



## PERFORMANCE MEASUREMENT SYSTEM

# The University of Massachusetts 2011 ANNUAL INDICATORS REPORT

**Office of Institutional Research  
UMASS President's Office  
June 2011**



**The University of Massachusetts**

*Amherst • Boston • Dartmouth • Lowell • Worcester • UMassOnline*

## DEFINITIONS AND SOURCES

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### ACADEMIC QUALITY INDICATORS

**Doctorates Awarded** Total number of Doctorates awarded by UMass campuses for the academic year 2009-10, which includes September 2009, January 2010, and May 2010 award dates. The data includes both research/scholarship and first-professional doctoral degrees.

**Research Expenditures.** FY 2010 data as reported to the National Science Foundation (NSF) through its annual Survey of R&D Expenditures at Universities and Colleges. This survey is now called Higher Education Research and Development (HERD) Survey.

**License Income.** Amount of annual income from license agreements as reported to the Association of University Technology Managers for its annual survey.

### ACCESS AND AFFORDABILITY INDICATORS

**Tuition and Fees as a Percentage of Family Income.** Tuition and mandatory fees for in-state undergraduates (FY 2010) as a percentage of state-wide median family income as reported by US Census in 2009 inflation-adjusted dollars (latest available). Comparative data are from IPEDS and US Census.

**Percentage of undergraduate students from Massachusetts.** Percentage of Fall 2009 undergraduate state-supported students from in-state as determined by tuition residency classification. Data for Massachusetts private universities are from Fall 2009 IPEDS or Campus IR Offices.

**Rate of growth in distance education enrollments.** Percentage rate of growth in annual course registrations. Does not represent headcount enrollments. Academic Year represents Fall, Winter, Spring and Summer enrollments. Data are for fully online (100%) courses only.

### STUDENT SUCCESS AND SATISFACTION INDICATORS

**Percentage of Undergraduate Students of Color.** Fall 2010 undergraduates who are Black (including Cape Verdean), Hispanic/Latino, Asian and/or Native American, divided by total U.S. citizens and permanent residents who report race/ethnicity. Comparative data for 2010 public high school graduates are from the MA Department of Education.

**Percentage Undergraduates who are International.** Percentage of all undergraduates who are studying at the

university on a student visa. International students include all eligible visa types as long as they are enrolled for a credit course; i.e., international students do not include U.S. citizens, U.S. permanent residents or refugees.

### SERVICE TO THE COMMONWEALTH INDICATORS

**Enrollment of Massachusetts residents.** Number of first-year undergraduates enrolling at each institution who are residents of Massachusetts. Data for Massachusetts private universities are from Fall 2009 IPEDS and the universities' institutional research offices.

**Enrollment by region.** In-state undergraduate enrollment by region for Fall 2010.

**Degrees conferred by field.** 2009-10 degrees conferred by UMass campuses by field. IPEDS 2009-10 Completions data.

**UMass degrees as Percent of all Massachusetts degrees.** Degrees awarded by UMass as % of total degrees awarded by colleges and universities in the state in 2009-10 based on IPEDS Completions Survey.

**Percent of graduates who live in Massachusetts.** Percentage of total undergraduate and graduate degree recipients who currently reside in Massachusetts based on alumni records as of Fall 2010.

**MTEL Science & Math Test-Takers.** Total number of students who took the Massachusetts Tests for Educator Licensure (MTEL) subject tests in science and math fields. Data compiled from the campuses' MTEL Annual Institution reports.

### FINANCIAL HEALTH INDICATORS

**Endowment assets.** Market value of true and quasi-endowment assets. Comparative data are from IPEDS, financial statements and NACUBO survey.

**Private Funds Raised Annually.** Private funds raised includes restricted and unrestricted revenues from individuals, foundations, corporations and other organizations. Includes private grant revenues but not private contract revenues. Totals for each year include pledges made in that year as well as the value of in-kind contributions (exception: Lowell's equipment gifts in-kind were not included). Comparable peer data are not available.

**Return on Net Assets.** Increase/decrease in net assets divided by total net assets at beginning of the year. Peer data from published financial statements.

**Financial Cushion.** Unrestricted net assets as a percentage of operating expenditures and interest expense. Peer data are from published financial statements. Not comparable to prior years.

**Debt Service to Operations.** Debt service payments as a percentage of operating expenditures and interest expense. Peer data from published financial statements. Not comparable to prior years.

**Total Deferred Maintenance (DM) Cost & Deferred Maintenance Cost (DM) per Square Foot of Space.**

These new indicators better reflect the condition of campus facilities and are based on work being done with the facilities asset advisory firm *Sightlines* utilizing their *The Return on Physical Assets (ROPA sm)* methodology.

**Total Deferred Maintenance (DM) Cost:** Includes deferred and other maintenance dollars needed to maintain the current function of the campus. This is the amount needed to address the deferred maintenance backlog plus the code work that would be mandated to allow the campus to continue to use the space once the repairs were complete.

**DM Cost per Square Foot:** The total deferred maintenance cost per square foot of space. This ratio quantifies the average dollar level of deferred maintenance work needed per square foot of space.

