

PERFORMANCE INDICATORS

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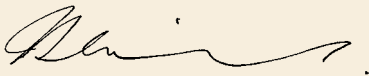
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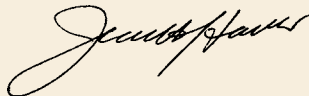
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CERTIFICATION OF PERFORMANCE INDICATORS

We hereby certify that the performance indicators are based on proper records, are relevant and appropriate for assisting users to access Curtin University of Technology's performance, and fairly represent the performance of Curtin University of Technology for the financial year ended 31 December 2011.



James Ian Gill
Chancellor



Jeanette Hackett
Vice-Chancellor

On behalf of the University Council

Dated this 14th day of March 2012

CURTIN'S INSTITUTIONAL PERFORMANCE INDICATORS

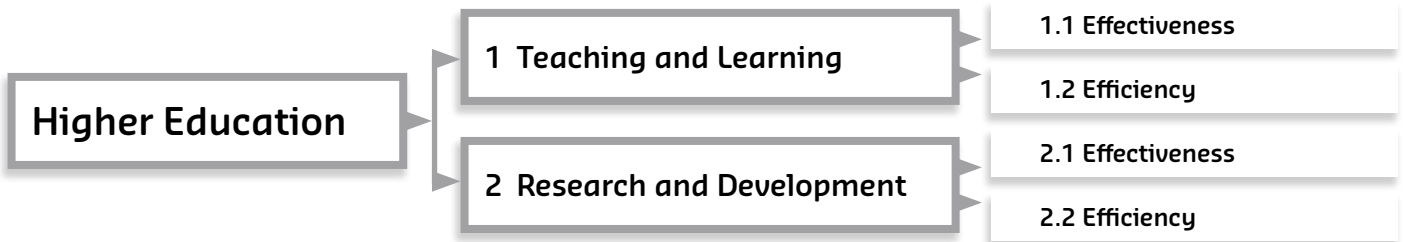
Introduction

As expressed through its mission, Curtin is committed to innovation and excellence in teaching and research for the benefit of our students and the wider community. The institutional effectiveness and efficiency Performance Indicators (PIs) used by Curtin are designed to demonstrate progress towards meeting Teaching and Learning and Research and Development objectives, and targets as espoused in the University's Strategic and Enabling Plans.

The performance indicators used are divided into two categories – effectiveness and efficiency – and are used in the following context:

- **effectiveness measures the extent to which outcomes have been achieved**
- **efficiency measures the resources used to attain a certain level of output.**

The following diagram summarises the approach.



Trend data for the last three to four years is provided so that overall direction and rate of progress can be seen. This trend data also identifies broad changes in cases where short-term variability may hide longer-term trends.

Performance Indicators (continued)

HIGHER EDUCATION PERFORMANCE**1 Higher Education Teaching and Learning Performance Indicators**

	Ref	Name	Objective
1.1 Effectiveness	a	Employment and Study Destinations of New First Degree Graduates	Focus on high-quality courses in areas of strength
	b	Perceived Course Quality – Australian Graduate Survey	Focus on high-quality courses in areas of strength Drive international excellence
	c	Perceived Teaching Quality – Curtin eVALUate Unit Survey	Develop a culture of excellence and innovation Drive international excellence
	d	Quality of the University Experience – Curtin Annual Student Satisfaction Survey	Develop a culture of excellence and innovation Drive international excellence
	e	Subject Load Pass Rate	Focus on high-quality courses in areas of strength Drive international excellence
1.2 Efficiency	f	Teaching and Learning Expenditure per EFTSL and as a percentage of Curtin Total Expenditure	Enhance capacity and financial sustainability
	g	Teaching and Learning Expenditure per Successful EFTSL	Enhance capacity and financial sustainability
	h	Graduate Productivity Rate – Course Completions per 10 FTE Academic Staff	Enhance capacity and financial sustainability
	i	Commencing (First Year) Bachelor Degree Retention	Enhance capacity and financial sustainability Drive international excellence

2 Higher Education Research and Development Performance Indicators

2.1 Effectiveness	j	Growth in Research EFTSL	Strengthen research capability and performance
	k	Institutional Grants (\$) Ranking	Strengthen research capability and performance Enhance capacity and financial sustainability
	l	Total Research Income (\$) Ranking	Strengthen research capability and performance Enhance capacity and financial sustainability
	m	Cooperative Research Centre (\$) Ranking	Strengthen research capability and performance Enhance capacity and financial sustainability
	n	Research Publication (weighted HERDC points) Ranking	Strengthen research capability and performance
2.2 Efficiency	o	Research Funding per Research Staff (using Research Performance Index database)	Strengthen research capability and performance Enhance capacity and financial sustainability
	p	Weighted Research Publication per Research Staff (using Research Performance Index database)	Strengthen research capability and performance Enhance capacity and financial sustainability

1 TEACHING AND LEARNING PERFORMANCE INDICATORS

Strategic Objectives:

- S1. Develop a culture of excellence and innovation.
- S2. Focus on high-quality courses in areas of strength.
- S3. Drive international excellence.
- S5. Enhance capacity and financial sustainability.

