		D						
Advanced Web Design	S	S+	S		S	S		D
<b>Internet and Multimedia</b>								
HTML		S		D				
ASP	S	S	D	D	S	S	D	D
Xml	S	S		D	S	S		D
Java Security and electronic commerce #	S	S+	S	D	S	S		
Graphics		D				D		
Multimedia		D		D		D		S
Firewall/ Internet security	S	S+	S	D	S	D		
<b>Office/E-mail/Groupware</b>								
Groupwise		D			D	D		
Lotus Notes		D			S	S		D
Microsoft Exchange		D				D		D
CC:Mail		D			D			D
Eudora		D			D	D		

\* S = Shortage D = Recruitment Difficulty # = programming skills, not business skills

Feb 2001

	AUST	NSW	VIC	QLD	SA	WA	TAS	ACT
<b>Client/Server applications</b>								
COBOL								
SAP	S	D	S	D	D	S		D
PeopleSoft	S	D	S	D	S	S		
Siebel	S	S	D		D	S		
<b>System Software Support</b>								
Help desk								
Data Warehousing	S	S		S	D	D		
<b>Operating Systems</b>								
Unix	S	S	S	S	D	D		D
Windows 2000		S		D				
Windows NT		S		D				S
Solaris	S	S	D	S	D	S		D
Linux	S	S		S	D	D		
HP-UX		S		D	D	D		D
VMS		S		D		S		
<b>Communications</b>								
Radio		D		D	D	D		
SDH		D			D	D		
WDM		D			D	D		
GSM		D			D	D		
CDMA		D			D	D		
Broadband CDMA		D			D	D		
Satellite design					D	D		
TDMA					D	D		
VSAT					D	D		
Photonics			D			D		
<b>Process &amp; Systems Management</b>								
Project Management	S	S	S			D	D	S
Systems analysis	S		S	D	D	D		S
Broad commercial business understanding	S	S	S	D		D		S
<b>E-Commerce (eg. business financial management/analysis/customer service)</b>								
Overall e-commerce	S	S	S	D	D	S		S
Business analysts		S						
<b>Mainframe</b>								
Pick					D			
ADSO					D			
Adabas					D			
Hogan			S		D			
IDMS					D			

\* S = Shortage    D = Recruitment Difficulty



Feb 2001

	AUST	NSW	VIC	QLD	SA	WA	TAS	ACT
<b>Other Specialisations not listed above</b>								
Cisco		S			D			
VB/COM		D						
Messaging systems		D						
Open TV		D						
DVD		D						
IT recruiters		D						
Perl					D			D
OO technologies		D						D
Voice over IP		D						
Optical		D						
Flase				S				
Tuxedo				D				
WML for WAP			S					
PHP				S				
Technical Architect				D				
C/Unix (Combined)				S				
Games Programmers				D				
Experienced Developers					D			
DBA					D			
Foxpro					D			
Object Star					D			
Ada					D			
Fortran					D			
Clipper					D			
CRM (Customer Relationship Management)					D			
Univers							S	
CRYSTAL							S	
Testers				D				

\* S = Shortage    D = Recruitment Difficulty

**SKILL SHORTAGE RATINGS\* by ICT SPECIALISATION  
(October 2001)**

	AUST	NSW	VIC	QLD	SA	WA	TAS	ACT
<b>Database</b>								
DB2		S	B	S	D	D	D	D
Oracle		S	D	D	D	B	D	D
MS Access		NS	B	B	B	B	D	D
Microsoft SQL Server		D	B	D	D	B	D	D
Sybase SQL Server	S	S	S	D	D	D	S	D
<b>General Applications Development/Software Engineering</b>								
PowerBuilder		D	B	S	D	S	-	B
Java		NS	D	D	D	S	D	D
Java Script		D	B	B	D	B	D	D
C++	S	S	D	S	D	D	D	S
Delphi		D	S	D	D	D	D	D
Visual Basic		NS	B	B	B	B	D	D
Lotus Notes		D	B	D	D	D	D	D
Progress	S	S	S	D	S	S	-	B
Powerhouse		D	B	S	D	S	-	B
<b>Internet/Networking/Lan/WAN</b>								
Novell Netware		D	B	B	B	B	B	D
TCP/IP		D	B	B	B	B	D	D
IPX		D	B	B	D	B	D	NS
SNA		D	B	D	D	B	D	NS
Microsoft NT Server		D	B	D	B	NS	B	B
Ethernet		D	B	B	B	NS	D	NS
Advanced Web Design		D	B	D	S	B	D	D
HTML		NS	B	B	B	NS	-	B
ASP		D	D	D	D	B	D	B
Firewall/Internet security	S	S	D	S	S	D	B	S
Xml	S	S	S	S	D	D	-	S
Java Security and electronic commerce	S	S	D	S	S	D	D	S
CISCO		NS						
Network Design		D						
<b>Multimedia</b>								
Graphics		NS	B	B	B	B	B	B
Multimedia		NS	B	B	B	B	D	B
<b>Office/E-mail/Groupware</b>								
Groupwise		D	B	D	D	B	D	D
Lotus Notes		D	B	D	D	B	D	D

	AUST	NSW	VIC	QLD	SA	WA	TAS	ACT
Microsoft Exchange		D	B	B	B	NS	D	D
CC:Mail		D	B	D	D	B	D	D
Netscape		D	B	B	B	B	D	D
Eudora		D	B	B	B	B	D	B
Client/Server applications								
COBOL		NS	B	D	B	B	D	B
SAP	S	S	S	D	S	S	D	B
PeopleSoft	S	S	S	S	S	S	D	B
Siebel	S	S	S	S	S	S	D	D
System Software Support								
Help desk		NS	B	B	B	NS	B	NS
Data Warehousing		D	B	S	D	B	B	D
Operating Systems								
Unix		D	B	D	D	B	B	D
Windows 2000		NS	B	B	B	NS	B	B
Windows NT		NS	B	B	B	NS	B	B
Solaris		D	B	B	D	B	D	D
Linux		D	B	B	B	B	D	D
HP-UX		D	B	D	D	B	D	D
VMS		D	B	D	S	D	D	D
Communications								
Radio		D	B	B	D	D	-	-
SDH		NS	B	-	D	D	-	-
WDM		D	D	-	D	D	-	-
GSM		NS	B	D	D	D	-	-
CDMA		D	B	S	D	D	-	-
Broadband CDMA		D	B	S	D	D	-	-
Satellite design	S	S	D	S	S	D	-	-
TDMA		D	B	D	D	D	-	-
VSAT		D	B	D	D	D	-	-
Photonics		S	D	D	D	D	-	D
Process & Systems management								
Project Management		NS	B	D	B	B	S	D
Systems analysis		D	B	D	B	B	S	B
Broad commercial business understanding		D	B	D	B	NS	D	D
E-Commerce (eg business/financial management/analysis/customer service)								
e-commerce security (non programming)	S	S	D	S	S	D	-	S

	AUST	NSW	VIC	QLD	SA	WA	TAS	ACT
Security								
Network Security		D	B	S	D	D	S	D
Risk Management		D	B	D	D	B	S	D
CISSP#	S	S	S	S	D	D	-	S
PKI		D	D	S	D	D	-	D
Other specialisations not listed above (eg GIS, Mapinfo)								
Disaster recovery		D						
SANa		D						
IT recruiters		D						
Perl								
OO technologies		D						
Voice over IP		D						
Optical		D						
Univers							S	
CRYSTAL							S	
ERP			S					
B2B			S					
CRM			S					
Hogan			D					
AS400			D					
IDMS					D			
Defence software engineers					D			
ADA in Defence					D			
Systems Engineer in defence					D			
C++ in Unix					D			
Visual C++					D			
Solutions Architect						D		
VBA						D		
OS/390						D		
CICS						D		
Hi Level Cool-Gen								D
Technical Pre-sales								D
Mapinfo				D	D	D	S	B
CITRIX								

\* S = Shortage D = Recruitment Difficulty NS = No Shortage B= Balance

# Certified Information Systems Security Professional

# NATIONAL AND STATE SKILL SHORTAGE LISTS

## AUSTRALIA

Jan 2000

### PROFESSIONALS

Child Care Coordinator

Electronics Engineer

Accountant

Computing Professional (Oracle, SQL Server, Java, Java Script, C++,  
CISCO Certified Professionals (CCPs), Advanced Web Design, E-Commerce,  
SAP, PeopleSoft)

Registered Nurse

Operating Theatre

Critical/Intensive Care

Accident/Emergency

Cardiothoracic

Neo-Natal Intensive Care

Neurological

Paediatric

Aged Care

Registered Midwife

Registered Mental Health Nurse

Pharmacist (Retail and Hospital)

Diagnostic Radiographer

Radiation Therapist

Sonographer

Secondary School Teacher

### TRADES

Fitter

Metal Machinist

Toolmaker

Metal Fabricator (Boilermaker)

Welder

Sheetmetal Worker

Motor Mechanic

Automotive Electrician

Panel Beater

Vehicle Painter

Refrigeration and Air-conditioning Mechanic

Carpenter and Joiner

Fibrous Plasterer

Bricklayer

Solid Plasterer

Chefs (4-5 star hotels and selected Asian Cuisines such as Thai and Japanese)

