Support for Physics Education at Worcester Polytechnic Institute

by

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An Interactive Qualifying Project

Submitted to the Faculty

of the

WORCESTER POLYTECHNIC INSTITUTE

In partial fulfillment of the requirements for the

Degree of Bachelor of Science

by

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March 2015

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Abstract

The project uses the data from two major sources to look at factors in 192 physics programs concerning educational demands, resources, and research productivity. Worcester Polytechnic Institute's (WPI) physics program is compared to these factors to see which bars are cleared and which areas can use improvement. As a program which has to meet the demands of a large number of students, it is clear from this study that the WPI physics department has extremely limited resources with which to meet its expectations. It is therefore recommended that WPI raise its number of physics faculty members to 25, raise its number of graduate students to 60, increase the number of physics teaching assistantships to 30, and increase the number of physics research assistantships to 23.

Executive Summary

Point 1: WPI's physics faculty is too small for the tasks placed on the faculty.

- WPI has a small number of faculty members and is in the bottom decile of the faculty member distribution.
- WPI has a low number of publications per faculty member and falls in the bottom quartile of the national distribution.
- WPI's undergraduate physics program is quite large compared to WPI's number of physics faculty members as it places in the top quartile for both measures comparing these sizes.
- WPI's physics student to physics faculty member ratio is high because WPI is in the top decile of the ratio of junior physics majors to faculty members distribution.
- WPI has an extraordinarily low number of faculty compared to the number of first term course enrollments as WPI places in the bottom quartile in the plot comparing these numbers.

Point 2: WPI is lacking in talented graduate students to do research and help teach.

- WPI's graduate retention is small and is in the bottom decile of the distribution.
- WPI's number of graduate students per faculty member is low and is in the bottom decile of the distribution.
- WPI has a small graduate program and is near the bottom of the distributions for first year graduate students, total graduate students, master's degrees awarded, PhDs awarded, research assistants, and teaching assistants.
- Graduate program size has positive correlations with measures of a physics department's success such as number of publications per faculty member and number of awards per faculty member.

- WPI falls in the bottom decile for both factors of the number of publications per faculty member and the number of graduate students.
- Physics teaching assistants have a large load at WPI because WPI is in the highest quartile for the ratio of first term course enrollments to teaching assistants distribution.
- WPI's graduate physics program is extremely small compared to its undergraduate program size and places in the bottom decile for both measures comparing these program sizes.

Point 3: WPI physics faculty and teaching assistants have plenty of undergraduate students to teach.

- Worcester Polytechnic Institute (WPI) has a large number of students who take introductory physics.
- WPI has a medium sized undergraduate program and is close to middle of the distributions for junior physics undergraduates, senior undergraduates, and bachelor's degrees awarded.
- WPI's undergraduate retention is normal and falls near the middle of the national distribution.

Point 4: I recommend the following improvements.

- Raise the number of tenure and tenure-track physics faculty members to 25.
- Raise the number of physics graduate students to 60.
- Increase the number of physics teaching assistantships to 30.
- Increase the number of physics research assistantships to 23.

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Introduction

The Accreditation Board for Engineering and Technology (ABET) is considered the primary accreditation board for applied science, computing, engineering, and engineering technology. ABET accredits over 2800 programs at over 600 colleges and universities including Worcester Polytechnic Institute. For engineering programs, ABET accreditation requires physics coursework for students in those programs. This requirement is in place because physics is an important basic science for these programs and is fundamental to the topics covered in these programs. Engineering coursework is designed around students having a strong understanding of basic physics. ABET evaluators look at the quality of physics courses for their rigor of course material and significant laboratory experiences.

It is therefore clear that physics education is vital to engineering education. Physics education should have extra importance at a school such as Worcester Polytechnic Institute where 72% of the undergraduates study some sort of engineering. There is some suggestion that Worcester Polytechnic Institute does not provide enough support to its physics department so that it can meet ABET expectations. This suggestion is, however, nothing but guesswork without an unbiased data analysis. The goal of this project is to to provide that data-based analysis and assessment.

In this study, Worcester Polytechnic Institute's physics department will be compared to other departments across the United States. The purpose of this is to compare support given to WPI's physics department with national averages. It is therefore made clear in what areas Worcester Polytechnic Institute succeeds and in what areas improvement is needed.

There are three important questions which are constantly asked in this report, and which this report hopes to answer. The first question asks what the demands on a PhD-granting physics department are. This question goes right to the heart of physics research and education as these are the main demands on a department. The second question looks for what resources a department has to meet these demands. The answer to the second question allows weaknesses to be identified, which is the first step to making necessary improvements. The final question is of the productivity of departments. Worcester Polytechnic Institute is a research university as are the other institutions with which WPI is being compared. It is thus important to consider how resources or lack thereof affect research productivity.

With these three questions in mind and a large amount of data, this study attempts to discover what Worcester Polytechnic Institute needs to do for its physics department to ensure physics education is the best it can be.

Section 1. Sources of Data

The American Institute of Physics has a large collection of publications concerning various topics in physics education and research. This large collection contains the first set of data which was found in the *Rosters of Physics Departments with Enrollment and Degree Data*. The second set, *A Data-Based Assessment of Research Doctorate Programs in the United States* was found in the collection the National Academies Press provides on its website. To gain further insight into WPI's physics program, WPI's physics department provided the *Physics Department Annual Report* and the *Physics Department Census Data*. Additionally, *Web of Science* provided online by Thomson Reuters was used to gain additional insights into WPI's physics program.

1.1) American Institute of Physics

The first set of sources are the *Roster*[s] *of Physics Departments with Enrollment and Degree Data, 1998-2013* (to be referred to as *Roster*[s] or American Institute of Physics data) by Starr Nicholson and Patrick J. Mulvey from the American Institute of Physics Statistical Research Center. Every fall, the American Institute of Physics (AIP) conducts its annual Survey of Enrollments and Degrees which gathers data on most schools which offer some physics degree. In 2013 for instance, AIP sent data to all 752 degree granting physics departments in the United States, and 688 of them contributed to the data provided in this roster.

The *Rosters* contain numbers of introductory course enrollments, undergraduate majors, graduate students, and degrees awarded. Departments are surveyed each fiscal year concerning this data, thus 15 years of this data is analyzed here. Starr Nicholson provided these 15 years of data in Microsoft Excel format for the purposes of this study.

Introductory course enrollments are described as, “The number of students who took their first term of introductory level physics, astronomy or physical science. Departments were instructed not to include enrollments for courses that were a continuation of a sequence.” This is a reasonable measure of weight put on a physics department by the institution. For the fiscal years from fall 1999 to spring 2013 numbers for other physical science enrollments such as chemistry or astronomy were also provided, but these were not used for this study. For the fiscal year fall 1998 to spring 1999, numbers for other physical science enrollments are not provided.

Undergraduate majors are listed for each of these years. This number indicates how many juniors and seniors are majoring in physics or a highly related field at an institution. Only juniors and seniors are listed, which is a reasonable choice due to the likelihood of a change of major in a student’s freshman or sophomore year.

The number of graduate students in the corresponding department are also listed for each year. More specifically the total number of graduate students, the number of first year graduate students, and the number of foreign graduate students are listed. The count of foreign graduate students were not used for this study.

The number of degrees awarded are listed in each of the *Rosters*. This includes bachelor’s degrees, master’s degrees, and PhDs awarded in each fiscal year of interest to each *Roster*. These numbers are useful in measuring program sizes. Since this study is focused on schools with bachelor’s and PhD programs, the number of these degrees awarded is of special interest.

For the years from fall 2006 to spring 2013 and the year fall 2000 to spring 2001, the *Rosters* list the highest degree available in each department. For the purposes of this investigation, only physics departments which grant a Doctor of Philosophy (PhD) were considered. For the years when the *Rosters* do not list the highest degree available, only

departments which granted one or more PhDs in that fiscal year were considered. This removed Worcester Polytechnic Institute's (WPI) physics department, which is of particular interest in this study, from the three years spanning fall 2002 to spring 2004 because WPI reported awarding zero PhDs that year. I added WPI to the data as a school of interest for these three years.

Once the PhD schools were extracted from the *Rosters*, two more filters were applied. The first filter had the purpose to combine two physics departments associated with one institution. Some institutions have two separate physics departments. These second departments have a note of "Appl Phys" or "Appl Sci" next to them for applied physics and applied science. It is clear that applied physics is an extension of the physics department and graduate students and professors from such a department can be added to those of the physics department at that institution. The three departments listed with "Appl Sci," are Columbia University, Cornell University, and Harvard University. Upon accessing the department websites, it seems that these are highly interdisciplinary departments which all contain applied physics programs. These departments are combined with the physics department at the same institution just as the applied physics departments were. The data from the two departments are added and the institution is listed instead of the department.

The last filter was applied to rid of schools which do not provide bachelor's degrees. No direct indication was given in the data which schools had a bachelor's program and which did not. Therefore, schools which did not grant any bachelor's degrees were filtered out for each year in which no degrees were granted.

Table 1.1

Fiscal Year	PhD Granting Departments	Two Department Schools	No Bachelor's Degrees	Net Result
12-13	198	5	10	183
11-12	195	6	13	176
10-11	194	6	16	176
09-10	193	7	12	174
08-09	190	7	12	171
07-08	187	7	10	170
06-07	188	7	19	162
00-01	181	6	16	159

The results of these filters are in tables 1.1 and 1.2. The second column from the left gives the number of departments extracted from the studies. Then the next two columns give the number of departments merged together or filtered out for the reasons previously described.

Table 1.2

Fiscal Year	At Least One PhD	Two Department Schools	No Bachelor's Degrees	Net Result
05-06	163	6	6	151
04-05	170	6	4	160
03-04	166	7	5	154
02-03	162	7	3	152
01-02	164	5	11	148
99-00	165	6	6	153
98-99	163	5	4	154

There was one physics department that needed special consideration when compiling the data from the *Rosters*. The first of these is the mixed department of New Jersey Institute of Technology and Rutgers University Newark. In the years from fall 1998 to spring 2006 and from

fall 2007 to spring 2010, these departments are reported together while in the years fall 2006 to spring 2007 and from fall 2010 to spring 2013 the departments are reported separately. As a comparison, the data obtained from one of the other sources in this study, *A Data-Based Assessment of Research Doctorate Programs in the United States*, reports data only listed for New Jersey Institute of Technology. The resolution to this was therefore to label the data according to three departments. Thus data would fall under either New Jersey Institute of Technology, Rutgers University Newark, or the combined department; and only data from the *Rosters* reported for New Jersey Institute of Technology alone could be compared to the numbers reported for New Jersey Institute of Technology in the *Data Based Assessment of Research Doctorate Programs in the United States.*

1.2) National Research Council

The second source is *A Data-Based Assessment of Research Doctorate Programs in the United States* (will be referred to as the *Data-Based Assessment*). This data and assessment was put together by the Committee on an Assessment of Research Doctorate Programs which is a committee of the National Research Council. Editors of this source were Jeremiah P. Ostriker, Charlotte V. Kuh, and James A. Voytuk. This source contains a large array of data concerning faculty, graduate programs, and department research.

In the assessment, there are three measures of faculty. To understand these measures, the *Data-Based Assessment* established definitions for core, new, and associated faculty. Core faculty are defined as, “faculty who have served as a chair or member of a program dissertation committee in the past five academic years (2001-2002 through 2005-2006), or are serving as a member of the graduate admissions or curriculum committee. [Additionally] the faculty member must be currently (2006-2007) and formally designated as faculty in the program, and not be an

outside reader who reads the dissertation but does not contribute substantially to its development. Include emeritus faculty only if the faculty member has, within the past three years, either chaired a dissertation committee or been the primary instructor for a regular Ph.D. course." New faculty are defined as, " Faculty who are not core and do not meet the criteria for core faculty, but who have been hired in tenured or tenure-track positions within the past three academic years (2003-2004 through 2005-2006) and are currently employed at your university and are expected to become involved in doctoral education in your program." Associated faculty are defined as, "Faculty who are neither core nor new, but have chaired or served on program dissertation committees in the past five years (2001-2002 through 2005-2006), and have a current (2006-2007) appointment at your institution, but who are not designated faculty in the program. They should not be outside readers, or faculty currently employed at other universities, unless they are on leave from the faculty at your institution. Include emeritus faculty only if the faculty member has, within the past three years, either chaired a dissertation committee or been the primary instructor for a regular Ph.D. course."

The first count of faculty, total number of faculty members, is described as "Sum of core, new, and associated faculty in 2006." This is a logical number to use as a measure of physics faculty since each of these faculty members contribute to the needs of the department. The second measure of faculty is number of core and new faculty, which was also counted in 2006. The third measure, allocated faculty, is a number that attempts to account for each faculty's responsibilities to the physics department as compared to other departments. The assessment describes this number as "the number of faculty allocated to the program," and states that the value is "corrected for association with multiple programs."

While merging and filtering data, multiple graduate departments associated with a single undergraduate departments were combined. In the case of faculty measures, the numbers were added. While this is completely correct for allocated faculty, there is admittance of error for the other two measures. This is due to the possibility that the same faculty member is part of both departments being combined. These faculty members would have been double counted. Due to the lack of ambiguity with the allocated faculty value, it will be the only measure of faculty considered in this study. Additionally, the allocated faculty will simply be called the faculty.

The *Data-Based Assessment* also has a host of data associated with faculty measures. Three of these were used for the purposes of this study: awards per faculty member, publications per faculty member, and citations per publication.

The *Data-Based Assessment* describes collection of awards per faculty member as follows: “Data from a review of 1,393 awards and honors from various scholarly organizations were used for this variable. The awards were identified by the committee as “Highly Prestigious” or “Prestigious,” with the former given a weight five times that of the latter. The award recipients were matched to the faculty in all programs and the total awards for a faculty member in a program was the sum of the weighted awards times the faculty member’s allocation to that program. These awards were added across the faculty in a program and divided by the [number of allocated faculty] in the program.”

Publications per faculty member was measured over the span of seven years from 2000 to 2006. Any publication published in this year range, by faculty members present at the department in 2006, was counted and then divided by the number of faculty members in 2006. The publications of the faculty on Thomson Reuters Corporation’s collection of scientific publications were found and counted individually.

Citations were similarly counted from the Thomson Reuters collection. The citations were counted from articles published in the years from 1981 to 2006 and cited in the years from 2000 to 2006. The total count of citations across all faculty members was then divided by the number of articles published in the years from 2000 to 2006 to obtain citations per publication. This is a rather strange value as it divides citations across a certain array of articles by the count of different articles. Due to the inability to verifiably repeat this process for Worcester Polytechnic Institute, this value was not used for this study.

There are also three counts of graduate students: the number of first year graduate students, total graduate enrollment, and the number of PhDs graduated. These data are provided for more schools and across more years in the *Rosters*, so these counts from the *Data-Based Assessments* will not be used for this study. However two measures associated with number of graduate students will be used in this study. These measures are percent of [graduate] students with research assistantships and percent of students with teaching assistantships. The National Research Council retrieved these numbers from the results of a survey sent to graduate departments. These percentages are for fall 2005 and can thus be used in conjunction with the number of graduate students for the fall 2005 to spring 2006 fiscal year provided in the 2006 *Roster*. It will be useful to multiply both the percent of graduate students with research assistantships and the percent of students with teaching assistantships by the number of graduate students associated with a certain institution to get values which will be referred to as the number of research assistants and the number of teaching assistants, respectively.

1.3) Department Report

Since no data was provided on Worcester Polytechnic Institute in the *Data-Based Assessment*, a separate source had to be used to supplement the information. Worcester

Polytechnic Institute's *Physics Department Annual Report*, 2007 (referred to as the *Annual Report*) compiled by Germano Iannacchione was therefore used for this purpose.

Professors are listed by category and name. These categories are professor, associate professor, assistant professor, research professor, full time adjunct professor, and part time adjunct professor. The number of professors from each category was counted individually for the purposes of this study.

These numbers had to be matched to the corresponding numbers in the *Data-Based Assessment*. For this purpose, professors and assistant professors as listed in the *Annual Report* are filled in with the core and new faculty from the *Data-Based Assessment*. Associate professors as listed in the *Annual Report* are listed with associate professors from the *Data-Based Assessment*. The sum of professors, assistant professors, and associate professors is therefore listed as the total number of faculty members. Due to a lack of a metric from the *Data-Based Assessment* for allocated faculty, the total number of faculty is also listed as the number of allocated faculty members. While this could be a slight overestimate, it is a good estimate because each faculty member was primarily a physics faculty member in the year listed.

The reader should note that faculty in this report really means professors, associate professors, and assistant professors. It should therefore be made clear that comparisons made are between number of tenure and tenure-track faculty members.

1.4) Web of Science

To find values, for WPI, for the number of publications per faculty member and the number of citations per publication, the methods listed in the *Data-Based Assessment* were copied. *Web of Science* provided by Thompson Reuters was used to find these values. Each professor was searched individually for number of publications published from 2000 to 2006.

Additionally, citations during the years 2000 to 2006 for papers published from 1981 to 2006 were counted. While this was the exact method described in the *Data-Based Assessment*, much larger numbers than anything in the *Data-Based Assessment* were reached for number of citations per publication. It is possible that the *Data-Based Assessment* actually divided the number of citations for 1981 to 2006 papers by the number of 1981 to 2006 papers, but this process also achieved a value one order of magnitude above the rest of the data. The publications per faculty member number was completely reasonable however and is used in this study.

1.5) Department Census

Another important piece of data missing was WPI's count of teaching assistants and research assistants. Older data with these numbers was not available, so the current numbers provided by the *2014-2015 [WPI] Physics Department Census Data* (referred to as the *Census Data*) of teaching and research assistants was used. While this may be a problem for a department which has undergone growth or decay during the last ten years, it is a reasonable thing to do for WPI. For instance, the *Rosters* report WPI having 17 graduate students in fall 2005 (the year the *Data-Based Assessment* reports teaching and research assistants) and 19 graduate students in fall 2012. Thus, it is clear that WPI's graduate program has been mostly stagnant in this time period, so the current numbers of teaching and research assistants are reasonable estimates. These values for teaching assistants and research assistants are placed with the *Data-Based Assessment* teaching assistants and research assistants for analysis in this project.

1.6) Other Sources

There were two sources which were pursued for the purposes of this project that were not successfully retrieved for use. The first of these sources was Peterson's full graduate data set.

These data include enrollment assignments, financial support data, completion data, research data, and completion data. This data is provided by year across the years 1998 to 2013. The point of contact for this data was Stephen Sauermelch, stephen.sauermelch@petersons.com. For this study, the data was offered to be provided for $2500.

The second of these sources was *Engineering by the Numbers, 2008-2013*. This source is compiled yearly for the American Society for Engineering Education. This publication was compiled and written by Brian Yoder for the fiscal years spanning 2009 and 2013 and Michael Gibbons for the fiscal year 2008 to 2009. This source contains the number of bachelor's degrees given in various engineering disciplines. The American Society for Engineering Education obtains these numbers through a survey sent out to every school in America with an engineering program.

While the *Engineering by the Numbers* publications are available for free online, this publication contains a limited sampling of the total data used by the American Society for Engineering Education to complete the publication. Only fifty schools are provided for each engineering discipline and for engineering as a whole. The rest of the data is available for deans of engineering at contributing schools. While attempts were made to get access to this data, we failed. The search was eventually abandoned due to time constraints and the vast amount of data already available, but it was discovered just a few days before the project termination date that the WPI George Gordon Library has access to this data.

Section 2. Distributions

Before looking at relationships between data, it is important to look at the distributions of the various collections of data available. These distributions will be looked at using histograms. Additionally, Worcester Polytechnic Institute's (WPI) physics department will be marked as a key school of interest. Red lines are placed at WPI's values on the histograms. WPI's value will be compared to the overall distribution in three ways. The placement of WPI (e.g. 74th most physics juniors), the number of standard deviations WPI is from the mean, and the number of median absolute deviations (MADs) from the median will be mentioned and considered. The median absolute deviation is the median of the absolute differences of the data from the median of the data.

2.1) Undergraduate Students of Physics

Generally, the foremost tasks of a PhD-granting physics department at an institution with an undergraduate program are teaching and research. For this reason, an important factor to analyze when considering physics departments is the size of the undergraduate program. In the case of physics, the undergraduate program consists largely of non-majors who are taking introductory physics courses for requirements in engineering, pre-health, etc. The undergraduate program also includes the undergraduate majors who fill the higher level physics courses.

The American Institute of Physics data[1] provides numbers of first term course enrollments, undergraduate physics juniors, undergraduate physics seniors, and bachelor's degrees awarded by institution. These numbers conveniently account for enrollment in both lower and higher level undergraduate physics courses, thereby measuring the teaching load of an

[1] *Roster of Physics Departments with Enrollment and Degree Data, 1998-2013 [5]*

institution's physics department. Each of these values was averaged (mean) for each institution over the fifteen years from fall 1998 to spring 2013. Each school is weighted equally although some schools do not have as much data listed because their data was not reported for all years.

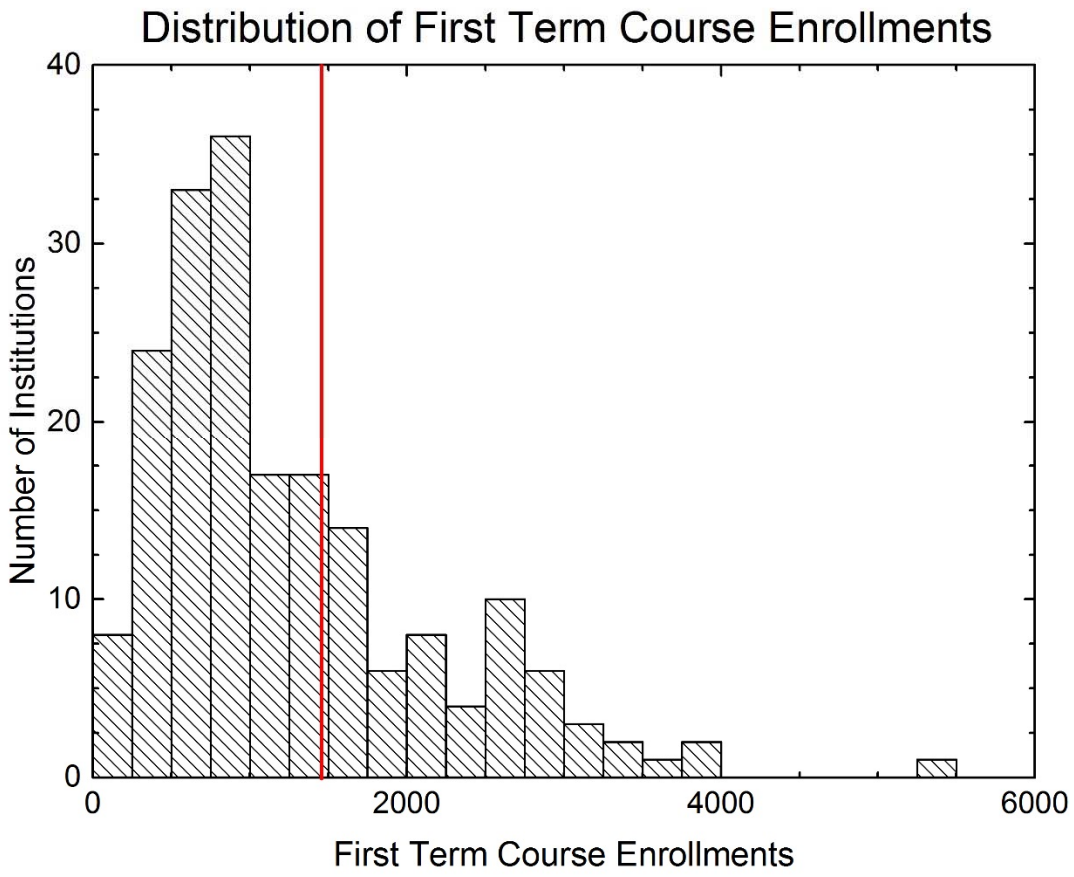

Figure 2.1 Histogram of first term course enrollments across 192 institutions.

WPI is clearly on the high end of the first term course enrollment distribution as it is the 67th highest of the 192 institutions of interest which places WPI in the second quartile. The distribution of first term course enrollments can be seen in figure 2.1. Note that the red WPI line is generally in the middle of the data but slightly to the right of the peak. This indicates that WPI is about or slightly above average in its lower level physics enrollments compared to most schools of interest. Additionally, WPI is clearly above the by far most common range of first term enrollments, 500 to 1000 students. More specifically, the mean first term course enrollment

is 1265 students with a standard deviation of 895 students. WPI's value of 1441 students puts it within a quarter of a standard deviation of the mean. Since the distribution is skewed right, it may be more pertinent to look at the median and MAD rather than the mean and standard deviation. The median for first term course enrollments is 953 students which is quite a bit less than the mean. This would be expected for a right skewed distribution. The MAD is 486 students meaning that WPI's value of 1441 students is just beyond one MAD greater than the median. This is further evidence that WPI is on the high end of the distribution.

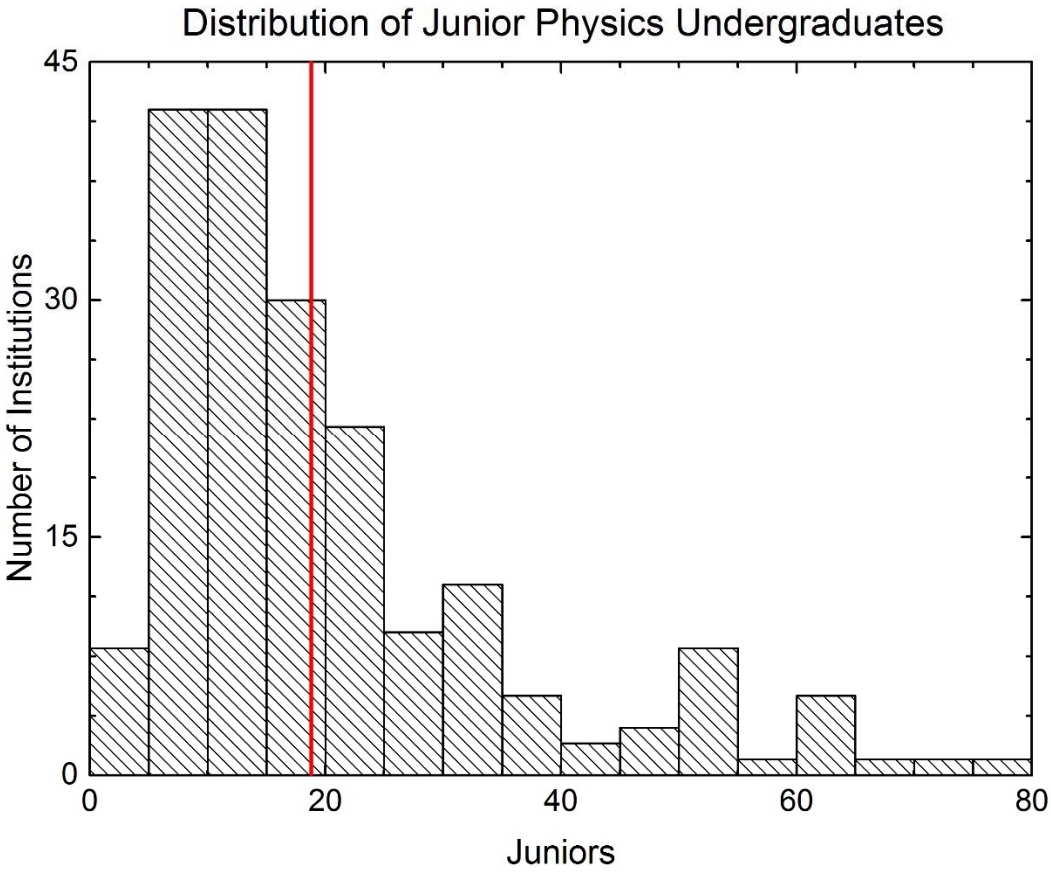

Figure 2.2 Histogram of the number of junior undergraduate physics students across 192 institutions.