1.1 Teaching and Learning Effectiveness

Ref	Name	Objective
a	Employment and Study Destinations of New First Degree Graduates	Focus on high-quality courses in areas of strength
b	Perceived Course Quality – Australian Graduate Survey	Focus on high-quality courses in areas of strength Drive international excellence
c	Perceived Teaching Quality – Curtin eVALUate Unit Survey	Develop a culture of excellence and innovation Drive international excellence
d	Quality of the University Experience – Curtin Annual Student Satisfaction Survey	Develop a culture of excellence and innovation Drive international excellence
e	Subject Load Pass Rate	Focus on high-quality courses in areas of strength Drive international excellence

Performance Indicators (continued)

Focus on high-quality courses in areas of strength, measured by:
(a) Employment and Study Destinations of New First Degree Graduates
Benchmark gauge: Australian Universities' Average

This indicator measures Curtin's effectiveness in both assisting students to reach their full potential and in producing graduates who are of productive value to employers and the community. Table a. shows results from the Australian Graduate Survey (AGS), which combines the Graduate Destination Survey (GDS) and Course Experience Questionnaire (CEQ). It summarises the major activities of new first degree (that is, bachelor, bachelor honours, and diploma) Curtin graduates each year of the series, and

compares these with the national average sourced from Graduate Careers Australia (GCA). Surveys in each year deal with the graduates of the previous year. Therefore the latest available national data, which is from the 2010 AGS survey, applies to the views of students who graduated in 2009. In addition to this national data, Curtin also has access to the views of its own 2010 graduates from the results of the latest survey conducted in 2011, as follows:

Table a. Employment and Study Destinations of New Bachelor Degree Graduates¹ 2008–2011
 Australian Citizens and Permanent Residents only

Activity	2008 survey		2009 survey		2010 survey		2011 survey	
	Curtin	All ²	Curtin	All ²	Curtin	All ²	Curtin	All ²
Full-Time Work	69%	56%	61%	52%	55%	49%	56%	n/a
Full-Time Study	11%	20%	11%	18%	12%	19%	13%	n/a
Not Working, Seeking Full-Time Work	4%	3%	6%	5%	8%	6%	6%	n/a
Part-Time Work, Seeking Full-Time Work	5%	6%	8%	9%	9%	10%	9%	n/a
Part-Time Work, Not Seeking Full-Time Work	8%	8%	9%	10%	11%	10%	10%	n/a
Not Working, Seeking Part-Time Work	0%	1%	1%	1%	1%	1%	1%	n/a
Unavailable for Work/Study	4%	5%	6%	5%	5%	6%	5%	n/a
Total	100%	100%	100%	100%	100%	100%	100%	n/a
Percentage Graduates in Mode of Choice ³	90%	86%	84%	81%	79%	79%	80%	n/a
Curtin Target (minimum)	82%		82%		82%		82%	
Benchmark (Aust Unis' Avg. in prior year)	86%		86%		81%		79%	
<i>Total Number of Respondents</i>	<i>2,047</i>	<i>64,648</i>	<i>2,012</i>	<i>63,492</i>	<i>2,095</i>	<i>65,045</i>	<i>2,217</i>	<i>n/a</i>
<i>Response Rate</i>	<i>66%</i>	<i>n/a</i>	<i>61%</i>	<i>n/a</i>	<i>61%</i>	<i>n/a</i>	<i>65%</i>	

¹ Data is sourced from the Australian Graduate Surveys conducted by Curtin and other universities of all their graduates.

² All refers to All Australian Universities. While Curtin has access to its 2011 survey results, national data for 2011 are not available until 2012.

³ Definition: The percentage of new first-degree graduates working in the mode of their choice as a percentage of the total number of graduates seeking work
 Mode of Choice = (the number of graduates in full-time work + number in part-time work, not seeking full-time work) / (total number of respondents minus those in full-time study and those unavailable for study or work).

- Notes:**
 a. Rounding errors may occur.
 b. Graduates are surveyed in the year following their completion/graduation. For example, the 2011 survey applies to students who completed their course in 2010.
 c. GDS/AGS datapoints are frequencies and not means, thus standard deviations are not reported.
 d. Survey data for 2011: Confidence Level = 99%; Confidence Interval = 1.61.
 e. National data from the 2011 survey is not yet available.

In relation to the GDS, the 80 per cent outcome in 2011 for the item "Percentage of graduates in their mode of choice," falls below Curtin's minimum target of 82 per cent. However, it is acknowledged that labour market conditions influence

this indicator and therefore this must be considered when comparing this indicator to previous years' benchmarks or Curtin's target.

Focus on high-quality courses in areas of strength, measured by:

(b) Perceived Course Quality – Australian Graduate Survey

Benchmark gauge: Australian Universities' Average

The Australian Graduate Survey (AGS) conducted by Curtin and other institutions provides graduate outcome measures of teaching and learning within the Course Experience section. New graduates are asked to rate their perceptions using five aspects of their recently completed course: good teaching, clear goals and appropriate standards, generic skills, overall satisfaction and graduate qualities. Graduate perceptions of the extent to which they have developed generic and general skills, together with their overall satisfaction, are fundamental to monitoring the quality of teaching and learning.

Surveys in each year deal with the graduates of the previous year. AGS survey data for all universities was analysed by the Australian Council for Educational Research on behalf of the GCA. Graduates assign scores across a range from -100 to +100 against each criterion. A score of -100 corresponds

to *complete disagreement*, while at the other end of the scale a +100 indicates *complete agreement*. Results are shown in Table b. In addition to this national data, Curtin also had access to its own results of the latest survey, conducted in 2011 for students who graduated in 2010.

On average, 94 per cent of Curtin's 2010 graduates (surveyed in 2011) were broadly satisfied with their course experience. This is comparable to last year. However, it is important to note that from survey year 2010, Graduate Careers Australia (GCA) implemented the new fully labelled CEQ scale for the first time (strongly disagree, disagree, neither agree nor disagree, agree, strongly agree). Previously only the two extreme rating points were labelled (strongly disagree and strongly agree). The significant improvement in CEQ 2010 and 2011 results may be partly attributed to this scale modification.