Pastrycook

Cabinetmaker

Hairdresser

Furniture Upholsterer

# SKILL SHORTAGES - TRADES

Jan 2000

ISCO	OCCUPATION	NSW	VIC	QLD	SA	WA	TAS	NT	End 98 AUS	End 99 AUS
<b>METAL TRADES</b>										
4112-11	Fitter	M	S	S	R					✓
4112-13	Metal Machinist	M	S	S	S				✓	✓
4113-11	Toolmaker	S	S	S	M				✓	✓
4122-11	Metal Fabricator (Boilermaker)	M	S	S	R				✓	✓
4122-13/15	Welder	M	S	S	R				✓	✓
4124-11	Sheetmetal Worker	M	S	S	S				✓	✓
<b>AUTOMOTIVE TRADES</b>										
4211-11	Motor Mechanic	S	S	S	S	S		S	✓	✓
4212-11	Automotive Electrician	S	S	S	S	S		S	✓	✓
4213-11	Panel Beater	M	S	S	S	S		R	✓	✓
4214-11	Vehicle Painter	M	S	S	S	S		R	✓	✓
<b>ELECTRICAL/ELECTRONICS TRADES</b>										
4311-11/13/15	Electrician			R	R					
4312-11	Refrigeration and Airconditioning Mechanic	S	S	S	S				✓	✓
<b>CONSTRUCTION TRADES</b>										
4411-11/13/15	Carpenter and Joiner	S	S		S	M				✓
4412-11	Fibrous Plasterer	M	S		M	S				✓
4413	Roof Slater and Tiler	M	S							
4414-11	Bricklayer	M	S	S	S	S				✓
4415-11	Solid Plasterer	M	S		M	S			✓	✓
4416-11	Wall and Floor Tiler							R*		
4431-11	Plumber	M				S		R*		
9917-11	Concreter	M*								
<b>FOOD OCCUPATIONS</b>										
4512-11	Chef	S	S	S	R	S <sup>1</sup>	S	R	✓	✓
4512-13	Pastrycook	M	S	S			S*	S	✓	✓
4513-11	Cook	S		S	R		S*			
<b>WOOD TRADES</b>										
4921-11	Wood Machinist	S		S	M					✓
4921-13	Wood Turner			S						
4922-11	Cabinetmaker	S	S	S	S		S*			✓
4929-13	Furniture Finisher		S		S		S*			
<b>OTHER TRADES</b>										
4931-11	Hairdresser	S	S	S	S	S	S*		✓	✓
4942-11	Upholsterer	M	S	S	M	S			✓	✓
4981-11/13	Shipwright/Boat Builder & Repairer			S						

\* Ratings are provisional

1. Shortage of Asian Cuisine chefs only

S = Statewide Shortage

M = Metropolitan Shortage

R = Regional Shortage

✓ = National Shortage

# SKILL SHORTAGES - PROFESSIONAL OCCUPATIONS

Jan 2000

ASCO	OCCUPATION	NSW	VIC	QLD	SA	WA	TAS	NT	End 98 AUS	End 99 AUS
<b>CHILD CARE</b>										
1295-11	Child Care Coordinator	S	S			R	S		✓	✓
6312-11sp	Child Care Worker	S	S		R	R	R	S		✓
<b>ENGINEERS</b>										
2124	Civil Engineers	S								
2125-11	Electrical Engineer	S					S	R		
2125-13	Electronics Engineer	S	S	S			S	R		✓
<b>ACCOUNTANTS</b>										
2211-11	Accountant (particularly Taxation - GST)	S	S	S	S	S	S	S	✓	✓
<b>REGISTERED NURSES</b>										
2323-11	Registered Nurse	S	S	S		S	S	S	✓	✓
	Operating Theatre	S	S	S	S	S	S	S	✓	✓
	Accident/Emergency	S	S	S		S	S	S	✓	✓
	Cardiothoracic	S	S	S			S	S	✓	✓
	Neurological	S	S					S		✓
	NeoNatal Intensive Care	S		S			S	S	✓	✓
	Paediatric	S		S				S		✓
	Critical/Intensive Care	S	S	S	S	S	S	S	✓	✓
	Renal	S		S				S		
	Aged Care	S		S	S	S	S	S		✓
	Oncology	S		S				S		
	Perioperative		S	S		R				
	Aboriginal Health			S						
	Community Nursing			S		R				
2324-11	Registered Midwife	M	S	S		S	S	S	✓	✓
2325-11	Mental Health Nurse	S	S	S		S	S	S	✓	✓
<b>HEALTH SPECIALISTS</b>										
2382-11,15	Pharmacist (Hospital/Retail)		S	S	S	S	S	S	✓	✓
2385-11	Physiotherapist		R	R	R		S	R	✓	
2386-11	Speech Pathologist		R			R				
2391-11	Diagnostic Radiographer	S	S	S		S	S		✓	✓
2391-13	Radiation Therapist	S	S	R			S			✓
2391-15	Nuclear Medicine Technologist		S							
2391-17	Sonographer	S	S	S		S	S*		✓	✓
2392-11	Veterinarian					S				
<b>SECONDARY TEACHERS</b>										
2413-11	Secondary Teacher	R	R	S				S	✓	✓
	Manual Arts		S	S	R	R				
	Maths		R	S	R	R			✓	
	Physics/Chemistry		R	S	R	R			✓	
	LOTE		S*	S						
	Home Economics			S	R	R				
	Information Technology			S					✓	
<b>OTHER PROFESSIONS</b>										
11sp	Legal Professionals (Commercial Lawyers)					S				

except Greek

S = Statewide Shortage

M = Metropolitan

Shortage R = Regional Shortage

✓ = National Shortage

SKILL SHORTAGES\* – IT & T SPECIALISATIONS

Jan 2000

SKILLED GROUP	NSW	VIC	QLD	SA	WA	TAS	NT	AUST
Specialisation								
<b>Structured Query</b>								
DB2	D	D					S	
<b>Language (SQL)</b>								
Oracle	D	S	S	S		S	S	✓
Ingres	D			D				
Object Oriented Design	D		S		S			
<b>Database</b>								
CICS							S	
IBM Mainframe							D	
Unix	D	S					S	
AS400		D		S				
Powerbuilder			S	D				
MS Access						S	D	
CGI Server	D	S	S		S	S	D	✓
<b>General Application Development</b>								
Java	S	S	S		S		S	✓
Java Script		S	S		S			✓
C++	S	S	S	S	S	S		✓
Delphi			D	S				
Visual Basic	D	D	D	D	S		D	
<b>Networking</b>								
LAN/WAN							D	
Windows NT							D	
TCP/IP	D						D	
IPX							D	
SNA							S	
Microsoft NT Server							D	
Ethernet							D	
<b>Communications</b>								
CISCO Certified Professionals (CCPs)	D	S		D	S	S	S	✓
Transmission: Radio, SDH, WDM	S							
Mobiles: GSM, CDMA, Broadband, CDMA	S	S						
Satellite: Satellite design, TDMA, VSAT	S	S						
<b>Manufacture/Production</b>								
Real Time Systems	S				S			
<b>Geographical Information Systems</b>								
GIS (e.g., Mapinfo)							S	
<b>Publishing/Graphics/Multimedia</b>								
Advanced Web design	S	S	S		S		D	✓
<b>Internet</b>								
HTML	S							
ASP	S						S	
Xml	S	S					S	
<b>Commerce</b>	S	S	S		S			✓

\* S = Shortage    D = Recruitment difficulty

✓ = National Shortage



Jan 2000

SKILLED GROUP	NSW	VIC	QLD	SA	WA	TAS	NT	AUST
<b>Specialisation</b>								
Office/Email/Groupware								
Groupwise	D						D	
Lotus Notes	D		D		S		S	
MS Exchange	D						D	
Novell	D		D			S	D	
<b>Client/Server Applications</b>								
COBOL				D			D	
SAP	S	S	S	D	S		S	✓
PeopleSoft (enterprise based multiple applications)	S	S		S	S			✓
<b>System Software Support</b>								
Help desk	D						S	
Project Management	D							
<b>Operating Systems</b>								
Unix	S	S					S	
Windows							D	
Systems analysis						S	D	
<b>Process and Systems Management</b>								
Project management						S	D	
Wide commercial business understanding						S		
<b>Other</b>								
Business Analyst			D		S			
Senior Consultants/Analyst					S			
Programmers								
Embedded Systems					S			
Ada		D						

\* S = Shortage

D = Recruitment Difficulty

✓ = National Shortage

# National and State Skill Shortage Lists

## Shortage lists

Skill shortage lists, national (Australia) and for each State of Australia and the Northern Territory, were prepared in late 1998. Labour market conditions for these occupations may have changed in recent months and this could affect the shortage status for some occupations included on the list. Similarly, other occupations not on the skill shortage list may have moved into shortage.

- Although skill shortages are monitored closely, there may be localised or specialised shortages that have not been identified by the monitoring procedures.

The Skills Analysis and Research Branch in the Department of Employment Workplace Relations and Small Business (DEWRSB) monitors occupational labour markets in Australia and assesses whether skill shortages exist. This work is undertaken by National Office in tandem with Labour Economics Offices (LEOs) in each State capital city and Darwin. The LEOs provide "on the ground" intelligence on occupational developments and skill shortages.

## Causes of skill shortages

Skill shortages may arise in a number of ways and are the result of a complex array of labour supply and demand factors. Employment and vacancy growth are important influences, as is the education and training system. There are also a range of other factors, including: economic and demographic change; wastage during training and wastage of qualified workers (those not working in the field of their formal qualifications and/or experience); cyclical fluctuations in labour demand (especially for trades occupations); emerging demands of new technology; lack of flexibility in wages; and regional mismatches.

- Many skill shortages relate to *experience* requirements of employers, or apply in some *regions* only.

## What is a skill shortage?

*Skill shortages exist when employers are unable to fill or have difficulty in filling vacancies in a recognised occupation or specialisation at the current level of remuneration and conditions of employment, including realistic location. Shortages are typically for specialised and experienced workers, and can coexist with relatively high unemployment. Shortages may be numerically small, or in specific geographic areas.*

## Skill shortage lists

### Australia - National Skill Shortage (NSS) list

New South Wales

Victoria

Queensland

South Australia

Western Australia

Tasmania

Northern Territory

## SKILL SHORTAGE LIST - AUSTRALIA

Occupation	ASCO 2 CODE
<b>Managers and Administrators</b>	
Child Care Coordinator	1295 - 11
<b>Professionals</b>	
Accountant	2211 - 11
Computer Professional (COBOL, C++, Visual Basic, SAP, Oracle, Internet - Java)	2231 (part)
Registered Nurse	2323 - 11 (part)
Operating Theatre	
Critical/Intensive Care	
Accident/Emergency	
Cardiothoracic	
Neo-Natal Intensive Care	
Registered Midwife	2324 - 11
Registered Mental Health Nurse	2325 - 11
Pharmacist (Retail and Hospital)	2382 - 11,15
Physiotherapist	2385 - 11
Medical Diagnostic Radiographer	2391 - 11
Sonographer	2391 - 17
Secondary School Teacher (Information Technology, Maths, Science)	2413 - 11 (part)
<b>Associate Professionals</b>	
Chefs (4-5 star hotels and selected Asian Cuisines such as Thai and Japanese)	3322
<b>Tradespersons</b>	
Metal Machinist	4112 - 13
Toolmaker	4113 - 11
Metal Fabricator (Boilermaker)	4122 - 11
Welder	4122 - 13,15
Sheetmetal Worker	4124 - 11
Motor Mechanic	4211 - 11
Automotive Electrician	4212 - 11
Panel Beater	4213 - 11
Vehicle Painter	4214 - 11
Refrigeration and Air-conditioning Mechanic	4312 - 11
Solid Plasterer	4415 - 11
Pastrycook	4512 - 13
Hairdresser	4931 - 11
Furniture Upholsterer	4942 - 11