## PEER INSTITUTIONS FOR UMASS SYSTEM

### *Peer University Systems*

University of Connecticut  
University of California  
University of Colorado  
University of Illinois  
University of Maryland  
University of Missouri

### *New England Public Universities*

University of Connecticut  
University of Maine  
University of New Hampshire  
University of Rhode Island  
University of Vermont

### *Massachusetts Private Universities*

Boston College  
Boston University  
Brandeis University  
Clark University  
Harvard University  
Massachusetts Institute of Technology  
Northeastern University  
Suffolk University  
Tufts University

*Please Note: Unless otherwise specified, all data are from the UMPO Office of Institutional Research.*

## HEADLINES FROM THE 2011 ANNUAL INDICATORS

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### ACADEMIC QUALITY

*The Top American Research Universities (TARU - The Center)* identifies nine performance indicators as measures of academic quality to evaluate the comparative performance of 163 research universities. These public and private institutions generate over \$40 million in federal research annually. Included in this group are ten public research universities with a Carnegie classification of very high research activity (RU/VH) with which the Amherst campus is comparing its progress on these and other indicators. All but three of the peers, the Universities of Connecticut, Delaware, and Nebraska – Lincoln are among the 62 members of the Association of American Universities (AAU). AAU institutions are recognized for their excellence in research and education. Hence, the benchmark for the Amherst campus is quite high, and its performance is generally lower than its peers.

**Student Academic Quality.** The academic profile of entering students has improved in recent years, evidenced by growth in both high school GPA and SAT scores. There have been impressive gains in the high school GPA of entering students which has grown from 3.46 in 2006 to 3.61 in 2010. Ninety eight percent of students entered UMA with a high school GPA of 3.0 and above. Average SAT scores have increased by 21 points since 2006, but still fall below the median of the peer group. The campus is making progress in closing the gap. Further, seniors report high satisfaction with their undergraduate experience. Results from the National Survey of Student Engagement (NSSE) show that 87% of seniors evaluate their UMass Amherst educational experience positively.

**Advanced Training.** The campus has demonstrated strength in the education and training of pre- and post-doctoral researchers. Here, too, UMass Amherst is below the peer median for the number of degrees awarded. In recent years, the number of post-doctorates receiving training has increased, and the campus performs at the peer median on this measure.

**Research and Creative Activity.** Total and federal research dollars in science and engineering (R&D) are key measures of an institution's commitment to and success in research. The Amherst campus faculty has been successful in competing for these dollars. Total R&D spending increased by 24%, and per faculty expenditures increased by 23% in the past five years. The campus ranks among the top 70 public research universities on R&D expenditures, and its national ranking has improved from 75 in 2004 to 69 in 2008

(TARU). However, it consistently performs below the peer median on total spending.

The number of academic honors and awards bestowed on its faculty is another indicator of an institution's quality. UMass Amherst's faculty has shown strength in this area. In particular, it consistently ranks at or above the peer median on faculty awards.

In recent years, the campus invested in tenure-system faculty, but the size of the faculty is below 1,000 and considerably smaller than top public research universities. Growth in the tenure-system faculty will be required for the campus to make significant progress in improving academic quality and research productivity, and hence, advance in the research university rankings. One of the goals articulated for the campus in *The Framework for Excellence* is to increase the size of the faculty to 1,200 by 2020. New faculty hires for the coming year will allow the campus to approach 1,000 tenure-system faculty.

### ACCESS AND AFFORDABILITY

Providing an affordable and accessible education of high quality is stated in the University's mission. In the 2009-10 academic year, the neediest in-state students at UMA (28%) received aid in the form of Pell grants, and 90% of financial need was met for in-state students. The campus continues to recognize its commitment to students with financial need, and has increased institutional need-based aid accordingly.

### STUDENT SUCCESS AND SATISFACTION

Most UMass Amherst students have a positive educational experience. Eighty-nine percent of students return for their sophomore year, and 69% graduate within six years. These rates have improved in recent years but remain somewhat below the peer median. The campus hopes to implement and expand programs that will enrich the college experience and ultimately increase retention and graduation rates. Such initiatives include a *First-Year Intelligence* program, expanded research and scholarship opportunities for undergraduates, and changes in the design and delivery of the General Education curriculum, including an integrative experience requirement for all upper division students beginning with the fall 2010 entering class.

The campus has made progress in increasing the diversity of the campus. The fall 2010 entering class was one of the most diverse groups of students in recent history. Many will be the first in their families to

complete the baccalaureate. The campus will continue to attract a diverse student body and to encourage greater appreciation for diverse populations on the campus.

### **SERVICE TO THE COMMONWEALTH**

The Amherst campus has invested in programs to promote the enrollment and graduation of undergraduate and graduate students in the sciences and mathematics. In fall 2010, 28% of both baccalaureate students and master's and doctoral students were enrolled in STEM programs. These investments will continue.

### **FINANCIAL HEALTH**

The fiscal goals of the campus are to develop reliable income streams to supplement state support of campus operations and to devote more of its unrestricted revenue to capital improvements. Funds will also be allocated to replenish faculty strength. Investment in capital improvements and restoration of faculty are necessary if the campus is to remain nationally competitive. Through these investments, the campus will enhance its academic mission and bolster its reputation.