Table b. Perceived Course Quality – Australian Graduate Survey (AGS) of all New Bachelor Degree Graduates 2008-2011
Average Graduate Score -100 (complete disagreement) to +100 (complete agreement)

AGS Scale	2008 survey		2009 survey		2010 survey ⁴		2011 survey	
	Curtin	All ²	Curtin	All ²	Curtin	All ²	Curtin	All ²
Good Teaching	+19 (42.0)	+23	+21 (43.1)	+23	+31 (37.2)	+31	+31 (37.9)	n/a
Clear Goals and Standards	+17 (39.4)	+18	+17 (38.6)	+19	+24 (34.4)	+25	+24 (35.0)	n/a
Graduate Qualities	+34 (42.1)	+40	+34 (43.3)	+40	+46 (32.0)	+48	+45 (33.3)	n/a
Generic Skills	+34 (41.5)	+37	+33 (42.9)	+37	+45 (32.2)	+46	+45 (33.1)	n/a
Overall Satisfaction	+34 (50.9)	+39	+34 (51.6)	+39	+47 (41.6)	+48	+47 (42.0)	n/a
Per cent Broad Agreement ³ Overall Satisfaction	86%	88%	86%	88%	94%	93%	94%	n/a
Curtin Target (minimum)	90%		90%		90%		90%	
Benchmark (Aust Unis' Avg. in prior year)	90%		88%		88%		93%	
<i>Total Number of Respondents¹</i>	2,153	72,193	2,899	73,951	2,988	83,363	3,158	n/a
<i>Response Rate</i>	46%	n/a	57%	n/a	57%	n/a	57%	n/a

¹ A student undertaking a double major has had the option of completing two Australian Graduate Surveys. Of the 3,158 Curtin respondents to the 2011 survey, 835 provided additional information about a major.

² All refers to All Australian Universities.

³ Broad agreement includes responses of 3, 4 and 5 on a 5-point scale where 5 is 'strongly agree', so eliminating 'disagree' and 'disagree strongly'.

⁴ Graduate Careers Australia (GCA) implemented the new fully labelled CEQ scale for the first time for the 2010 survey (strongly disagree, disagree, neither agree nor disagree, agree, strongly agree). Previously only the two extreme rating points were labelled (strongly disagree and strongly agree).

Notes:

a. Graduates are surveyed in the year following their completion/graduation. For example, the 2011 survey applies to students who completed their course in 2010.

b. Bracketed figures are the standard deviation for each CEQ/AGS scale.

c. Survey data for 2011: Confidence level = 99%; Confidence interval = 1.50.

d. National data for 2011 is not yet available.

Performance Indicators (continued)

Develop a culture of excellence and innovation, measured by:
(c) Perceived Teaching Quality – Curtin eVALUate Unit Survey
Benchmark gauge: None

Curtin eVALUate Unit Survey (eVALUate) is automatically available for all students who are enrolled in Curtin's coursework units. The survey focuses on student achievement of unit learning outcomes. It asks students' level of agreement with three key indicators: what helped their achievement of learning outcomes; their level of motivation and engagement; and their overall satisfaction with the unit.

Percentage Agreement of the item "overall, I am satisfied with this unit" provides an indicator of student satisfaction with the quality of the teaching and learning experiences of the unit.

In 2011, agreement in overall unit satisfaction is 82 per cent in first semester and 83 per cent in second semester. These are below Curtin's target. There is no benchmark, as this is an internal Curtin survey.

Table c. Perceived Teaching Quality – Curtin eVALUate Unit Survey 2008-2011

Total Agreement as a percentage of Total Response

	2008		2009		2010		2011	
	Sem1	Sem2	Sem1 ²	Sem2 ²	Sem1 ²	Sem2 ²	Sem1 ²	Sem2 ²
Per cent agreement ¹ in overall satisfaction	82%	84%	83%	83%	83%	84%	82%	84%
Curtin Target (minimum)	80%	80%	80%	80%	85%	85%	85%	85%
<i>Number of students who could participate</i>	28,472	30,133	35,342	33,201	39,457	34,059	42,449	33,875
<i>Response Rate</i>	44%	41%	45%	41%	44%	43%	44%	43%

¹ Agreement consists of 'strongly agree' and 'agree' in a 5-level of agreement, the others being 'strongly disagree', 'disagree', and 'unable to judge'.

² The survey covers all locations and study periods included in the first semester and second semester events.

Develop a culture of excellence and innovation, measured by:

(d) Quality of the University Experience – Curtin Annual Student Satisfaction (CASS) Survey

Benchmark gauge: None

This indicator is measured by the Curtin Annual Student Satisfaction (CASS) survey which is conducted every year in August and September on all current students (both onshore and offshore) to assess students' satisfaction with their experience at Curtin, including their course, campus life and the available services and facilities.

In 2011 percentage agreement of 86 per cent was achieved, which exceeds Curtin's target. No benchmarks are available, as this is an internal Curtin survey.

Positive responses to the statement "overall, I am satisfied with my experiences as a student at Curtin University" provide a direct measure of student satisfaction not only to teaching quality, but also to the support services and environment provided by Curtin.

Table d. Quality of University Experience – Curtin Annual Student Satisfaction Survey 2009–2011

Total Agreement as a percentage of Total Valid Response

	2009 survey	2010 survey	2011 survey
Per cent agreement ¹ in overall satisfaction	85%	87%	86%
Curtin Target (minimum)	80%	80%	80%
<i>Number of respondents</i>	<i>8,172</i>	<i>10,653</i>	<i>10,506</i>
<i>Number in population²</i>	<i>37,018</i>	<i>45,756</i>	<i>51,186</i>
<i>Response Rate</i>	<i>22%</i>	<i>23%</i>	<i>21%</i>

¹ Agreement consists of 'strongly agree' and 'agree' on a 5-point scale, the others being 'strongly disagree', 'disagree' and 'neither'. Base: All Curtin students (all locations both onshore and offshore) who provided a valid response to the question 'Overall, I am satisfied with my experiences as a student at Curtin University'.