The distribution of the number of junior physics majors is provided in figure 2.2. In the distribution the red WPI line falls close to the middle of the data. More specifically, WPI is 74th of 192 schools for number of junior physics undergraduate majors, placing WPI in the second

quartile. The distribution is skewed right such that the mean number of junior undergraduate majors, 20.4 students, is higher than the WPI value of 18.6 students. With a large standard deviation of 15.5 students, this places the WPI value quite close to the mean. Moreover, the median of junior undergraduate majors is 15.5 students with a MAD of 7.6. WPI is further placed at the middle of the data showing that it is about average in terms of junior undergraduate majors.

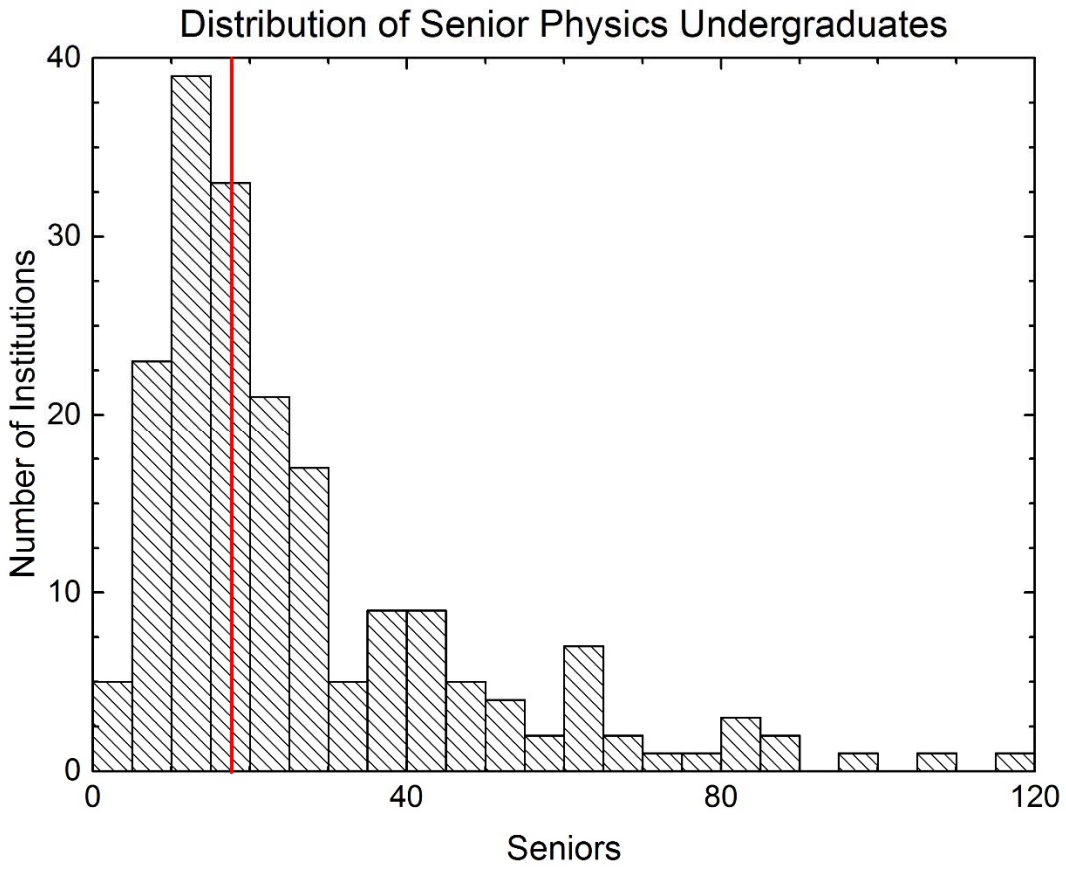

Figure 2.3 Histogram of the number of senior undergraduate physics students across 192 institutions.

WPI is 110th of 192 schools in the number of senior physics undergraduate majors, placing WPI in the third quartile. The mean number of senior undergraduate physics majors is 27.3 students with a standard deviation of 22.5 students. Just as would be expected from the distribution of junior undergraduate majors, WPI's value of 17.7 students is close to, although

about half of a standard deviation below, the average. The median is 19.4 students with a MAD of 8.4 students, which more clearly shows that WPI is quite close to the center of the distribution meaning. WPI is thus about average when it comes to the number of senior undergraduates in the institutions of interest. The distribution of senior undergraduates can be seen in figure 2.3.

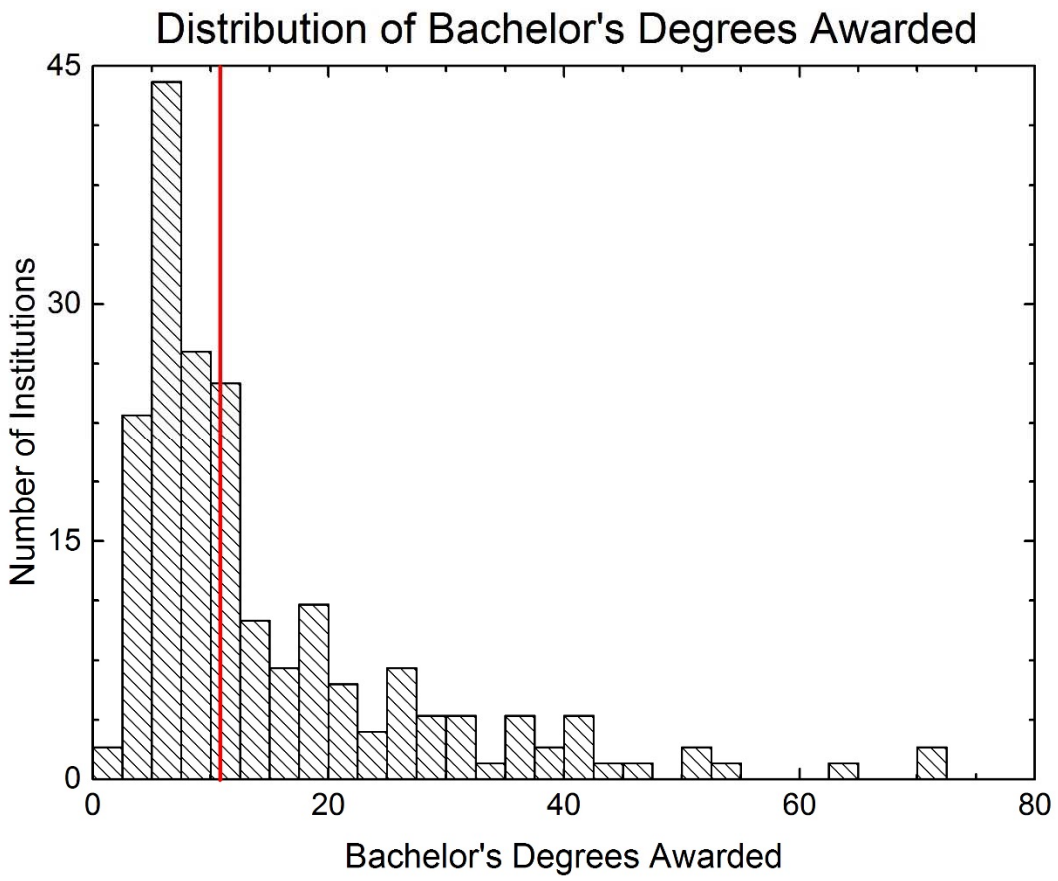

Figure 2.4 Histogram of the number of bachelor's degrees awarded across 192 institutions.

It is reasonable based on the number of junior and senior physics undergraduates to expect that WPI would award a number of bachelor's degrees which is close to the mean and median for the 192 schools of interest. WPI places 80th among these 192 institutions, placing it close to the middle of the distribution, shown in figure 2.4 and in the second quartile. The distribution has a mean of 14.8 degrees awarded with a standard deviation of 13.0 degrees. WPI's 11.7 bachelor's degrees awarded is less than a quarter of a standard deviation away from

the average. Similarly, the median of average bachelor's degrees awarded is 9.9 degrees with a MAD of 4.4 degrees. As clearly seen in figure 2.4, the red WPI line falls right about in the middle of the data.

All three of these distributions make it clear that WPI has a physics department which is close to the middle of the schools of interest in terms of number of undergraduate physics majors. It should be emphasized that the schools of interest are the schools with both bachelor's and PhD programs.

2.2) Faculties

When considering the ability of an institution's department to meet the demands placed upon it, there are two factors to consider. These factors are the faculty and the graduate program sizes. Faculty members and graduate students both serve a department's goals of teaching and performing research. Faculty members are the main champions of these goals as their experience provides the ability to lead department research and run courses.

The *Data-Based Assessment*[2] provides numbers for "total faculty members," "allocated faculty members," and "new and core faculty members." The count of "allocated faculty members" (referred to as faculty members) measure is used in this study. The count of faculty members is limited to professors, associate professors, and assistant professors.

Figure 2.5 shows the faculty member distribution in which WPI has the 136th most faculty members of 144 institutions which reported data to the National Research Council. WPI thus places in the bottom decile with 11 faculty members. Only six schools have less allocated faculty members in physics than WPI does, so WPI sits squarely at the bottom in its number of

[2] *Data-Based Assessment of Research Doctorate Programs in the United States, 2010 [7]*

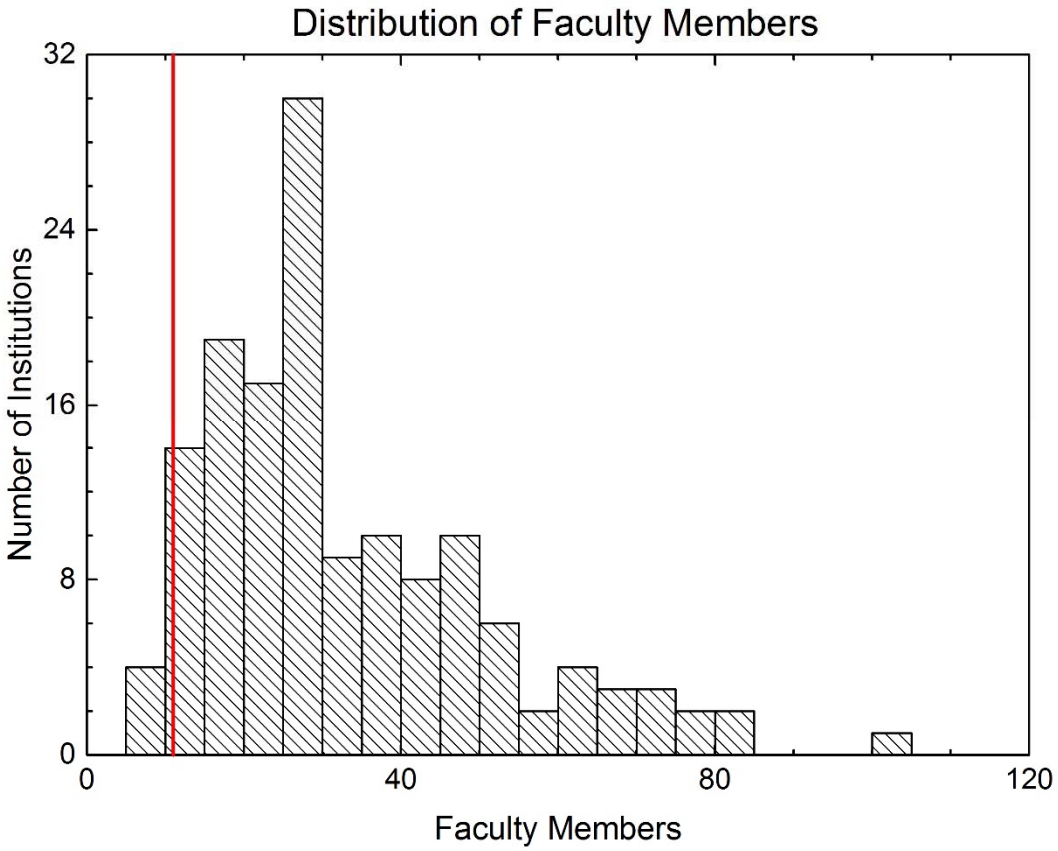

Figure 2.5 Histogram of the number of faculty members across 144 institutions.

faculty members. The mean number of faculty members for these 144 institutions is 32.9 faculty members with a standard deviation of 18.2 faculty members which places WPI easily more than a standard deviation below the mean. Furthermore, the median of this distribution is 27.2 faculty members with a MAD of 9.8 faculty member. This means WPI is more than one and a half median absolute deviations below the median, further showing WPI's small number of physics faculty members. The reader should recall that WPI's value of 11 faculty members is an estimate, but it is an overestimate. The assumption made in this estimate is that each faculty member is completely a physics faculty members with no responsibilities in any other departments. While most physics faculty members at WPI are primarily physics faculty member,

some are involved in other departments as well. The fact that this *overestimate* of WPI's faculty member is well below the rest of the distribution is verified in figure 2.5.

2.3) Graduate Programs

Since all institutions of interest have graduate programs, it is important to consider the size of these programs. Graduate students who are teaching assistants lead some part of the teaching process such as freshman laboratory lessons or problem solving conferences. Graduate students also often have office hours in which they are available to assist undergraduates. Additionally, graduate students generally provide augment the work in faculty members' research programs. For these reasons, it seems relevant to look at distributions concerning the graduate program sizes.

The American Institute of Physics data[3] provides numbers of first year graduate enrollment, total graduate enrollment, number of master's degrees awarded, and number of PhDs awarded for each fiscal year. These numbers are provided each year across fifteen fiscal years from fall 1998 to spring 2013. Additionally, these numbers are provided for 192 schools. For these reasons, the analogous National Research Council numbers[4] for first year enrollment, total enrollment, and PhDs awarded which only provide data for 1 year across 144 institutions will not be used. The National Research Council data does provide the percent of students with teaching assistantships and the percent of students with research assistantships. These percentages were multiplied by the total number of graduate students for the fall 2005 to spring 2006 fiscal year to obtain the number of teaching assistants and research assistants. WPI's number of teaching

[3] *Roster of Physics Departments with Enrollment and Degree Data, 1998-2013 [5]*
[4] *Data-Based Assessment of Research Doctorate Programs in the United States, 2010 [7]*

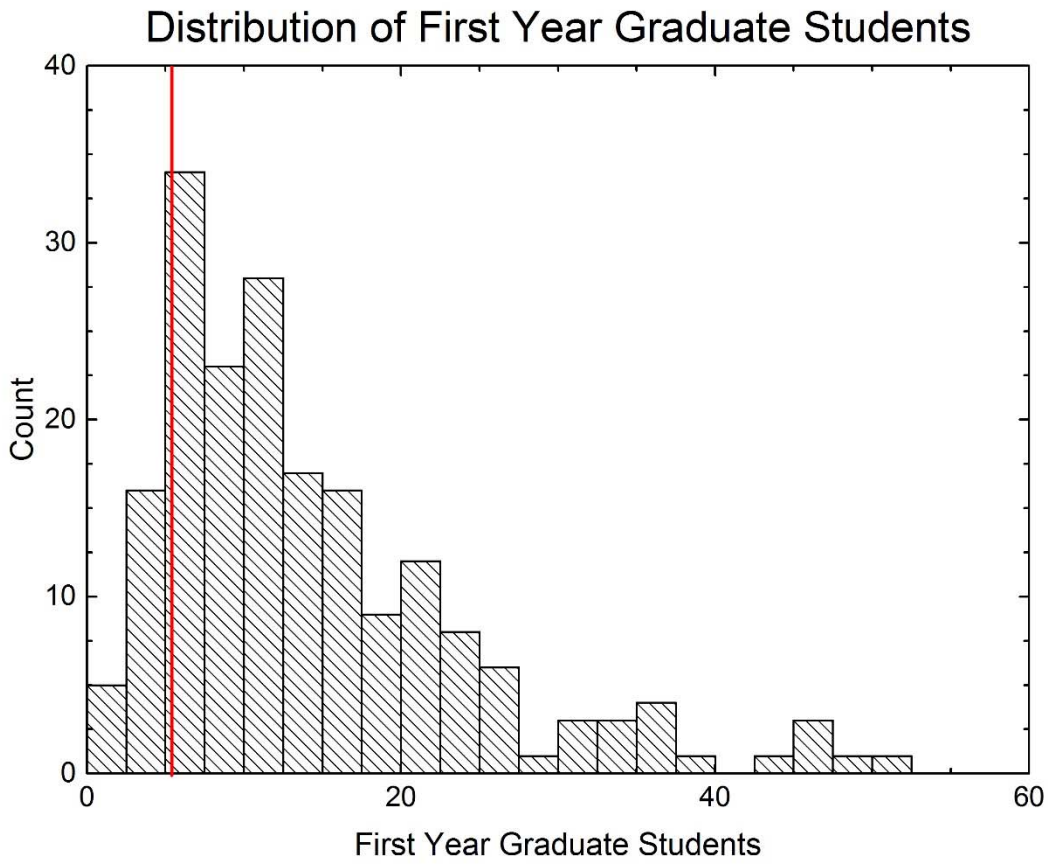

Figure 2.6 Histogram of the number of first year graduate students across 192 institutions.

assistants and research assistants was supplied in the *Department Census Data*[5] and will be compared to the distributions from the National Research Council data.

The distribution of first year graduate students can be seen in figure 2.6. It is clear that WPI is on the low end of this distribution. WPI is in fact 166th of 192 schools in number of first year graduate students, placing WPI in the bottom quartile. The mean number of first year graduate students is 14.3 students with a standard deviation of 10.2. WPI's 5.4 students is nearly one standard deviation below the mean. The distribution is heavily skewed to the right. More

[5] *WPI Physics Department Census, 2014 [6]*

usefully, the distribution has a median of 11.5 students with a MAD of 5.3 students putting WPI easily more than one MAD below the median.

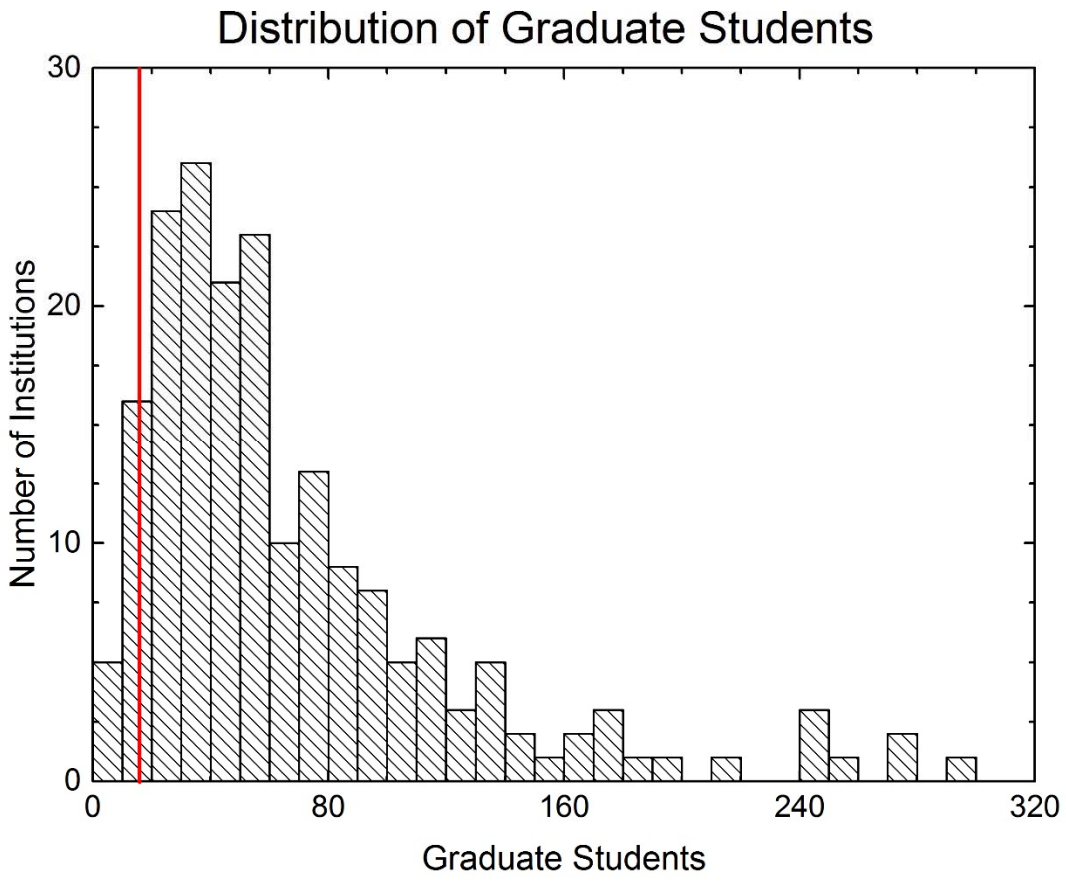

Figure 2.7 Histogram of the total number of graduate students across 192 institutions.

To continue looking at the distribution of graduate students, the most useful data are probably the numbers of total graduate students. This distribution of total graduate students is seen in figure 2.7. This figure makes WPI's low number of graduate students even clearer. WPI has 16 graduate students. The mean over all programs is 68.5 students with a standard deviation of 56.2 such that WPI is almost one standard deviation below the mean. WPI is 169th out of the 192 schools for its number of graduate students and thus is in the bottom quartile. Finally, the

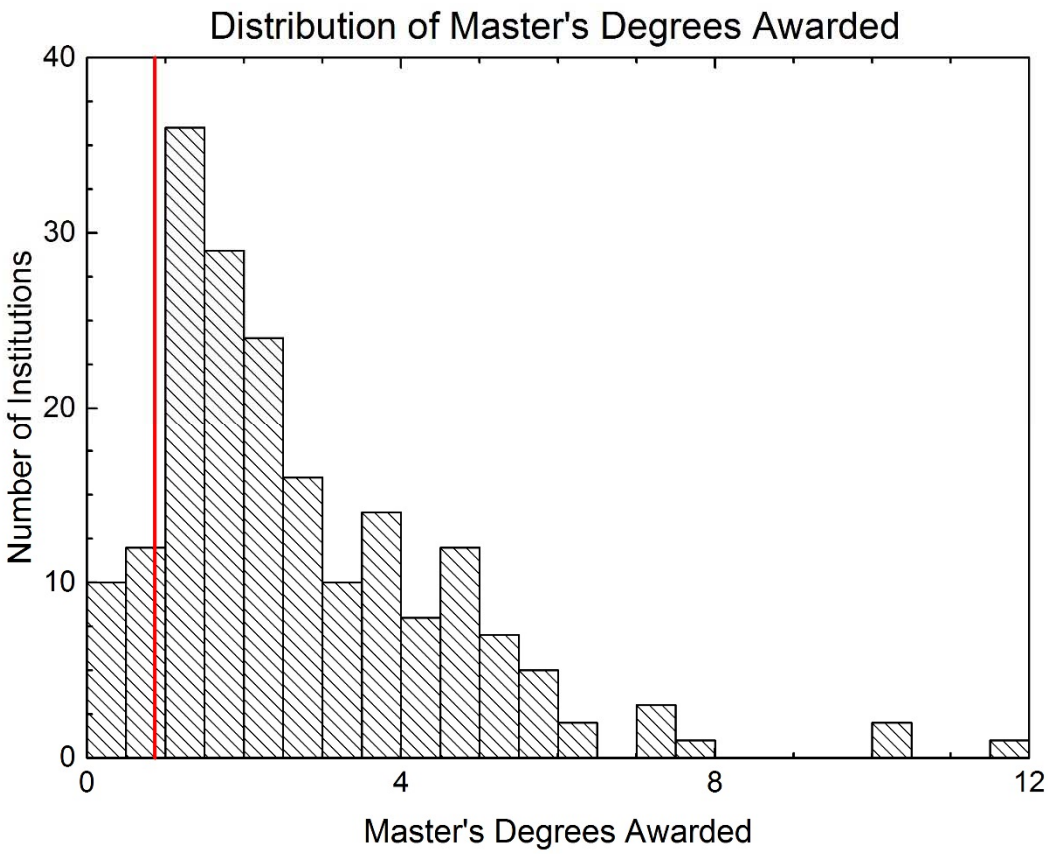

Figure 2.8 Histogram of the number of master's degrees awarded across 192 institutions.

median number of graduate students in this distribution is 52.3 students with a MAD of 25.0 thus placing WPI more than one MAD below the median.

It should come as no surprise that WPI is on the low end of the distributions for master's degrees and PhDs awarded which can be seen in figures 2.8 and 2.9 respectively. It is seen in figure 2.9 that WPI is below the large majority of the data in figure 2.9. WPI lies 177th of the 192 institutions for number of PhDs awarded placing WPI in the bottom decile. The mean PhDs awarded is 7.5 PhDs with a standard deviation of 7.3 PhDs. WPI's value of 1.6 PhDs puts it close to one standard deviation below the mean; but with a standard deviation as large in value as the mean itself, this may not be completely useful. The right skewed distribution makes median

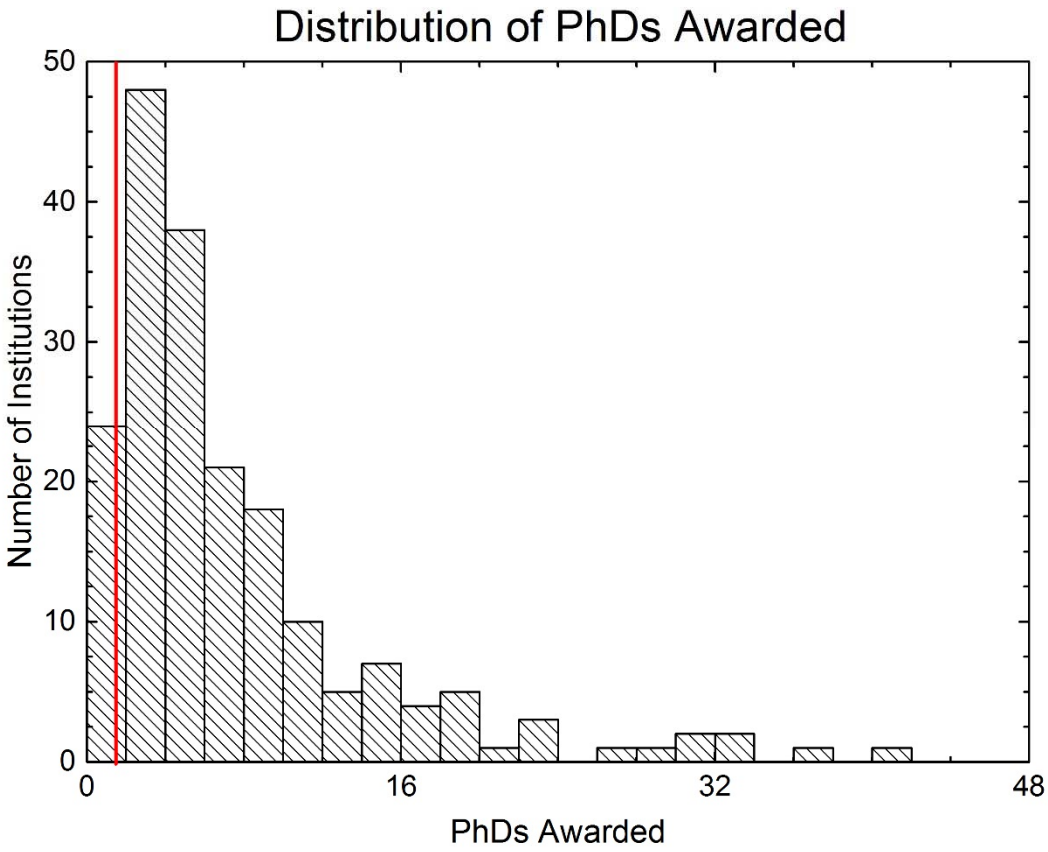

Figure 2.9 Histogram of the number of PhDs awarded across 192 institutions.

and MAD more useful. The median PhDs awarded is 4.9 PhDs with a MAD of 2.7 PhDs putting WPI well under one MAD below the median.