## 2011 ANNUAL INDICATORS AT A GLANCE

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### ACADEMIC QUALITY

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• Average HS GPA of Freshmen	3.61
• SAT Scores of Freshmen	
<i>Median</i>	1167
<i>25<sup>th</sup> – 75th Percentile</i>	1080 – 1250
• Average GPA of Entering Transfer Students	3.25
• Satisfaction With Major	87%
• No. of Doctorates Awarded	281
• No. of Postdoctoral Appointees	218
• Total R&D Expenditures	\$169.1M
• Federal R&D Expenditures	\$88.9M
• Total R&D/Faculty	\$168,805
• Patent Applications	28
• License Income	\$2.4M
• New Tenured/Tenure-Track Faculty Hired	32
• Change in Tenured/Tenure-Track Faculty	6
• Change in Faculty FTE	10
• Faculty Awards	12
• National Academy Members	9

### ACCESS AND AFFORDABILITY

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• % Pell Grant Recipients	28%
• % of Need Met for In-State Students Awarded	
Need-Based Aid	90%
• % Undergraduates from Massachusetts	80%
• Online Course Enrollments	14,856
• Annual Growth in Online Course Enrollments	10%

### STUDENT SUCCESS AND SATISFACTION

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• % Undergraduates who are Students of Color	20.9%
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• % Undergraduates who are First Generation in College	28%
• % Undergraduates with English as a Second Language	8%
• % Undergraduates who are International	1.4%
• Number Undergraduates who Participated in a Study Abroad Program	1,035
• Freshman One-Year Retention Rate	89%
• Freshman Six-Year Graduation Rate	69%

### SERVICE TO THE COMMONWEALTH

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• Enrollment in STEM Programs	
<i>Undergraduate</i>	5,490 (28%)
<i>Graduate</i>	1,584 (28%)
• Degrees Awarded in STEM Fields	
<i>Undergraduate</i>	1,054 (22%)
<i>Graduate</i>	358(24%)
• MTEL Science and Math Test-Takers	26

### FINANCIAL HEALTH

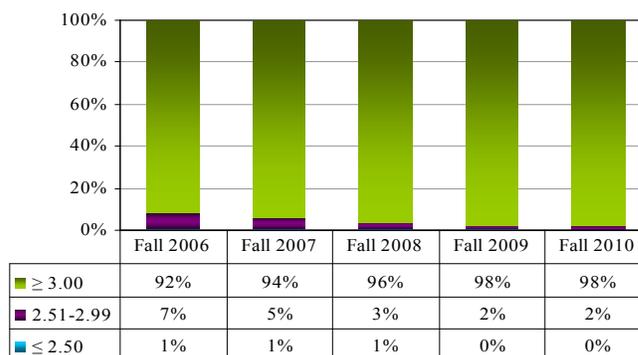
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• Endowment	\$181.5M
• Endowment Per Student	\$7,032
• Return on Net Assets	11.8%
• Financial Cushion	25.9%
• Debt Ratio	6.2%
• Deferred Maintenance per GSF	\$146

## ACADEMIC QUALITY

### High School GPA of Freshmen

UMass Amherst entering first-year students are strong academically with an average high school GPAs of 3.61. The Fall 2010 entering class was the strongest in the five year period with 98% of students earning a GPA of 3.0 and above in high school.



<i>Mean GPA</i>	2006	2007	2008	2009	2010
<i>UMA</i>	3.46	3.48	3.56	3.60	<b>3.61</b>

### SAT Scores of Freshmen

First-year students entered UMA with a mean SAT of 1167. There has been improvement in SAT scores of entering students at the 25th percentile, and the campus is at the median of the peer group. However, it is at the bottom of the peer group at the 75th percentile.

<i>SAT Score</i>	2006	2007	2008	2009	2010
<i>UMA</i>					
<i>25th %ile</i>	1050	1050	1050	1060	<b>1080</b>
<i>75th %ile</i>	1240	1230	1260	1280	<b>1250</b>
<i>Peer Median</i>					
<i>25th %ile</i>	1080	1060	1070	1060	<b>1080</b>
<i>75th %ile</i>	1300	1290	1295	1300	<b>1310</b>
<i>UMA Rank</i>					
<i>25th %ile</i>	9	9	8	6	<b>4</b>
<i>75th %ile</i>	10	11	10	9	<b>11</b>

### Average GPA of Entering Transfer Students

The transfer grade point average has reached a five-year high and consistently surpasses the mandated Department of Higher Education minimum of 2.00 for transfer students.

<i>Average Transfer GPA</i>	2006	2007	2008	2009	2010
<i>UMA</i>	3.18	3.14	3.16	3.23	<b>3.25</b>

## Student Evaluation of Educational Experience

Seniors generally evaluate their UMA educational experience positively. In 2008, almost 90% of students rated their experience as good or excellent. The percentage of students who rated the experience as excellent gained six points between 2005 and 2008. Students will be surveyed again in spring 2011.



## Number of Doctorates Awarded

The number of doctorates awarded at UMA stabilized in 2010. In contrast, there was a slight decline in the number of doctorates awarded at peer institutions. UMA remains near or at the bottom of the peer group.