² The population has been adjusted to exclude students who have withdrawn, graduated or taken leave of absence during the survey period.

Performance Indicators (continued)

Focus on high-quality courses in areas of strength, measured by:

(e) Subject Load Pass Rate

Benchmark gauge: All WA and All Australian Universities Rates

The *Subject Load Pass Rate* indicator (also often referred to as '*Success Rate*' or '*Progress Rate*') measures quantity and timeliness of students attaining a pass result in their units of study. Sound curriculum design, good pedagogy, appropriate assessment practices and learning support should sustain subject load pass rates and, thus, course progression, minimising course completion times.

The data in Table e. shows that Curtin's overall Subject Load Pass Rate in 2011 is 87 per cent, one per cent below the *Curtin University* and *All Australian* benchmarks, and equal to the *All WA Universities* benchmark.

This indicator is the percentage in each academic year of assessed subject load (based on credit points studied) for which students, both domestic and international, were awarded a passing grade.

Table e. Subject Load Pass Rate (SLPR) by Branch of Learning 2009–2011
Student Load Passed as a Percentage of Student Load Assessed

Branch of Learning	2009	2010	2011
Science, Computing, Engineering, Architecture, Agriculture	87%	85%	85%
Administration, Business, Economics, Law	86%	86%	86%
Humanities, Arts and Education	89%	87%	86%
Health Sciences	95%	95%	94%
Curtin Overall SLPR	88%	87%	87%
Curtin Target (minimum)	88%	88%	88%
All WA Universities Benchmark (prior year)	88%	88%	87%
All Australian Universities Benchmark (prior year)	89%	89%	88%

Notes:

a. Rounding errors may occur.

b. Data source: the Commonwealth annual student statistical collections. The Subject Load Pass Rates presented in the table exclude Higher Degree by Research student load.

c. Benchmark source:

The *All WA* and *All Australian Universities* benchmarks are derived from success rates and success ratios reported in the Institutional Performance Portfolio by DEEWR. The benchmark figures are for domestic student enrolments only.

1.2 Teaching and Learning Efficiency

Ref	Name	Objective
f	Teaching and Learning Expenditure per EFTSL and as a percentage of Curtin Total Expenditure	Enhance capacity and financial sustainability
g	Teaching and Learning Expenditure per Successful EFTSL	Enhance capacity and financial sustainability
h	Graduate Productivity Rate – Course Completions per 10 FTE Academic Staff	Enhance capacity and financial sustainability
i	Commencing (First Year) Bachelor Degree Retention	Enhance capacity and financial sustainability Drive international excellence

Enhance capacity and financial sustainability, measured by:

(f) Teaching and Learning Expenditure per EFTSL

Benchmark gauge: None

(g) Teaching and Learning Expenditure per Successful EFTSL

Benchmark gauge: None

Teaching and Learning expenditure relates to the teaching of coursework (that is, non-research) programs. The two indicators reported in Table f. shows: (i) the average cost of teaching each Equivalent Full-Time Student Load (EFTSL) where load is sourced from the Commonwealth annual statistical collections; and (ii) the average cost of teaching each successful EFTSL. Both of these provide an insight into the efficiency with which monies directed towards the Teaching and Learning objective have been spent. Table g. shows the comparison in 2011 dollars (that is, after applying CPI adjustments to previous years' data).

It is important to note that average expenditure per EFTSL is largely dependent on the mix of disciplines taught by an institution. Curtin's high representation of laboratory-based courses raises service delivery costs when compared to institutions where non-laboratory-based courses feature more prominently. Also, Curtin incurs higher than average costs in supporting the delivery of regional higher education programs through its presence in Kalgoorlie, Northam, Esperance, Margaret River, Albany, Geraldton, Karratha and Port Hedland.

Table f. Teaching and Learning Expenditure¹ at Historical Cost 2008–2011

Expenditure and EFTSL details	2008	2009	2010	2011
A. (1) Teaching and Learning Expenditure (\$'000)	\$479,836	\$493,500	\$503,221	\$527,701
(2) Total Curtin Expenditure (\$'000)	\$579,635	\$609,138	\$636,639	\$678,446
(3) Teaching and Learning Expenditure percentage	82.8%	81.0%	79.0%	77.8%
B. Total Taught EFTSL	24,570	26,198	26,595	25,978
C. Successful EFTSL	21,523	23,034	23,162	22,544
Indicator (f) Teaching and Learning Expenditure (\$) per EFTSL	\$19,529	\$18,837	\$18,922	\$20,313
Curtin Target	\$14,500	\$14,500	\$14,500	\$14,500
Indicator (g) Teaching and Learning Expenditure (\$) per Successful EFTSL	\$22,294	\$21,425	\$21,726	\$23,408
Curtin Target	\$16,500	\$16,500	\$16,500	\$16,500

¹ All University Expenditure is now reported on: (i) Teaching and Learning or Research and Development, in line with the University's objectives; and, (ii) consistent with the University's Financial Statements.

Notes:

a. Benchmarks are not available.