Thus, using the counts of first year graduate students, total graduate students, and PhDs awarded, it is clear that WPI has a graduate program which is much smaller than most PhD granting physics departments. Not all graduate students are equal though.

It is useful to consider teaching assistants and research students instead of just graduate students as a whole. Students who are not doing research or helping with teaching could even be a burden to the department, rather than a way to help it reach its demands.

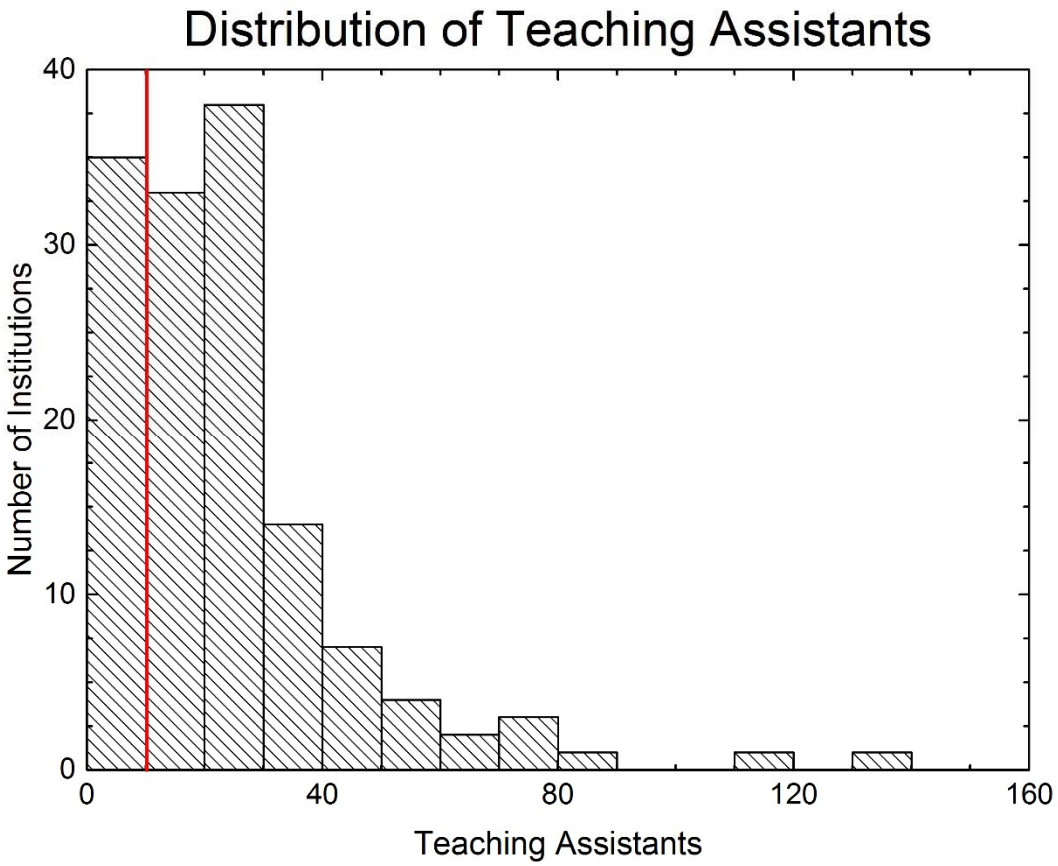

Figure 2.10 Histogram of the number of teaching assistants across 140 institutions.

The distribution of teaching assistants is seen in figure 2.10 with the red WPI line on the low end of the data. Of the 140 schools which reported number of teaching assistants, WPI falls 105th placing WPI in the bottom quartile. The mean number of teaching assistants is 23.5 assistants with a standard deviation of 20.8 assistants. WPI's 10 teaching assistants are therefore about half of a standard deviation below the mean. The median, however, is 20.2 assistants with a MAD of 9.2 assistants making WPI well under one MAD below the median.

Similar to teaching assistants, research assistants are some fraction of graduate students. It is thus logical that WPI is easily on the low end of the data as can be seen in figure 2.11. This

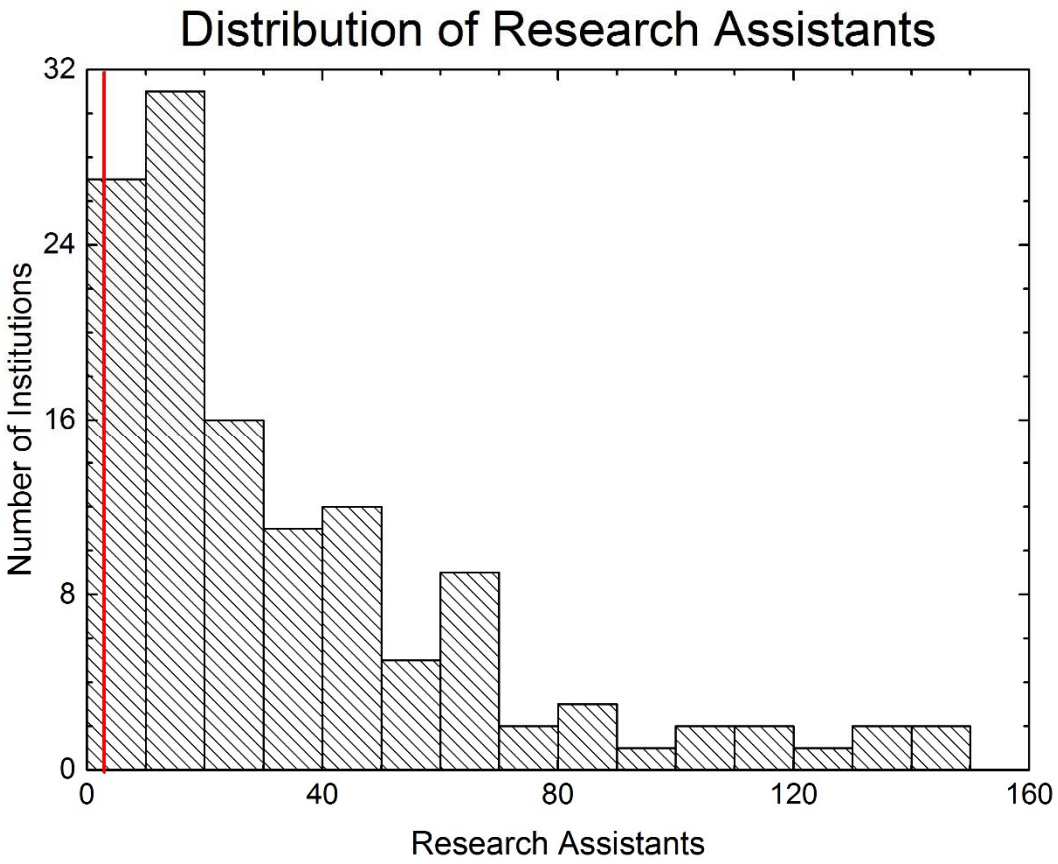

Figure 2.11 Histogram of the number of research assistants across 127 institutions.

value is especially low, and WPI's value of 3 research assistants makes WPI in the bottom decile being 119th in most research assistants of 127 reporting institutions meaning that only eight have less research assistants than WPI. Since mean number of research assistants is 34.9 assistants, WPI has less than a tenth of the mean number of research assistants. The median is 23.0 assistants with a MAD of 14.8 assistants such that WPI is well under one MAD below the median.

It is thus apparent that WPI is quite low on faculty member and graduate student numbers compared to other PhD and bachelor's degree granting institutions. This result is surprising since WPI does not have a low number of physics students for these faculty members and graduate students to teach.

2.4) Research

There are a few measures of how an institution performs research. The National Research Council data[6] provides a few measures. The number of publications per faculty member per year is the one measure of how an institution meets its research demands. For WPI, this number is 1.87 publications per faculty member. WPI has the 120th most publications per faculty member of 144 institutions placing WPI in the bottom quartile. The distribution of publications per faculty member is figure 2.12. We can see that the distribution is not very skewed because the mean number of publications per faculty member is 3.8 publications per faculty member with a standard deviation of 2.1 publications; and the median number of publications per faculty

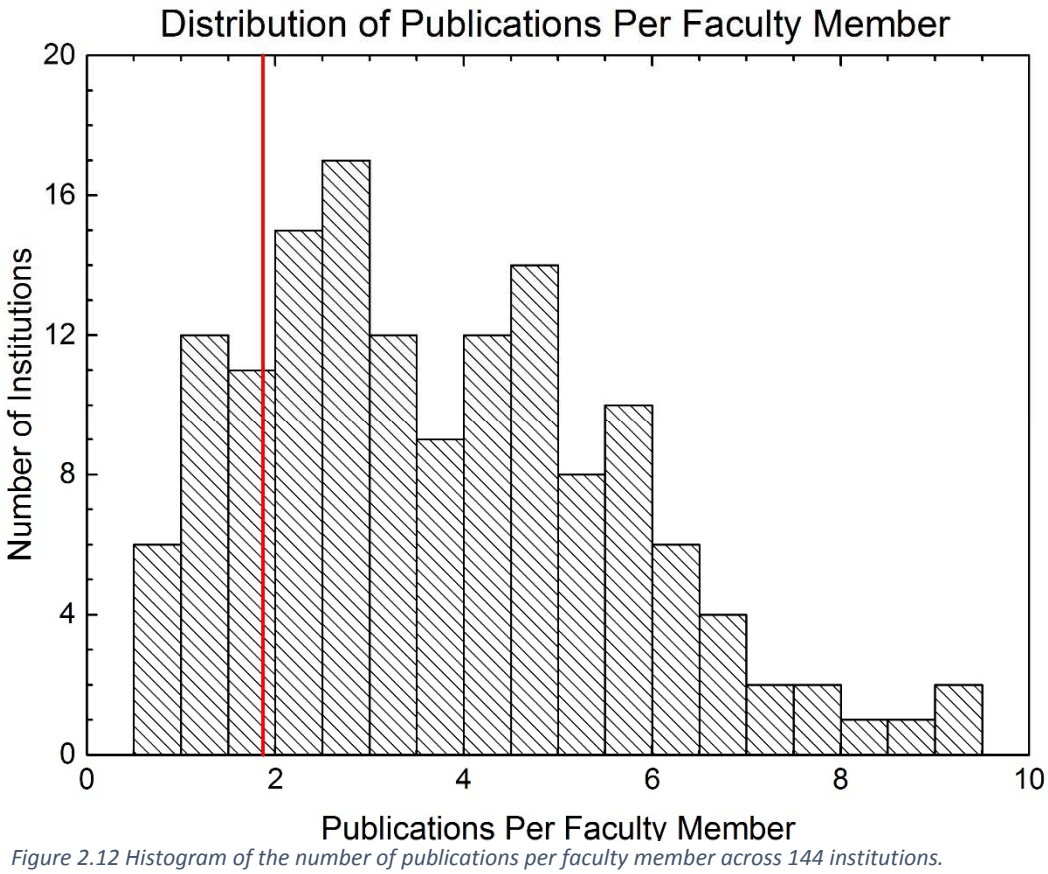

Figure 2.12 Histogram of the number of publications per faculty member across 144 institutions.

[6] *Data-Based Assessment of Research Doctorate Programs in the United States, 2010 [7]*

member is 3.5 publications per faculty member with a MAD of 1.4 publications per faculty member. Thus, using either measure, WPI is about one deviation below average.

2.5) Defined Quantities

Before concluding this section and moving to correlations, distributions of certain quantities of interest should defined and considered. These defined quantities will be measures which are defined by multiple measures from the data. The defined quantities are undergraduate retention, graduate retention, graduate student to faculty ratio, student to faculty member ratio, and teaching assistant load.

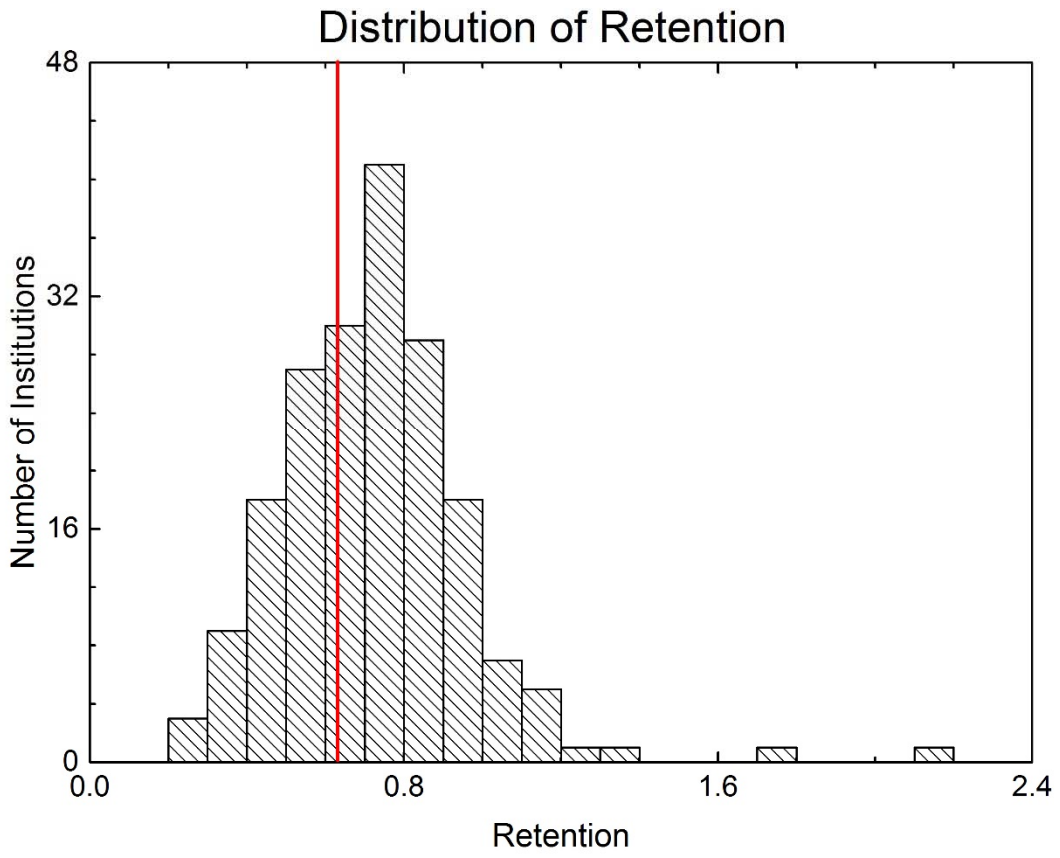

Figure 2.13 Histogram of undergraduate retention (bachelor's degrees awarded per junior physics undergraduate) across 192 institutions.

Undergraduate retention is an attempt to measure how many undergraduate students in a physics program complete that program. Undergraduate retention is here defined as the number of bachelor's degrees awarded divided by the number of junior undergraduates. The distribution is in figure 2.13. The distribution is not skewed, and is centered in the range of 0.7 to 0.8 degrees per junior. WPI's value has the 128th highest retention value of 191 schools, thus placing it in the third quartile. The mean and median are the same at 0.72 degrees per undergraduate. The standard deviation is 0.24 degrees per undergraduate and the MAD is 0.15 degrees per

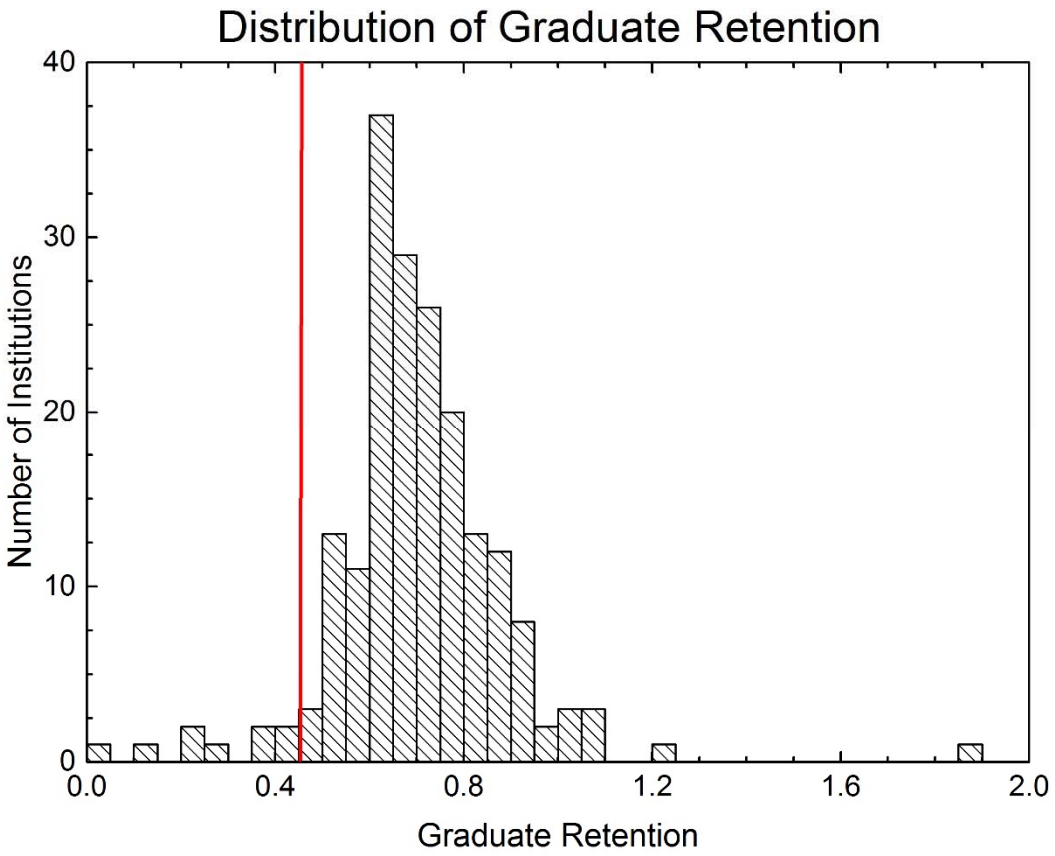

Figure 2.14 Histogram of graduate retention (graduate degrees awarded per first year graduate student) across 192 institutions.

undergraduate, thus making WPI's 0.63 degrees per undergraduate about half a deviation away from the mean and median. WPI's value has the 128th highest retention value of 192 schools, thus placing it in the second quartile.

Graduate retention is similarly an attempt to measure how many graduate students in a physics program complete that program. Graduate retention is defined as the number of master's degrees awarded plus the number of PhDs awarded all divided by the number of first year graduate students. This number thus counts as being retained those students who entered a PhD program and exited the program with a master's degree. Graduate students who fall into the master's degree only category may not seem to have been retained; but because they completed a degree and most likely still spent a considerable amount of time in that graduate program, counting these graduate students should have little effect on the goal of measuring retention. The distribution of graduate retention which can be seen in figure 2.14 is not skewed and is centered on the 0.60 to 0.65 range. WPI is in the bottom decile, being 182nd of 192 institutions for graduate retention. Only nine schools have a smaller graduate retention rate than WPI does. The mean graduate retention across these 191 schools is 0.70 degrees per student with a standard deviation of 0.18 degrees per student making WPI's 0.46 degrees per student well under one standard deviation below the mean. Furthermore, the median graduate retention is 0.69 degrees per student with a MAD of 0.08 degrees per student making WPI's graduate retention almost three MADs below the median.

Graduate student to faculty member ratio is a measure of how many graduate students assist with faculty member research. While it may seem useful to divide research assistants by professors to achieve this number, all graduate students do research without research assistantships. Graduate student to faculty member ratio is defined as total number of graduate students (average over fifteen years of AIP data[7]) divided by the number of faculty members. The distribution of the number of graduate students per faculty member is seen in figure 2.15.

[7] *Roster of Physics Departments with Enrollment and Degree Data, 1998-2013 [5]*

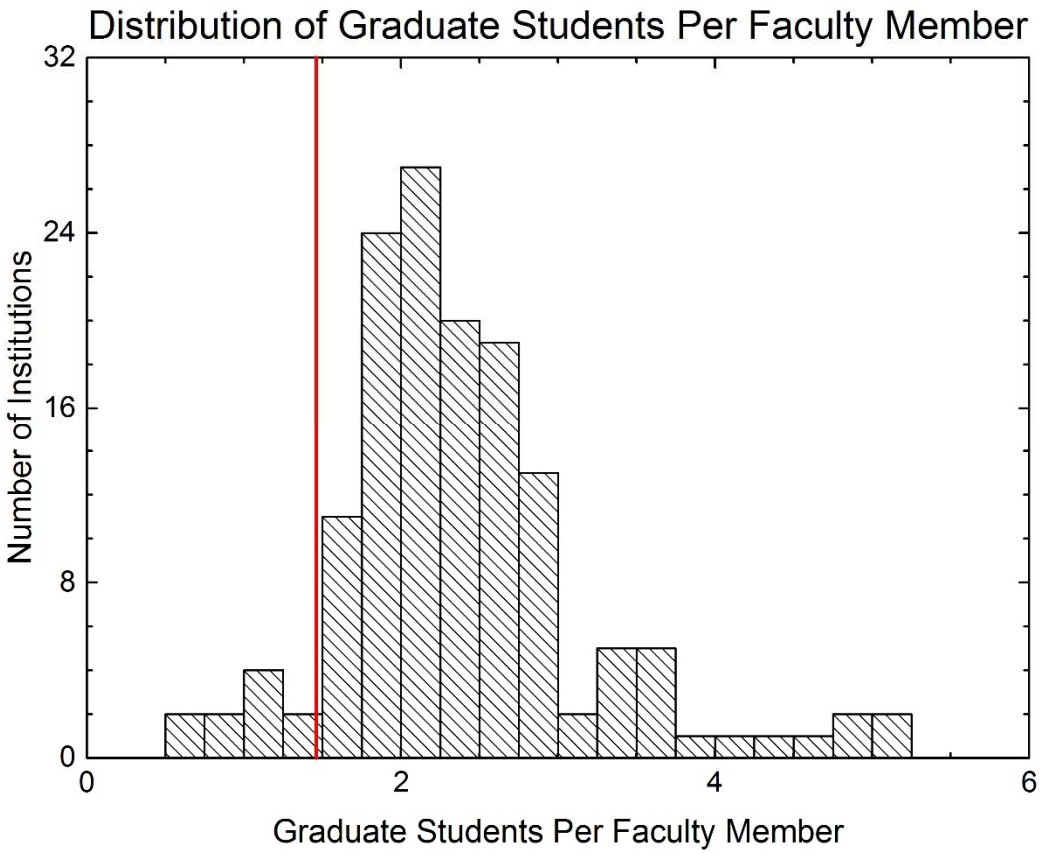

Figure 2.15 Histogram of the number of total graduate students per faculty member across 144 institutions.

The distribution is not skewed and is centered on the range of 2.00 to 2.25 graduate students per faculty member. WPI is in the bottom decile as the 135th of the 144 schools. Only nine schools have a smaller number of graduate students per faculty member than WPI. The mean number of graduate students per faculty member is 2.39 with a standard deviation of 0.80. WPI's 1.46 students per faculty member is therefore below one standard deviation under the mean. The median is 2.25 students per faculty member, with a MAD of 0.39 students per faculty member, thereby placing WPI more than two MADs below the median.