Doctorates	2006	2007	2008	2009	2010
UMA	253	293	291	255	<b>281</b>
Peer Median	310	319	323	316	<b>309</b>
Rank	9	9	8	10	<b>10</b>

## Postdoctoral Appointees

UMass Amherst senior faculty mentor recent PhDs with science and engineering degrees who wish to receive advanced research training. The number of post-doctoral scholars in Fall 2008 was above the peer median. This is further evidence of strong research programs.

Post-Docs	2006	2007	2008	2009	2010
UMA	182	178	224	209	<b>218</b>
Peer Median	162	163	221	NA	NA
Rank	5	6	5	NA	NA

## Total R&D Expenditures

Total R&D spending for the campus in FY10 was about \$169 million, of which over \$165 million was in science and engineering (S&E). S&E R&D expenditures have increased by 24% in total dollars and 20% in federal dollars since FY2006. The rate of growth for the campus has exceeded that of peer institutions from FY06-09. Despite these gains, S&E expenditures were about 70% of the median of the peer group in FY09, and the relative position of UMA has not changed. Total R&D expenditures for many of the peers are not comparable because they are reported to NSF for all campuses (i.e., Indiana, Rutgers, and the Universities of Colorado, Connecticut and Nebraska). Numbers reported are from TARU which reports adjusted S&E R&D.

Total Research (\$000's)	2006	2007	2008	2009	2010
UMA	\$140,184	\$146,323	\$156,817	\$160,666	<b>\$169,143</b>
S&E UMA	\$136,057	\$141,351	\$152,884	\$156,216	<b>\$164,854</b>
S&E Peer Median	\$218,924	\$216,032	\$224,368	\$220,271	NA
Rank	9	8	8	9	NA

Federal Research (\$000's)	2006	2007	2008	2009	2010
UMA	\$71,220	\$73,485	\$80,432	\$80,950	<b>\$89,413</b>
S&E UMA	\$69,642	\$71,974	\$79,736	\$80,163	<b>\$88,860</b>
S&E Peer Median	\$105,361	\$97,112	\$102,771	\$96,483	NA
Rank	9	9	8	9	NA

## Total Research Expenditures per Tenure System Faculty

The total R&D dollars per faculty increased by 19% in that same period.

Per Tenure System Faculty FTE	2006	2007	2008	2009	2010
Total	\$141,743	\$146,177	\$156,037	\$161,149	<b>\$168,805</b>
Federal	\$72,012	\$73,412	\$80,032	\$81,194	<b>\$89,235</b>

### Patent Applications

Currently, UMass Amherst files approximately one patent application for every \$6 million in sponsored research spending, which is on par with peer universities.

<i>Number Patent Applications</i>	2006	2007	2008	2009	2010
<i>UMA</i>	26	32	33	27	<b>28</b>

### License Income

Fiscal year 2010 was a record-setting year and almost \$2.4 million in licensing revenue was received. The revenue for FY 2009 and 2010 include large, one-time payments. The campus again received over \$500,000 in sponsored research support from its licensees in FY10.

<i>License Income</i>	2006	2007	2008	2009	2010
<i>UMA</i>	\$1,585,516	\$652,043	\$697,008	\$861,496	<b>\$2,353,519</b>

### New Tenured/Tenure-Track Faculty Hired

The campus has made significant investments in tenure system faculty hires in recent years. Despite the economic downturn, there were 32 new hires in FY11. The campus will remain committed to supporting the strongest faculty possible.

	AY 2006-07	AY 2007-08	AY 2008-09	AY 2009-10	AY 2010-11
<i>UMA</i>	61	68	72	35	<b>32</b>

### Change in Tenured/Tenure-Track Faculty

Fall 2010 saw a small one-year increase in the tenure-system faculty, and an increase of 17 since Fall 2006. Investment in faculty is required to maintain the campus as a nationally competitive public research university. One of the goals of *The Framework for Excellence* is to increase the size of the faculty to 1,200 by 2020.

	Fall 2006	Fall 2007	Fall 2008	Fall 2009	Fall 2010	1-year Change
<i>UMA</i>	961	972	975	972	<b>978</b>	6

### Change in Faculty FTE

Faculty full-time equivalent showed a one-year increase of 10 and has grown by 33 since Fall 2006. Half of the growth has been in tenure system faculty numbers.

	Fall 2006	Fall 2007	Fall 2008	Fall 2009	Fall 2010	1-year Change
<i>UMA</i>	1,231	1,255	1,266	1,254	<b>1,264</b>	10

### Faculty Awards

UMass Amherst faculty members are recipients of many prominent awards in the arts, humanities, science, engineering and health fields. In 2009, the most recent year for which there are data, the campus performed at the median of its peers.

<i>Awards</i>	2005	2006	2007	2008	2009
<i>UMA</i>	13	19	11	14	<b>12</b>
<i>Peer Median</i>	15	12	11	10	<b>12</b>
<i>Rank</i>	7	1	6	3	<b>6</b>

## National Academy Members

Several UMass faculty members have been elected to some of the most prestigious disciplinary organizations: the National Academy of Science, the National Academy of Engineering, or the Institute of Medicine. These are some of the highest honors academic faculty can receive. This number has remained stable over time. The campus ranks somewhat below its peers on this measure. The absence of a medical school limits the ability of UMA faculty to be elected to the IOM.