Performance Indicators (continued)

Table g. Teaching and Learning Expenditure at Constant Dollar Value 2008-2011

Expenditure and EFTSL details	2008	2009	2010	2011
A. (1) Teaching and Learning Expenditure (\$'000)	\$508,079	\$511,799	\$511,147	\$527,701
(2) Total Curtin Expenditure (\$'000)	\$613,752	\$631,725	\$646,666	\$678,446
(3) Teaching and Learning Expenditure percentage	82.8%	81.0%	79.0%	77.8%
B. Total Taught EFTSL	24,570	26,198	26,595	25,978
C. Successful EFTSL	21,523	23,034	23,162	22,544
Indicator (f) Teaching and Learning Expenditure (\$) per EFTSL	\$20,679	\$19,536	\$19,220	\$20,313
Indicator (g) Teaching and Learning Expenditure (\$) per Successful EFTSL	\$23,606	\$22,219	\$22,068	\$23,408
<i>Higher Education Indexation Factor¹</i>	<i>1.286311</i>	<i>1.313323</i>	<i>1.340903</i>	<i>1.362022</i>

¹ Higher Education Indexation Factors in the table are extracted from the Commonwealth Special Gazette No S83 (31 May 2010) and used to convert historical cost figures to December 2011 price levels.

Enhance capacity and financial sustainability, measured by:

(h) Graduate Productivity Rate - Course Completions per 10 FTE Academic Staff

Benchmark gauge: ATN average

The indicator *Graduate Productivity Rates* provides an insight into the efficiency with which monies directed towards the Teaching and Learning objective have been spent.

These rates show changes over time in the output of graduates for every 10 full-time equivalent staff. Table h(i) provides the rates for undergraduate and postgraduate coursework students, where the numerator is based on graduate numbers and the denominator on 'teaching' and 'teaching and research' staff only.

Curtin's 2011 postgraduate coursework graduates per 10 FTE academic staff is 27.1 and exceeds Curtin's target of 20.0. However, it is below the Australian Technology Network (ATN)¹ benchmark of 28.4.

The undergraduate productivity rate at 62.0 graduates per 10 FTE academic staff exceeds Curtin's target of 57.0 and the ATN benchmark of 55.5.

¹ The ATN universities consist of the five major former Institutes of Technology across Australia: Queensland University of Technology; University of Technology, Sydney; RMIT University; the University of South Australia and Curtin University.

Table h(i). Graduate Productivity Rates¹ 2008–2011Graduations per 10 FTE Academic Staff²

	2008	2009	2010	2011
Undergraduate	60.4	63.7	62.3	62.7
Curtin Target (minimum)	57.0	57.0	57.0	57.0
Benchmark (ATN in prior year)	50.6	49.5	53.9	55.5
Postgraduate Coursework	26.5	27.3	27.3	27.1
Curtin Target (minimum)	20.0	20.0	20.0	20.0
Benchmark (ATN in prior year)	26.2	25.9	28.7	28.4

¹ For each year shown (X) graduates (the numerator) are taken as those with awards approved in the period 1 January to 31 December in year X-1. Thus for 2011 there would have been 89.1 graduates for every 10 FTE teaching in the period 1 January 2010 to 31 December 2010.

² The denominator consists of staff from all funding sources categorised as 'teaching' or 'teaching and research'. An average of the staff in the previous three years is used.

Notes:

a. Curtin Source: Student Record System S1.

b. Benchmark Source: DEEWR Selected Higher Education Student (2007–2009) and Staff (2005–2009) Data Collection.

Table h(ii). shows Research Degree Completions Productivity Rates, with the data disaggregated to the Master and Doctorate levels. The denominator is restricted to staff eligible to supervise research students.

The research degree completion rate has improved against 2010 outcomes and for the first time has exceeded Curtin's target of 3.0 completions per 10 academic FTE. It is also well above the ATN benchmark which has seen a significant fall this year due to the low number of research degree completions at RMIT.

Table h(ii). Research Degree Completions Productivity Rate 2008–2011Research Higher Degree Completions per 10 FTE Academic Staff¹

	2008	2009	2010	2011
Master	0.49	0.54	0.42	0.46
Doctorate	2.13	2.18	2.34	2.56
All Research	2.62	2.73	2.77	3.02
Curtin Target (minimum)	3.00	3.00	3.00	3.00
Benchmark (ATN in prior year)	2.58	2.82	2.70	2.09

¹ Staff data comprise a three-year average of teaching and research academic staff of Lecturer B level and above in academic organisational units only and from all funding sources. Hourly paid academic staff is excluded. These staff data are derived from the Commonwealth annual statistical collections. An average of the staff in the current and previous two years is taken.

Notes:

a. Curtin Source: Graduate Studies.

b. Benchmark Source: DEEWR Selected Higher Education Student (2006–2008) and DEEWR Staff aggregated dataset (2005–2009).

Performance Indicators (continued)

Enhance capacity and financial sustainability, measured by:

(i) Commencing (First Year) Bachelor Degree Retention

Benchmark gauge: ATN and All Australian Universities Retention Rates

Resources devoted to teaching students during a year are not efficiently expended if students do not return to their studies in the following year. High efficiency is achieved when high numbers of students return (are retained) into the following year. This measure focuses on the most vulnerable group (first-year students) in Curtin's largest course offering – bachelor courses – which comprises over two-thirds of all students.

The 2010 commencing bachelor degree students who returned in 2011 is 85 per cent, which exceeds the University minimum target of 83 per cent. However, the 2010–11 outcome is two per cent less than 2008–09 and 2009–10. Benchmarks against the *ATN universities* and *all Australian universities* for 2010–11 are not available.