*Note: Regional shortages of Electricians are evident, but shortages are not considered to be widespread across Australia.*

## SKILL SHORTAGE LIST – NEW SOUTH WALES

Occupation	ASCO CODE
<b>Managers and Administrators</b>	
Child Care Co-ordinator	1295 – 11
<b>Professionals</b>	
Civil Engineer	2124 – 11
Accountant	2211 – 11
Computing Professionals (Programming - Java, Java Script, C++, Delphi, Visual Basic, COBOL; network design and management; data warehousing; SAP; PeopleSoft)	2231
Actuary	2293 – 15
Registered Nurse	2323 – 11 (part)
Operating Theatre	
Critical Care	
Emergency	
Intensive Care	
Registered Midwife	2324 – 11
Registered Mental Health Nurse	2325 – 11
Pharmacist (Retail and Hospital)	2382 – 11,15
Physiotherapist	2385 – 11
Medical Diagnostic Radiographer	2391 – 11
Radiation Therapist	2391 – 13
Sonographer	2391 – 17
Secondary School Teacher	2413 – 11 (part)
Industrial Arts	
Maths/Computing;	
Agriculture/Science	
<b>Associate Professionals</b>	
Chef	3322
Senior in four & five star hotels and international restaurants Japanese and Thai cuisines	
<b>Tradespersons</b>	
Toolmaker	4113 – 11
Metal Fabricator (Boilermaker)	4122 – 11
Welder	4122 – 13,15
Sheetmetal Worker	4124 – 11
Motor Mechanic (specialists in transmissions, electronic fuel injection: more general in northern and eastern suburbs of Sydney)	4211 – 11
Automotive Electrician	4212 – 11
Panel Beater	4213 – 11
Vehicle Painter	4214 – 11

Continued.....

## SKILL SHORTAGE LIST – NEW SOUTH WALES (Continued)

General Electrician (Sydney metropolitan)	4311 – 11
Refrigeration Mechanic	4312 – 11
Solid Plasterer	4415 – 11
Bricklayer	4414 – 11
Plumber	4431 – 11 to 19
Pastrycook	4512 – 13
Cook (trade-equivalent in Asian cuisines such as Japanese & Thai)	4513 – 11
Hairdresser	4931 – 11
Furniture Upholsterer (specialising in restoration of period furniture and manufacture of custom-built and designer furniture)	4942 – 11
<b>Other Occupations</b>	
Child Care Worker	6312 – 11
Concreteer	9917 – 11

### Regional Shortages (additional to above State shortage list)

General Medical Practitioners	Shortage in country areas	2311
Specialist Medical Practitioners	Shortage in country areas	2312
Urban and Regional Planner	Local Government outside Sydney	2523 – 11

## SKILL SHORTAGE LIST – VICTORIA

Occupation	ASCO CODE
<b>Managers and Administrators</b>	
Child Care Coordinator	1295-11
<b>Professionals</b>	
Accountant	2211
Computing Professional (LAN/WAN, IBM Mainframe, COBOL, Visual Basic, SAP, Peoplesoft, C++, Internet - Java )	2231 (part)
Registered Nurse	2323 – 11 (part)
Perioperative	
Accident and Emergency	
Neo-Natal Intensive Care	
Cardiothoracic	
Registered Mental Health Nurse	2325 – 11
Pharmacist (Hospital and Retail)	2382 – 11,15
Medical Diagnostic Radiographer	2391 – 11
Sonographer	2391 – 17
Secondary School Teacher	2413 – 11 (part)
Japanese	
Indonesian	
Information Technology	
<b>Associate Professionals</b>	
Chef	3322
Asian cuisines, International standard	
Enrolled Nurse	3411 – 11
<b>Tradespersons</b>	
Metal Fitter	4112 – 11 (part)
Metal Machinist	4112 – 13
Toolmaker	4113 – 11
Metal Fabricator (Boilermaker)	4122 – 11
Welder	4122 – 15
Sheetmetal Worker	4124 – 11
Motor Mechanic	4211 – 11
Automotive Electrician	4212 – 11
Panel Beater	4213 – 11
Vehicle Painter	4214 – 11
Refrigeration and Air-conditioning Mechanic	4312 – 11
Fibrous Plasterer	4412 – 11
Bricklayer	4414 – 11
Solid Plasterer	4415 – 11

Continued.....

## SKILL SHORTAGE LIST – VICTORIA (Continued)

Pastrycook (4/5 star hotel standard)	4512 – 13
Furniture Finisher (Furniture Polisher)	4929 – 13
Hairdresser	4931 – 11
Upholsterer	4942 – 11
<b>Other Occupations</b>	
Child Care Worker (qualified - some outer metropolitan/country areas)	6312 – 11

### Regional Shortages (additional to above State shortage list)

Dentist	Shortage in country areas	2380
Secondary School Teacher	Shortages of Mathematics, Physical Science, Technology, and Accounting teachers in country areas	2413 – 11 (part)
Pastrycook	Shortages in some country areas	4512 – 13

### Recruitment Difficulties

Recruitment difficulties have been reported for **Physiotherapists** in the latter half of the year, associated with locations and sessional hours.

**Motor Mechanics** are in shortage generally but particular recruitment difficulties are for the specialisations of electronic systems, transmissions and fuel injection.

**Electronic Engineers** are in balance generally but recruitment difficulties or shortages are being experienced in the specialisations of radio frequency design and high voltage control.

## SKILL SHORTAGE LIST – QUEENSLAND

Occupation	ASCO Code
<b>Professionals</b>	
Extractive Metallurgist	2119 – 15
Electronics Engineer	2125 – 13
Mining Engineer	2127 – 11
Accountant (Taxation)	2211 – 11
Computing Professional (COBOL, Delphi, C++, SAP, Powerbuilder, Oracle, Internet – Java, Y2K, Database Administration)	2231 (part)
Registered Nurse	2323 – 11 (part)
Operating Theatre	
Accident/Emergency	
Cardiothoracic	
Paediatric	
Neo-Natal Intensive Care	
Critical/Intensive Care	
Renal	
Aged Care	
Oncology	
Registered Midwife	2324 – 11
Registered Mental Health Nurse	2325 – 11
Pharmacists (Hospital and Retail)	2382 – 11,15
Physiotherapist	2385 – 11
Medical Diagnostic Radiographer	2391 – 11
Sonographer	2391 – 17
Secondary School Teacher (LOTE, Information Technology Maths, Science, Manual Arts)	2413 – 11 (part)
<b>Associate Professionals</b>	
Chef	3322
Enrolled Nurse	3411 – 11
<b>Tradespersons</b>	
Fitter	4112 – 11
Metal Machinist	4112 – 13
Toolmaker (plastics and CNC operators and programmers)	4113 – 11
Precision Metal Tradesperson/Locksmith	4115 – 15
Metal Fabricator (Boilermaker)	4122 – 11
Welder First Class	4122 – 15
Sheetmetal Worker	4124 – 11
Metal Casting Tradesperson/Moulder	4125 – 11
Motor Mechanic	4211 – 11
Automotive Electrician	4212 – 11

Continued.....



## SKILL SHORTAGE LIST - QUEENSLAND (Continued)

Panel Beater	4213 - 11
Vehicle Painter	4214 - 11
Refrigeration and Air Conditioning Mechanic	4312 - 11
Pastrycook	4512 - 13
Cabinetmaker	4922 - 11
Hairdresser	4931 - 11
Furniture Upholsterer	4942 - 11

### Regional Shortages (additional to above State shortage list)

Child Care Co-ordinator	Shortage in some rural/remote areas	1295 - 11
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## SKILL SHORTAGE LIST – SOUTH AUSTRALIA

Occupation	ASCO CODE
<b>Professionals</b>	
Civil Engineer	2124-11
Electrical/Electronics Engineers	2125
Accountant	2211-11
Computing Professionals	2231
Registered Mental Health Nurse	2325-11
Pharmacists (Hospital and Retail)	2382- 11,15
Diagnostic Radiographer	2391-11
Sonographer	2391-17
<b>Tradespersons</b>	
Metal Machinist	4112-13
Sheetmetal Worker	4124-11
Motor Mechanics	4211-11
Automotive Electricians	4212-11
Panel Beaters	4213-11
Refrigeration and Airconditioning Mechanics	4312-11
Carpentry and Joinery Tradespersons	4411-11,13,15
Solid Plasterers	4415-11
Plumbers	4431-11 to 17
Hairdressers	4931-11
Furniture Upholsterers	4942-11

### Regional Shortages (additional to above State shortage list)

Secondary School Teacher	Shortage in some country areas	2413-11
Registered Nurse	Shortage in some country areas	2323-11
Registered Midwife	Shortage in some country areas	2324-11
Physiotherapist	Shortage in some country areas	2385

## SKILL SHORTAGE LIST – WESTERN AUSTRALIA

Occupation	ASCO CODE
<b>Professionals</b>	
Electrical Engineer	2125 - 11
Petroleum Engineer	2127 - 13
Drilling Engineer	2127 - 13
Computing Professional (COBOL, Oracle, SAP and Internet technologies such as Java)	2231 (part)
Psychiatrist	2312 - 27
Registered Nurse	2323 - 11 (part)
General	
Intensive Care/Neo-Natal Intensive Care	
Operating Theatre	
Accident and Emergency	
Geriatric	
Cardiothoracic	
Registered Midwife	2324 - 11
Pharmacist (Hospital and Retail)	2382 - 11,15
Sonographer	2391 - 17
Veterinarian	2392 - 11
Secondary School Teacher	2413 - 11 (part)
Maths	
Physics	
Music	
Computing	
Legal Professional (experienced in commercial law)	2521 (part)
<b>Associate Professionals</b>	
Chef	3322
<b>Tradespersons</b>	
Metal Machinist	4112 - 13
Metal Fabricator (Boilermaker)	4122 - 11
Welder	4122 - 13,15
Sheetmetal Worker	4124 - 11
Motor Mechanic	4211 - 11
Automotive Electrician	4212 - 11
Panel Beater	4213 - 11
General Electrician	4311 - 11
Refrigeration Mechanic	4312 - 11
Pastrycook	4512 - 13
Hairdresser	4931 - 11

## Regional Shortages (additional to above State shortage list)

Physiotherapist	Shortage in country areas	2385 - 11
Speech Pathologist	Shortage in country areas	2386 - 11
Secondary School Teacher	Shortages of Physical Science, Technology, and Accounting teachers in country areas	2413 - 11 (part)
Plumber	Shortage in some country areas	4431

## Recruitment Difficulties

Recruitment difficulties have been reported for **Physiotherapists** specialising in women's health and paediatrics.