A value often advertised to high school students who are applying to colleges is the student to faculty member ratio. Generally a high student to faculty member ratio is considered

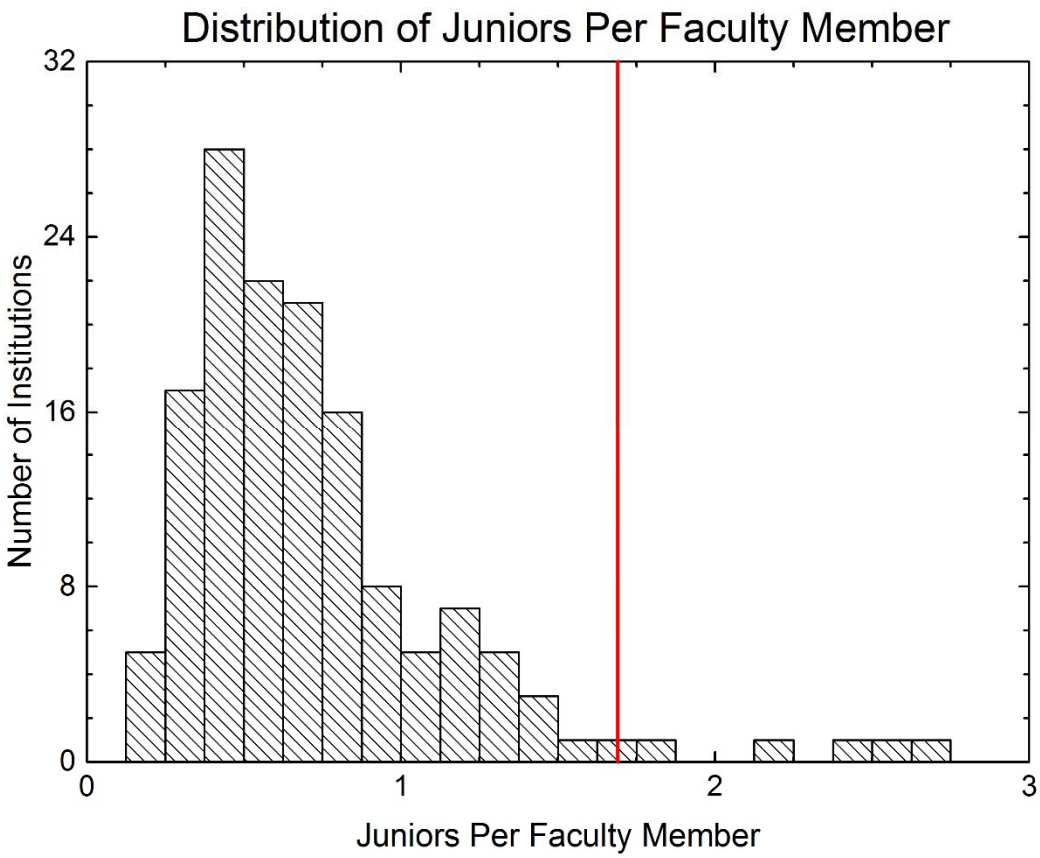

Figure 2.16 Histogram of junior physics undergraduates per faculty member across 144 institutions.

bad while a low ratio is considered good. To measure this, the number of juniors (physics majors) will be divided by the number of faculty members. The number of seniors will not be used because the definition of a junior is a third year student while seniors can be in their fourth, fifth, or any higher year of undergraduate study. Measuring the student to faculty member ratio in this way produces a ratio which is about one fourth the size of the actual ratio of undergraduate physics majors to faculty members. The right skewed distribution of juniors per faculty member is seen in figure 2.16. WPI is in the top decile being 6th of 144 schools for highest student to faculty member ratio. Only five schools have higher number of physics juniors per faculty member. Most of the distribution falls in the 0.25 to 0.75 juniors per faculty member range, and WPI is clearly far to the right of this range. The juniors per faculty member

distribution has a mean of 0.73 juniors per faculty member and a standard deviation of 0.44 juniors per faculty member. This means WPI's junior to faculty member ratio of 1.69 juniors per faculty member is more than two standard deviations above the mean. Furthermore the

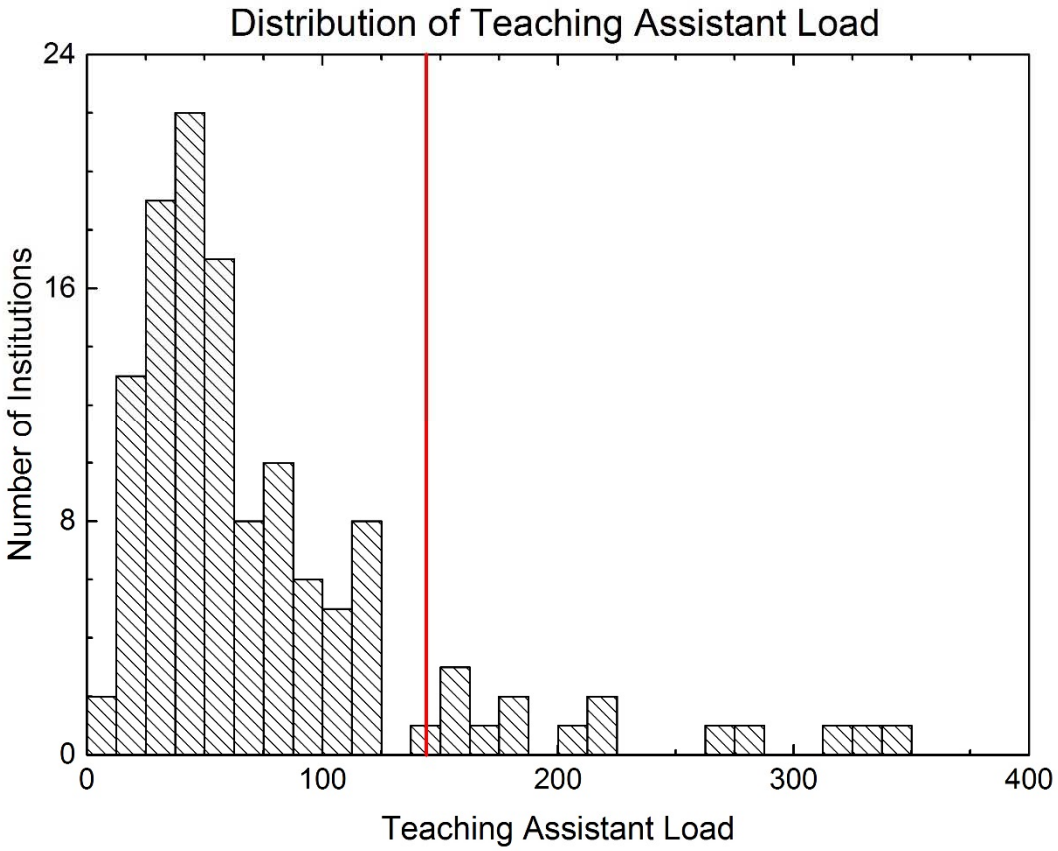

Figure 2.17 Histogram of the number of first term course enrollments per teaching assistant across 127 institutions.

distribution has a median of 0.62 juniors per faculty member with a MAD of 0.19 students per faculty member. WPI's physics juniors to physics faculty member ratio is thus more than five MADs above the median.

Teaching assistants (TAs) are vital to the success of students taking introductory courses. Professors often have too many responsibilities and students to spend much time helping students individually with coursework and labs. The TA is able to fill this role. This success of TAs in helping students depends on how many students they are expected to help. To measure

this load on teaching students, the number of introductory course enrollments is divided by the number of TAs. This measure will be referred to as TA load and is measured in enrollments per assistant. Of 140 schools, 13 reported having zero TAs are omitted for this discussion. WPI is 17th of the 127 schools reporting TAs for highest TA load placing it just within the fourth quartile. The distribution of teaching assistant load is figure 2.17. This figure omits two outlying institutions at 438 enrollments per assistant and 751 enrollments per assistant in addition to the thirteen “infinities” such that the majority of the distribution can be seen easily. The WPI line falls just beyond this majority area in the 0 to 125 enrollments per assistant range. The mean TA load is 84 enrollments per assistant, with a standard deviation of 94 enrollments per assistant. WPI’s 144 enrollments per assistant is therefore just beyond one half of a standard deviation above the mean. Since this distribution has two major outliers, it may be pertinent to rid of the two highest and two lowest values in the distribution. After ridding of those four values, the mean TA load is 77 enrollments per assistant with a standard deviation of 65 enrollments per assistant. This makes WPI over one standard deviation above the mean. The median for all of the schools is 56 enrollments per assistant with a MAD of 24 enrollments per student. WPI is therefore well over three MADs above the median.

Section 3. Scatter Plots

This section aims to look at relationships between variables and how WPI places within these relationships compared to other schools. In order to achieve this, twelve scatter plots were made which compare variables which are either strongly correlated or have an important relationship. Best fit lines for each of these scatter plots are drawn. The best fit lines are fixed at zero when the two are connected in such a way that a value of zero for one of the values would require a value of zero for the other value. These scatter plots are analyzed using one of three placement methods and/or a deviation.

The first of the two placement methods used is the parallel line placement method (PLPM). PLPM is used when the value in the Y axis with respect to the value in the X axis is of interest. The second method is the orthogonal line placement method (OLPM). OLPM is used when both the value in the Y axis and the value in the X axis are of interest together. The third method is zero line placement method (ZLPM). ZLPM is used when the values in both axes are strongly connected such that the best fit line is fixed at zero. To perform PLPM or OLPM, one uses the best fit line. For PLPM, a line parallel to the best fit line is drawn through the point of interest (the WPI point). The number of points above and below the parallel are then counted as a measure of placement for this point of interest. Similarly, for OLPM, a line orthogonal to the line of best fit is drawn through the point of interest; and the number of points above and below the orthogonal line are counted for placement. For ZLPM, a line is simply drawn through zero and the point of interest; and the number of points above and below are counted for placement. OLPM is only used once in this section, and ZLPM is only used twice. Unless otherwise stated, placement of WPI is done with PLPM in this section.

For strongly correlated variables, it is useful to use a root mean square deviation (RMSD). The RMSD shows the amount of deviation one can expect from a best fit line based on the strength of the correlation. An RMSD will therefore show how strongly WPI deviates from the best fit line. Any deviation is also easily seen as WPI is a red star on all of the graphs in which a WPI point is present.

3.1) Strong Correlations

To begin relating variables, a correlation matrix was constructed from all of the National Research Council Data[8] and the fifteen year averages from the American Institute of Physics Data.[9] This correlation matrix gave the correlations of all the data categories. From this matrix, all correlations greater than 0.6 were extracted for the possibility of creating scatter plots. Of these, those which related a variable to a highly similar variable, such as one measure of graduate program size to another, were filtered out. The remaining correlations are listed in table 3.1.

Table 3.1

Correlation	Variable 1	Variable 2
0.84	Faculty Members	PhDs Awarded
0.84	Faculty Members	Total Graduate Students
0.82	Faculty Members	First Year Graduate Students
0.80	Bachelor's Degrees Awarded	PhDs Awarded
0.80	Bachelor's Degrees Awarded	Total Graduate Students
0.78	Bachelor's Degrees Awarded	First Year Graduate Students
0.72	Faculty Members	Bachelor's Degrees Awarded
0.72	Juniors	Total Graduate Students
0.71	Juniors	First Year Graduate Students
0.71	Seniors	First Year Graduate Students
0.71	Seniors	Total Graduate Students
0.65	PhDs Awarded	Awards per Faculty Member
0.63	Total Graduate Students	Awards per Faculty Member

[8] *Data-Based Assessment of Research Doctorate Programs in the United States, 2010 [7]*
[9] *Roster of Physics Departments with Enrollment and Degree Data, 1998-2013 [5]*

The reader will note that many of these correlations really measure the same thing. These can be compiled into the following categories from strongest to weakest correlation: faculty size to graduate program size, graduate program size to undergraduate program size, faculty size to undergraduate program size, and awards per faculty member to graduate program size. This grouping can allow many of these correlations to be ignored as they are highly similar. After putting emphasis on higher correlations, juniors instead of seniors, and similar measures (such as comparing PhDs to bachelor's degrees), table 3.1 is compressed to table 3.2.

Table 3.2

Correlation	Variable 1	Variable 2
0.84	Faculty Members	PhDs Awarded
0.84	Faculty Members	Total Graduate Students
0.80	Bachelor's Degrees Awarded	PhDs Awarded
0.72	Faculty Members	Bachelor's Degrees Awarded
0.72	Juniors	Total Graduate Students
0.63	Total Graduate Students	Awards per Faculty Member

This thus narrows down the correlations from 24 to 8. It is important to notice that the labels variable 1 and variable 2 on tables 3.1 and 3.2 have no meaning or importance. Strong correlations indicate an accurate best fit line.

As measures of graduate program size against faculty size, there are two strong correlations. The first of these is PhDs awarded against number of faculty members. This is plotted in figure 3.1. The best fit line for this data has a slope of 0.287 PhDs per faculty member. WPI places as 86th of 144 institutions for most PhDs awarded against number of faculty members. WPI is therefore in the third quartile and close to the middle of the data. Using the best fit line and the RMSD of 54%, WPI's faculty member value of 11 faculty member predicts 3.157 +/- 1.7 PhDs, WPI's actual value of 1.6 PhDs is within the expected range. It is about half of a deviation on the low end, but one will notice in figure 3.1 that most of the smaller departments

are below the line while the larger ones are above. This indicates that WPI's graduate program size relative to its faculty member size is somewhat small.

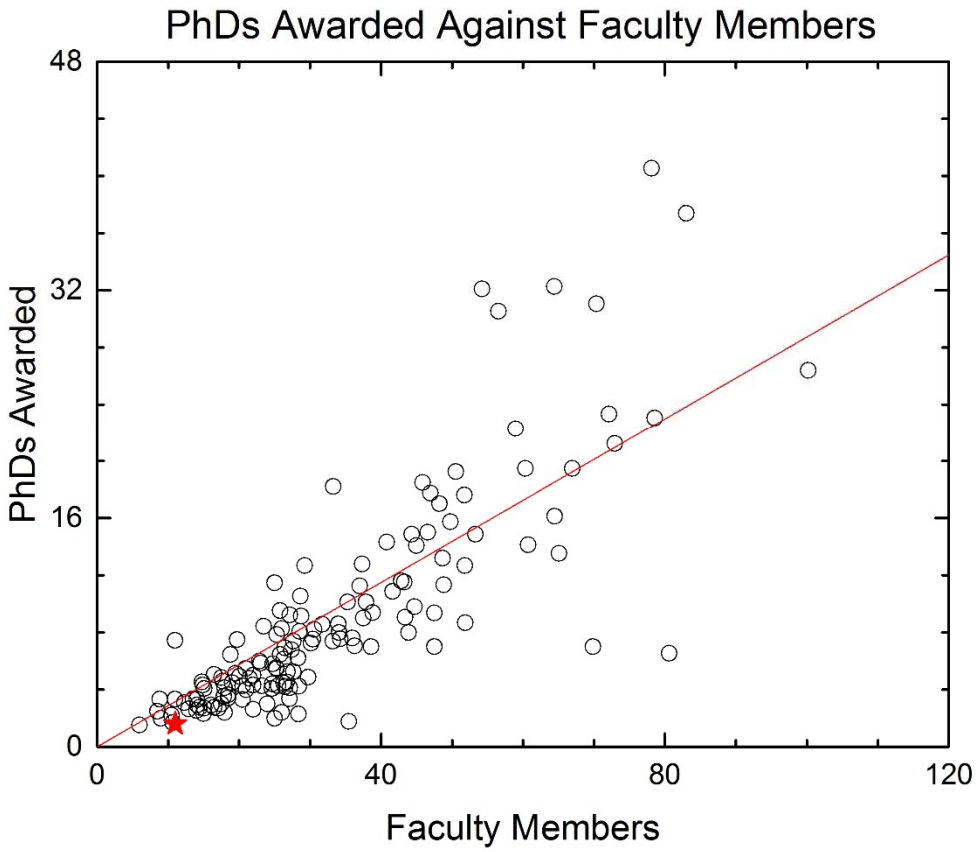

Figure 3.1, X-Axis: Number of Faculty Members, Y-Axis: Number of PhDs Awarded, by institution, intercept of best fit line fixed at (0,0)

To further the comparative sizes of faculties and graduate programs, total number of enrolled graduate students will be compared to number of faculty member. This is plotted in figure 3.2. The best fit line for this data has a slope of 2.46 graduate students per faculty member. WPI is 102nd of 144 schools for most graduate students against faculty members. WPI is therefore in the 3rd quartile although on the lower end of this quartile. With an RMSD of 54%, WPI's 11 faculty members predicts 27.1 +/- 14.6 graduate students. Thus WPI's value of 16 graduate students is on the low end of this range.

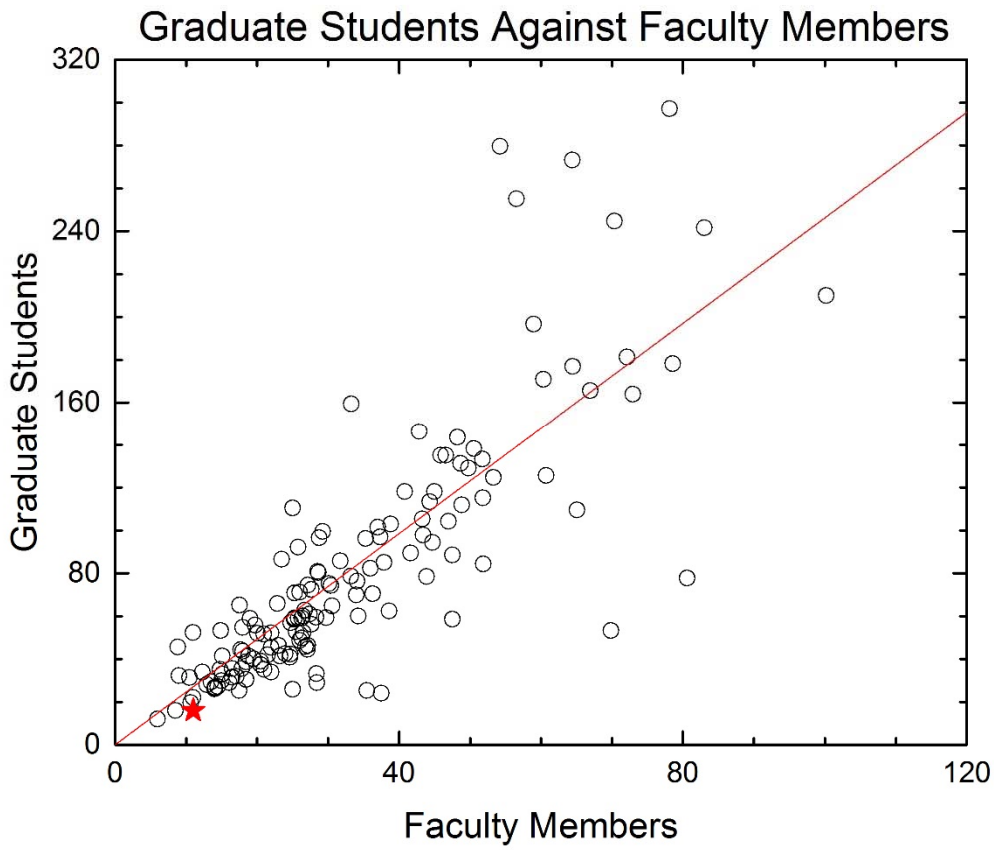

Figure 3.2, X-Axis: Number of Faculty Members, Y-Axis: Total Number of Graduate Students, by institution, intercept of best fit line fixed at (0,0)

Measures comparing undergraduate and graduate program sizes are well correlated. This is useful because undergraduates tend to provide a huge teaching burden on physics departments while graduate students tend to be more helpful with teaching and research. Distributions from earlier in the study indicated that WPI has an average-size undergraduate program, but it has a small graduate program compared to other institutions of interest. One way to compare these sizes is to consider PhDs awarded against bachelor's degrees awarded. This comparison is plotted in figure 3.3. It is rather clear in this figure that the WPI star is reasonably below the best fit line. The best fit line for this data has a slope of 0.44 bachelor's degrees per PhDs which places WPI as 173rd of 191 schools for most number of PhDs awarded against number of bachelor's degrees awarded. With a nonzero intercept for the best fit line of 0.95 bachelor's

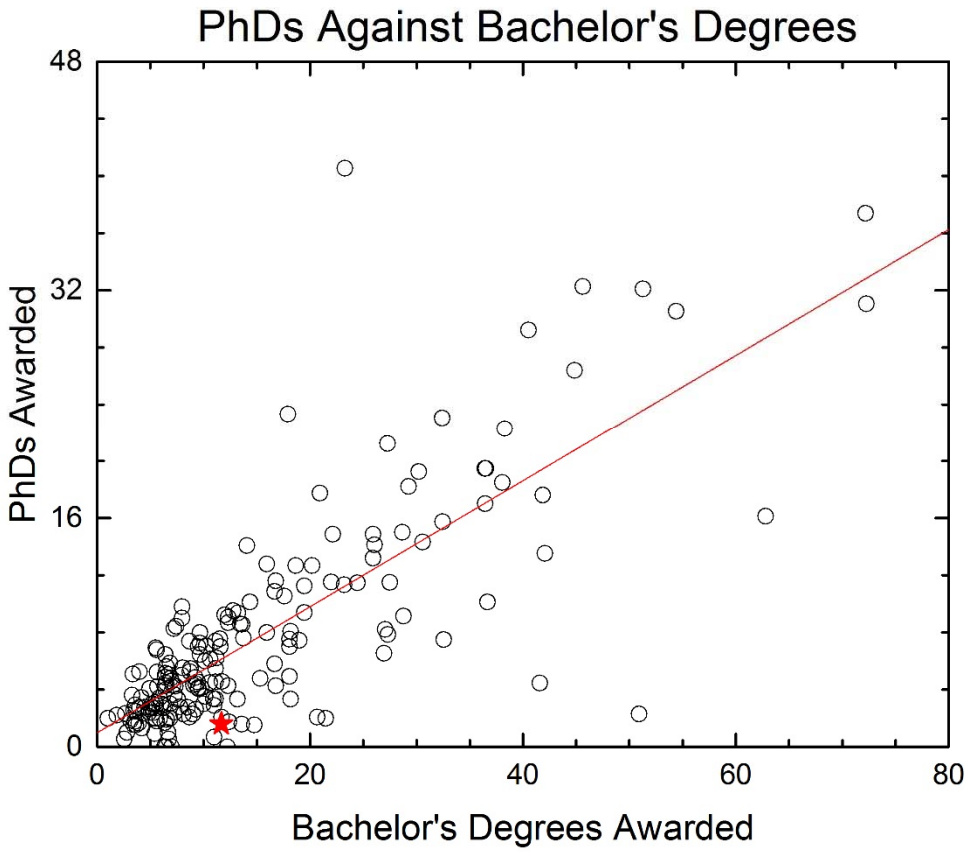

Figure 3.3, X-Axis: Number of Bachelor's Degrees Awarded, Y-Axis: Number of PhDs Awarded, by institution

degrees and an RMSD of 60%, WPI's 11.7 bachelor's degrees awarded predicts a value of 4.91 +/- 2.95 PhDs awarded. It is therefore clear that WPI's value of 1.6 PhDs awarded is easily below this range.

While number of degrees awarded does indicate a program's size, it may be more pertinent to look at the actual number of students in a program. Thus number of graduate students is compared to number of juniors. As mentioned in section 2.6, number of juniors is the most reliable measure for number of undergraduate students across institutions. The plot of number of graduate students against number of juniors can be seen in figure 3.4. The WPI star in the figure appears to be well below the best fit line. This line has a slope of 1.79 graduate students per junior making WPI 188th of 192 schools for the number of graduate students against

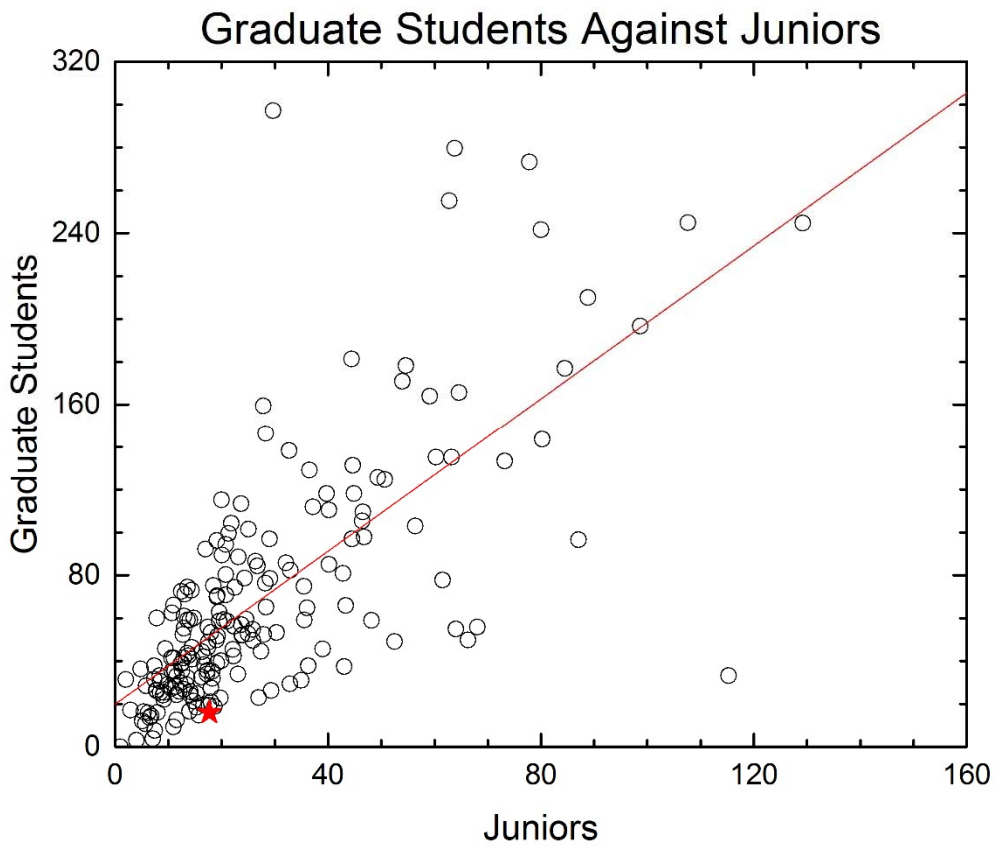

Figure 3.4, X-Axis: Number of Junior Physics Undergraduates, Y-Axis: Number of Total Graduate Students, by institution

the number of juniors. WPI is therefore in the bottom decile concerning the number of graduate students against the number of juniors. With an intercept of 19.8 graduate students, and a RMSD of 69%, WPI's value of 18.6 juniors predicts a value of 53.1+/- 36.6 graduate students. WPI's actual value of 16.0 graduate students is below this range which is further indication that WPI's graduate physics program is quite small compared to its undergraduate physics program.

The burden of the undergraduate program rests on the shoulders of the faculty. It is therefore important to compare number of faculty members to number of undergraduate students. The strong correlation the correlation matrix indicates is between number of faculty members and number of bachelor's degrees awarded. The plot of bachelor's degrees against faculty

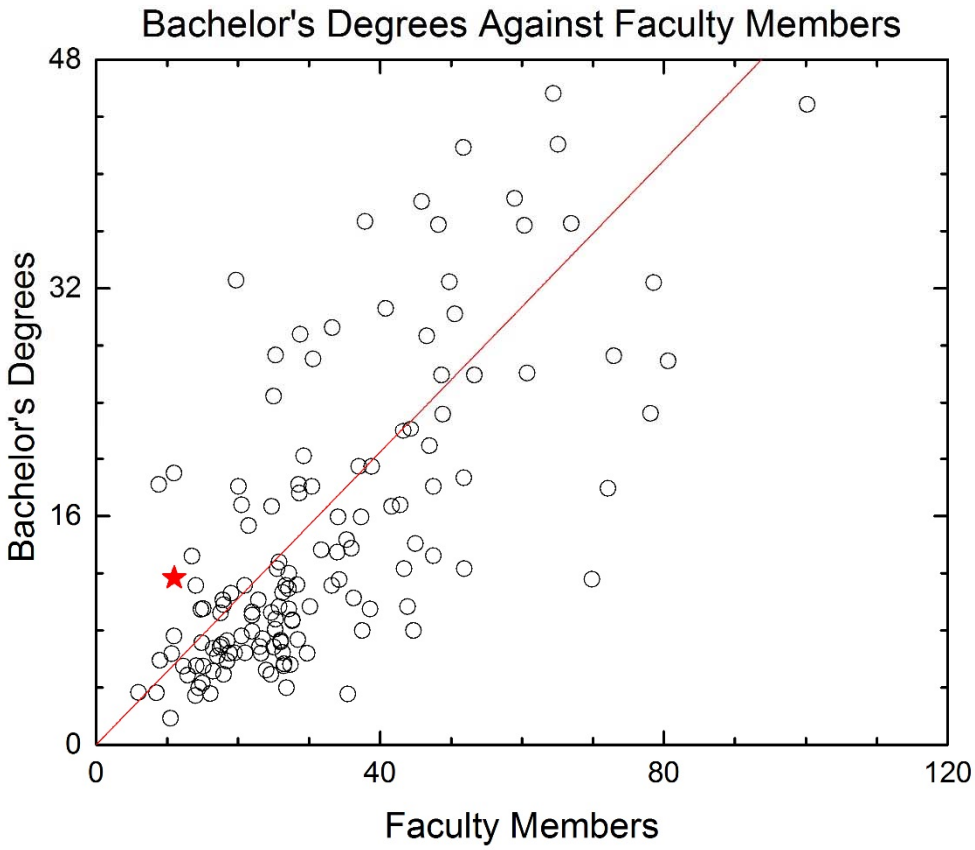

Figure 3.5, X-Axis: Number of Faculty Members, Y-Axis: Number of Bachelor's Degrees Awarded, by institution, intercept of best fit line fixed at (0,0)

members is figure 3.5. The best fit line has a slope of 0.51 bachelor's degrees per faculty member placing WPI as 27th of 144 schools for most bachelor's degrees against number of faculty members. WPI is therefore in the top quartile concerning number of bachelor's degrees against number of faculty. With an RMSD of 69%, WPI's value of 11 faculty members predicts 5.61 +/- 3.87 bachelor's degrees. This places WPI's actual value of 11.67 bachelor's degrees awarded very much out of this range. It is therefore evident that WPI's undergraduate physics program is considerably large compared to the number of WPI physics faculty.