Table i. Commencing (First-Year) Bachelor Degree Retention 2008–2011

Per cent of first year students returning the subsequent year

	2007-08	2008-09	2009-10	2010-11
First-Year Bachelor Degree Retention Rate	83%	87%	87%	85%
Curtin Target (minimum)	75%	75%	83%	83%
ATN Universities Benchmark (prior year's rate)	84% (85%)	84% (84%)	86% (-)	87% (-)
All Australian Universities Benchmark (prior year's rate)	83% (83%)	83% (83%)	84% (-)	84% (-)

Notes:
a. Curtin Source: Student Record System S1.
b. Benchmark Source: DEEWR Institution Performance Portfolio. The bracketed figures were used in previous years' reports and were also from the same source, derived from attrition rates calculated as [Retention rate = (1 - Attrition rate)]. This attrition rate series has been discontinued. 2011 benchmark data is unavailable.

2 RESEARCH AND DEVELOPMENT PERFORMANCE

Strategic Objectives:

- S3. Strengthen research capability and performance.
- S5. Enhance capacity and financial sustainability.

2.1 Research and Development Effectiveness

Ref	Name	Objective
j	Growth in Research EFTSL	Strengthen research capability and performance
k	Joint Research Engagement Scheme (\$) Ranking	Strengthen research capability and performance Enhance capacity and financial sustainability
l	Total Research Income(\$) Ranking	Strengthen research capability and performance Enhance capacity and financial sustainability
m	Cooperative Research Centre (\$) Ranking	Strengthen research capability and performance Enhance capacity and financial sustainability
n	Research Publication (weighted HERDC points) Ranking	Strengthen research capability and performance

Performance Indicators (continued)

Strengthen research capability and performance, measured by:

(j) Growth in Research EFTSL

Benchmark gauge: WA Universities and National growth rates

One of Curtin's educational strategies to raise its research profile is to increase research by higher degree enrolments and EFTSL.

Table j. shows research by higher degree EFTSL growth of 8.9 per cent between 2010 and 2011, which is higher than the Curtin Target as well as the *All WA Universities* and *All Australian Universities* benchmarks. In Australia, Curtin improves its ranking to 10th in total research enrolled EFTSL in 2011.

Table j. Growth in Research EFTSL 2007-2011

Year-on-year percentage change

	2007	2008	2009	2010	2011
Doctorate EFTSL	843	905	981	1,116	1,222
Master EFTSL	149	137	167	183	192
Total Research EFTSL	992	1,042	1,148	1,298	1,414
Curtin Target (prior year growth)	n/a	n/a	+6.5%	+6.5%	+6.5%
Research Growth (% change)	-1.2%	+5.1%	+10.2%	+13.1%	+8.9%
All WA Universities Benchmark (prior year's rate)	+3.8%	+1.2%	+3.5%	+6.7%	+4.6%
All Australian Universities Benchmark (prior year's rate)	+1.1%	+1.3%	+1.6%	+4.9%	+7.7%
National Ranking (prior year) (of 111 Australian Institutions)	11	12	11	12	10

Notes:

a. All EFTSL data are for the year at 31 March.

b. Benchmarks source: DEEWR Selected Higher Education Student Statistics for Western Australian and Australian universities.

c. Rounding errors may occur.

Strengthen research capability and performance *and* Enhance capacity and financial sustainability, measured by:
(k) Joint Research Engagement Scheme (\$) Ranking

Benchmark gauge: National

The Joint Research Engagement (JRE) scheme replaced the Institutional Grant Scheme (IGS) from 2010. The JRE was distributed across universities by a performance-based formula comprising Category 2-4 research income (weighted 60 per cent); weighted publications (10 per cent); and higher degree research student places measured in EFTSL (30 per cent). Research income is collected in four categories under the Higher Education Research Data Collection. However, only Category 2 (Other public sector research income), Category 3 (Industry and other research income) and Category 4 (Income from Cooperative Research Centres) are utilised for JRE. Research income and publication data is averaged over the most recent two years of data available, while student load data is sourced from the most recent year.

Table k. provides the Joint Research Engagement allocations by university and is ranked according to each institution's share of the total JRE for 2011. Comparative data is given for 2010 JRE allocations and, due to the similarities in the calculation of JRE and the previous IGS block grant, 2009 IGS data is also provided. Curtin is ranked 9th nationally under the JRE (11th in 2010) and remains the highest ranked of the ATN universities.

ATN universities are identified in the table in italics, Western Australian universities are identified in bold type and universities with medical schools and supporting departments are identified with the letter 'M'.

Performance Indicators (continued)

Table k. Joint Research Engagement (JRE) Scheme Funds and Percentage Share of National Total for 2010–2011, with Comparative Data Given for the Institutional Grant Scheme (IGS) for 2009
Ranking according to %JRE Share in 2011