<i>Members</i>	2005	2006	2007	2008	2009
<i>UMA</i>	9	7	9	9	<b>9</b>
<i>Peer Median</i>	12	11	11	10	<b>11</b>
<i>Rank</i>	7	8	7	7	<b>7</b>

## ACCESS AND AFFORDABILITY

### Percent Pell Grant Recipients

In-state students have demonstrated increased financial need in recent years, evidenced by the percent of students receiving Pell Grants. The campus has significantly increased its need-based institutional grant aid to support these students. This rate is competitive with other flagship campuses.

	AY2006-07	AY2007-08	AY2008-09	AY2009-10
<i>UMA</i>	22%	23%	24%	28%

### Percent of Need Met for In-State Students Awarded Need-Based Aid

The campus continues to enhance its commitment to need-based aid for undergraduates as it strives to provide a quality and affordable education to its students.

<i>Percent Need Met</i>	AY2008-09	AY2009-10
<i>UMA</i>	88%	90%

### Percent Undergraduates from Massachusetts

The campus is committed to maintaining access to a quality education for residents of the Commonwealth. About four-fifths of UMass Amherst students enrolled in state-supported programs are residents of the state.

<i>Percent UG's from MA</i>	Fall 2006	Fall 2007	Fall 2008	Fall 2009	Fall 2010
<i>UMA</i>	80.1%	79.7%	80.1%	81.2%	<b>79.7%</b>

### Online Course Enrollments

The Amherst campus offers five undergraduate and graduate degree programs and five certificate programs that can be completed partially or fully online. In addition, a variety of other courses are offered. Online course enrollments grew by 10% in the most recent year, and by over 60% since 2007.

<i>Online Course Enrollments</i>	AY 2007	AY 2008	AY 2009	AY 2010
<i>UMA</i>	9,175	11,142	13,523	<b>14,856</b>

## Annual Growth in Online Course Enrollments

There has been considerable growth in online course enrollment on the Amherst campus in recent years. Online programs afford students flexibility in course-taking.

<i>Annual Growth Online</i>	<i>AY 2007</i>	<i>AY 2008</i>	<i>AY 2009</i>	<i>AY 2010</i>
<i>UMA</i>	NA	21%	21%	<b>10%</b>

## STUDENT SUCCESS AND SATISFACTION

### Percent Undergraduates who are Students of Color

The Amherst campus is committed to enrolling a diverse student body. This is evidenced by the growth in the proportion of undergraduates (including CPE) who are students of color. Undergraduates enrolled in Fall 2010 were the most diverse group of students in recent history.

<i>Students of Color (UG's)</i>	<i>Fall 2006</i>	<i>Fall 2007</i>	<i>Fall 2008</i>	<i>Fall 2009</i>	<i>Fall 2010</i>
<i>Percent</i>	17.1%	18.4%	19.2%	20.1%	<b>20.9%</b>

### Percent Undergraduates who are First Generation in College

Although most students who enter UMass Amherst have parents who are college-educated, many students who enroll will be the first in their family to earn the baccalaureate.

<i>First Generation College-Going (UG's)</i>	<i>Fall 2008</i>	<i>Fall 2009</i>	<i>Fall 2010</i>
<i>Number</i>	1,072	995	<b>1,251</b>
<i>Percent</i>	26%	24%	<b>28%</b>

### Percent Undergraduates with English as a Second Language

English is not the first language of about 8% of first-year students entering UMass Amherst. This is another indicator of the diversity of the campus.

<i>English as a Second Language (UG's)</i>	<i>Fall 2008</i>	<i>Fall 2009</i>	<i>Fall 2010</i>
<i>Number</i>	371	347	<b>358</b>
<i>Percent</i>	9%	8%	<b>8%</b>

### Percent Undergraduate Students who are International

The Amherst campus attracts a small number of undergraduate international students, many of whom are studying on the campus as part of an international exchange program. In contrast, one-fourth (1,363) of graduate students are international. The campus is exploring ways to increase the number of international undergraduate students.

<i>International Undergraduate</i>	<i>Fall 2006</i>	<i>Fall 2007</i>	<i>Fall 2008</i>	<i>Fall 2009</i>	<i>Fall 2010</i>
<i>Number</i>	266	231	251	262	<b>304</b>
<i>Percent</i>	2%	1%	1%	1%	<b>1%</b>

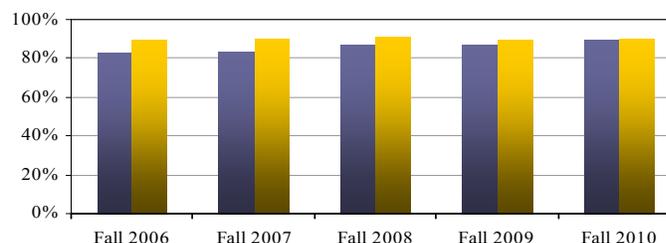
### Number Undergraduates who Participated in a Study Abroad Program

Over 1,000 UMass undergraduates participated in a study abroad experience during the 2009-10 academic year. The campus encourages students to take advantage of these enriching global learning opportunities.