## SKILL SHORTAGE LIST – TASMANIA

Occupation	ASCO CODE
<b>Managers and Administrators</b>	
Child Care Co-ordinator	1295 - 11
<b>Professionals</b>	
Computing Professional (Ingres, C++, advanced Web skills, Systems Analysts, Project Managers)	2231 (part)
Registered Nurse	2323 – 11 (part)
Intensive Care/Critical Care	
Perioperative/Operating Theatre	
Neo-Natal	
Renal	
Neuro-Science	
Pharmacist (Hospital and Retail)	2382 – 11,15
Physiotherapist	2385 - 11
Medical Imaging Professionals	2391 - 11,13,15,17
<b>Associate Professionals</b>	
Chef (International standard and specialist international cuisine)	3322
<b>Tradespersons</b>	
Toolmaker	4113 - 11
Sheetmetal Worker	4124 - 11
Motor Mechanic	4211 - 11
Panel Beater	4213 - 11
Vehicle Painter	4214 - 11
Refrigeration & Air - Conditioning Mechanic	4312 - 11
Hairdresser	4931 - 11
Upholsterer	4942 - 11

### Regional Shortages (additional to above State shortage list)

Registered Mental Health Nurse	some regional shortages only	2324 - 11
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### Recruitment Difficulties

Recruitment difficulties have been reported for **General Electricians** with post - trade qualifications such as industrial electronics.

## SKILL SHORTAGE LIST – NORTHERN TERRITORY

Occupation	ASCO CODE
<b>Professionals</b>	
Electrical Engineer	2125 - 11
Computing Professional (LAN/WAN, IBM Mainframe, Visual Basic Internet – Java, Advanced Web Skills)	2231 (part)
Registered Nurse	2323 – 11 (part)
Renal	
Intensive/Critical Care	
Neo-Natal	
Paediatric	
Operating Theatre	
Registered Mental Health Nurse	2325-11
Sonographer	2391 - 17
Secondary School Teacher	2413 – 11 (part)
Maths, Science, Computing	
<b>Associate Professionals</b>	
Chef      Asian, Mediterranean, A La Carte	3322
Metal Fitter (particularly heavy engineering)	4112 - 11
Metal Machinist	4112 -13
Metal Fabricator (Boilermaker)	4122 - 11
Welder	4122 - 13,15
Motor Méchanic	4211 - 11
Automotive Electrician	4212 - 11
General Electrician	4311 - 11
Refrigeration Mechanic	4312 - 11
Carpenters & Joiners	4411-11
Fibrous Plasterer	4412-11
Blocklayers	4414-11
Solid Plasterer	4415-11
Pastrycook	4512 - 13
Baker	4512 - 11
Cabinetmaker	4922-11
Furniture Upholsterer	4942 - 11

### Regional Shortages (additional to above State shortage list)

Child care co-ordinator	Shortages in remote areas	1295-11
Panel beater	Shortages in all regional areas	4213-11
Vehicle painter	Shortage in all regional areas	4214-11
Plumber	Shortage in Alice Springs	4431-11
Child care workers	Shortages in remote areas	6312-11

# SKILL SHORTAGE LIST - National

*second half 1997-98*

## ASCO 2 CODE

## Occupation

### Managers and Administrators

1295-11 Child Care Coordinator

### Professionals

2127-11 Mining Engineer (particularly underground)  
2231 Computer Professional (specialisations vary by State/Territory)  
2323-11 (part) Registered Nurse (Operating Theatre)  
Registered Nurse (Critical/Intensive Care)  
Registered Nurse (Accident/Emergency)  
Registered Nurse (Neo-Natal Intensive Care)  
2324-11 Registered Midwife  
2325-11 Registered Mental Health Nurse  
2382 Pharmacist  
2385-11 Physiotherapist  
2391-11 Medical Diagnostic Radiographer  
2391-17 Sonographer  
2413-11 (part) Secondary School Teacher (Information Technology)  
2413-11 (part) Secondary School Teacher (Maths/Science)

### Associate Professionals

3322-11 Chef (Asian Cuisines and International Standard)

### Tradespersons

4112-13 Metal Machinist  
4113-11 Toolmaker  
4122-11 Metal Fabricator (Boilermaker)  
4122-13,15 Welder  
4124-11 Sheetmetal Worker  
4211-11 Motor Mechanic  
4212-11 Automotive Electrician  
4214-11 Vehicle Painter  
4312-11 Refrigeration and Air-conditioning Mechanic  
4512-13 Pastrycook  
4931-11 Hairdresser  
4942-11 Upholsterer

*Skill shortages exist when employers have difficulty filling, or are unable to fill, vacancies in recognised occupations or specialisations (at reasonable levels of pay, conditions and location). Shortages are typically for specialised and experienced workers, and can coexist with relatively high unemployment. The labour market can change and, due to training lead times, this information should not be used as the primary basis of career decisions. Shortages may be numerically small, or in specific geographic areas.*

## SKILL SHORTAGE LIST - New South Wales

**ASCO 2 CODE                      Occupation**

### Managers and Administrators

1295-11                      Childcare Coordinator

### Professionals

2123-13 (part)              Surveyor - Cadastral

2124-11                      Civil Engineer

2231 (part)                      Computing Professionals (C++, Oracle, PL/1, Powerbuilder, RPG4, Lotus Notes)

2293-15                      Actuary

2323-11 (part)              Registered Nurse (Operating Theatre / Accident and Emergency)

Registered Nurse (Intensive Care / Neo-natal Intensive Care)

Registered Nurse (Aged Care / Paediatrics)

Registered Nurse (Oncology)

2324-11                      Registered Midwife

2325-11                      Registered Mental Health Nurse

2382-11                      Hospital Pharmacist

2382-15                      Retail Pharmacist - experienced, in rural NSW

2385-11                      Physiotherapist

2391-11                      Medical Diagnostic Radiographer

2391-13                      Radiation Therapist

2391-17                      Ultrasonographer

2413-11 (part)              Secondary School Teacher (Industrial Arts)

Secondary School Teacher (Maths/Computing)

Secondary School Teacher (Agriculture/Science)

2523-11                      Urban and Regional Planner (non-metropolitan NSW)

### Associate Professionals

3322-11 (part)              Chef: Commis Chef, Demi-Chef, Chef de Partie in 3 to 5 star hotels  
Chef/Cook (Japanese, Thai, Indian cuisine)

### Tradespersons

4113-11                      Toolmaker

4122-11                      Boilermaker

4124-11                      Sheetmetal Worker

4311-11 (part)              Armature Winder

4312-11                      Refrigeration & Airconditioning mechanic

4411-13 (part)              Formwork Carpenter

4512-13                      Pastrycooks

4931-11                      Hairdresser

4942-11                      Furniture Upholsterer - repair and restoration

4981-11,13                  Shipwright/Boatbuilder

6312-11                      Childcare Worker

9917-11                      Concreter



# SKILL SHORTAGE LIST - Victoria

ASCO 2 CODE                      Occupation

## Managers and Administrators

1295-11                      Child Care Coordinator

## Professionals

2125-13 (part)                Electronic Engineer (radio frequency (RF) and high voltage protection/control)

2127-11                      Mining Engineer (Underground)

2231 (part)                    Computing Professional (LAN/WAN Technologies, IBM Mainframe  
COBOL, Hogan, SAP and AS400)

2323-11 (part)                Registered Nurse - Operating Theatre  
Registered Nurse - Accident/Emergency  
Registered Nurse - Neo-Natal Intensive Care  
Registered Nurse - Cardio-thoracic  
Registered Nurse - Neurological

2325-11                      Registered Mental Health Nurse

2381-11                      Dentist (rural areas)

2385-11 (part)                Physiotherapist (rural areas; cardiothoracic and neurology)

2391-17                      Sonographer

2413-11 (part)                Secondary School Teacher (Japanese, Indonesian)  
Secondary School Teacher (Information Technology)

## Associate Professionals

3322-11                      Chef (Asian cuisines and international standard)

3411-11                      Enrolled Nurse

## Tradespersons

4112-11 (part)                Metal Fitter (Advanced machining and NC skills)

4112-13 (part)                Metal Machinist (Advanced machining and NC skills)

4113-11                      Toolmaker

4124-11 (part)                Sheetmetal Worker (CNC skills)

4211-11 (part)                Motor Mechanic (Electronic systems, Transmissions and Fuel  
injection system skills)

4414-11                      Bricklayer

4512-13 (part)                Pastrycook (4/5 star hotel standard and rural areas)

4929-13                      Furniture Finisher (Furniture Polisher)

4931-11                      Hairdresser

4942-11                      Furniture Upholsterer

6312-11                      Child Care Worker (qualified)

# SKILL SHORTAGE LIST - Queensland

**ASCO 2 CODE                      Occupation**

## **Managers and Administrators**

1295-11                      Child Care Co-ordinator

## **Professionals**

2119-15                      Extractive Metallurgist

2125-13                      Electronics Engineer

2127-11                      Mining Engineer

2231                          Computing Professional (Multimedia, Internet, Networking/  
Communications, CICS, Cobol, DB2, SAP, Peoplesoft, C++, GUI)

2323-11 (part)              Registered Nurse (Accident/Emergency  
Registered Nurse (Aged Care)  
Registered Nurse (Critical/Intensive Care)  
Registered Nurse (Neo-natal/Paediatric)  
Registered Nurse (Renal)  
Registered Nurse (Operating Theatre)