Rank	University	JRE		IGS	
		(\$'000) 2011	% Share 2011	% Share 2010	% Share 2009
1	University of Melbourne (M)	37,574	11.5%	11.6%	11.6%
2	University of Sydney (M)	35,522	10.9%	11.5%	11.5%
3	University of New South Wales (M)	29,405	9.0%	8.5%	7.9%
4	University of Queensland (M)	29,165	8.9%	8.8%	9.2%
5	Monash University (M)	24,196	7.4%	7.8%	8.1%
6	The University of Western Australia (M)	16,219	5.0%	5.2%	5.5%
7	Australian National University	15,890	4.9%	5.1%	5.4%
8	University of Adelaide (M)	15,286	4.7%	4.8%	5.0%
9	CURTIN UNIVERSITY	9,223	2.8%	2.6%	2.2%
10	<i>Queensland University of Technology</i>	8,842	2.7%	2.4%	2.2%
11	University of Newcastle (M)	8,539	2.6%	2.6%	2.4%
12	University of Tasmania (M)	8,091	2.5%	2.6%	2.7%
13	<i>University of South Australia</i>	7,284	2.2%	2.1%	1.8%
14	Griffith University	7,171	2.2%	2.1%	1.9%
15	La Trobe University	6,086	1.9%	1.8%	1.7%
16	Flinders University	6,059	1.9%	1.9%	1.8%
17	University of Wollongong	5,668	1.7%	1.7%	1.8%
18	<i>RMIT University</i>	5,554	1.7%	1.7%	1.7%
19	Macquarie University	5,524	1.7%	1.8%	1.9%
20	Murdoch University	5,421	1.7%	1.5%	1.6%
21	<i>University of Technology, Sydney</i>	4,837	1.5%	1.6%	1.6%
22	Deakin University	4,673	1.4%	1.3%	1.3%
23	James Cook University	3,630	1.1%	1.2%	1.2%
24	University of Western Sydney	3,046	0.9%	1.0%	1.0%
25	University of New England	2,965	0.9%	1.0%	1.0%
26	Charles Darwin University	2,608	0.8%	0.7%	0.7%
27	Swinburne University of Technology	2,527	0.8%	0.8%	0.8%
28	Victoria University of Technology	2,355	0.7%	0.7%	0.6%
29	Edith Cowan University	2,190	0.7%	0.6%	0.6%
30	Charles Sturt University	1,827	0.6%	0.6%	0.6%
31	University of Canberra	1,754	0.5%	0.5%	0.5%
32	Southern Cross University	1,698	0.5%	0.5%	0.5%
33	Central Queensland University	1,291	0.4%	0.4%	0.4%
34	University of Southern Queensland	1,181	0.4%	0.3%	0.3%
35	University of Ballarat	882	0.3%	0.3%	0.3%
36	Australian Catholic University	699	0.2%	0.2%	0.2%
37	University of the Sunshine Coast	463	0.1%	0.1%	0.1%
38	Bond University	343	0.1%	0.1%	0.1%
39	Melbourne College of Divinity	312	0.1%	0.1%	0.1%
40	University of Notre Dame Australia	180	0.1%	0.0%	0.0%
41	Batchelor Institute	112	0.0%	0.0%	0.0%
	Total	326,289	100%	100%	100%

Strengthen research capability and performance and Enhance capacity and financial sustainability, measured by:

(1) Total Research Income (\$) Ranking

Benchmark gauge: ATN, National

Under the 2011 Higher Education Research Data Collection for 2010 Activity, Curtin experienced a decline in research income (9.6 per cent) which placed Curtin 14th nationally. From 2007 Cooperative Research Centre income has been declining with the hiatus in the program at the Commonwealth level, while industry income was maintained between 2008 and 2009, the decline in 2010 was likely the pipeline effect from the Global Financial Crisis.

Other Public Sector Research Funding has declined over the period with substantially reduced state government investment in the centres of excellence program. Of particular note is the 12 per cent increase in prestigious Australian Competitive Grant income, which in 2010 represented 29 per cent of Curtin's income compared to 23 per cent in 2009.

Table 1. All Research Funding: Comparison between Curtin and the Average of All ATN Universities and National Ranking 2008-2010

	2008			2009			2010		
	Curtin \$'000	ATN ¹ \$'000	Nat Rank	Curtin \$'000	ATN ¹ \$'000	Nat Rank	Curtin \$'000	ATN ¹ \$'000	Nat Rank
Australian Competitive Research Grants ²	13,284	12,772	18	15,405	14,885	17	17,230	15,676	16
Other Public Sector Research Funding ²	31,404	17,277	9	30,870	20,198	9	25,575	16,315	9
Industry and Other Funding for Research ²	13,750	12,602	14	13,085	11,463	13	10,877	14,023	19
Cooperative Research Centres Funds ^{2,3}	6,100	4,297	5	5,342	5,560	8	4,790	5,071	9
Total	64,538	46,948	11	64,702	52,107	12	58,472	51,084	14
Curtin Target	63,000	n/a	n/a	63,000	n/a	n/a	63,000	n/a	n/a

¹ ATN refers to the average of all ATN universities.

² The Source: the Commonwealth's Higher Education Research Data Collection.

³ Note: All financial data are for calendar year periods, except for CRC data, which is reported on a financial year.

Performance Indicators (continued)

**Strengthen research capability and performance and Enhance capacity and financial sustainability, measured by:
(m) Cooperative Research Centre (\$) Ranking***Benchmark gauge: National*

Established through the Commonwealth Government's Cooperative Research Centre Program, CRCs link the public and private sectors across Australia and bring together a wide range of expertise and facilities, with a focus on new and innovative research, leading to competitive technological applications. However, the CRC program has been in a hiatus from approximately 2007 to late 2009, as the government undertook a review of the program.

Funding from CRC differs from other funding sources in that it is calculated on a financial year. It is reported here for the year that it is reported under the Higher Education Research Data Collection (HERDC).

Table m. expands upon the Cooperative Research Centre funding data provided in the previous table.

ATN universities are identified in the table in italics, and Western Australian universities are identified in bold type.