<i>Study Abroad (UG's)</i>	<i>2006-07</i>	<i>2007-08</i>	<i>2008-09</i>	<i>2009-10</i>
<i>Number</i>	1,008	1,015	1,031	<b>1,035</b>

## Freshman One-Year Retention Rate

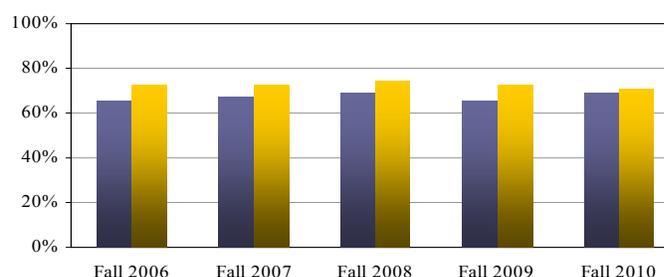
There has been a 6-point gain in the one-year retention rate since Fall 2006, and the gap in retention rates is narrowing between UMA and its peers. However, the one-year rate remains below the peer median. Improving the first-year experience and hence student retention is a campus priority, and new strategies are being developed and implemented.



	Fall 2006	Fall 2007	Fall 2008	Fall 2009	Fall 2010
<b>UMA</b>	83%	84%	87%	87%	<b>89%</b>
<b>Peer Median</b>	89%	90%	91%	89%	<b>90%</b>
<b>Rank</b>	11	9	8	8	<b>7</b>

## Freshman Six-Year Graduation Rate

Over two-thirds of full-time Amherst campus students graduate within six years of entrance. The 2009 rate is below the peer median, however improvements in the one-year retention rates in recent years will likely translate to higher graduation rates in the future.



	Fall 2006	Fall 2007	Fall 2008	Fall 2009	Fall 2010
<b>UMA</b>	66%	67%	69%	66%	<b>69%</b>
<b>Peer Median</b>	73%	73%	74%	73%	<b>71%</b>
<b>Rank</b>	7	7	7	10	<b>8</b>

## SERVICE TO THE COMMONWEALTH

### Enrollment in STEM Programs

There are several initiatives on the Amherst campus to promote the enrollment and graduation of students in science, technology, engineering and mathematics (STEM) fields. An added goal is to increase the enrollment and persistence of underrepresented minorities in STEM. There has been an upward trend in the number and percent of undergraduates in STEM programs. Presently, 28% of undergraduate and graduate students are enrolled in such programs.

#### Undergraduate

UMA	Fall 2006	Fall 2007	Fall 2008	Fall 2009	Fall 2010
<b>Total</b>	18,495	18,769	19,016	19,311	<b>19,804</b>
<b>STEM</b>	4,157	4,455	4,845	5,222	<b>5,490</b>
<b>Percent STEM</b>	22%	24%	25%	27%	<b>28%</b>

#### Graduate

UMA	Fall 2006	Fall 2007	Fall 2008	Fall 2009	Fall 2010
<b>Total</b>	4,998	5,018	5,105	5,505	<b>5,632</b>
<b>STEM</b>	1,453	1,413	1,393	1,491	<b>1,584</b>
<b>Percent STEM</b>	29%	28%	27%	27%	<b>28%</b>

## Degrees Awarded in STEM Fields

Approximately one-fifth of undergraduates and one-fourth of graduate students are awarded degrees in STEM fields.

### Undergraduate

UMA	2005-06	2006-07	2007-08	2008-09	2009-10
<i>Total Degrees</i>	4,038	4,235	4,431	4,573	<b>4,851</b>
<i>STEM</i>	953	919	911	938	<b>1,054</b>
<i>Percent STEM</i>	24%	22%	21%	21%	<b>22%</b>

### Graduate

UMA	2005-06	2006-07	2007-08	2008-09	2009-10
<i>Total Degrees</i>	1,402	1,448	1,506	1,378	<b>1,470</b>
<i>STEM</i>	369	419	427	350	<b>358</b>
<i>% STEM</i>	26%	29%	28%	25%	<b>24%</b>

## FINANCIAL HEALTH

### Endowment Assets and Annual Growth in Endowment

The campus endowment is one of the lowest in the country for a public flagship campus. In FY2010 the endowment was stronger due to an improvement in the stability of the financial markets when compared to FY2009. The campus is ramping up its fundraising staff, and steady growth is projected in endowment earnings.

<i>Endowment (\$000's)</i>	<i>FY 2006</i>	<i>FY 2007</i>	<i>FY 2008</i>	<i>FY 2009</i>	<i>FY 2010</i>
<i>UMA</i>	\$113,724	\$136,954	\$168,241	\$159,620	<b>\$181,498</b>
<i>Annual % change</i>	25%	20%	23%	-5%	<b>14%</b>

### Endowment per Student

The campus endowment is one of the lowest in the country for a public flagship campus. FY2009 saw a sharp decline in the annual growth due to instability in the financial markets. FY2010 has improved as the financial markets have become more stable. Steady growth is projected in endowment earnings due to improved financial markets as well as increased fundraising activities.