2324-11                      Registered Midwife

2325-11                      Registered Mental Health Nurse

2382-11                      Hospital Pharmacist (Public hospitals sector)

2385-11                      Physiotherapist

2391-11                      Medical Diagnostic Radiographer

2391-17                      Sonographer

2413-11 (part)              Secondary School Teacher (Information Technology)  
Secondary School Teacher (Mathematics, Science)  
Secondary School Teacher (LOTE)  
Secondary School Teacher (Manual Arts)

## **Associate Professionals**

322 - 11                      Chef

3411 - 11                      Enrolled Nurse

## **Tradespersons**

4112 - 11 (part)              Fitter (Machining, Pneumatics, Hydraulics)

4113 - 11 (part)              Toolmaker (CNC Operator/Programming, Plastic Mould/Cavity Making)

4115 - 15                      Locksmith

4122 - 11                      Metal Fabricator (Boilermaker)

4125 - 11                      Metal Casting Tradesperson

4211 - 11                      Motor Mechanic

4212 - 11                      Automotive Electrician

4213 - 11                      Panel Beater

4214 - 11                      Vehicle Painter

4312 - 11                      Refrigeration and Air-conditioning Mechanic

4512 - 13                      Pastrycook

4922 - 11                      Cabinetmaker

4931 - 11                      Hairdresser

4942 - 11                      Furniture Upholsterer

## SKILL SHORTAGE LIST - South Australia

### ASCO 2 CODE

### Occupation

#### Professionals

2124	Civil Engineers
2125	Electrical and Electronics Engineers
2127-11	Mining Engineer
2211-11	Accountant
2382	Pharmacists
2387-11	Chiropractor
2391-11	Medical Diagnostic Radiographer
2391-17	Sonographer

#### Tradespersons

3113-11	Toolmaker
4122-11,13,15	Structural Steel & Welding Tradespersons
4124-11	Sheetmetal Worker
4211-11	Motor Mechanic
4212-11	Automotive Electrician
4213-11	Panel Beater
4214-11	Vehicle Painter
4215-11	Vehicle Body Maker
4312-11	Refrigeration & Air-conditioning Mechanic
4316-11 (part)	Communications Tradespersons
4912-11	Printing Machinist
4911-11	Hairdresser
4942-11	Furniture Upholsterer

# SKILL SHORTAGE LIST - Western Australia

ASCO 2 CODE                      Occupation

## Managers and Administrators

1295-11                      Child Care Coordinator (some country areas)

## Professionals

2125-11                      Electrical Engineer  
 2126-11                      Mechanical Engineer  
 2127-11                      Mining Engineer  
 2127-13                      Petroleum Engineer  
 2127-13                      Drilling Engineer  
 2129-17                      Chemical Engineer  
 2312-27                      Psychiatrist  
 2323-11                      General Registered Nurse  
                                  Registered Nurse (Intensive Care / Neonatal Intensive Care)  
                                  Registered Nurse (Operating Theatre / Accident & Emergency)  
                                  Registered Nurse (Geriatrics / Cardiothoracic)  
 2324-11                      Registered Midwife  
 2325-11                      Registered Mental Health Nurse  
 2382                          Pharmacists  
 2383-11                      Occupational Therapist  
 2385-11                      Physiotherapist  
 2391-11                      Sonographer  
 2392-11                      Veterinarian

## Associate Professionals

3129-13                      Metallurgical & Materials Tech (NDT)  
 3122-11 (part)              Civil Engineering Associate/Drafter (Structural Drafters)  
 3125-11 (part)              Mechanical Engineering Associate/Drafter (Piping Drafters)  
 22-11                          Chefs (country areas)

## Tradespersons

4112-13                      Metal Machinist  
 4113-11                      Toolmaker  
 4122-11                      Boilermaker  
 4122-13,15                  Welder  
 4124-11                      Sheetmetal Worker  
 4211-11                      Motor Mechanic  
 4212-11                      Automotive Electrician  
 4214-11                      Vehicle Painter  
 4215-11                      Vehicle Body Builder  
 4512-13                      Pastrycook  
 4513-11                      Cook (Country areas)  
 4601-11                      Hairdresser  
 4942-11                      Furniture Upholsterer  
 6601-13                      Child Care Worker (some country areas)

# SKILL SHORTAGE LIST - Tasmania

ASCO 2 CODE                      Occupation

## Managers and Administrators

1295                                  Child Care Co-ordinators

## Professionals

2231 (part)                      Computer Professionals (Ingres, Centura, Powerbuilder, WAN administrator skills)

2323 (part)                      Registered Nurse (ICU/Critical Care)  
Registered Nurse (Operating Theatre)  
Registered Nurse (Neo-natal Intensive Care)  
Registered Mental Health Nurses

2325

2383                                  Occupational Therapists

2385                                  Physiotherapists

2388                                  Podiatrists

2391-11                          Medical Imaging Technologist

2391-13                          Radiation Therapist

2391-15                          Nuclear Medicine Technologist

2413 (part)                      Secondary School Teacher (Maths/Science)  
Secondary School Teacher (Information Technology)  
Secondary School Teacher (Asian Languages)

2543-13                          Environmental Health Officer

## Associate Professionals

3322                                  Chefs (International standard, experience in specialist international cuisine).

## Tradespersons

4112-11                          Fitter

4112-15                          Textile, Clothing or Footwear Mechanic

4113-11                          Toolmaker

4122-11                          Metal Fabricator

4122-15                          Welder - First Class

4124-11                          Sheetmetal Worker

4211-11                          Motor Mechanic

4212-11                          Automotive Electrician

4213-11                          Panel Beater

4214-11                          Vehicle Painter

4942-11                          Upholsterer

4931-11                          Hairdresser

# SKILL SHORTAGE LIST - Northern Territory

ASCO 2 CODE            Occupation

## Managers and Administrators

1295-11            Child Care Coordinator

## Professionals

2125-11            Electrical Engineer

2215-11 <sup>332</sup>        Mining Engineer

2323-11            Registered General Nurse

Registered Nurse (Operating Theatre)

Registered Nurse (Critical/Intensive Care)

Registered Nurse (Neo Natal Intensive Care)

Registered Nurse (Renal)

2382                Pharmacists

2413-11 (part)    Secondary School Teacher (Maths/Science)

## Associate Professionals

3322-11 (part)    Chef (Asian cuisines and international standard)

## Tradespersons

4122-11            Metal Fabricator (Boilermaker)

4122-15            Welder

4212-11            Automotive Electrician

4211-11            Motor Mechanic

4312-11            Refrigeration and Airconditioning Mechanic

4431-11 to 19     Plumber

4512-11            Baker

4512-13            Pastrycook

4922-11            Cabinetmaker

## Other Occupations

6312-11            Child Care Worker (qualified)

# National Skills Shortage List Australia 1997-98

## ASCO 2 CODE

## Occupation

1295-11	Child Care Coordinator
2215-11	Mining Engineer
2231	Computer Professional (WAN Administration, SAP R/2 and R/3, COBOL)
2323-11sp	Registered Nurse (Operating Theatre)
	Registered Nurse (Critical/Intensive Care)
	Registered Nurse (Neo-Natal Intensive Care)
2325-11	Registered Mental Health Nurse
2385-11	Physiotherapist
2391-11	Medical Diagnostic Radiographer
2391-17	Sonographer
2413-11sp	Secondary School Teacher (Information Technology)
3322-11	Chef (Asian Cuisines and International Standard)
4113-11	Toolmaker
4124-11	Sheetmetal Worker (first class)
4124-11	Boilermaker
4211-11	Motor Mechanic
4512-13	Pastrycook
4931-11	Hairdresser
4942-11	Upholsterer

August 1997

## SKILL SHORTAGE LIST - New South Wales 1997/98

ASCO 2 CODE	OCCUPATION
1295-11	Childcare co-ordinator
2123-13 (sp)	Surveyor - Cadastral
2124-11	Civil Engineer
2125-11	Electrical Engineer
2127-11 (sp)	Mining Engineer - Coal mining with statutory qualifications
2231 (sp)	Computing Professionals - SAP R/2, SAP R/3, Oracle, COBOL/CICS DB2 (MVS, VMS), Powerbuilder, Sybase, RPG 400, UNIX System administrators, Tandem.
2323-11 (sp)	Registered Nurse - Operating Theatre, Accident and Emergency, Intensive Care, Neo-natal Intensive Care, Paediatrics, Aged Care, Oncology
2324-11	Registered Midwife
2325-11	Registered Mental Health Nurse
2382-11	Hospital Pharmacist
2382-15	Retail Pharmacist - Experienced, in rural NSW
2385-11	Physiotherapist
2391-11	Medical Diagnostic Radiographer
2391-17	Ultrasonographer
2413-11 (sp)	Secondary School Teacher - Industrial Arts; Maths/Computing; Agriculture/Science
3121-15 (sp)	Surveying Associate
3322-11 (sp)	Chef - Commis chefs; Demi-chefs and Chefs specialising in Japanese, Thai, Indian cuisine
4113-11	Tool and Die Maker
4122-11	Boilermaker
4124-11	Sheetmetal Worker
4311-11 (sp)	Armature Winder
4411-13 (sp)	Formwork Carpenter
4512-13	Pastrycooks
4931-11	Hairdresser
4942-11	Furniture Upholsterer - repair and restoration
4981-11,13	Shipwright/Boatbuilder
6312-11	Childcare Worker
9917-11	Concreter

Aug 97



**SKILL SHORTAGE LIST - Victoria  
1997/98**

<b>ASCO-SE</b>	<b>OCCUPATION</b>
1295-11	Child Care Coordinator
2215-11	Mining Engineer - Underground
2231 (sp)	Computing Professional - LAN/WAN Technologies, IBM Mainframe COBOL, Hogan, SAP and AS400
2323-11 (sp)	Registered Nurse - Operating Theatre
2323-11 (sp)	Registered Nurse - Critical/Intensive Care
2323-11 (sp)	Registered Nurse - Neo Natal Intensive Care
2323-11 (sp)	Registered Nurse - Cardio-thoracic
2325-11	Registered Mental Health Nurse
2391-17	Sonographer
2413-11 (sp)	Secondary School Teacher - Japanese
2413-11 (sp)	Secondary School Teacher - Indonesian
2413-11 (sp)	Secondary School Teacher - Information Technology
3322-11 (sp)	Chef - Asian cuisines and international standard
3411-11	Enrolled Nurse
4112-11 (sp)	Metal Fitter - advanced machining skills
4112-13	Metal Machinist (First Class)
4113-11	Toolmaker
4512-13	Pastrycook
4929-13	Furniture Finisher
4931-11	Hairdresser
4942-11	Furniture Upholsterer
6312-11	Child Care Worker (qualified)