Table m. CRC Funding for the HERDC reporting year

Rank	University	(\$'000) 2010	% Share 2010	% Share 2009	% Share 2008
1	University of Queensland	11,732	9.8%	10.0%	13.1%
2	University of Melbourne	10,314	8.7%	9.4%	11.5%
3	Monash University	8,633	7.2%	7.6%	8.6%
4	<i>University of South Australia</i>	8,594	7.2%	6.6%	4.8%
5	University of Tasmania	8,482	7.1%	5.7%	5.6%
6	University of Canberra	7,582	6.4%	3.5%	2.7%
7	<i>Queensland University of Technology</i>	7,054	5.9%	7.0%	4.3%
8	University of New South Wales	4,903	4.1%	5.1%	4.6%
9	CURTIN UNIVERSITY	4,790	4.0%	4.4%	4.9%
10	University of Adelaide	4,763	4.0%	3.4%	4.9%
11	University of New England	3,809	3.2%	3.4%	2.8%
12	<i>RMIT University</i>	3,739	3.1%	3.6%	2.5%
13	University of Sydney	3,566	3.0%	3.8%	4.9%
14	La Trobe University	3,409	2.9%	1.9%	1.6%
15	Deakin University	3,197	2.7%	1.1%	0.6%
16	Murdoch University	3,090	2.6%	4.3%	4.3%
17	Southern Cross University	2,952	2.5%	2.3%	2.6%
18	Griffith University	2,545	2.1%	2.3%	1.3%
19	Swinburne University of Technology	2,409	2.0%	2.3%	2.3%
20	Charles Sturt University	1,871	1.6%	1.1%	1.2%
21	University of Newcastle	1,862	1.6%	1.8%	1.8%
22	University of Wollongong	1,434	1.2%	1.0%	0.1%
23	The University of Western Australia	1,215	1.0%	1.7%	2.3%
24	Flinders University	1,201	1.0%	0.6%	0.6%
25	<i>University of Technology, Sydney</i>	1,177	1.0%	1.1%	0.7%
26	Macquarie University	994	0.8%	0.8%	0.6%
27	Charles Darwin University	848	0.7%	1.0%	1.0%
28	James Cook University	697	0.6%	0.8%	0.8%
29	Central Queensland University	631	0.5%	0.5%	1.1%
30	University of Southern Queensland	557	0.5%	0.5%	0.0%
31	University of Western Sydney	434	0.4%	0.5%	0.4%
32	Australian National University	287	0.2%	0.5%	0.9%
33	University of the Sunshine Coast	278	0.2%	0.0%	0.0%
34	Victoria University of Technology	128	0.1%	0.1%	0.4%
35	Edith Cowan University	50	0.0%	0.1%	0.1%
36	Australian Catholic University	0	0.0%	0.0%	0.0%
37	Batchelor Institute	0	0.0%	0.0%	0.0%
38	Bond University	0	0.0%	0.0%	0.0%
39	Melbourne College of Divinity	0	0.0%	0.0%	0.0%
40	University of Ballarat	0	0.0%	0.0%	0.0%
41	University of Notre Dame Australia	0	0.0%	0.0%	0.0%
Total		119,225	100%	100.0%	100.0%

Performance Indicators (continued)

Strengthen research capability and performance, measured by:
(n) Research Publications (weighted HERDC points) Ranking
Benchmark gauge: National

Research publications are considered an important measure of research performance throughout the higher education sector. The publication of a piece of research demonstrates that referees, expert in the appropriate field, have judged the work worthy of acceptance and dissemination to the research community. Publications are also forming a major component of judging quality of research by the Commonwealth Government initiatives such as the Excellence in Research for Australia.

Table n. gives Curtin's relative performance in respect of the publications indicator over the period 2008–2010 against averages for the ATN universities and ranked against all Australian universities. Additional initiatives and incentives were put in place in 2006, and there has been a steady increase in total HERDC points awarded for publications. Although total publications remained steady in 2010, with a decline in books, which are weighted and tend to be cyclical, there was continued strong growth (14 per cent) in journal articles between 2009 and 2010.

Table n. All Research Publications: Comparison between Curtin and the Average of All ATN Universities and National Ranking 2008–2010

	2008			2009			2010		
	Curtin wt pts	ATN ¹ wt pts	Nat Rank	Curtin wt pts	ATN ¹ wt pts	Nat Rank	Curtin wt pts	ATN ¹ wt pts	Nat Rank
Books ²	78.8	82.7	23	172.5	95.9	10	40.6	63.8	30
Book chapters ²	102.2	129.9	21	136.3	145.5	19	107.5	121.8	18
Journal Articles ²	749.3	646.5	12	804.1	709.0	12	920.1	788.7	11
Conference Articles ²	494.8	456.1	6	504.1	453.5	5	572.8	496.3	3
Total	1,425	1,315	11	1,617	1,404	10	1,641	1,471	11
Curtin Target	1,714	n/a	n/a	1,714	n/a	n/a	1,714	n/a	n/a

¹ ATN refers to the average of all ATN universities.

² The Source: the Commonwealth's Higher Education Research Data Collection.

2.2 Research and Development Efficiency

Ref	Name	Objective
o	Research Funding per Research Staff (using Research Performance Index database)	Strengthen research capability and performance Enhance capacity and financial sustainability
p	Weighted Research Publications per Research Staff (using Research Performance Index database)	Strengthen research capability and performance Enhance capacity and financial sustainability

The Research Performance Index (RPI) is an internal initiative that collects information on research performance, on an annual basis, at the level of an individual staff member.

These newly developed measures are to gauge research efficiency in terms of funding and publications (research input/output respectively).

Strengthen research capability and performance and Enhance capacity and financial sustainability, measured by:
(o) Research Funding per Research Staff (using RPI database)

Benchmark gauge: None

Table o. Research Funding Efficiency

	2010 ¹	2011 ²
Research Funding per staff member	\$49,278	\$43,121
Curtin Target	\$55,000	\$55,000

¹ Based on 2009 performance data collected in 2010.

² Based on 2010 performance data collected in 2011.

Strengthen research capability and performance and Enhance capacity and financial sustainability, measured by:
(p) Weighted Research Publications per Research Staff (using RPI database)

Benchmark gauge: None

Table p. Research Publication Efficiency

Weighted research publication per research staff member

	2010 ¹	2011 ²
Weighted HERDC points per staff member	1.23	1.21
Curtin Target	1.26	1.26

¹ Based on 2009 performance data collected in 2010.

² Based on 2010 performance data collected in 2011.