<i>Endowment per FTE</i>	<i>FY 2006</i>	<i>FY 2007</i>	<i>FY 2008</i>	<i>FY 2009</i>	<i>FY 2010</i>
<i>UMA</i>	\$5,256	\$6,101	\$7,426	\$6,929	<b>\$7,032</b>
<i>Peers</i>	\$19,769	\$21,304	\$14,915	\$11,137	<b>\$10,840</b>

### Return on Net Assets

Return on net assets for the campus is above the peer average. The ratio will remain solid through FY13 as a result of an infusion of \$175 million of state funding for capital projects over the next five years.

	<i>FY 2006</i>	<i>FY 2007</i>	<i>FY 2008</i>	<i>FY 2009</i>	<i>FY 2010</i>
<i>UMA</i>	8.37%	17.2%	8.0%	3.7%	<b>11.8%</b>
<i>Peers</i>	2.97%	7.8%	5.3%	2.1%	<b>5.5%</b>

### Financial Cushion

Financial cushion represents an institution's capacity to sustain itself during difficult financial times. Although lower than its peers, the ratio for the Amherst campus still compares favorably.

The financial cushion will decline over the next several years as accumulated unrestricted funds, which have been designated for capital improvements are spent on these projects.

	<i>FY 2006</i>	<i>FY 2007</i>	<i>FY 2008</i>	<i>FY 2009</i>	<i>FY 2010</i>
<i>UMA</i>	16.7%	18.2%	19.3%	18.9%	<b>25.9%</b>
<i>Peers</i>	22.5%	25.6%	26.8%	25.3%	<b>27.2%</b>

### Debt Service to Operations

The debt service ratio for the campus has grown as the campus continues its investment in infrastructure improvements. This ratio will escalate to 8% over the next five years as the campus invests in new classroom space, science laboratories as well as a new residence hall.

	<i>FY 2006</i>	<i>FY 2007</i>	<i>FY 2008</i>	<i>FY 2009</i>	<i>FY 2010</i>
<i>UMA</i>	4.6%	4.2%	4.7%	5.9%	<b>6.2%</b>
<i>Peers</i>	4.9%	5.3%	4.8%	6.6%	<b>5.7%</b>

### Deferred Maintenance per GSF

This ratio tracks the progress the campus anticipates making in reducing its deferred maintenance backlog over the next few years. It is based on currently identified projects in the capital plan with \$200 million of spending included in the five year projection for infrastructure improvements.

	<i>FY 2008</i>	<i>FY 2009</i>	<i>FY 2010</i>
<i>UMA</i>	\$165	\$159	\$149

## DEFINITIONS AND SOURCES

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### ACADEMIC QUALITY INDICATORS

**High School GPA of Freshmen.** Cumulative GPA for college prep courses with additional weight to honor and AP courses, according to BHE admissions policy, reported on all first-year students.

**SAT Scores of freshmen.** 25<sup>th</sup> & 75<sup>th</sup> percentiles of combined SAT scores of all first-year students. Peer data are from IPEDS.

**Average GPA of entering transfer students.** Cumulative GPA for college-level courses transferred to UMA according to admissions policy.

**Student Evaluation of Educational Experience.** Percent of seniors who responded “good” or “excellent” to the question, “How would you evaluate your entire educational experience at this institution?” on the National Survey of Student Engagement administered in Spring 2008.

**Number of Doctorates Awarded.** Number of Doctorates awarded for the academic year 2010 which includes September 2009, January 2010 and May 2010 award dates. Peer data does not include formerly first professional degrees from associated professional schools.

**Postdoctoral Appointees.** The number of postdoctoral appointees as reported to NSF.

**Research Expenditures.** R&D expenditures in all academic fields from all sources (federal, state, local governments, industry, private and institutional) as reported to NSF. Peer data reported in The Top American Research Universities.

**Total Research Expenditures per Tenure System Faculty.** R&D expenditures in all academic fields from all sources (federal, state, local governments, industry, private and institutional) as reported to NSF, divided by total tenure system faculty as reported to IPEDS. Peer data reported in The Top American Research Universities.

**Patent Applications.** Number of U.S. Patent applications filed per year. Data Source: Data reported by campuses to UMass President’s Office, Office of CVIP.

**License Income.** Amount of annual income from license agreements. Data Source: Data reported by campuses to UMass President’s Office, Office of CVIP.

**New Tenured/Tenure-track Faculty.** The number of new tenured/tenure-track faculty members hired to start their new positions in the academic year.

**Change in Tenured/Tenure-track Faculty.** The difference in the number of tenured/tenure-track faculty from one fall semester to the next. Includes faculty members who are on paid leave. Does not include individuals whose primary responsibility is administrative. For the 2011 PMS report, the difference will be between the figure for Fall 2010 and Fall 2009.

**Change in Faculty FTE.** The difference in the total FTE, from one fall semester to the next, for all full-time and part-time instructional faculty teaching state-supported courses. Includes faculty members who are on paid leave. Does not include individuals whose primary responsibility is administrative. For the 2011 PMS report, the difference will be between the figure for Fall 2010 and Fall 2009. Definition of Faculty FTE is per the Common Data Set, and includes all faculty teaching credit courses, including credit courses offered via Continuing Education

**Faculty Awards.** Number of faculty with awards from a list of 24 prominent grant and fellowship programs in the arts, humanities, science, engineering and health fields (e.g., Fulbright American Scholars, Guggenheim Fellows, MacArthur Foundation Fellow, National Endowment for the Humanities Fellows, NSF Career Awards, Sloan Research Fellows). Data reported in The Top American Research Universities and were obtained from directories or web based listings.