Avg 97

**SKILL SHORTAGES - Queensland  
1997/98**

<b>ASCO 2 CODE</b>	<b>OCCUPATION TITLE</b>
2119 - 15	Extractive Metallurgist
2125 - 11	Electrical Engineer
2125 - 13	Electronics Engineer
2127 - 11	Mining Engineer
2323 - 11 (sp)	Registered Nurse - Aged Care, Critical/Intensive Care, Emergency, Neo-natal, Paediatric, Renal, Theatre
2324 - 11	Registered Midwife
2325 - 11	Registered Mental Health Nurse
2385 - 11	Physiotherapist
2391 - 11	Medical Diagnostic Radiographer
2391 - 17	Sonographer
2413 - 11 (sp)	Secondary School Teacher - Information Technology
3322 - 11	Chef
3411 - 11	Enrolled Nurse
4112 - 11 (sp)	Fitter - Machining, Pneumatics, Hydraulics
4113 - 11 (sp)	Toolmaker - CNC Operator/Programmer, Plastic Mould/Cavity Maker
4115 - 15	Locksmith
4122 - 11	Metal Fabricator/Boilermaker
4122 - 15	Welder (First Class)
4125 - 11	Metal Casting Tradesperson
4211 - 11	Motor Mechanic
4212 - 11	Automotive Electrician
4213 - 11	Panel Beater
4214 - 11	Vehicle Painter
4512 - 13	Pastrycook
4513 - 11	Cook
4922 - 11	Cabinetmaker
4931 - 11	Hairdresser
4942 - 11	Furniture Upholsterer

Aug 97

**SKILL SHORTAGE LIST - South Australia  
1997/98**

<b>ASCO CODE</b>	<b>OCCUPATION</b>
2124	Civil Engineers
2125	Electrical & Electronics Engineers
2211-11	Accountant
2382	Pharmacists
2391-17	Sonographer
4113	Toolmakers
4211	Vehicle Mechanics
4212	Automotive Electricians
4213	Panel Beaters
4214	Vehicle Painters
4215	Vehicle Body Makers
4924	Upholsterers & Bedding Trades

Aug 97

## SKILL SHORTAGE LIST - Western Australia 1997/98

ASCO CODE	OCCUPATION
1295-11	Child Care Coordinator (country WA only)
2127-11	Mining Engineer
2127-13	Petroleum Engineer
2127-13	Drilling Engineer
2129-17	Chemical Engineer (experienced in process control)
2312-27	Psychiatrist
2323-11 2324-11 2325-11	Specialist/Registered Nurse - country areas generally, also specialisations of Midwifery, Intensive Care, Operating Theatre, Mental Health, Accident & Emergency, Geriatrics
2381-11/13	Dentist
2383-11	Occupational Therapist
2385-11	Physiotherapist (country WA only)
2386-11	Speech Pathologist
2391-11	Diagnostic Radiographer
2391-11	Sonographer
2413-11	Secondary School Teacher - Mathematics, Physics, Music, Computing
3122-11	Civil Engineering Associate/Drafter - Structural Steel Shop Detailers
4112-11	Fitter - experienced with heavy earth moving plant in the mining and resources sector
4112-13	Metal Machinist
4114-11/13 15/81/83/85	Aircraft Maintenance Engineer - for smaller metropolitan firms and those located in remote mining and northern centres
4122-11	Boilermaker - in remote mining and northern areas
4122-13/15	Welder - country areas associated with mining and resource activity
4124-11	Sheetmetal Worker
4173-11	Toolmaker
4212-11	Automotive Electrician
4214-11	Vehicle Painter - country areas, and of Vehicle Painters with two-pack skills
4215-11	Vehicle Body Builder
4311-11/13 4314-11/13	Electrical Fitter/Instrument Fitter - multiskilled Instrument/Electrical Fitters
4312-11	Refrigeration Mechanic
4512-13	Pastrycook
3322-01/11 4513-11	Cook/Chef - particularly apparent for Cook/Chefs either newly qualified or up to four years experience, and also for Chefs specialising in quality ethnic cuisines such as Chinese, Thai and Italian. Shortages are most evident in country areas.
6601-13	Child Care Worker - in some country areas

Aug 97

**SKILL SHORTAGE LIST - Tasmania  
1997/98**

ASCO 2 CODE	OCCUPATION TITLE
1295	Child Care Co-ordinators
2231 sp	Computer Professionals - Ingres, C++, Centura, Powerbuilder, WAN administrator skills
2323 sp	Registered Nurses - ICU/Critical Care, Renal, Peri-operative/Theatre, Neo-natal
2325	Registered Mental Health Nurses
2383	Occupational Therapists
2385	Physiotherapists
2388	Podiatrists
2391-11	Medical Imaging Technologist
2391-13	Radiation Therapist
2391-15	Nuclear Medicine Technologist
2413 sp	Secondary School Teachers - Maths/Science, Information Technology, Asian Languages
2543-13	Environmental Health Officer
3322	Chefs (International standard Chefs, and those with experience in specialist international cuisine).
4112-11	Fitter
4112-15	Textile, Clothing or Footwear Mechanic
4113-11	Toolmaker
4122-11	Metal Fabricator
4122-15	Welder - First Class
4124-11	Sheetmetal Worker
4211-11	Motor Mechanic
4212-11	Automotive Electrician
4213-11	Panel Beater
4214-11	Vehicle Painter
4311-11	General Electrician
4311-13	Electrician (Special Class)
4912-11	Printing Machinist
4929-13	Furniture Polisher
4942-11	Upholsterer
4931-11	Hairdresser

Aug 97

**SKILLS SHORTAGE LIST - Northern Territory  
1997/98**

<b>ASCO-SE</b>	<b>OCCUPATION</b>
1295-11	Child Care Coordinator
2125-11	Electrical Engineer
2215-11	Mining Engineer
2323-11	Registered Nurse - general shortage, but particularly the following specialisations
	Registered Nurse - Operating Theatre
	Registered Nurse - Critical/Intensive Care
	Registered Nurse - Paediatric
	Registered Nurse - Neo Natal Intensive Care
	Registered Nurse - Renal
2382	Pharmacists
2413-11 (sp)	Secondary School Teacher - Maths/Science
3322-11 (sp)	Chef - Asian cuisines and international standard
4112-11	Metal Fitter
4124-11	Sheetmetal Worker (First Class)
4122-11	Boilermaker
4122-15	Welder
4212-11	Automotive Electrician
4211-11	Motor Mechanic
4213-11	Panel Beater
4214-11	Vehicle Painter
4312-11	Refrigeration and Airconditioning Mechanic
4512-13	Pastrycook
4931-11	Hairdresser
6312-11	Child Care Worker (qualified)

Aug 97

ASCOFE code	Title
2211-11	Electrical Engineer
2215-11	Mining Engineer (except Petroleum)
2313-11	Physiotherapist
2321-11	Medical Diagnostic Radiographer
2321-11sp	Ultrasonographer
2405sp	Secondary School Teacher - Information Technology
3401-15	Registered Midwife
3401-19	Registered Nurse - Mental Health
3401-99sp	Registered Nurse - Operating Theatre
3401-99sp	Registered Nurse - Accident and Emergency
3401-99sp	Registered Nurse - Critical/Intensive Care
3907	Child Care Coordinator
4101-11	Toolmaker (Plastic Cavity Mould Maker, Computer Numerically Controlled Machining)
4205-15,17	Welder (First Class and Pressure Welder)
4305-11	Automotive Electrician
4601-11	Motor Mechanic (Electronic Systems, EFI and Air-Conditioning)
4603-11	Panel Beater
4703-11	Pastrycook
4705-11sp	Chef/Cook, Asian cuisines and international standard
4913-11	Furniture Upholsterer
6601-13	Child Care Worker (qualified)

New South Wales

Dec 96

ASCOFE code	Title
2209	Civil Engineer
2321-13	Radiation Therapist
2707sp	Computer Professional -Unix systems administration, Tandem, Ingress, Oracle, Lotus Notes, Sybase,
2707sp	Computer Professional - Powerbuilder
2707sp	Computer Professional - AS400
2707sp	Computer Professional - SAP
3401-14	Registered Nurse - Community Health
3401-99sp	Registered Nurse - Geriatric
3401-99	Registered Nurse - Paediatric
3401-99	Registered Nurse - Rehabilitation
3401-99	Registered Nurse - Oncology
3401-99	Registered Nurse - Orthopaedics
4303-11sp	Armature Winder
4907-11	Shipwright
4927	Hairdresser
6699-13	Tour Guide - Japanese Speaking



Victoria

Dec 96

ASCOFE code	Title
2405sp	Secondary School Teacher - Japanese
2405sp	Secondary School Teacher - Indonesian
2405sp	Secondary School Teacher - Other Languages other than English
2405sp	Secondary School Teacher - Physical Education
2405sp	Secondary School Teacher - Music
2707sp	Computer Professional - AS400
2707sp	Computer Professional - SAP
	CAD Draftsperson
3401-19	Registered Psychiatric Nurse
4905	Furniture Finisher
6603-11	Enrolled Nurse

Queensland

Dec 96

ASCOFE code	Title
2211-13	Electronics Engineer
2405sp	Secondary School Teacher - Maths, Science
2701-11sp	Accountant (experienced) - Taxation and Auditing
3401	Registered Nurse
3401-99sp	Registered Nurse - Geriatric
3401-99	Registered Nurse - Paediatric
3401-99	Registered Nurse - Neo Natal
3401-99	Registered Nurse - Renal
4103-11	Metal Fitter
4103-13	Machinist First Class
4203-11	Sheetmetal Worker (First Class)
4205-11,13	Boilermaker
4213-15	Precision Metal Tradesperson (Locksmith)
4301-11	Electrical Linesman/woman
4305-11	Automotive Electrician
4307	Refrigeration/Air-conditioning Mechanic
4309-11	Electrical Mechanic
4313-11	Radio and Television Servicer
4315-11	Office Equipment Servicer
4601-11	Motor Mechanic
4603-11	Panel Beater
4605-11	Vehicle Painter
4903	Cabinetmaker
6603-11	Enrolled Nurse