It is also relevant to compare number of juniors to number of faculty members. While this is not one of the strong correlations in the correlation matrix, it is important to consider how WPI

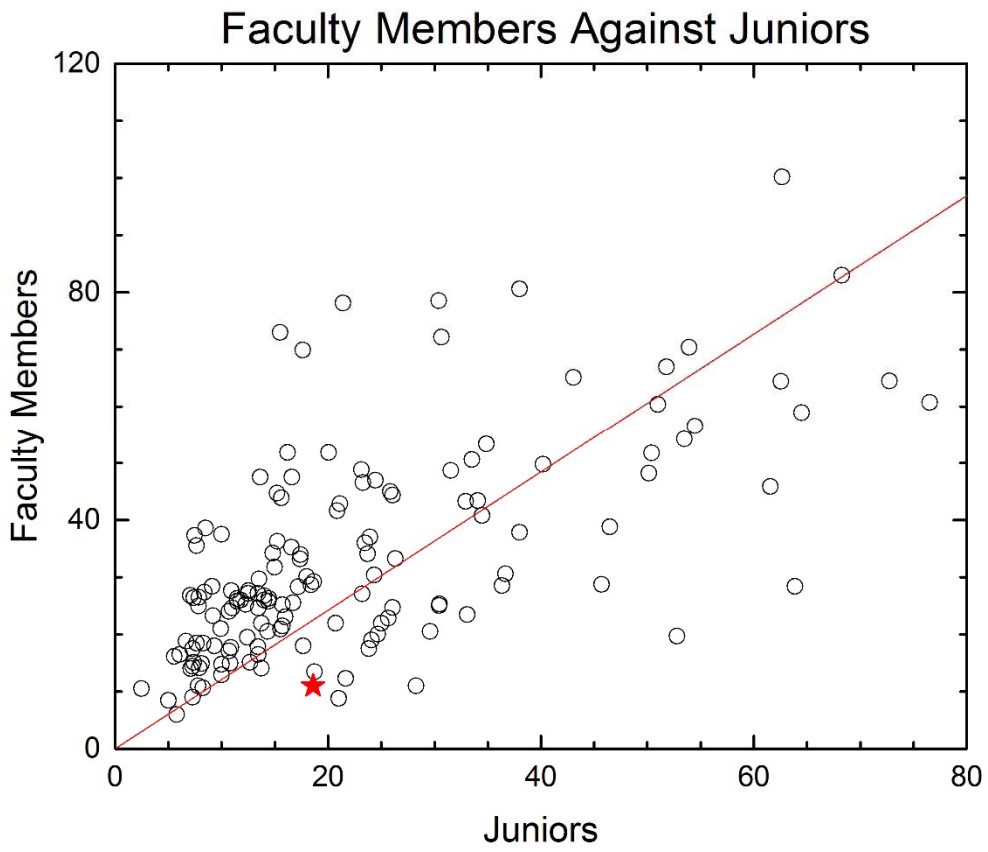

Figure 3.6, X-Axis: Number of Junior Physics Undergraduates, Y-Axis: Number of Faculty Members, by institution, intercept of best fit line fixed at (0,0)

places when comparing number of undergraduates to number of faculty members. The plot of number of the number of faculty members against the number of junior physics undergraduates is figure 3.6. WPI is clearly below the majority of other schools. WPI places 117th of 144 schools for number of faculty members against number of juniors, and is thus in the first quartile. Due to the weak correlation, RMSD is not useful. Figures 3.5 and 3.6 both make it clear that WPI has a small physics faculty size compared to the number of undergraduate students whom these faculty members have to teach.

Awards per faculty member is a measure of the success of an institution's faculty. It is therefore not a surprise that this measure is strongly correlated to number of graduate students.

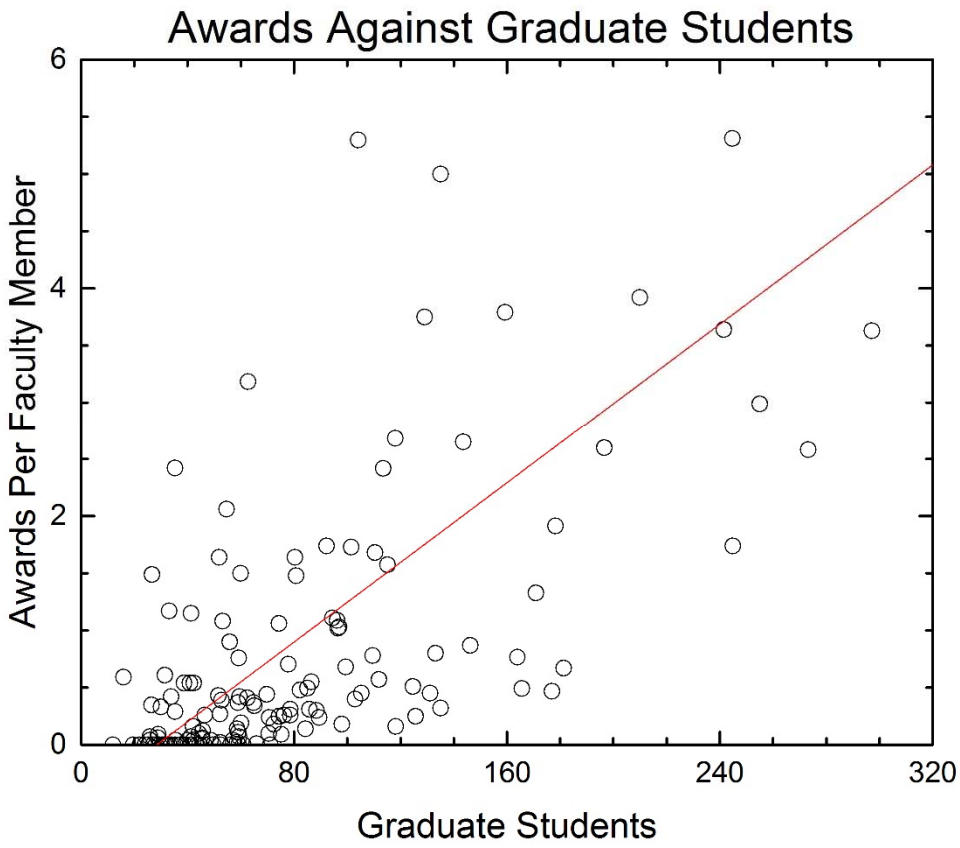

Figure 3.7, X-Axis: Total Number of Graduate Students, Y-Axis: Number of Awards per Faculty Member, by institution

The plot of awards per faculty member against number of graduate students is figure 3.7. There is no WPI value for awards per faculty member. It is therefore just useful to show the importance of graduate students for the success of a physics department. Although awards per faculty member is strongly correlated to total number of graduate students in a department, it seems more valid to compare awards per faculty member to graduate students per faculty member. The plot of awards per faculty member against graduate students per faculty member is figure 3.8. One should note that both plots indicate a positive correlation such that graduate students are related to number of awards per faculty member.

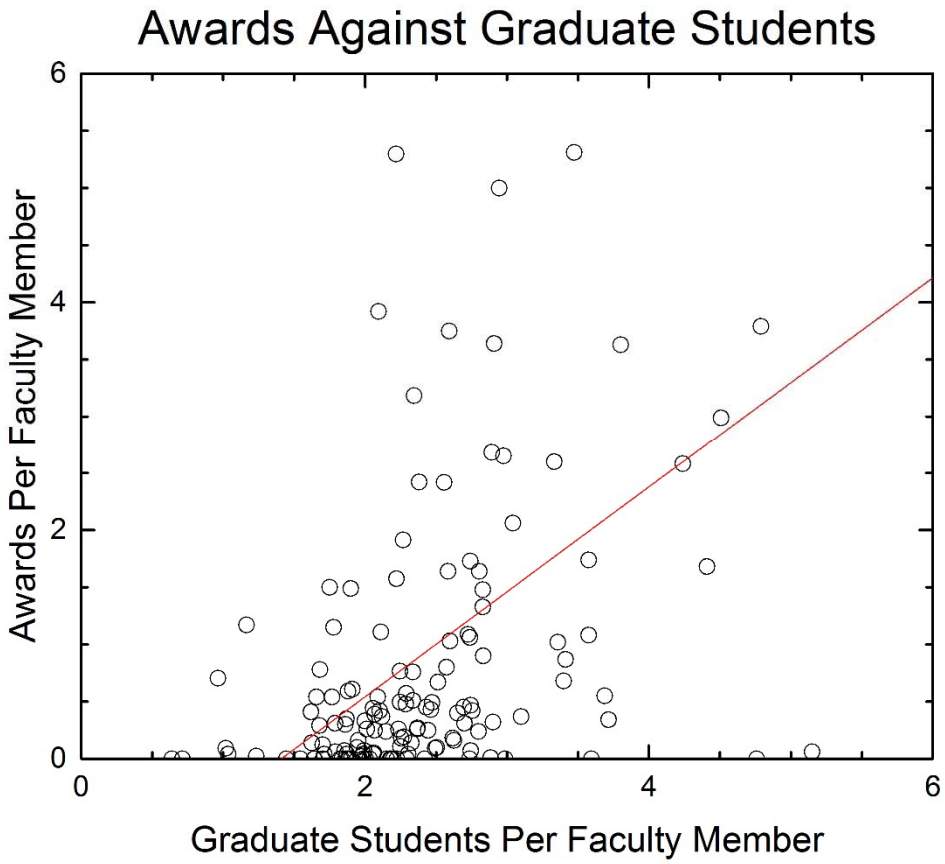

Figure 3.8, X-Axis: Number of Graduate Students per Faculty Member, Y-Axis: Number of Awards per Faculty Member, by institution

3.2) Correlations of Interest

There are a few variables that should be compared despite the lack of a strong correlation between variables which measure different things. The first of these is between two variables which both measure graduate program size. These two variables are graduate degrees awarded and first year graduate students. The plot of number of graduate degrees awarded against number of first year graduate students is figure 3.9. This has a very strong correlation of 0.97. The best fit line has a slope of 0.73 graduate degrees per first year graduate student. WPI is therefore placed as 151st of 192 schools for most graduate degrees awarded against first year graduate students such that WPI is in the bottom quartile. With a RMSD of 25%, WPI's value of 5.4 first year

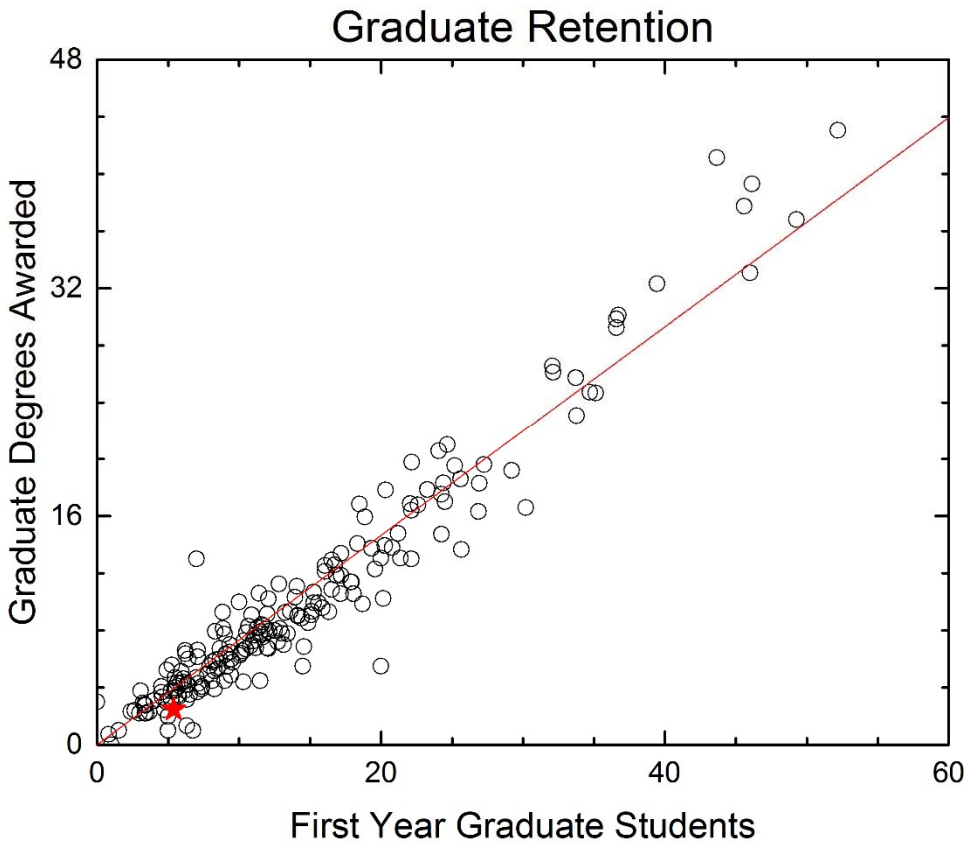

Figure 3.9, X-Axis: Number of First Year Graduate Students, Y-Axis: Number of Graduate Degrees Awarded (Master's Degrees Awarded Plus PhDs Awarded), by institution, intercept of best fit line fixed at (0,0)

graduate students predicts 3.9 +/- 1.0 graduate degrees awarded. In reality, WPI's value is 2.5 graduate degrees awarded. This is well below the expected range of graduate degrees awarded. The reader should note that figure 3.9 is a scatter plot analogous to the figure 2.14 histogram. Both of these have indicated that WPI's graduate retention is quite low.

Another point of interest is the effect of first term course enrollments on those who teach these students. First term course enrollments are therefore compared to number of faculty members and number of teaching assistants. The plot of number of faculty members against number of first term course enrollments is figure 3.10. The WPI star is clearly below the majority of points in this plot. WPI is placed as 124th of 144 schools for faculty members against first term

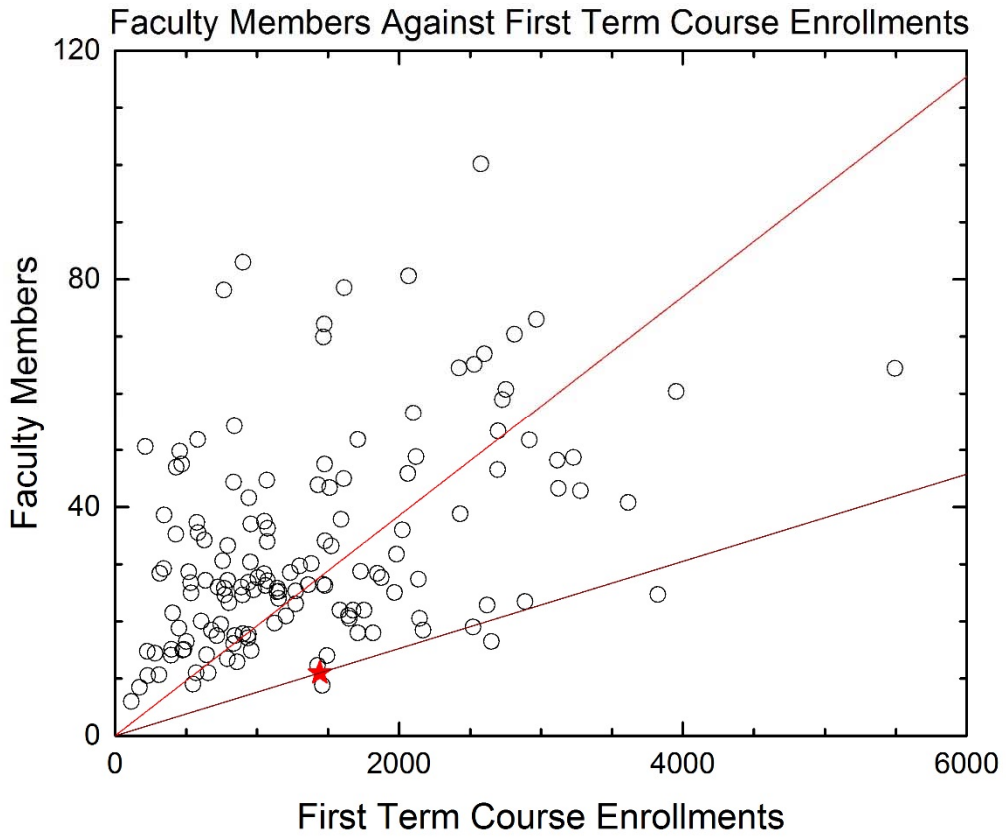

Figure 3.10, X-Axis: Number of First Term Course Enrollments, Y-Axis: Number of Faculty Members, by institution, intercept of best fit line fixed at (0,0)

course enrollments, and WPI is therefore in the bottom quartile. The best fit line in figure 3.10 has a slope of 0.027 faculty members per enrollment. It is thus clear that the WPI faculty have many students to teach in introductory classes compared to other institutions. Faculty members and first term enrollments are interdependent in such a way that the best fit line must run through zero. It is thus relevant in this case to place WPI using ZLPM as well as PLPM. Using ZLPM, WPI places 140th of 144 schools for most first term course enrollments per faculty member. WPI is therefore in the bottom decile. The zero line is plotted on figure 10 to illustrate WPI's placement.

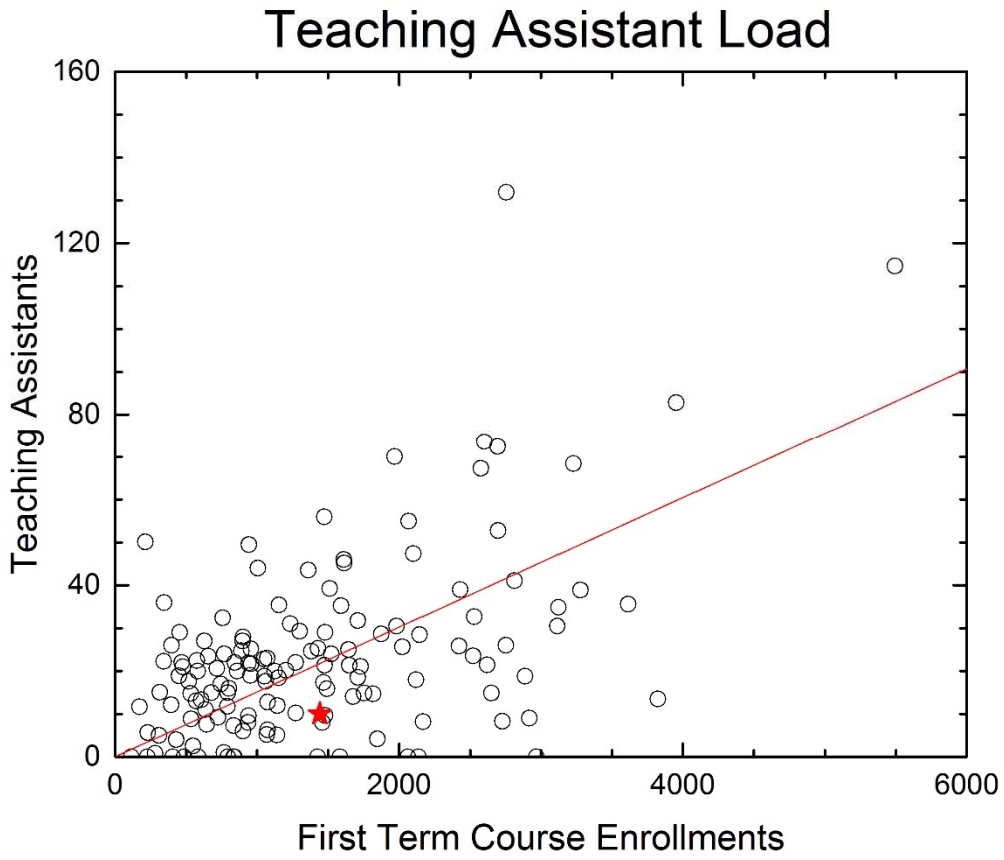

Figure 3.11, X-Axis: Number of Teaching Assistants, Y-Axis: Number of First Term Course Enrollments, by institution, intercept of best fit line fixed at (0,0)

Teaching assistants are important for the teaching of introductory courses, so it is important to compare the number of first term course enrollments to the number of teaching assistants. The plot of first term course enrollments against number of teaching assistants is figure 3.11. This plot is analogous to figure 2.17 as both measure teaching assistant load. The best fit line in figure 3.11 has a slope of 0.023 assistants per enrollment. WPI's value is placed as 30th of 140 institutions that reported number of teaching assistants for most first term course enrollments against number of teaching assistants, thus placing WPI in the top quartile. This indicates that WPI teaching assistants have many more students to teach than other institutions. The sole purpose of teaching assistants is to teach the students who make up first term course enrollments. It is therefore relevant to use ZLPM to place WPI. The thirteen schools with zero

teaching assistants will not be counted in ZLPM. WPI places 17th of 127 schools which reported a nonzero number of teaching assistants such that WPI is in the top quartile for first term course enrollments per teaching assistant.

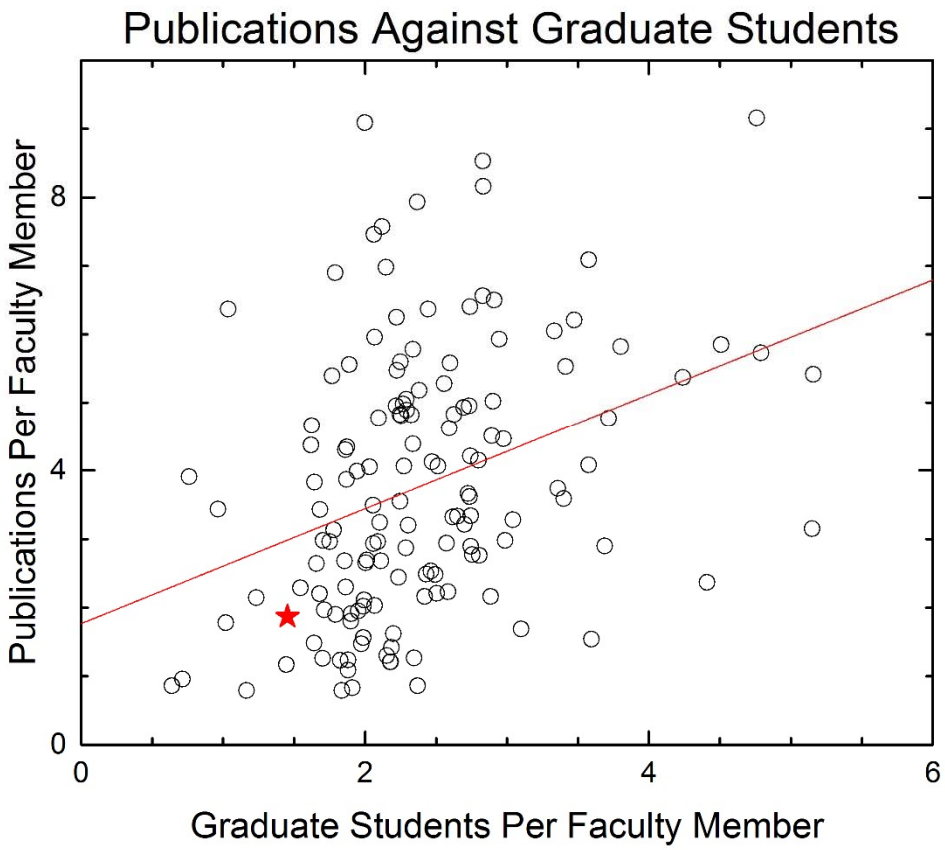

Figure 3.12, X-Axis: Number of Total Graduate Students per Faculty Member, Y Axis: Number of Publications per Faculty Member, by institution

The final plot of interest compares number of graduate students per faculty member to number of publications per faculty member. As graduate students are important participants in faculty research, it is useful to quantify this effect with publications. The plot of publications per faculty member against graduate students per faculty member is figure 3.12. While the WPI star is below the best fit line, it is more useful to consider how far down the best fit line the point is. This is because, as shown in figures 2.12 and 2.15, WPI's physics department has small values for both publications per faculty member and graduate students per faculty member. To measure

how far down the best fit line WPI is, the OLPM is used. The best fit line has a slope of 0.84 such that WPI places 132nd of 144 schools for most publications and graduate students, so WPI is in the bottom decile. It is thus clear that WPI is lacking compared to other schools concerning number of publications and number of graduate students.

Section 4. Summary

This section summarizes the key points of sections 2 and 3 of this project. The results below contain all of the results of this study which are used to make recommendations in the following section (section 5). The readers should recall that comparisons are made with institutions that have both PhD and bachelor's degree programs.

- Worcester Polytechnic Institute (WPI) has a large number of students who take introductory physics.
- WPI is close to middle of the distributions for the numbers of junior physics undergraduates, senior undergraduates, and bachelor's degrees awarded.
- WPI has a small number of faculty members and is in the bottom decile of the faculty member distribution.
- WPI has an extraordinarily small number of faculty and of teaching assistants compared to the number of enrollments in the first freshman course. WPI places in the bottom quartiles of both ratios.
- WPI's undergraduate retention is normal and falls near the middle of the distribution
- WPI has a small graduate program and is near the bottom of the distributions for first year graduate students, total graduate students, master's degrees awarded, PhDs awarded, research assistants, and teaching assistants.
- WPI's number of graduate students per faculty member is low and is in the bottom decile of the distribution.
- WPI's graduate retention is small and is in the bottom decile of the distribution.
- WPI's undergraduate physics student to physics faculty member ratio is high as WPI is in the top decile of the ratio of junior physics majors to faculty members distribution.

- Physics teaching assistants have a large work load at WPI because WPI is in the highest quartile for the ratio of first term course enrollments to teaching assistants distribution.
- WPI's graduate physics program is small compared to WPI's number of physics faculty members.
- WPI's graduate physics program is extremely small compared to its undergraduate program size and places in the bottom decile in the placement of the number of graduate physics students against the number undergraduate physics juniors. WPI also places in the bottom decile in the placement of the number of PhDs awarded against the number of bachelor's degrees awarded.
- WPI's undergraduate physics program is quite large compared to WPI's number of physics faculty members as it places in the top quartile in the placement of the number of bachelor's degrees awarded against the number of faculty members and in the bottom quartile in the placement of the number of faculty members against the number of undergraduate physics juniors.
- Graduate program size has positive correlations with measures of a physics department's success such as number of publications per faculty member and number of awards per faculty member.
- WPI has a low number of publications per faculty member.
- WPI falls in the bottom decile in the placement comparing with other schools the number of publications per faculty member and the number of graduate students per faculty member.

Section 5. Conclusions and Recommendations

As faculty members provide most of the expertise and education, it is a negative point to note that Worcester Polytechnic Institute seems to lack the faculty members to complete the responsibilities in the physics department. Figures 3.5 and 3.6 show that WPI's undergraduate program is quite large for the number of faculty members in the department. Additionally, figure 3.10 shows that the number first term course enrollments are much larger than would be expected for the WPI physics faculty size. Finally, figure 2.12 shows that WPI's number of publications per faculty are well below similar schools.

I thus first recommend that WPI increase its number of physics tenure and tenure-track faculty members. Based on WPI's number of freshman course enrollments, comparison with other PhD-granting institutions indicates that WPI should have 37 to 41 physics faculty members.

Using the number of bachelor's physics degrees awarded and the number junior physics undergraduates, comparison with the other PhD-granting institutions indicates that the number of tenure and tenure-track physics faculty members should be increased to 25. In order to ensure that these faculty enhance WPI's physics program, it would be best to bring in faculty who do research and bring a diverse set of expertise to the program.