**National Academy Members.** Number of faculty with active or emeritus status who have been elected to membership in the National Academy of Sciences, the National Academy of Engineering, or the Institute of Medicine. Data reported in The Top American Research Universities.

### ACCESS AND AFFORDABILITY INDICATORS

**Percent Pell Grant Recipients.** Federal Pell Grants are awarded to low-income undergraduates based on their expected family contribution. Data as reported by campuses to the UMass President’s Office of in-state students with Pell Grants in the Financial Aid Template.

**Percent of Need Met for In-State Students Awarded Need-based Aid.** The average percentage of demonstrated financial need that is met by the institution’s award of need-based financial aid to undergraduate students. Data as reported to the UMass President’s Office in the Financial Aid Template.

**Percentage Undergraduate from Massachusetts.** Percentage of total undergraduate students who currently reside in Massachusetts based on tuition residency and/or permanent address for continuing education students.

**Online Course Registrations.** Enrollments or course registrations for the academic year for online credit courses. Academic year includes summer, fall, intersession, and spring. These do not include hybrid courses, but fully online only offered via *UMassOnline*.

**Annual Growth in Online Course Registrations.**

Percentage rate of growth in enrollments or course registrations for the fiscal year for online credit courses. Fiscal year includes summer, fall, intersession, and spring. These do not include hybrid courses, but fully online only offered via *UMassOnline*.

**STUDENT SUCCESS AND SATISFACTION INDICATORS**

**Percent Undergraduate who are Students of Color.**

Undergraduates who are African American/Black, American Indian/Alaska Native, Asian, Hawaiian/Pacific Islander, More than One Race, or Hispanic/Latino divided by total U.S. citizens and permanent residents who report race/ethnicity. Due to recent changes in IPEDS race and ethnicity classifications, trend data on students of color should be viewed with caution.

**Percent Undergraduates who are First Generation in College.** First-generation college students are defined as those students with neither parent having earned the bachelor's degree. Data are from Cooperative Institutional Research Program (CIRP) Freshman Survey 2010.

**Percent Undergraduates with English as a Second Language.** Percentage of undergraduates whose first language was not English. Data are from Cooperative Institutional Research Program (CIRP) Freshman Survey 2010.

**Percent Students who are International.** Percentage of all undergraduates who are studying at the university on a student visa. International students include all eligible visa types as long as they are enrolled for a credit course; i.e., international students do not include U.S. citizens, U.S. permanent residents or refugees.

**Number Undergraduates who Participated in a Study Abroad Program.** Data are numbers of students who participated in a credit bearing study abroad program as reported on the Institute of International Education Open Doors survey for Fall 2009 through Summer 2010.

**Freshmen One-Year Retention Rate.** Percent of first-time, full-time freshmen who entered in previous fall and were still enrolled as of the next fall. Peer data as reported to IPEDS.

**Freshmen Six-Year Graduation Rate.** Percent of first-time, full-time freshmen who entered in a given fall and had graduated within six years. Peer data as reported to IPEDS.

**SERVICE TO THE COMMONWEALTH INDICATORS**

**Enrollment in Science, Technology, Engineering, and Mathematics (STEM) Programs.** Total number of students enrolled in STEM programs. STEM programs are those fields of study defined in the National Science & Mathematics Access to Retain Talent (SMART) Grant with the exclusion of foreign languages. Enrollment count includes undergraduate, graduate and certificate students.

**Degrees Awarded in STEM Fields.** Number of undergraduate and graduate degrees and certificates awarded in STEM fields. STEM fields are those defined in the National Science & Mathematics Access to Retain Talent (SMART) Grant with the exclusion of foreign languages.

**FINANCIAL HEALTH INDICATORS**

**Endowment Assets and Annual Growth in Endowment.** Annual growth in total UMass Amherst endowment balance.

**Endowment per Student.** Total UMass Amherst endowments per annualized FTE student, where FTE of peer institutions is standardized to UMass formula.

**Return on Net Assets.** Increase/decrease in net assets divided by total net assets at beginning of the year. Peer data from published financial statements.

**Financial Cushion.** Unrestricted net assets as a percentage of total operating expenditures. Peer data are from published financial statements.

**Debt Service to Operations.** Debt service as a percentage of total operating expenditures. Peer data are from published financial statements.

**Deferred Maintenance per GSF.** Deferred Maintenance per Gross Square Footage includes deferred and other maintenance dollars needed to maintain the current function of the campus, calculated by the "Sightlines" Return on Physical Assets methodology (ROPA sm) and shown per square foot of space.

**PEER INSTITUTIONS FOR UMASS AMHERST**

Indiana University-Bloomington

\*Iowa State University

\*Rutgers University-New Brunswick

Stony Brook University

\*University of California-Santa Barbara

\*University of Colorado-Boulder

\*University of Connecticut-Storrs

University of Delaware

\*University of Maryland-College Park

University of Nebraska-Lincoln

\*Financial Peer

*Please Note: Unless otherwise specified, all data are from the Campus Office of Institutional Research.*