South Australia

Dec 96

ASCOFE code	Title
2209	Civil Engineer
2307	Pharmacist
4407	Solid Plasterer
4605-11	Vehicle Painter
4607	Vehicle Body Maker
4609	Vehicle Trimmer

Western Australia

Dec 96

ASCOFE code	Title
2205-13	Underground Mine Surveyor
2207-11	Chemical Engineer
2209	Civil Engineer
2215-13	Petroleum Engineer, Drilling Engineer
2217-11	Extractive Metallurgist
2303-21	Psychiatrist
2305	Dentist
2309-11	Occupational Therapist
2315-11	Speech Pathologist
2405sp	Secondary School Teacher - Physical Education
3203-11	Civil Engineering Associate/Drafter
3205-11	Mechanical Engineering Associate/Drafter
3401	Registered Nurse
4103-11sp	Heavy Duty Fitter
4203-11	Sheetmetal Worker (First Class)
4211	Aircraft Maintenance Engineer
4307	Refrigeration/Air-conditioning Mechanic
4601-11	Motor Mechanic
4907-11	Shipwright

Tasmania

Dec 96

ASCOFE code	Title
2309-11	Occupational Therapist
2319-11	Podiatrist
2321-13	Radiation Therapist
2321-15	Nuclear Medicine Technologist
2405sp	Secondary School Teacher - Maths/Science
2405sp	Secondary School Teacher - Asian Languages
2405sp	Secondary School Teacher - Music
2707sp	Computer Professional - Visual Basic
2707sp	Computer Professional - C++
2707sp	Computer professional - Gupta
2707sp	Computer Professional - Powerbuilder
2707sp	Computer Professional - WAN Administrator
3401-99	Registered Nurse - Neo Natal
3401-99	Registered Nurse - Renal
3905-11	Building Inspector
3905-21	Environmental Health Officer
4103-11	Metal Fitter
4103-15	Textile Mechanic
4203-11	Sheetmetal Worker (First Class)
4205-11,13	Boilermaker
4309-11	Electrical Mechanic
4505	Printing Machinist
4601-11	Motor Mechanic
4605-11	Vehicle Painter
4905	Furniture Finisher

Northern Territory

Dec 96

ASCOFE code	Title
2701-11sp	Accountant (experienced) - Taxation and Auditing
3401	Registered Nurse
3401-19	Registered Psychiatric Nurse
3401-99	Registered Nurse - Neo Natal
3401-99	Registered Nurse - Renal
4205-11,13	Boilermaker
4307	Refrigeration/Air-conditioning Mechanic
4309-11	Electrical Mechanic
4601-11	Motor Mechanic
4605-11	Vehicle Painter

**NATIONAL SKILLS SHORTAGE LIST**  
**1st Half 1996/97**

2215-11	Mining Engineer (except Petroleum)
2309-11	Occupational Therapist
2313-11	Physiotherapist
2321-11	Medical Diagnostic Radiographer
2321-11sp	Ultrasonographer
2701-11sp	Accountant (experienced) - Taxation and Auditing
2707sp	Computer Professional -Visual Basic, AS400, IEF, RPG 400, SAP R/2andR/3, Powerbuilder, Tandem, Oracle, multi media, graphics, Gupta, other object oriented languages (e.g. smalltalk, Huron, C++,) mainframe languages (e.g. CICS/COBOL,DB2)
3401-15	Registered Midwife
3401-19	Registered Psychiatric Nurse
3401-99sp	Registered Nurse- Critical/Intensive Care, Emergency, Neo-natal, Paediatric, Geriatric, Operating Theatre
4101-11	Toolmaker (Plastic cavity mould maker, Computer Numerically Controlled Machining)
4103-11	Metal Fitter
4203-11	Sheetmetal Worker (First Class)
4205-11,13	Boilermaker
4205-15,17	Welder
4305-11	Automotive Electrician
4601-11	Motor Mechanic
4603-11	Panel Beater
4605-11	Vehicle Painter
4703-11	Pastrycook
4705-11sp	Chef/Cook, Asian cuisines and international standard
4913-11	Furniture Upholsterer
6601-13	Child Care Worker (qualified)

1996

Attachment B

## New South Wales Skills Shortage List - 1st Half 1996/97.

NEW SOUTH WALES

<u>ASCO code</u>	<u>Title</u>
2313-11	<b>Physiotherapist</b>
2321-11	<b>Medical Diagnostic Radiographer</b>
2321-11sp	<b>Ultrasonographer</b>
2321-13	Medical Therapeutic Radiographer
2707	Computer Professional - SAP R/2, SAP R/3, IEF, RPG 400, Oracle, CICS/COBOL,DB2, smalltalk, Huron, Tandem
3401-13	Registered Community Health Nurse
3401-15	<b>Registered Midwife</b>
3401-19	<b>Registered Psychiatric Nurse</b>
3401-99sp	<b>Registered Nurse, nec-Intensive Care, Emergency, Neo-natal, Paediatric, Aged Care, Operating Suite</b>
4101-11	<b>Toolmaker</b>
4103-11	<b>Metal Fitter-(with Computer Numerically Controlled machining; Metal Inert Gas/Tungsten Inert Gas welding; or boilermaking skills)</b>
4203-11	<b>Sheetmetal Worker (First Class)</b>
4205-11,13	<b>Boilermaker</b>
4205-15,17	<b>Welder</b>
4303-11sp	Electrical Fitter - Armature Winder
4309-11	Electrical Mechanic-(Program Logic Controllers; voice/data cabling)
4703-11	<b>Pastrycook</b>
4705-11	Chef
6601-13	<b>Child Care Worker (Associate Diploma qualified or equivalent)</b>
6699-13	Tour Guide (Japanese Speaking)

Occupations in **bold** are included on the National Skills Shortage List for the 1st half of 1996/97.



Victoria Skills Shortage List - 1st Half 1996/97.

VICTORIA

<u>ASCO code</u>	<u>Title</u>
2215-11	<b>Mining Engineer (except Petroleum)</b>
2309-11	<b>Occupational Therapist</b>
2321-11	<b>Medical Diagnostic Radiographer</b>
2605-11,13	Lawyer (Taxation & Superannuation law)
2701-11sp	<b>Accountant - Taxation and Auditing</b>
2707	<b>Computer Professional</b> - newer object-orientated languages (C++, Visual Basic, Access), LAN/WAN and AS400.
3401-19	<b>Registered Psychiatric Nurse</b>
4311-11,13,99	Communications Equipment Tradesperson- major building and equipment fitout
4705-11sp	<b>Chef/Cook</b> , Asian cuisines and international standard
4905-19	Furniture Finisher
4913-11	<b>Furniture Upholsterer</b>
6603-11	Enrolled Nurse

Occupations in **bold** are included on the National Skills Shortage List for the 1st half of 1996/97.

Queensland Skills Shortage List - 1st Half 1996/97.

QUEENSLAND

<u>ASCO code</u>	<u>Title</u>
2211-11	Electrical Engineer
2211-13	Electronics Engineer
2215-11	<b>Mining Engineer (except Petroleum)</b>
2313-11	<b>Physiotherapist</b>
2321-11sp	<b>Ultrasonographer</b>
2405-11sp	Secondary School Teacher Maths/Science, Asian languages, Languages Other Than English (LOTE)
2701-11sp	<b>Accountant - Taxation and Auditing</b>
2707-11, 13sp	Spatial Information Systems Technician
3401-11	Registered General Nurse
3401-13	Registered Community Health Nurse
3401-15	<b>Registered Midwife</b>
3401-19	<b>Registered Psychiatric Nurse</b>
3401-99sp	<b>Registered Nurse, nec-Critical/Intensive Care, Emergency, Neo- natal, Paediatric, Geriatric, Operating Theatre,</b>
3401-99sp	Registered Nurses, nec - Renal
4101-11sp	<b>Toolmaker - (Computer Numerically Controlled machining, Plastic Cavity Moulding)</b>
4103-11	<b>Metal Fitter</b>
4103-13	Metal Machinist
4203-11	<b>Sheetmetal Worker (First Class)</b>
4205-11,13	<b>Boilermaker</b>
4205-15,17	<b>Welder</b>
4213-15	Locksmith
4305-11	<b>Automotive Electrician</b>
4307-11,13	Air-Conditioning/Refrigeration Mechanic
4315-11	Office Equipment Servicer
4601-11	<b>Motor Mechanic</b>
4601-11sp	Diesel Mechanic
4603-11	<b>Panel Beater</b>
4605-11	<b>Vehicle Painter</b>
4703-11	<b>Pastrycook</b>
4705-11	Chef/Cook
4705-11sp	<b>Chef/Cook, Asian cuisines and international standard</b>
4903-11	Cabinetmaker
4913-11	<b>Furniture Upholsterer</b>
6601-13	<b>Child Care Worker (qualified)</b>
6603-11	Enrolled Nurse

Occupations in bold are included on the National Skills Shortage List for the 1st half of 1996/97.

Western Australia Skills Shortage List - 1st Half 1996/97.

WESTERN AUSTRALIA

<u>ASCO code</u>	<u>Title</u>
2205-13sp	Mining Surveyor
2209-11	Civil Engineer - (mining sector)
2211-11	Electrical Engineer - (electrical control systems and power generation)
2213-11	Mechanical Engineer - (mining and oil & gas sectors)
<b>2215-11</b>	<b>Mining Engineer</b>
2215-13	Petroleum Engineer (subsea and process engineering)
2217-11	Extractive Metallurgist
2303-21	Psychiatrist
<b>2309-11</b>	<b>Occupational Therapist</b>
<b>2321-11sp</b>	<b>Ultrasonographer</b>
<b>3401-15</b>	<b>Registered Midwife</b>
<b>3401-19</b>	<b>Registered Psychiatric Nurse</b>
<b>3401-99sp</b>	<b>Registered Nurse, nec-/Intensive Care, Emergency, Operating Theatre,</b>
3907-11	Child Care Coordinator
<b>4203-11</b>	<b>Sheetmetal Worker (First Class)</b>
<b>4205-11,13</b>	<b>Boilermaker</b>
<b>4205-15,17</b>	<b>Welder</b>
<b>4305-11</b>	<b>Automotive Electrician</b>
4307-13	Refrigeration Mechanic
4501, 4503	Graphic Pre-press Operator (highly skilled Mac operators)
<b>4601-11</b>	<b>Motor Mechanic</b>
<b>4603-11</b>	<b>Panel Beater</b>
<b>4703-11</b>	<b>Pastrycook</b>
4705-11	Chef/Cook
<b>4705-11sp</b>	<b>Chef/Cook, Asian cuisines and international standard</b>
<b>6601-13</b>	<b>Child Care Worker (qualified)</b>

Occupations in **bold** are included on the National Skills Shortage List for the 1st half of 1996/97.