WPI's graduate program size is a weak point. The distributions of first year graduate students, total graduate students, master's degrees awarded, PhDs awarded, teaching assistants, and research assistants place WPI in the bottom quartile for each and every of these values. For master's degrees and PhDs awarded, WPI falls in the bottom decile. This has an effect on

graduate retention for which WPI has the 10th lowest value across 192 institutions. It is therefore clear that WPI's graduate physics program is one which few enter and much fewer complete.

A small graduate program would not be a problem if the responsibilities of this program were not so vast. WPI's teaching assistant load is one of the highest in the nation as shown in figures 2.17 and 3.11. Additionally, the number of graduate students is correlated with the number of publications per faculty member and the number of awards per faculty member. Figure 2.15 shows that WPI has one of the smallest values for graduate students per faculty member. This means that WPI faculty members have few graduate students to assist with research. Furthermore, very few of these graduate students have research assistantships as only 8 of 127 PhD granting schools have fewer research assistants than WPI.

The second recommendation I make is therefore to address exceedingly low numbers of graduate students. WPI should figure out how to bring more graduate students to WPI's physics department. Of course, this means bringing in talented students, as graduate retention indicates that WPI has brought in many graduate students who were not able to complete a degree. WPI should use the physics GRE as a way to ensure that students entering graduate programs are talented and will be able to complete the program. Bringing in more faculty members who do a diverse set of research will be one way to attract more talented physics graduate students. Increasing the number of teaching assistantships and research assistantships will attract more talented physics graduate students as well.

WPI should aim to have a value close to the national mean for number of graduate students per faculty member. The national mean as mentioned in section 2.5 is 2.4 graduate students per faculty member. Based on my recommended number of faculty members, I recommend that WPI make its goal to raise the physics graduate program size to 60 graduate

students. Even with the current faculty size, there should be close to 30 graduate students pursuing the PhD. I plugged WPI's first term course enrollments into the equation for the best fit line of figure 3.11 to achieve an expected number of teaching assistants. I therefore recommend that WPI raise its number of teaching assistantships in physics to 30. Finally, I recommend that WPI raise its number of research assistantships to 23.

Works Cited

[1] "About ABET." *ABET*. Accreditation Board of Engineering and Technology, 2011. Web. 27 Feb. 2015. <http://www.abet.org/about-abet/>.

[2] "College Search - Worcester Polytechnic Institute - WPI." *BigFuture College Search*. College Board, n.d. Web. 28 Feb. 2015. <https://bigfuture.collegeboard.org/college-university-search/worcester-polytechnic-institute>.

[3] Cryer, Keryl, and M. D. Aldridge. "What Is ABET and What Does It Have to Do with Physics?" *APS Physics*. American Physical Society, Summer 2009. Web. 28 Feb. 2015. <http://www.aps.org/units/fed/newsletters/summer2009/cryer.cfm>.

[4] Iannacchione, Germano. *Physics Department Annual Report*. Rep. Worcester: n.p., 2007. Web. 16 Jan. 2015.

[5] Nicholson, Starr, and Patrick J. Mulvey. *Roster of Physics Departments with Enrollment and Degree Data*. Tech. no. 15. College Park: American Institute of Physics, 2013. 1998-2013. *American Institute of Physics Statistics*. Web. 15 Dec. 2014. <http://www.aip.org/statistics/reports>.

[6] *Physics Department Census Data*. Rep. Worcester: Worcester Polytechnic Instiute, 2014. Web. 18 Feb. 2015.

[7] United States. National Academies. National Academies Press. *A Data-Based Assessment of Research Doctorate Programs in the United States*. Ed. Jeremiah P. Ostriker, Charlotte V. Kuh, and James A. Voytuk. N.p.: National Research Council, 2010. Web. 15 Jan. 2015. <http://www.nap.edu/rdp/>.

[8] "Web of Science." *Web of Knowledge*. Thomson Reuters, n.d. Web. 19 Feb. 2015. <http://webofknowledge.com/wos>.

Appendix A: American Institute of Physics Data

The following abbreviations are used in the tables of data below:

1999 (etc.) Roster Data	Data from the 1999 (etc.) *Roster of Physics Departments* published by the American Institute of Physics
1ST	First Year Graduate Students
AL	Alabama
AR	Arkansas
BACH	Number of Bachelor's Degrees Awarded
Balt	Baltimore
CA	California
Cal	California
Cnty	County
Coll	College
FOR	Foreign Graduate Students
IL	Illinois
IN	Indiana
Indpls	Indianapolis
Inst	Institute
JR	Junior Undergraduate Physics Majors
LA	Louisiana
MA	Massachusetts
MAST	Number of Master's Degrees Awarded
Minnpls	Minneapolis
MO	Missouri
Mpls	Minneapolis
NC	North Carolina
NJIT	New Jersey Institute of Technology
NM	New Mexico
PHD	Number of PhDs Awarded
Phys	First Term Physics Course Enrollments
Polytech	Polytechnic
St	State
SUNY	State University of New York
SR	Senior Undergraduate Physics Majors
Tech	Technology or Technological
TOT	Total Graduate Students
TN	Tennessee
U	University
WI	Wisconsin

1999 Roster Data

	Enrollments	Majors		Graduate Students			Degrees Awarded		
INSTITUTION	PHYS	JR	SR	TOT	FOR	1ST	BACH	MAST	PHD
AL-U of Birmingham	355	1	6	24	5	6	1	1	4
AL-U of Huntsville	217	6	8	61	18	37	8	6	10
AL-U of Tuscaloosa	474	5	3	33	19	10	4	5	4
Alabama A&M U	690	7	14	39	10	4	2	6	3
Alaska-U of	205	5	3	33	15	5	2	2	6
American U	160	6	5	15	10	3	1	1	2
AR-U of Fayetteville	820	11	18	38	18	10	12	3	2
Arizona State U	1152	23	31	75	26	8	6	2	4
Arizona-U of	1152	38	69	70	24	18	19	5	7
Auburn U	1865	3	8	25	9	4	5	0	2
Boston Coll	407	6	6	27	20	6	5	6	1
Boston U	977	18	27	70	52	17	22	8	11
Brandeis U	264	5	5	31	22	14	6	5	5
Brigham Young U	1153	54	76	28	12	4	44	0	1
Brown U	348	14	19	82	64	16	6	16	12
Bryn Mawr Coll	170	11	10	3	1	1	4	0	2
CA-U of Berkeley	2190	41	100	235	62	39	40	21	34
CA-U of Davis	1890	25	32	89	14	19	21	12	7
CA-U of Irvine	905	13	42	49	12	14	25	8	6
CA-U of Los Angeles	2941	31	54	105	30	23	22	17	22
CA-U of Riverside	751	13	9	40	18	9	7	3	2
CA-U of San Diego	2605	42	68	112	34	20	22	13	29
CA-U of Santa Barbara	1777	43	27	116	20	16	13	3	12
CA-U of Santa Cruz	721	40	28	43	9	13	15	12	8
Cal Inst of Tech	220	41	36	126	57	30	17	7	11
Carnegie Mellon U	728	25	27	51	29	13	20	9	8
Case Western Reserve U	572	12	12	35	25	12	7	7	6
Catholic U	235	2	3	31	6	5	1	3	1
Central Florida-U of	1150	13	14	42	18	8	6	13	8
Chicago-U of	497	25	16	102	43	23	16	7	12
Cincinnati-U of	874	6	10	56	45	10	7	7	6
Clark U	87	3	4	16	9	3	3	0	2
Clarkson U	1278	8	11	9	2	0	6	3	2
Clemson U	938	7	12	41	13	8	6	6	1
Colorado School of Mines	783	18	40	22	5	4	18	3	5
Colorado St U	1882	10	16	39	16	9	11	6	4
Colorado-U of Boulder	3699	44	56	144	34	36	22	15	21
Columbia U	391	19	23	144	92	31	21	60	17
Connecticut-U of	975	5	6	60	39	13	2	6	5
Cornell U	1568	16	19	226	92	47	18	32	35

Dartmouth Coll	325	17	13	31	9	7	17	2	3
Delaware-U of	788	12	13	45	31	9	1	1	5
Duke U	1232	18	12	57	24	13	7	6	10
Emory U	367	14	9	5	4	0	5	0	3
Florida Inst of Tech	254	5	6	11	2	5	8	0	2
Florida St U	563	16	23	85	35	27	5	9	16
Florida-U of	2086	29	24	87	46	26	6	2	9
George Washington U		4	4	24	16	4	4	0	2
Georgia Inst of Tech	1674		32	71	32	13	21	5	7
Georgia St U	756	11	17	21	14	3	4	9	2
Georgia-U of	1165	7	12	33	16	6	6	1	6
Hampton U	268	7	7	34	7	7	3	2	6
Harvard U (w/ Radcliffe)	1416	40	99	162	67	17	46	15	18
Hawaii-U of at Manoa	835	6	17	25	14	5	5	7	1
Houston-U of	1873	18	15	52	47	11	4	2	5
Howard U	306	5	2	20	5	3	3	4	1
IL-U of Chicago	604	14	14	53	37	15	5	7	5
IL-U of Urbana/Champaign	6520	43	42	216	78	48	26	26	31
Illinois Inst of Tech	217	3	1	25	19	3	7	1	5
IN U/Purdue U-Indpls	603	3	5	6	4	1	1	0	1
Indiana U-Bloomington	2141	6	20	80	40	17	8	9	5
Iowa St U	1184	15	21	74	47	17	6	7	7
Iowa-U of	293	16	16	50	29	14	7	5	11
Johns Hopkins U	617	6	5	82	41	18	8	9	11
Kansas St U	1955	8	10	49	39	12	3	1	6
Kansas-U of	1362	11	21	37	20	8	10	4	9
Kent St U	3335	9	9	53	37	11	4	2	3
Kentucky-U of	1312	17	14	55	35	13	12	5	2
LA St U-Baton Rouge	630	29	43	72	42	33	11	10	10
Lehigh U	345	7	6	35	22	9	4	1	3
MA-U of Amherst	576	19	20	58	46	17	11	4	8
MA-U of Lowell	518	7	9	56	31	8	5	4	5
Maine-U of	598	9	14	26	11	3	2	1	4
Maryland-U of Balt Cnty	886	22	5	25	9	5	10	1	1
Maryland-U of Coll Park	119	33	54	177	87	39	21	14	27
Mass Inst of Tech (MIT)	842	54	56	251	121	59	41	3	49
Michigan St U	2071	34	16	108	61	22	9	16	11
Michigan Technological U	1136	13	15	24	16	8	6	0	2
Michigan-U of Ann Arbor	1811	30	25	109	52	25	17	2	20
Minnesota-U of Mpls	2339	7	16	114	44	31	12	8	10
Mississippi-U of	262	10	9	24	1	10	9	8	1
MO-U of Columbia	435	8	14	31	17	7	7	3	4
MO-U of Rolla	995	8	17	33	18	6	11	3	1
MO-U of Kansas City	257	2	2	15	8	3	5	7	3

Montana St U	730	12	21	47	15	14	8	7	4
NC-U of Chapel Hill	753	10	19	60	17	13	5	8	8
Nebraska-U of Lincoln	1065	7	14	46	25	11	5	4	6
Nevada-U of Reno	628	3	9	30	22	6	6	2	5
New Hampshire-U of	490	7	7	31	14	7	6	5	2
New Mexico St U	756	5	10	43	31	14	3	1	11
New Mexico-U of	707	54	23	92	32	22	3	8	8
New York U (NYU)	523	10	11	57	50	16	4	0	9
North Carolina St U	3134	26	47	88	17	15	8	11	3
North Dakota-U of	398	4	4	9	3	3	2	2	2
North Texas - U of	1123	9	20	40	23	6	4	5	7
Northeastern U	754	6	3	35	33	14	3	12	8
Northwestern U	669	12	12	59	43	14	6	8	8
Notre Dame-U of	815	16	12	77	41	17	8	3	13
Ohio St U	7397	25	52	173	98	51	26	17	13
Ohio U	835	11	7	52	41	16	3	9	8
Oklahoma St U	723	6	4	42	22	2	3	7	5
Oklahoma-U of	1689	10	26	34	14	12	10	3	3
Old Dominion U	408	9	5	35	26	10	2	2	5
Oregon St U	1343	26	23	44	17	8	10	13	5
Oregon-U of	533	12	28	62	25	13	14	10	15
Pennsylvania St U	1325	27	29	100	55	35	22	4	20
Pennsylvania-U of	787	14	22	79	54	19	10	10	19
Pittsburgh-U of	1250	11	5	77	47	14	5	8	3
Portland St U	465	11	19	18	6	5	21	7	1
Princeton U	590	10	17	90	50	13	18		21
Purdue U-West Lafayette	3920	22	22	97	62	20	15	15	8
Rensselaer Polytech Inst	247	11	17	50	30	10	21	7	11
Rice U	410	10	14	48	23	9	17	1	5
Rochester-U of	551	13	8	106	60	32	9	11	9
Rutgers U-Busch Campus	2331	45	48	86	64	18	24	12	12
Rutgers/NJIT	813	3	3	37	25	9	2	1	1
South Carolina-U of	961	8	5	25	17	5	2	4	3
Southern Cal-U of (USC)	891	10	13	54	45	11	6	3	2
Southern Methodist U	170	6	2	10	9	0	4	2	1
Stanford U	409	10	29	241	99	56	13	12	24
Stevens Inst of Tech	310	3	4	21	12	8	4	5	5
Sthrn IL U-Carbondale	809	7	6	10	10	1	2	4	1
SUNY-Albany	443	15	22	79	48	15	16	5	11
SUNY-Buffalo	1201	7	14	65	55	18	10	7	11
SUNY-Stony Brook	715	14	39	171	109	29	20	25	18
Syracuse U	1122	5	6	47	30	11	2	0	4
Texas A&M, College Station	3465	18	21	116	87	29	12	8	9
Texas Christian U	109	6	5	17	10	4	4	2	3

Texas Tech U	1377	9	15	28	14	7	5	3	1
Texas-U of Arlington	1371	1	2	25	20	12	3	3	1
Texas-U of Austin	1233	30	36	232	112	37	28	19	31
Texas-U of Dallas	588	13	7	51	15	12	7	12	5
TN-U of Knoxville	724	3	5	74	42	14	2	2	5
Toledo-U of	1286	5	6	35	14	9	6	4	2
Tufts U	386	1	7	33	22	5	2	4	4
Tulane U	471	4	12	22	14	5	8	0	2
Utah St U	379	9	13	35	11	7	14	3	3
Utah-U of	1645	29	44	94	51	21	26	8	10
Vanderbilt U	288	6	7	58	26	9	9	6	2
Virginia Tech	2402	28	38	31	19	7	12	10	6
Virginia-U of	1688	28	29	59	27	12	32	2	10
Wake Forest U	470	11	7	17	9	8	11	2	5
Washington St U	1398	9	10	41	17	10	7	3	3
Washington U	578	20	19	64	26	15	8	10	6
Washington-U of	2426	49	28	151	41	43	42	17	22
Wayne St U	700	5	7	41	25	9	1	5	2
West Virginia U	1082	5	6	39	23	8	3	5	3
Western Michigan U	1011	5	9	23	20	7	2	1	2
WI-U of Madison	3675	3	24	118	38	21	15	13	23
WI-U of Milwaukee				28	16	12	2	3	7
William & Mary-Coll of	522	16	24	47	22	16	13	6	11
Worcester Polytech Inst	645	15	14	13	8	8	6	0	1
Wyoming-U of	720	6	4	10	1	0	5	0	3
Yale U	867	12	10	108	68	23	14	18	13

2000 Roster Data

	Enrollments		Majors		Students			Degrees Awarded		
INSTITUTION	PHYS	SCI & ASTRO	JR	SR	TOT	FOR	1ST	BACH	MAST	PHD
AL-U of, Birmingham	928	696	4	4	22	9	7	4	2	4
AL-U of, Huntsville	538	157	5	4	71	26	12	5	5	8
AL-U of, Tuscaloosa	585	851	3	8	33	19	9	2	0	3
Alabama A&M U	527	1185	9	12	35	9	2	6	3	2
Alaska-U of	227	69	9	11	31	15	4	4	0	3
AR-U of, Fayetteville	1151	400	15	20	37	21	7	13	3	3
Arizona State U	2751	1024	19	23	76	30	8	12	0	13
Arizona-U of	2539	48	38	68	77	28	22	22	2	10
Auburn U	1520	146	7	3	18	7	1	5	0	2
Boston Coll	451		8	6	23	18	4	6	3	1
Boston U	937	15	27	12	82	61	22	18	2	8
Brandeis U	287	213	7	2	27	21	5	5	1	6
Brigham Young U	1125	2479	43	88	24	8	5	47	9	2
Brown U	303	178	13	15	96	68	18	21	0	8
CA-U of, Berkeley	2275		48	110	226	65	42	63	0	28
CA-U of, Davis	2141	269	45	35	169	45	41	18	9	20
CA-U of, Irvine	1123	385	14	32	58	15	14	17	1	5
CA-U of, Los Angeles	3917		36	44	107	36	26	35	6	15
CA-U of, Riverside	1118	453	26	17	45	26	15	6	1	7
CA-U of, San Diego	2743	564	47	68	106	36	20	27	2	22
CA-U of, Santa Cruz	809		25	20	48	7	14	14	2	4
Cal Inst of Tech	238	78	40	41	137	56	31	35	1	10
Carnegie Mellon U	642	122	29	29	65	41	21	21	0	4
Case Western Reserve U	594		23	15	40	31	15	8	0	4
Catholic U	192	28	3	2	27	7	4	3	0	2
Central Florida-U of	3646	169	4	19	34	16	4	6	4	8
Chicago-U of	382		27	21	116	60	26	15	1	12
Cincinnati-U of	901	240	12	15	57	48	13	2	3	6
Clark U	82	163	1	2	15	10	3	3	1	1
Clemson U	688	444	4	11	43	18	14	5	5	7
Colorado School of Mines	736		27	26	24	6	7	27	0	3
Colorado State U	1862	577	8	15	52	17	16	7	0	3
Colorado-U of, Boulder	3790		40	54	136	35	24	24	1	22
Columbia U	319	123	18	18	149	92	27	23	8	19
Connecticut-U of	1966	254	8	10	51	37	11	6	2	8
Cornell U	2017		38	44	226	102	44	33	6	29
Dartmouth Coll	632	117	20	17	30	10	8	12	2	4
Delaware-U of	1355	801	12	12	45	29	13	5	1	4
Denver-U of	110	75	3	2	8	1	1	2	1	1
Duke U	1132	169	17	16	65	32	18	10	0	8

Emory U	391	365	9	8	5	4	2	9	0	2
Florida Atlantic U	550	1150	19	11	29	12	5	8	2	2
Florida State U	1158	839	15	20	93	49	25	15	5	11
Florida-U of			36	27	98		28	13	3	8
George Washington U	1000	840	5	5	25	20	5	4	0	2
Georgia Inst of Tech	2323	60	21	26	78	41	28	16	5	5
Georgia State U	764		8	10	19	17	4	2	4	3
Georgia-U of	930	800	19	13	36	19	9	3	0	7
Hampton U	277	549	2	10	34	10	3	4	1	5
Harvard U (w/ Radcliffe)	1123		60	91	185	80	37	59	3	25
Hawaii-U of, at Manoa	364	76	5	10	22	14	1	7	1	3
Houston-U of	1966	1011	7	13	66	55	24	8	4	2
Howard U				3	12	4	5	2	0	7
IL-U of, Chicago	1063	364	7	17	59	41	13	9	2	3
IL-U of, Urbana/Champaign	2768		45	42	246	87	48	24	2	32
IN U/Purdue U-Indpls	897	698	2	7	10	5	6	6	2	1
Indiana U-Bloomington	1206		10	16	72	39	12	6	1	8
Iowa State U	1754		9	24	71	48	11	13	6	2
Iowa-U of	409	38	12	20	49	32	14	9	1	7
Johns Hopkins U	560	65	15	6	82	39	20	5	4	7
Kansas State U	2588	292	7	10	50	37	10	6	1	7
Kansas-U of	1472		10	22	36	20	9	5	4	7
Kent State U	3590	1417	8	11	50	35	8	4	2	5
Kentucky-U of	712	490	10	18	55	40	13	7	3	6
Lehigh U	385	60	5	9	36	21	6	2	2	6
Louisiana St U-Baton Rouge	899	484	14	27	67	44	17	11	5	8
MA-U of, Amherst	594		13	24	56	40	26	13	5	7
MA-U of, Lowell	689	892	8	11	48	31	4	2	2	8
Maine-U of	540	269	18	15	25	8	6	8	0	5
Maryland-U of, Baltimore Cnty	828	336	13	11	25	10	7	4	3	2
Maryland-U of, College Park	3940		42	50	171	86	32	19	5	20
Mass Inst of Tech (MIT)	616		36	68	236	114	48	35	9	39
Miami-U of	676	415	5	5	24	19	4	7	2	2
Michigan State U	2071		34	19	122	68	28	11	5	12
Michigan Technological U	1239	96	12	15	26	21	9	10	1	4
Michigan-U of, Ann Arbor	925	77	12	40	108	58	25	17	4	17
Minnesota-U of, Mpls	2442		16	33	129	64	33	16	6	15
Mississippi State U	943	492	5	4	10	4	0	7	3	1
Mississippi-U of	308	479	8	11	19	2	5	8	3	2
MO-U of, Columbia	535	84	7	15	31	16	5	6	1	6
MO-U of, Kansas City	402	85	3	2	19	10	8	2	1	2
MO-U of, Rolla	333	35	11	17	24	15	5	7	2	8
MO-U of, St. Louis	193	208	7	12	17	7	9	6	1	1
Montana State U	1232	816	17	25	53	15	15	9	4	2

NC-U of, Chapel Hill	638	408	14	12	61	24	13	11	4	6
Nebraska-U of, Lincoln	1402	1518	7	11	49	26	9	11	1	3
Nevada-U of, Las Vegas	400	925	6	8	14	3	2	4	0	2
Nevada-U of, Reno	308	69	15	20	28	19	3	5	2	2
New Hampshire-U of	504	473	12	6	34	17	7	3	2	3
New Mexico St U	775		1	11	42	29	12	2	1	4
New Mexico-U of	1856	2160	53	36	60	20	12	18	4	9
New York U (NYU)	493	144	8	6	51	43	5	10	0	4
NJIT/Rutgers	819	92	4	10	32	25	7	3	0	4
NM Inst of Mining & Tech	189		19	25	21	7	3	11	0	2
North Carolina St U	3007	366	29	40	78	21	14	15	2	10
North Dakota St U	750	239	2	7	8	4	1	1	0	1
North Dakota-U of	363	81	6	5	9	6	1	3	1	1
North Texas-U of	838	1469	8	9	30	23	8	5	6	7
Northwestern U	561	441	8	7	60	48	14	8	4	8
Notre Dame-U of	887	122	10	15	71	44	12	11	4	10
Ohio State U	2452		27	56	171	100	32	26		19
Ohio U	882	1117	36	8	60	45	18	3	5	6
Oklahoma State U	364	150	1	5	49	33	15	3	3	4
Oklahoma-U of	1623		13	22	40	16	2	11	2	9
Old Dominion U	665	364	13	6	33	24	4	5	3	5
Oregon State U	1500	830	26	24	38	16	6	12	4	8
Oregon-U of	458	587	21	26	76	32	31	15	10	8
Pennsylvania St U	2594		21	34	94	44	25	18	5	14
Pennsylvania-U of	719	559	18	24	83	57	19	17	3	13
Pittsburgh-U of	1603	35	7	14	77	44	17	3	3	10
Portland State U	445	78	21	15	27	9	11	25	0	1
Princeton U	288		14	8	94	48	26	16		20
Purdue U-West Lafayette	3328	983	27	29	95	68	19	11	4	11
Rensselaer Polytech Inst	921	26	10	13	49	33	20	15	2	5
Rhode Island-U of	472	351	9	3	14	11	3	1	1	6
Rice U	293		12	8	61	30	13	13	3	5
Rochester-U of	493		15	19	97	49	11	16	0	17
Rutgers U-Busch Campus	2229	576	33	41	108	74	31	31	2	11
Rutgers/NJIT	819	92	4	10	32	25	7	3	0	4
South Carolina-U of	947	901	2	3	32	22	17	8	3	2
Southern Cal-U of (USC)	983		9	10	62	52	13	7	4	3
Southern Methodist U	159	145	6	3	6	4	2	2	3	1
Stanford U	856	157	3	38	238	103	45	26	3	31
Stevens Inst of Tech	325		4	5	23	14	7	6	1	3
SUNY-Albany	456	483	19	18	58	44	10	21	5	17
SUNY-Buffalo	1337	170	13	13	72	58	23	9	2	8
SUNY-Stony Brook	776		17	26	176	113	35	12	8	20
Syracuse U	1482	611	12	9	48	33	9	13	0	6

Temple U	1387	96			20	11	6	3	0	3
Texas A&M U-College Station	3461	397	14	25	105	79	19	15	7	9
Texas Christian U	114	258	4	8	16	9	3	3	0	2
Texas-U of, Arlington	818	520	3	11	26	16	3	11	2	1
Texas-U of, Austin	3603		37	85	230	116	43	36	11	27
Texas-U of, Dallas	297	36	14	14	56	14	14	6	4	6
TN-U of, Knoxville	711	778	4	8	70	35	17	2	3	11
Toledo-U of	1129	1349	6	5	36	24	13	2	6	3
Tufts U	1252		3	4	32	20	6	7	1	3
Tulane U	743	127	6	10	18	8	3	9	0	8
Utah State U	238	385	13	15	35	10	5	3	4	1
Utah-U of	2072	294	29	67	76	47	21	12	3	10
Vanderbilt U	343		6	11	55	25	7	7	1	6
Virginia Tech	5646	339	16	13	42	30	14	11	1	3
Virginia-U of	1366	192	40	38	63	33	14	29	0	9
Wake Forest U	222	146	7	13	17	9	6	5	0	4
Washington State U	968	418	10	14	38	18	8	2	3	7
Washington U	582	66	6	12	65	27	11	16	1	4
Washington-U of	1714	780	61	106	169	46	44	37	9	12
Wayne State U	529	397	10	11	36	20	10	2	3	2
Wesleyan U	238		14	7	12	9	3	16	0	1
West Virginia U	1161	400	6	6	46	30	17	3	4	4
WI-U of, Madison	3392		5	30	146	47	48	10	5	18
William & Mary-Coll of	300	472	14	22	48	24	11	24	0	5
Worcester Polytech Inst	665	27	22	14	12	8	3	9	0	1
Yale U	871		10	23	109	68	22	11	3	12