South Australia Skills Shortage List - 1st Half 1996/97.

SOUTH AUSTRALIA

<u>ASCO code</u>	<u>Title</u>
1401-31	Viticulturist
2307	Pharmacist
<b>2309-11</b>	<b>Occupational Therapist</b>
<b>2313-11</b>	<b>Physiotherapist</b>
2317-11	Chiropractor
2317-13	Osteopath
<b>2321-11</b>	<b>Medical Diagnostic Radiographer</b>
<b>4101-11</b>	<b>Toolmaker</b>
<b>4305-11</b>	<b>Automotive Electrician</b>
4307-11,13	Air-Conditioning/Refrigeration Mechanic
4311-11	Broadcasting Technicians
4507-11	Binder and Finisher
<b>4601-11</b>	<b>Motor Mechanic</b>
<b>4603-11</b>	<b>Panel Beater</b>
<b>4605-11</b>	<b>Vehicle Painter</b>
4607-11	Vehicle Body Maker
4609-11	Vehicle Trimmer
<b>4913-11</b>	<b>Furniture Upholsterer</b>

Occupations in **bold** are included on the National Skills Shortage List for the 1st half of 1996/97.

Tasmania Skills Shortage List - 1st Half 1996/97.

TASMANIA

<u>ASCO code</u>	<u>Title</u>
2309-11	<b>Occupational Therapist</b>
2313-11	<b>Physiotherapist</b>
2319-11	Podiatrist
2321-11	<b>Medical Diagnostic Radiographer</b>
2321-11sp	<b>Ultrasonographer</b>
2321-13	Medical Therapeutic Radiographer
2321-15	Nuclear Medicine Technologist
2405-11sp	Secondary School Teacher- Maths/Science, Info Tech, Asian languages, Music
2707	Computer Professional -Visual Basic,C++,Gupta, Powerbuilder, WAN administrator
3401-99sp	<b>Registered Nurse, nec-Critical/Intensive Care, Neo-natal</b>
3401-99sp	Registered Nurse, nec -Renal
3905-11	Building Inspector
3905-21sp	Environmental Health Officer
4101-11	<b>Toolmaker</b>
4103-11	<b>Metal Fitter</b>
4203-11	<b>Sheetmetal Worker (First Class)</b>
4205-11,13	<b>Boilermaker</b>
4205-15,17	<b>Welder</b>
4303-11	Electrical Fitter
4305-11	<b>Automotive Electrician</b>
4309-11	Electrical Mechanic
4505	Printing Machinist
4601-11	<b>Motor Mechanic</b>
4603-11	<b>Panel Beater</b>
4605-11	<b>Vehicle Painter</b>
4705-11sp	<b>Chef/Cook, Asian cuisines and international standard</b>
4905-19	Furniture Finisher
4913-11	<b>Furniture Upholsterer</b>
6601-13	<b>Child Care Worker (qualified)</b>

Occupations in **bold** were included on the National Skills Shortage List for the 1st half of 1996/97.

Northern Territory Skills Shortage List - 1st Half 1996/97.

NORTHERN TERRITORY

<u>ASCO code</u>	<u>Title</u>
2211-11	Electrical Engineer
2211-13	Electronics Engineer
<b>2215-11</b>	<b>Mining Engineer</b>
2701-11sp	Accountant
3401-19	Registered Psychiatric Nurse
3401-99sp	Registered Nurse, nec-/Intensive Care, Emergency, Neo-natal, Paediatric, Aged Care, Operating Theatre,
4205-11,13	<b>Boilermaker</b>
4205-15,17	<b>Welder</b>
4305-11	<b>Automotive Electrician</b>
4307-13	Air-Conditioning/Refrigeration Mechanic
4309-11	Electrical Mechanic
4601-11	<b>Motor Mechanic</b>
4603-11	<b>Panel Beater</b>
4605-11	<b>Vehicle Painter</b>
4705-11sp	<b>Chef/Cook, Asian cuisines and international standard</b>
6601-13	<b>Child Care Worker (qualified)</b>

Occupations in **bold** are included on the National Skills Shortage List for the 1st half of 1996/97.

**NATIONAL SKILLS SHORTAGE LIST**  
**2nd Half 1995/96**

2211-11	Electrical Engineer
2211-13	Electronics Engineer
2215-11	Mining Engineer
2313-11	Physiotherapist
2321-11	Medical Diagnostic Radiographer
2321-11sp	Ultrasonographer
2321-13	Medical Therapeutic Radiographer
2405-11sp	Secondary School Teacher - Asian languages, Science, Mathematics
2701-11sp	Accountant (experienced) - Taxation and Auditing
2707sp	Computing Professional (experienced) - Visual Basic, C++, SAPR/3, Powerbuilder, AS400, multi-media, graphics, Windows4GL, Gupta, other object oriented languages (e.g. smalltalk), mainframe languages (e.g. PL1, CICS/COBOL, DB2)
3401-15	Registered Midwife
3401-13	Registered Community Health Nurse
3401-19	Registered Psychiatric Nurse
3401-99sp	Registered Nurse - Critical/Intensive Care, Emergency, Neo-natal, Paediatric, Geriatric, Operating Theatre
4101-11sp	Toolmaker - Plastic cavity mould maker, CNC machining
4103-11	Fitter
4103-13	Metal Machinist (First Class)

4203-11 Sheetmetal Worker (First Class)  
4205-11,13 Boilermaker  
4205-15,17 Welder  
4305-11 Automotive Electrician  
4307-11,13 Air Conditioning/Refrigeration Mechanic  
4309-11 Electrical Mechanic  
4505-13 Lithographic Printing Machinist  
4507-11 Binder and Finisher  
4601-11 Motor Mechanic  
4603-11 Panelbeater  
4605-11 Vehicle Painter  
4703-11 Pastrycook  
4705-11sp Chef/Cook -  
Asian cuisines and international standard  
4913-11 Furniture Upholsterer  
6601-13 Child Care Worker (qualified)



National Skills Shortage List by State  
2nd Half 1995/96

*NEW SOUTH WALES*

- 4101-11sp Toolmaker - Die Casting  
4303-11sp Electrical Fitter - Armature Winder  
6699-13 Tour Guide (Japanese Speaking)

*VICTORIA*

- 2307-11 Hospital Pharmacist  
2307-13 Industrial Pharmacist  
2307-15 Retail Pharmacist  
2309-11 Occupational Therapist - experienced in psychiatric, paediatric and aged care (rural shortages across occupation)  
2405-11sp Secondary School Teacher - Physical Education (metropolitan area), Music (country areas)  
2701-11sp Accountant - Information Technology experience  
3401-99sp Registered Nurse - Coronary, Cardio-Thoracic  
4103-15 Textile Mechanic  
4209-11 Metal Polisher  
4209-13 Electroplater (First Class)  
4311-11,13,15 Communications Equipment Tradesperson  
4901-11 Wood Machinist (A-Grade)  
4903-11 Cabinetmaker  
4905-19 Furniture Polisher/Finisher  
4911-19 Patternmaker/Grader (Textiles)  
6603-11 Enrolled Nurse  
6699-15sp Nail Technician (Beauty Therapy)

*QUEENSLAND*

- 2209-11 Civil Engineer  
2213-11 Mechanical Engineer  
2321-15 Nuclear Medicine Technologist  
2405-11sp Secondary School Teacher - Agriculture (rural areas)  
2601sp Social Worker - Country/remote areas, Aboriginal/Torres Strait Islander experience  
2707-11,13sp Spatial Information Systems Technician  
4213-15 Locksmith  
4301-11 Electrical Linesman/Woman  
4313-11 Radio and Television Servicer  
4315-11 Office Equipment Servicer  
5101-11sp Legal Secretary  
6505 Waiters/Waitresses (highly skilled/qualified)  
6603-11 Enrolled Nurse

## *SOUTH AUSTRALIA*

1401-31sp Viticulturist  
2317-11 Chiropractor  
2317-13 Osteopath  
2701-11 Accountant - 3 to 5 years experience  
4311-11,13,15 Communications Equipment Tradesperson  
4607-11 Vehicle Body Maker  
4905-19 Furniture Polisher/Finisher  
8103-13 Electrical and Electronic Equipment Assembler

## *WESTERN AUSTRALIA*

2305-11 Dentist  
2601sp Social Worker - Country/remote areas  
3201-11sp Electrical Engineering Design Draftsperson  
3203-11sp Civil/Structural Engineering Design Draftsperson  
3203-11sp Piping Engineering Draftsperson  
3205-11sp Mechanical Engineering Draftsperson  
4103-11sp Mechanic - Diesel and Heavy Earthmoving Equipment  
4211 Aircraft Maintenance Engineer  
4303-11 Electrical Fitter  
4303-11sp Electrical Instrument Fitter  
4511-11 Screen Printer  
4901-11 Wood Machinist (A-Grade)  
6603-11sp Enrolled Nurse - Mental Health/Psychiatric experience  
8405-11 Scaffolder  
8405-13 Rigger (Construction)

## *TASMANIA*

2321-15 Nuclear Medicine Technologist  
2405-11sp Secondary School Teacher - Information Technology  
3905-11 Building Inspector  
3905-21sp Environmental Health Officer  
4905-19 Furniture Finisher/Polisher

## *NORTHERN TERRITORY*

1505-11 Hotel/Motel Manager  
2209-11 Civil/Structural Engineer  
3401-99sp Registered Nurse - Renal, Coronary  
4409-11 Plumber  
4405-11 Painter and Decorator  
4413-11 Wall and Floor Tiler  
6699-13 Tour Guide (Japanese Speaking)