2001 Roster Data

	Enrollments		Majors		Students			Degrees Awarded		
INSTITUTION	PHYS	SCI & ASTRO	JR	SR	TOT	FOR	1ST	BACH	MAST	PHD
AL-U of, Birmingham	897	715	6	5	25	11	4	1	0	0
AL-U of, Tuscaloosa	584	863	5	2	37	23	6	6	2	4
Alabama A&M U	410	895	6	5	34	6	7	9	0	7
Alaska-U of	298	54	9	7	31	12	6	6	2	5
AR-U of, Fayetteville	1205	410	15	31	40	23	15	11	2	4
Arizona State U	1374	1430	25	36	73	29	10	12	3	5
Arizona-U of	2272	33	38	70	84	28	15	30	4	4
Auburn U	1709	200	4	11	18	6	6	4	4	3
Baylor U	2057	211	6	5	18	6	3	3	1	2
Boston Coll	434		7	8	28	23	10	4	1	2
Boston U	865		21	14	85	63	20	6	4	6
Brandeis U	183	175	5	9	25	20	8	2	4	6
Brigham Young U	1102	2585	54	99	29	9	7	41	8	1
Brown U	301	143	13	15	86	71	22	17	0	8
Bryn Mawr Coll	135		7	10	3	0	0	11	0	0
CA-U of, Berkeley	2216		55	133	231	66	40	44	5	41
CA-U of, Davis	2024	326	38	41	163	42	47	22	5	23
CA-U of, Irvine	1140	484	11	30	66	25	21	20	4	4
CA-U of, Los Angeles	2839		53	45	105	36	20	26	2	19
CA-U of, Riverside	1092	544	17	25	42	25	8	4	4	6
CA-U of, San Diego	2500	847	46	57	111	42	32	36	5	13
CA-U of, Santa Barbara	865	381	59	45	137	25	31	20	3	20
CA-U of, Santa Cruz	598		36	23	48	6	13	26	2	11
Cal Inst of Tech	196	34	40	43	144	68	21	34	1	13
Carnegie Mellon U	797	90	42	25	60	36	13	22	0	8
Case Western Reserve U	547		26	15	47	31	16	13	1	7
Catholic U	23	13	3	2	28	6	11	2	1	3
Central Florida-U of	3626	315	14	15	38	12	15	7	3	4
Chicago-U of	453		25	26	121	68	22	29	1	10
Cincinnati-U of	930	184	4	11	67	54	18	7	5	6
Clark U	92	154	4	1	13	11	2	3	0	0
Clarkson U	477		23	14	9	4	2	4	1	1
Clemson U	1793	827	6	8	49	23	12	7	6	2
Colorado School of Mines	1478	25	31	48	21	8	3	14	0	3
Colorado State U	1851	596	10	15	58	23	13	3	3	1
Colorado-U of, Boulder	3716		34	62	163	49	42	19	1	12
Columbia U	377	216	13	17	145	91	25	21	7	15
Connecticut-U of	889	149	16	8	57	45	14	5	0	7
Cornell U	2580		43	51	261	109	64	40	8	17
Dartmouth Coll	337	376	15	22	28	9	9	14	1	5

Delaware-U of	954	819	10	16	53	39	19	5	1	4
Denver-U of	102	85	5	2	6	0	2	1	2	1
Duke U	967	186	13	13	63	35	6	11	4	5
East Carolina U	1206	472	4	5	21	6	9	7	5	0
Emory U	403	376	10	5	7	5	4	7	0	1
Florida Atlantic U	550	1150	16	14	31	13	4	5	3	0
Florida Inst of Tech			15	22	21	8	7	10	1	0
Florida International U	640	250	5	8	22	14	6	4	4	0
Florida State U	1550	1013	21	27	98	51	21	7	4	13
Florida-U of	2865		31	50	101	65	24	11	3	13
Georgetown U	275	79	7	15	5	2	5	16	0	0
Georgia Inst of Tech	2138	60	34	22	95	54	38	17	4	10
Georgia State U	775		11	6	23	17	8	5	1	1
Georgia-U of	816	953	11	14	31	17	6	5	3	6
Hampton U	716	10	4	2	33	5	5	7	2	5
Harvard U	638		43	63	400	84	42	51	1	20
Hawaii-U of, at Manoa	385	81	7	10	20	13	3	4	1	3
Houston-U of	2492	984	25	17	75	65	12	2	1	3
Idaho-U of	471	49	6	10	15	13	6	3	0	1
IL-U of, Chicago	582	181	11	13	54	40	14	6	8	3
IL-U of, Urbana/Champaign	2629		51	53	237	99	52	25	9	37
Indiana U Purdue U Indpls	649	827	7	7	11	5	0	5	0	0
Indiana U-Bloomington	1797	375	11	16	82	40	13	13	3	8
Iowa State U	1219		12	29	69	50	17	2	4	11
Iowa-U of	471	35	8	18	37	29	6	13	6	5
Johns Hopkins U	635	71	7	22	88	41	15	2	1	7
Kansas State U	807	48	9	15	47	39	9	3	2	8
Kansas-U of	1339		11	23	42	25	13	9	0	4
Kent State U	3623	1254	2	12	57	41	14	3	0	5
Kentucky-U of	1123	1164	12	29	45	33	11	4	4	4
LA St U-Baton Rouge	1081	330	10	23	56	41	14	13	4	10
Lehigh U	687	200	4	6	26	16	6	6	2	9
MA-U of, Amherst	965		25	19	56	36	16	9	12	3
Maine-U of	581	529	10	23	23	7	6	6	1	4
Maryland-U of, Balt Cnty	1041	228	10	13	34	14	12	7	2	1
Maryland-U of, Coll Park	2567		28	53	182	90	37	24	6	18
Mass Inst of Tech (MIT)	860		37	55	245	114	46	55	6	36
Miami-U of	741	432	9	8	22	18	6	5	1	2
Michigan State U	2032		43	18	102	57	22	12	4	15
Michigan Technological U	738	61	5	5	24	19	4	8	2	2
Michigan-U of, Ann Arbor	973	25	17	36	127	66	31	19	6	7
Minnesota-U of, Minnpls	2481		26	45	121	69	24	12	6	12
Mississippi State U	1513	937	5	4	16	12	7	3	1	0
Mississippi-U of	286	626	5	10	15	1	2	7	2	1

MO-U of Columbia	302	103	7	13	37	21	7	6	0	0
MO-U of, Kansas City	424	116	1	3	15	9	5	1	1	3
MO-U of, Rolla	304	30	9	14	26	16	9	12	0	1
MO-U of, St. Louis	124	135	6	12	13	6	2	8	4	2
Montana State U	1092	779	21	14	48	14	8	9	1	6
NC-U of, Chapel Hill	743	402	22	15	66	24	19	8	3	5
Nebraska-U of, Lincoln	526	669	11	19	46	25	7	6	1	4
Nevada-U of, Las Vegas	438	640	6	14	17	4	4	1	1	1
New Hampshire-U of	463	188	16	4	28	20	9	5	1	5
New Mexico St U	777		6	11	48	32	14	5	0	3
New Mexico-U of	1268	1482	38	54	97	41	20	13	2	16
New York U (NYU)	473	100	12	7	51	47	10	6	2	6
NJIT/Rutgers (1)	1186	248	4	9	34	26	4	6	0	9
NM Inst of Mining & Tech	234	22	12	26	17	2	4	12	4	1
North Carolina St U	2882	411	25	39	85	24	19	18	2	7
North Dakota St U	441	104	7	5	6	4	0	1	1	0
North Dakota-U of	525	110	15	3	11	7	2	4	2	1
North Texas-U of	1025	2112	11	17	32	17	5	5	3	0
Northeastern U	716	357	10	6	55	46	15	2	2	6
Northern Illinois U	871	360	6	5	33	13	13	6	6	0
Northwestern U	768	405	8	10	61	46	16	9	2	6
Notre Dame-U of	846	291	7	10	82	58	21	13	0	9
Ohio State U	3927		36	60	154	88	27	26	4	23
Ohio U	933	964	8	7	66	59	23	9	9	6
Oklahoma State U	581	84	5	9	42	30	8	5	3	3
Oklahoma-U of	1673		17	28	38	17	8	2	1	4
Old Dominion U	407	240	3	10	27	22	1	2	0	1
Oregon State U	831	340	19	23	33	9	7	20	3	5
Oregon-U of	493	747	60	35	74	31	23	13	5	6
Pennsylvania St U	2472		21	29	101	48	24	22	4	12
Pennsylvania-U of	501	190	4	30	85	56	18	21	4	10
Pittsburgh-U of	1495	63	5	6	70	44	12	6	2	11
Polytechnic U	206		0	1	0	0	0	1	1	2
Portland State U	526	53	15	18	28	8	8	15	3	1
Princeton U	504		16	15	95	45	19	8		13
Purdue U West Lafayette	3999	480	24	31	103	71	23	21	6	9
Rensselaer Polytech Inst	994	38	18	11	56	39	14	13	4	8
Rhode Island-U of	687	139	4	6	16	11	7	3	1	1
Rice U	349	86	14	13	67	33	23	7	2	7
Rochester-U of	483		14	19	110	61	22	12	1	8
Rutgers U-New Brunswick	2352	664	37	36	118	82	21	41	0	9
South Carolina-U of	760	1107	4	2	29	23	7	2	0	3
South Florida-U of	1498		7	17	36	13	14	6	6	0
Southern Cal-U of (USC)	1112		4	7	65	51	17	6	0	9

Stanford U	508	91	20	37	258	122	54	15	4	37
Stevens Inst of Tech	400		3	3	26	21	11	3	3	6
SUNY-Stony Brook U	735		24	32	181	119	45	8	13	21
SUNY-U at Albany	439	479	15	9	69	49	25	11	6	12
Syracuse U	1376	827	6	9	51	41	10	4	2	3
Temple U	1648	98	3	4	27	17	7	1	0	0
Texas A&M-College Station	3263	599	13	23	111	87	32	14	3	11
Texas Christian U	126	273	1	7	17	8	1	3	0	1
Texas-U of, at Arlington	499	292	4	10	16	8	5	2	1	1
Texas-U of, at Austin	2616	1126	37	58	234	124	46	32	16	34
Texas-U of, at Dallas	259	20	12	13	50	12	22	7	3	9
TN-U of, Knoxville	1046	785	13	11	67	37	15	4	0	9
Toledo-U of	1037	1415	6	9	43	28	12	5	5	1
Tufts U	379		9	6	31	19	7	6	1	5
Tulane U	1019	123	4	10	19	9	3	7	0	3
Utah State U	500	559	22	19	32	9	5	5	0	5
Vanderbilt U	404		7	8	52	26	11	7	2	7
Virginia Tech	2438	129	17	11	42	25	15	11	4	4
Virginia-U of	1841		31	30	66	32	18	35	0	9
Wake Forest U	220	165	11	10	23	12	8	9	1	1
Washington State U	1418	293	8	14	42	22	16	4	3	4
Washington U	401	71	16	20	66	29	17	14	2	9
Washington-U of	2421	1277	65	34	180	41	33	50	3	12
Wayne State U	783	366	7	18	38	23	10	6	4	5
Wesleyan U	349	125	21	13	14	11	5	7	0	0
West Virginia U	1143	446	11	4	42	30	10	3	3	5
Western Michigan U	1010	762	4	13	21	14	7	3	0	3
WI-U of, Milwaukee			10	10	25	15	3	3	1	1
William & Mary-Coll of	476	305	18	21	50	25	12	21	1	5
Worcester Polytech Inst	673		22	23	12	7	5	6	1	1
Yale U	772		14	13	101	46	23	18	5	17

2002 Roster Data

	Enrollments		Majors		Students			Degrees Awarded		
INSTITUTION	PHYS	SCI & ASTRO	JR	SR	TOT	FOR	1ST	BACH	MAST	PHD
AL-U of, Huntsville	658	72	14	16	69	27	12	7	4	6
AL-U of, Tuscaloosa	601	812	6	7	43	30	6	3	0	2
Alabama A&M U	564	1278	7	2	29	5	2	4	0	2
Alaska-U of	388	108	6	8	25	8	2	3	1	2
AR-U of, Fayetteville	1023	431	8	25	40	20	14	17	5	5
Arizona State U	1884	983	26	46	88	30	26	7	3	7
Arizona-U of	2235	26	29	83	77	29	17	26	3	4
Auburn U	1750	199	11	7	21	10	7	6	2	3
Baylor U	2123	218	6	2	17	6	2	2	2	1
Boston Coll	388	0	16	7	37	30	16	7	1	2
Boston U	855	0	10	21	86	62	14	9	4	10
Brandeis U	322	112	4	9	27	19	9	8	2	1
Brigham Young U	1931	5494	39	90	36	11	10	49	4	2
Brown U	299	102	9	14	89	74	12	20	0	12
CA-U of, Berkeley	2387	0	42	158	233	55	37	76	1	23
CA-U of, Davis	2541	398	37	39	100	25	20	19	3	9
CA-U of, Irvine	1359	559	18	31	82	31	26	18	3	3
CA-U of, Los Angeles	2750	0	29	60	118	32	32	20	2	16
CA-U of, Riverside	1178	658	22	25	49	25	11	10	1	2
CA-U of, San Diego	2822	599	45	70	113	42	25	29	1	18
CA-U of, Santa Barbara	1512	594	43	57	147	27	29	18	3	16
Cal Inst of Tech	201	56	30	39	149	72	31	44	1	17
Carnegie Mellon U	703	86	34	38	62	37	11	18	1	8
Case Western Reserve U	532	0	31	21	48	30	14	15	5	2
Central Florida-U of	2222	2943	26	30	38	12	10	4	2	4
Chicago-U of	457	0	33	25	133	74	29	26	0	14
Cincinnati-U of	946	298	5	4	66	55	11	6	5	3
Clark U	114	167	7	4	12	10	3	1	1	3
Clarkson U	935	20	11	8	8	4	1	8	1	1
Clemson U	664	367	9	10	45	16	13	4	6	1
Colorado School of Mines	730	23	30	44	25	10	8	26	1	2
Colorado State U	1792	532	11	15	56	17	11	7	3	5
Colorado-U of, Boulder	3793	0	37	66	167	51	30	22	1	15
Columbia U	414	76	20	18	158	99	39	16	10	14
Connecticut-U of	1394	325	11	15	62	45	17	7	1	9
Cornell U	3136	0	49	50	256	97	61	45	9	30
Dartmouth Coll	506	207	25	13	31	9	10	22	2	1
Delaware-U of	1395	1389	8	8	55	43	9	10	1	5
Drexel U	1435	280	5	7	29	20	8	3	1	1
Duke U	985	126	10	27	68	36	19	9	1	5

East Carolina U	1308	480	7	3	23	6	6	4	2	1
Florida Atlantic U	191	649	10	5	32	18	4	7	1	3
Florida State U	1700	1060	21	24	98	64	28	17	1	13
Florida-U of	2840	0	27	53	116	81	31	15	6	7
George Washington U	1140	1112	10	6	27	19	8	5	0	3
Georgia Inst of Tech	1835	124	31	40	99	66	36	21	8	9
Georgia State U	967	0	6	8	24	19	7	4	1	2
Georgia-U of	1051	1031			31	19	9	2	0	2
Hampton U	275	0	4	5	30	9	3	2	0	3
Harvard U	639	0	65	56	226	79	63	49	1	30
Hawaii-U of, at Manoa	427	68	5	7	25	15	8	2	0	4
Houston-U of	4258	1188	17	32	75	67	16	5	1	8
Howard U	315	39	1	1	19	8	6	2	0	1
Idaho State U	479	311	7	8	16	6	11	8	1	1
Idaho-U of	786	99	22	14	15	12	1	3	2	2
IL-U of, Chicago	1400	359	6	14	59	43	20	5	2	6
Indiana U-Bloomington	1805	361	17	16	74	40	23	11	7	13
Iowa State U	1298	0	14	21	58	44	8	14	1	5
Iowa-U of	427	0	11	14	48	34	19	9	4	2
Johns Hopkins U	713	75	8	10	89	38	17	18	4	6
Kansas State U	2848	102	10	13	61	46	17	5	0	4
Kansas-U of	1398	0	21	23	49	24	16	6	3	5
Kent State U	3862	1380	14	11	60	49	14	2	2	9
Kentucky-U of	1349	1364	11	12	42	33	9	11	1	7
LA St U-Baton Rouge	1862	641	15	15	55	41	12	11	4	7
Lehigh U	613	154	5	11	39	21	12	4	0	3
MA-U of, Amherst	1241	0	30	17	69	47	19	15	3	7
MA-U of, Lowell	670	1124	5	6	66	26	21	5	5	3
Maine-U of	559	558	14	11	27	7	10	12	1	1
Maryland-U of, Coll Park	2716	0	45	64	189	82	36	25	1	14
Mass Inst of Tech (MIT)	890	0	59	62	251	109	42	49	2	32
Miami-U of	833	358	8	7	19	14	5	8	0	2
Michigan State U	2216	0	51	25	112	70	32	10	3	10
Michigan Technological U	317	50	11	15	34	30	9	6	2	2
Michigan-U of, Ann Arbor	931	25	17	43	128	68	28	18	0	13
Minnesota-U of, Minnpls	2683	0	30	55	122	72	22	18	9	15
Mississippi-U of	405	596	0	10	16	0	3	7	0	1
MO-U of Columbia	364	108	11	27	36	21	6	10	3	2
MO-U of, Rolla	266	48	5	16	30	18	5	6	2	6
MO-U of, St. Louis	377	308	9	10	14	5	3	9	1	2
Montana State U	1208	788	16	28	45	13	13	6	6	3
NC-U of, Chapel Hill	1094	713	20	24	65	25	13	6	4	8
Nebraska-U of, Lincoln	1114	1489	11	20	47	24	11	4	4	5
Nevada-U of, Las Vegas	386		9	13	18	4	4	3	0	1

Nevada-U of, Reno	748	242	12	14	49	30	9	2	2	2
New Mexico St U	1066	0	10	9	40	24	6	4	2	5
New Mexico-U of	2366	2995	60	49	45	20	12	11	5	4
New Orleans-U of	697	281	9	12	34	8	8	5	3	1
New York U (NYU)	580	219	7	10	49	43	6	7	5	5
NM Inst of Mining & Tech	241	0	21	26	26	3	8	8	2	2
North Carolina St U	3058	419	24	36	93	29	25	22	1	11
North Dakota-U of	1029	176	4	12	8	5	4	1	1	1
North Texas-U of	992	1658	17	15	51	31	19	12	1	3
Northeastern U	652	563	2	5	55	46	7	7	6	1
Northwestern U	684	368	5	14	65	48	11	5	0	7
Notre Dame-U of	898	287	9	13	75	46	11	9	0	9
Ohio State U	4040	0	81	25	143	73	25	25		25
Ohio U	758	1704	12	5	63	49	16	10	11	11
Oklahoma State U	638	263	4	9	42	24	10	5	3	4
Oklahoma-U of	1627	0	20	28	56	27	17	20	1	1
Old Dominion U	415	264	7	8	29	21	6	6	0	3
Oregon State U	1500	812	33	37	41	10	13	18	3	1
Oregon-U of	1151	2662	64	46	79	27	23	7	10	4
Pennsylvania St U	2550	0	28	36	106	57	24	14	5	10
Pennsylvania-U of	559	327	3	27	94	47	26	16	5	6
Pittsburgh-U of	1387	79	14	13	77	46	16	6	2	7
Portland State U	579	52	22	56	23	10	5	24	3	4
Princeton U			21	13	91	44	20	16		17
Purdue U West Lafayette	3676	453	24	35	95	67	15	20	3	12
Rensselaer Polytech Inst	903	20	29	30	54	40	11	8	2	3
Rhode Island-U of	727	145	6	8	17	14	5	5	0	2
Rice U	374	0	12	12	79	37	20	10	1	5
Rochester-U of	559	0	21	18	113	58	14	18	0	7
Rutgers U-New Brunswick	2353	706	35	35	114	80	23	29	4	10
Rutgers U-Newark/NJIT			3	6	57	43	9	2	0	9
South Florida-U of	1720	0	11	22	40	16	17	6	6	2
Southern Cal-U of (USC)	924	0	8	4	69	58	19	3	5	7
Southern Methodist U	451	100	3	6	5	4	1	5	0	1
Stanford U	546	117	17	9	269	125	48	18	1	37
Stevens Inst of Tech	455	0	2	6	31	23	1	5	2	2
SUNY-Stony Brook U	767	0	21	37	195	126	49	14	3	29
SUNY-U at Buffalo	1452	151	14	24	75	59	14	9	7	4
Syracuse U	1735	713	6	11	48	40	11	9	1	4
Texas A&M-College Station	3235	520	15	20	116	91	30	18	4	11
Texas Christian U	154	332	3	7	15	8	3	3	1	2
Texas-U of, at Austin	1191	534	29	61	254	138	82	29	13	29
Texas-U of, at Dallas	561	16	9	16	64	20	23	6	3	1
TN-U of, Knoxville	928	889	16	20	65	35	19	8	2	6

Toledo-U of	1402	52	6	12	41	31	7	6	2	3
Tufts U	724	0	2	12	28	17	4	6	2	5
Tulane U	439	359	8	7	22	10	6	6	0	2
Utah State U	663	558	10	17	31	11	5	9	1	3
Utah-U of	1070	635	45	35	104	64	29	27	2	6
Vanderbilt U	337	0	8	9	48	31	8	4	0	10
Virginia Tech	4533	179	19	23	40	23	13	9	2	5
Virginia-U of	1889	0	23	34	84	45	28	26	1	7
Wake Forest U	241	160	8	9	23	11	1	9	1	2
Washington State U	819	373	2	11	38	20	8	4	3	1
Washington U	891	134	10	18	67	35	13	19	1	8
Washington-U of	2481	1167	78	134	182	29	25	55	16	15
Wayne State U	805	347	6	12	32	22	6	4	4	2
Wesleyan U	215	0	11	25	15	10	4	12	1	3
West Virginia U	1031	474	7	11	49	32	12	4	0	3
Western Michigan U	1049	811	1	12	27	20	11	5	1	2
WI-U of, Madison	3705	0	11	34	155	53	36	16	3	16
WI-U of, Milwaukee	791	279	9	14	26	15	5	7	2	5
William & Mary-Coll of	457	278	17	18	51	21	9	20	3	4
Worcester Polytech Inst*	**633**	**0**	**12**	**9**	**13**	**8**	**2**	**9**	**1**	**0**
Yale U	797	0	19	16	103	58	20	9	3	17

2003 Roster Data

	Enrollments		Majors		Students			Degrees Awarded		
INSTITUTION	PHYS	SCI & ASTRO	JR	SR	TOT	FOR	1ST	BACH	MAST	PHD
AL-U of, Birmingham	936	953	3	6	24	11	4	3	1	3
AL-U of, Huntsville	420	69	11	15	92	35	25	7	3	3
AL-U of, Tuscaloosa	621	784	5	6	47	32	8	3	2	2
Alabama A&M U	233	549	5	3	29	12	6	2	3	3
Alaska-U of	251	95	6	8	23	4	8	4	1	4
AR-U of, Fayetteville	1203	414	15	20	46	21	15	16	10	2
Arizona State U	1132	697	24	44	83	33	12	20	5	5
Arizona-U of	2397	22	44	77	83	28	14	27	6	2
Auburn U	1716	192	10	13	38	21	17	7	1	1
Baylor U	1259	272	4	3	21	10	4	1	0	2
Boston Coll	290	147	6	14	41	33	11	7	1	3
Boston U	932	22	26	25	104	72	25	14	1	5
Brandeis U	328	107	12	8	31	20	8	9	0	3
Brigham Young U	2104	4561	64	107	34	6	10	56	7	2
Brown U	217	124	2	17	100	82	22	9	0	10
CA-U of, Berkeley	2376	0	27	142	239	64	38	76	4	27
CA-U of, Davis	4563	435	64	109	172	48	50	28	8	24
CA-U of, Irvine	1576	588	20	37	97	33	23	22	3	4
CA-U of, Los Angeles	2710	0	48	68	132	33	31	30	1	12
CA-U of, Riverside	1202	565	16	30	52	27	17	16	2	6
CA-U of, San Diego	2928	731	40	85	130	38	38	34	1	15
CA-U of, Santa Barbara	2334	929	33	40	140	34	22	35	4	15
CA-U of, Santa Cruz			68	56	61		13	36	2	2
Cal Inst of Tech	230	94	34	27	151	62	22	29	0	18
Carnegie Mellon U	807	84	45	36	60	36	13	23	0	10
Case Western Reserve U	564	0	18	28	56	29	18	20	4	4
Catholic U	168	45	3	1	40	15	6	2	0	1
Central Florida-U of	2271	3622	29	32	52	16	22	5	0	4
Chicago-U of	939	140	36	40	136	80	20	26	1	14
Cincinnati-U of	807	303	7	8	66	53	13	6	6	5
Clark U	104	123	2	6	14	11	4	4	0	1
Clarkson U	590	0	8	11	13	10	4	8	2	4
Clemson U	1143	649	26	18	45	20	11	5	5	4
Colorado School of Mines	688	17	50	52	30	8	9	24	0	3
Colorado St U, Fort Collins	1730	575	12	19	53	20	10	6	1	8
Columbia U	374	271	24	15	174	99	44	16	7	12
Connecticut-U of	1430	244	18	21	66	48	19	5	4	6
Cornell U	1471	0	55	72	286	109	63	50	7	21
Dartmouth Coll	327	497	16	22	32	13	13	9	2	5
Delaware-U of	1459	1037	10	14	71	55	24	5	2	7

Duke U	910	97	11	18	67	37	9	19	0	11
Florida Atlantic U	216	628	2	5	28	18	4	3	2	4
Florida Inst of Tech	359	0	3	14	15	6	7	7	4	1
Florida State U	1975	1098	34	31	113	69	26	12	1	13
Florida-U of	2536	0	31	34	129	88	24	32	6	5
George Washington U	903	862	14	8	21	15	7	5	0	5
Georgia Inst of Tech	1822	196	28	44	129	85	45	21	4	4
Georgia-U of	1100	1266	18	21	38	18	13	7	0	2
Hampton U	215	240	3	1	34	12	12	5	2	2
Harvard U	743	0	54	71	223	91	39	58	2	24
Hawaii-U of, at Manoa	431	82	6	10	28	15	7	3	1	1
Houston-U of	3564	803			88		19	10	0	4
Idaho State U	515	404	4	8	25	8	9	4	3	1
Idaho-U of	708	100	23	16	20	17	8	7	0	1
IL-U of, Chicago	621	226	13	20	54	41	10	7	4	9
IL-U of, Urbana/Champaign	6856	0	51	69	276	106	72	43	6	20
Illinois Inst of Tech	420	0	6	1	16	14	4	3	0	4
Indiana U Purdue U Indpls	957	1132	5	9	14	4	2	4	0	1
Indiana U-Bloomington	1706	395	16	18	96	54	32	12	3	6
Iowa State U	1393	0	18	31	77	66	33	9	3	5
Iowa-U of	465	0	12	23	54	39	13	7	0	1
Johns Hopkins U	765	47	12	15	104	49	30	9	0	16
Kansas State U	1866	106	6	17	58	44	10	6	0	8
Kansas-U of	1422	0	14	17	43	22	10	3	3	6
Kent State U	3881	1259	0	14	47	36	7	4	2	7
Kentucky-U of	467	356	4	17	58	43	23	7	5	4
LA St U-Baton Rouge	1329	416	18	24	58	34	18	9	9	5
Lehigh U	745	45	3	10	44	20	6	7	0	3
MA-U of, Amherst	1128	0	25	29	84	52	25	11	4	5
MA-U of, Lowell	711	1104	9	5	55	31	14	2	1	4
Maine-U of	588	722	16	13	29	4	14	11	1	3
Maryland-U of, Balt Cnty	1130	243	8	9	50	21	16	7	2	2
Maryland-U of, Coll Park	2393	0	36	45	207	84	39	28	5	19
Mass Inst of Tech (MIT)	1064	0	80	80	253	124	45	61	6	31
Miami-U of	734	328	6	5	28		15	6	0	2
Michigan State U	2658	0	62	25	113	68	20	18	6	12
Michigan Technological U	316	43	14	11	36	29	7	7	1	3
Michigan-U of, Ann Arbor	871	25	24	45	195	89	35	25	4	16
Minnesota-U of, Minnpls	2658	0	16	53	121	56	25	31	4	20
MO-U of Columbia	1051	372	14	16	32	20	9	6	1	6
MO-U of, Kansas City	203	131	5	6	23	14	8	1	0	1
MO-U of, Rolla	325	49	6	11	30	13	6	10	2	1
MO-U of, St. Louis	324	220	6	14	19	5	5	9	0	1
Montana State U	1112	747	12	39	44	12	10	15	1	5

NC-U of, Chapel Hill	1785	641	15	34	68	23	19	7	0	13
Nebraska-U of, Lincoln	1095	1456	19	17	50	20	15	4	1	9
Nevada-U of, Las Vegas	518	752	10	12	15	4	3	3	2	1
New Hampshire-U of	624	390	13	11	36	21	11	11	2	3
New Mexico St U	883	0	3	14	36	22	8	2	2	8
New Mexico-U of	1749	1673	35	37	101	37	23	16	3	7
New York U (NYU)	592	181	14	7	48	44	6	9	0	6
NJIT/Rutgers U-Newark (2)			3	6	37	22	8	3	0	4
NM Inst of Mining & Tech	122	0	16	33	21	4	5	17	1	3
North Carolina St U	2912	616	26	31	98	29	24	16	6	9
North Dakota-U of	1075	180	5	6	15	10	5	6	0	1
North Texas-U of	504	938	22	15	41	26	5	8	3	4
Northeastern U	1027	212	7	4	67	58	22	5	4	2
Northwestern U	667	301	12	15	68	44	18	12	2	12
Notre Dame-U of	841	274	14	16	89	47	25	7	3	6
Ohio State U	4110	0	30	44	143	76	26	23	3	16
Ohio U	657	1829	14	8	74	64	17	2	5	5
Oklahoma State U	810	429	6	9	36	23	7	4	2	1
Oklahoma-U of	4015	3052	19	30	24	11	6	10	1	5
Old Dominion U	749	484	8	6	33	23	13	1	3	6
Oregon State U			24	59	33	9	5	19	3	7
Oregon-U of	1174	3201	26	39	89	33	26	15	6	5
Pennsylvania St U	2916	0	27	36	120	66	28	25	3	8
Pennsylvania-U of	528	242	2	29	93	42	14	14	6	8
Pittsburgh-U of	1452	91	10	6	84	60	23	6	1	8
Princeton U	367	110	23	19	100	48	24	13	0	16
Purdue U West Lafayette	3771	706	34	24	123	92	42	26	9	8
Rensselaer Polytech Inst	983	41	34	34	50	32	12	18	6	10
Rice U	398	0	15	16	66	32	14	8	2	6
Rochester-U of	577	0	10	13	135	71	33	17	1	8
Rutgers U-New Brunswick	2399	652	35	34	114	80	25	36	10	11
South Carolina-U of	1118	2551	5	9	46	27	20	5	3	2
South Florida-U of	901	0	17	22	36	19	15	7	4	1
Southern Cal-U of (USC)	1194	0	12	5	75	63	16	3	4	3
Southern Methodist U								5	0	1
Stanford U	418	50	26	33	290	141	47	15	3	37
Stevens Inst of Tech	450	0	1	5	34	25	6	8	0	4
SUNY-Stony Brook U	1001	0	34	24	177	115	23	16	5	31
SUNY-U at Buffalo	1504	144	14	25	78	60	20	12	6	6
Syracuse U	1043	1285	10	9	58	42	14	10	0	5
Temple U	2417	67		6	29	21	7	6	1	1
Texas A&M-College Station	1932	280	17	17	130	100	28	8	0	4
Texas Christian U	143	294	4	8	16	8	6	4	0	4
Texas Tech U	1544	483	10	19	37	17	12	3	0	1

Texas-U of, at Arlington	847	594	12	8	32	22	7	4	2	4
Texas-U of, at Austin	2931	1199	52	104	261	139	50	40	8	29
Texas-U of, at Dallas	322	17	20	21	75	19	26	5	4	3
TN-U of, Knoxville	1006	750	15	13	66	38	14	8	6	9
Toledo-U of	1215	60	10	15	47	32	12	5	2	2
Tufts U	832	0	3	7	34	20	7	9	1	2
Tulane U	595	103	6	7	21	8	4	8	0	6
Utah State U	1199	201	14	15	30	10	5	15	1	3
Utah-U of			49	41	98	61	20	21	5	10
Vanderbilt U	224	0	10	9	49	28	16	9	1	7
Virginia Tech	1801	0	25	27	44	17	17	22	7	7
Virginia-U of	1815	0	32	34	83	44	16	30	1	12
Wake Forest U	242	157	7	11	25	11	7	8	0	3
Washington State U	576	129	4	16	42	25	18	4	2	5
Washington U	520	0	11	16	84	40	20	17	1	5
Washington-U of	2037	179	76	144	193	38	24	66	10	10
Wayne State U	1401	998	10	8	40	28	15	6	3	5
Wesleyan U	588	0	14	16	19	12	2	21	0	1
West Virginia U	1980	500	7	8	56	26	10	9	2	4
Western Michigan U	1045	868	9	7	26	21	5	4	2	1
WI-U of, Madison	3643	0	19	42	160	54	28	26	5	13
WI-U of, Milwaukee	1367	550	21	24	30	18	9	5	2	2
William & Mary-Coll of	466	276	12	19	52	17	10	18	1	8
Worcester Polytech Inst*	**641**	**0**	**15**	**13**	**16**	**10**	**8**	**9**	**0**	**0**
Yale U	831	0	15	12	108	59	22	12	5	16

2004 Roster Data

	Enrollments		Majors		Students			Degrees Awarded		
INSTITUTION	PHYS	SCI & ASTRO	JR	SR	TOT	FOR	1ST	BACH	MAST	PHD
AL-U of, Birmingham	996	778	4	11	26	9	6	5	5	1
AL-U of, Huntsville	976	155	7	15	86	33	10	8	2	6
AL-U of, Tuscaloosa	485	813	2	6	45	31	8	4	0	7
Alabama A&M U	1281	0	2	5	28	12	5	3	1	3
Alaska-U of	210	64	7	11	25	4	6	5	1	2
AR-U of, Fayetteville	1182	433	10	24	38	14	8	22	1	5
Arizona State U	525	1204	28	26	127	41	15	11	4	3
Arizona-U of	2330	18	43	74	93	40	15	38	3	5
Auburn U	1712	237	9	18	37	23	8	7	2	2
Baylor U	1165	417	5	4	24	13	8	1	2	2
Boston Coll	382	0	8	6	42	34	7	14	1	5
Boston U	988	0	23	26	110	76	23	25	3	10
Brandeis U	329	90	12	17	32	20	10	7	1	4
Brigham Young U	2113	5179	82	116	37	10	11	52	9	2
Brown U	243	118	17	15	105	83	19	18	0	10
Bryn Mawr Coll	227	0	6	4	2	0	0	7	1	1
CA-U of, Berkeley	2491	0	34	132	246	61	37	69	1	21
CA-U of, Davis	2127	141	62	106	195	46	51	57	10	20
CA-U of, Irvine	1768	391	16	39	119	30	34	17	2	6
CA-U of, Los Angeles	2819	0	46	85	135	37	21	45	2	9
CA-U of, Riverside	1315	647	13	25	61	30	21	17	5	5
CA-U of, San Diego	2520	706	53	85	113	29	12	29	4	12
CA-U of, Santa Barbara	2283	602	54	80	136	32	19	39	5	17
CA-U of, Santa Cruz	1078	0	29	62	69	6	16	33	2	2
Cal Inst of Tech			50	36	146	69	16	27	0	25
Carnegie Mellon U	860	104	36	49	62	41	14	25	0	6
Case Western Reserve U	555	0	15	16	63	34	18	24	4	4
Catholic U	166	43	4	3	30	9	5	1	4	2
Central Florida-U of	2438	4087	31	36	69	28	22	6	3	2
Chicago-U of	402	0	29	28	132	78	18	32	2	20
Cincinnati-U of	979	357	2	3	65	50	13	3	1	6
Clark U	109	133	6	2	16	13	2	5	0	2
Clemson U	1143	649	16	30	53	22	19	6	5	5
Colorado School of Mines	737	0	48	71	44	6	12	34	0	1
Colorado St U-Fort Collins	1661	559	10	16	50	21	13	11	4	6
Colorado-U of, Boulder	1755	0	48	63	198	59	41	41	2	13
Columbia U	347	110	31	27	177	92	48	17	12	17
Connecticut-U of	1158	195	20	19	79	51	21	13	2	3
Cornell U	2356	0	55	77	284	117	30	55	6	24
Dartmouth Coll	478	343	16	18	40	14	9	21	2	2

Delaware-U of	1473	1233	16	9	74	54	13	9	6	5
Denver-U of	128	90	3	2	8	4	2	4	1	1
Duke U	776	102	20	11	76	39	19	17	1	6
East Carolina U								7	2	3
Florida A&M U	557	724	5	4	21	3	5	8	0	1
Florida Atlantic U	773	1387	3	9	30	20	8	4	0	4
Florida Inst of Tech			7	7	19	11	4	6	1	1
Florida International U	744	364	16	4	32	20	9	1	0	1
Florida State U	1985	1100	32	43	126	72	27	13	2	7
Florida-U of	2858	0	37	50	123	82	20	24	9	12
George Washington U	473	622	7	6	28	19	10	3	2	4
Georgia Inst of Tech	1799	197	19	36	125	83	11	26	4	7
Georgia State U	1342	1208		2	29	22	6	2	1	3
Georgia-U of	1112	1396	8	19	49	24	13	9	1	3
Harvard U	748	0	68	57	251	87	43	66	0	23
Hawaii-U of, at Manoa	397	17	10	14	31	14	8	4	1	2
Houston-U of	2300	600	20	15	105	89	20	4	0	2
Idaho State U	858	473	8	8	36	16	14	4	5	1
Idaho-U of	322	59	21	24	19	12	4	6	1	1
IL-U of, Chicago	1818	438	11	20	68	48	17	6	1	1
IL-U of, Urbana/Champaign			62	59	308	121	58	40	8	17
Illinois Inst of Tech	420	0	3	9	13	11	4	3	1	1
Indiana U-Bloomington	998	414	6	18	85	53	11	9	6	11
Iowa State U	1242	0	10	36	74	61	8	11	0	9
Iowa-U of	431	0	22	22	56	37	12	13	3	5
Johns Hopkins U	826	45	8	22	92	48	9	11	4	12
Kansas State U	1057	1011	11	17	60	47	17	4	4	5
Kansas-U of	1442	0	17	32	50	31	13	2	4	1
Kent State U	3895	1312	12	11	47	36	7	6	1	4
Kentucky-U of	1275	897	10	14	58	42	16	6	2	4
LA St U-Baton Rouge	1251	381	18	35	66	33	18	6	3	6
Lehigh U	366	92	10	9	44	20	9	5	2	4
MA-U of, Amherst	1289	0	21	23	73	48	12	17	4	7
MA-U of, Lowell	527	1098	11	8	73	29	29	4	6	4
Maine-U of	666	753	13	18	27	6	9	9	2	2
Maryland-U of, Balt Cnty	1448	250	26	9	47	14	7	3	1	3
Maryland-U of, Coll Park	2530	0	54	56	210	85	42	39	7	33
Mass Inst of Tech (MIT)	812	0	63	89	249	125	45	65	7	39
Miami-U of	831	334	7	7	29	26	6	5	0	2
Michigan State U	2644	1445	70	46	119	77	20	14	6	12
Michigan Technological U	721	42	12	8	32	24	7	8	4	2
Michigan-U of, Ann Arbor	778	20	34	64	199	90	38	26	8	17
Minnesota-U of, Minnpls	2639	0	24	59	132	77	34	24	3	13
Mississippi-U of	331	474	11	18	17	7	2	2	1	2

MO-U of Columbia	1960	310	14	25	42	28	16	14	0	4
MO-U of, Rolla	324	62	17	6	39	19	12	10	2	4
MO-U of, St. Louis			10	9	17	6	2	9	1	2
Montana State U	1169	725	18	20	47	12	7	16	2	4
NC-U of, Chapel Hill	1694	634	28	27	66	23	14	20	3	5
Nebraska-U of, Lincoln	735	721	13	15	48	19	10	8	7	7
Nevada-U of, Reno	939	359	7	14	47	30	12	4	0	5
New Hampshire-U of	572	404	5	17	39	23	5	7	2	1
New Mexico St U	374	0	13	14	39	23	7	9	5	2
New Mexico-U of	2117	1858	29	42	79	28	19	10	0	6
New Orleans-U of	862	88	9	10	42	9	9	4	5	1
New York U (NYU)	575	185	20	23	54	44	11	5	1	7
NJIT/Rutgers U-Newark			6	6	40	27	17	1	3	6
NM Inst of Mining & Tech	170	0	13	38	23	9	7	12	3	1
North Carolina St U	2787	581	24	30	101	33	19	23	2	12
North Dakota St U	1044	173	3	6	4	4	1	5	0	1
North Texas-U of	969	1808	15	10	58	36	13	11	1	5
Northeastern U	468	431	4	5	72	63	22	11	1	3
Notre Dame-U of	845	270	11	13	90	51	19	16	4	8
Ohio State U			50	45	167	84	46	30	2	14
Ohio U	787	1257	10	9	67	59	10	6	7	9
Oklahoma State U	1003	478	8	9	58	40	11	7	4	4
Oklahoma-U of	2018	0	26	45	69	33	23	13	0	2
Old Dominion U	767	277	12	10	37	27	12	4	2	6
Oregon State U	1483	992	25	40	35	8	7	25	2	3
Oregon-U of	1046	2737	71	53	85	38	13	19	6	7
Pennsylvania St U	3015	0	30	34	117	59	19	25	5	16
Pennsylvania-U of	635	308	2	25	92	43	24	16	5	10
Pittsburgh-U of	1766	0	18	18	85	58	16	7	5	10
Princeton U	385	126	26	20	108	51	20	18	0	17
Purdue U-West Lafayette	67	28	35	27	141	99	29	16	1	7
Rensselaer Polytech Inst	1137	44	23	40	66	46	24	22	6	6
Rhode Island-U of	847	150	12	3	18	14	5	8	0	2
Rice U	346	0	20	24	103	55	26	15	4	7
Rochester-U of	462	0	24	16	129	69	10	12	2	11
Rutgers U-New Brunswick	2246	679	35	35	111	73	22	33	5	17
South Carolina-U of	955	1935	12	6	52	29	9	8	3	1
Southern Cal-U of (USC)	463	0	9	10	81	68	16	3	6	5
Stanford U	1095	178	13	41	325	156	66	26	2	24
Stevens Inst of Tech	460	0	4	2	31	25	7	5	0	10
SUNY-Stony Brook U	1379	0	23	24	188	114	46	9	13	15
SUNY-U at Albany	393	477	31	32	44	27	14	15	5	8
SUNY-U at Buffalo	1706	159	15	33	91	64	30	12	2	5
Syracuse U	1072	1113	12	11	51	38	9	5	0	5

Temple U	2647	72	8	6	30	21	7	5	2	4
Texas A&M-College Station	2919	714	27	28	135	98	23	13	2	9
Texas Christian U	146	312	4	10	18	7	5	1	0	3
Texas Tech U	1528	644	20	19	43	22	9	6	2	1
Texas-U of, at Austin	2817	1139	52	98	274	148	57	40	13	31
TN-U of, Knoxville	980	594	13	29	80	39	24	5	2	5
Toledo-U of	1654	54	15	14	55	30	12	8	1	2
Tufts U	385	0	8	4	35	21	7	5	0	4
Tulane U	537	254	8	12	24		5	7	0	2
Utah State U	1194	702	13	33	27	13	7	15	2	2
Utah-U of	1397	687	39	93	112	59	33	30	6	4
Vanderbilt U	282	110	6	4	51	25	9	8	1	6
Virginia Tech	2484	172	26	22	45	19	11	22	2	5
Virginia-U of	1744	0	34	33	87	43	20	31	3	6
Wake Forest U	232	180	6	9	22	8	3	8	1	4
Washington State U	514	122	15	10	40	19	13	11	5	2
Washington U	364	52	16	13	95	39	22	15	2	6
Washington-U of	2235	0	71	142	194	34	30	70	9	22
Wayne State U	1441	1022	11	10	39	25	5	3	3	3
Wesleyan U	318	0	13	15	18	9	0	14	2	1
West Virginia U	1597	438	9	7	49	26	8	7	2	5
Western Michigan U	941	957	12	13	27	22	7	2	2	3
WI-U of, Madison	1045	0	23	43	163	51	25	26	6	19
WI-U of, Milwaukee	986	246	10	18	38	22	10	3	1	5
William & Mary-Coll of	423	301	17	20	57	20	10	19	1	5
Worcester Polytech Inst*	690	0	22	21	13	9	4	16	1	0
Yale U	747	0	24	25	117	61	21	17	0	11

2005 Roster Data

	Enrollments		Majors		Students			Degrees Awarded		
INSTITUTION	PHYS	SCI & ASTRO	JR	SR	TOT	FOR	1ST	BACH	MAST	PHD
AL-U of, Birmingham	819	875	6	14	28	11	7	3	1	4
AL-U of, Huntsville	221	68			32			9	4	3
AL-U of, Tuscaloosa	741	882	7	7	39	28	5	1	1	6
Alabama A&M U	1276	0	2	3	28	12	6	4	3	5
Alaska-U of, Fairbanks	200	103	10	11	25	3	4	5	1	1
AR-U of, Fayetteville	1358	445	21	42	31	10	8	19	5	1
Arizona State U	6945	2238		37	61	32	11	12	2	8
Arizona-U of	1984	6	51	74	87	40	16	39	5	5
Auburn U	1773	203	7	18	40	24	9	8	1	2
Baylor U	1185	578	4	5	23	13	5	2	0	3
Boston Coll	439	0	12	6	44	34	8	5	0	4
Boston U	937	0	19	28	113	69	19	21	0	13
Brandeis U	174	82	13	16	30	18	7	15	4	2
Brigham Young U	1996	5754	58	122	40	11	12	57	12	1
Brown U	249	122	11	16	108	86	16	19	0	11
CA-U of, Berkeley	2561	0	25	125	245	58	43	85	2	40
CA-U of, Davis	2590	557	55	90	205	48	41	61	8	15
CA-U of, Irvine	1745	276	22	43	120	42	25	19	5	9
CA-U of, Los Angeles	2626	0	51	78	147	32	26	49	4	10
CA-U of, Riverside	2215	266	19	19	72	36	24	15	5	6
CA-U of, San Diego	3941	563	60	92	130	31	31	38	3	14
CA-U of, Santa Barbara	1619	668	69	69	149	28	37	34	2	20
CA-U of, Santa Cruz	1184	0	47	41	50	3	3	25	2	8
Cal Inst of Tech	189	0	30	45	151	69	32	34	2	22
Carnegie Mellon U	796	73	37	42	67	38	21	27	1	9
Case Western Reserve U	500	0	26	14	69	44	13	13	5	5
Catholic U	258	51	3	3	37	11	6	3	1	1
Central Florida-U of	2486	4774	28	41	71	30	17	10	4	3
Chicago-U of	513	0	38	20	136	71	22	29	0	16
Cincinnati-U of	986	349	11	2	63	52	8	2	4	9
Clark U	112	131	6	6	14	8	3	2	0	4
Clarkson U	531	0	7	9	12	9	4	8	2	1
Clemson U	1386	430	19	24	56	21	10	15	2	4
Colorado School of Mines	870	0	61	84	40	4	5	39	0	7
Colorado St U-Fort Collins	1666	570	17	24	48	20	15	9	2	5
Colorado-U of, Boulder	2699	0	53	87	205	48	27	44	4	23
Columbia U	732	248	31	32	176	92	41	33	17	24
Connecticut-U of	1003	113	17	23	78	54	11	9	2	5
Cornell U	1987	0	68	58	280	127	33	66	15	27
Dartmouth Coll	326	359	15	17	42	18	9	15	5	5

Delaware-U of	450	995	14	20	83	67	20	6	4	1
Denver-U of	114	92	1	5	9	4	2	2	1	1
Drexel U					38	23	7	8	3	5
Duke U	1059	78	8	25	76	41	13	12	0	5
East Carolina U	1372	493	6	7	34	12	12	3	2	3
Florida Atlantic U	362	709	5	11	20	13	5	9	0	6
Florida Inst of Tech	365	0	12	13	27	11	5	14	2	2
Florida International U	1668	651	14	3	30	19	7	10	0	6
Florida State U	1404	1028	23	49	126	73	28	12	2	13
Florida-U of	2202	0	41	58	131	82	32	17	2	19
George Washington U	913	182	6	6	30		10	6	1	4
Georgia Inst of Tech	1888	48	32	34	120	79	29	26	0	10
Georgia State U	887	61		6	29		10	4	1	1
Georgia-U of	1106	1283	17	23	55	26	16	7	0	5
Hampton U	235	350	4	3	50	18	9	2	0	2
Hawaii-U of, at Manoa	446	19	6	15	37	13	10	2	1	1
Houston-U of	1247	423	136	20	98		10	8	12	11
Howard U	342	42	3	7	18	9	4	1	1	1
Idaho-U of	390	46	15	30	16	10	3	5	1	2
IL-U of, Chicago	1204	341	12	18	78	53	27	13	5	7
IL-U of, Urbana/Champaign			67	80	304	127	49	48	3	30
Illinois Inst of Tech	422	0	7	9	40	15	14	5	0	2
Indiana U Purdue U-Indpls	701	976	7	7	13	6	4	4	0	2
Indiana U-Bloomington	1142	435	14	14	82	52	17	10	3	13
Iowa State U	1071	0	13	26	76	52	19	14	3	8
Iowa-U of	644	0	13	32	57	33	10	12	2	6
Johns Hopkins U	714	32	8	10	97	49	21	16	2	6
Kansas State U	629	418	8	13	60	42	13	9	4	6
Kansas-U of	1552	0	12	20	54	31	10	7	8	5
Kent State U	3894	1186	8	18	59	46	14	4	2	4
Kentucky-U of	1021	1525	10	22	56	16	9	4	1	1
LA St U-Baton Rouge	2010	457	26	35	77	35	43	12	8	1
Lehigh U	657	140	6	11	41	16	12	7	4	6
MA-U of, Amherst	792	0	19	19	66	46	9	30	12	5
MA-U of, Lowell	645	1171	9	11	58	25	11	5	3	5
Maine-U of	765	713	11	16	31	5	6	10	0	1
Maryland-U of, Balt Cnty	1336	202	3	8	51	19	7	9	1	2
Maryland-U of, Coll Park	2558	0	49	57	220	86	40	31	0	29
Mass Inst of Tech (MIT)	873	0	76	78	232	122	24	78	7	36
Miami-U of	780	273	5	6	28	26	5	7	3	1
Michigan State U	2675	0	115	46	118	65	18	26	2	15
Michigan Technological U	982	69	5	12	38	29	13	5	3	2
Michigan-U of, Ann Arbor	842	20	20	69	194	78	29	28	1	23
Minnesota-U of, Minnpls	2579	0	16	74	145	80	35	27	4	12

Mississippi State U	947	500	12	14	32	24	8	4	1	3
MO-U of Columbia	955	312	16	23	45	30	8	10	2	3
MO-U of, Rolla	361	48	8	20	38	16	4	2	2	2
Montana State U	562	382	14	29	53	15	12	12	3	2
NC-U of, Chapel Hill	1965	659	29	25	78	20	18	17	4	7
Nebraska-U of, Lincoln	662	687	21	17	61	30	15	8	1	3
Nevada-U of, Las Vegas	605	725	12	13	17	4	3	3	1	2
Nevada-U of, Reno	891	460	9	12	46	29	5	9	2	2
New Hampshire-U of	517	188	12	6	34	21	7	12	1	2
New Mexico St U	355	0	8	16	47	28	9	7	2	2
New Mexico-U of	5396	5972	26	43	80	34	15	13	2	3
New Orleans-U of	735	127	8	8	37	10	10	2	4	1
New York U (NYU)	43	97	20	13	44	36	8	15	0	12
NJIT/Rutgers U-Newark (2)	1041	0	4	4	33	21	2	2	1	4
NM Inst of Mining & Tech	268	0	17	32	23	10	7	17	2	3
North Carolina St U	2946	463	28	35	106	31	23	16	1	11
North Dakota St U	1067	126	7	5	6	5	3	2	0	2
North Texas-U of	874	1025	38	10	52	32	8	12	3	2
Northeastern U	854	582	6	5	59	49	16	10	6	13
Northern Illinois U	523	448	14	24	39	11	6	2	8	2
Northwestern U	676	705	12	16	77	44	11	12	2	8
Notre Dame-U of	1095	220	10	11	97	54	25	12	4	13
Ohio State U	3802	0	58	47	166	76	20	30	0	12
Ohio U	760	1307	13	10	67	57	19	7	7	9
Oklahoma State U	698	468	5	9	41	22	8	2	2	6
Oklahoma-U of	2051	0	6	27	61	30	6	13	3	8
Old Dominion U	728	280	13	12	40	31	5	2	1	1
Oregon State U	1627	972	34	57	33	7	9	13	5	7
Oregon-U of	1136	2323	20	35	89	37	25	20	12	4
Pennsylvania St U	5872	0	30	34	122	69	18	28	3	9
Pennsylvania-U of	644	209	5	22	101	37	15	12	2	15
Pittsburgh-U of	1675	26	0	32	90	60	19	12	5	7
Portland State U	647	56	21	32	36	14	10	18	5	2
Princeton U	580	0	29	26	91	49	13	20	0	15
Purdue U-West Lafayette	56	54	45	42	143	110	23	29	3	10
Rensselaer Polytech Inst	1015	30	41	36	62	40	11	36	7	7
Rhode Island-U of	822	150	6	4	18	14	5	3	1	3
Rice U	359	0	19	17	123	59	38	14	3	6
Rochester-U of	593	0	26	21	118	57	16	14	2	22
Rutgers U-New Brunswick	2228	679	39	40	114	73	23	32	8	16
South Carolina-U of	1409	2005	15	12	47	27	8	3	5	3
South Florida-U of	2281	113	9	45	58	26	20	16	5	3
Southern Cal-U of (USC)	496	0	11	13	82	66	11	7	2	9
Stanford U	1020	160	37	23	310	153	56	22	4	34

Stevens Inst of Tech	480	0	5	4	34	24	7	2	1	7
SUNY-Stony Brook U	1515	0	22	20	195	109	45	11	9	22
SUNY-U at Albany			32	26	41	22	15	14		7
SUNY-U at Buffalo	1781	146	11	35	88	59	22	12	4	8
Syracuse U	1156	852	13	2	55	39	6	11	1	9
Temple U	2094	409	7	8	28	15	5	2	2	3
Texas A&M-College Station	2959	420	16	33	150	95	34	14	9	6
Texas Christian U	213	665	9	9	18	9	4	6	0	1
Texas Tech U	1718	661	7	12	36	19	12	4	5	2
Texas-U of, at Arlington	2111	1122	15	2	30	23	9	10	4	2
Texas-U of, at Austin	2668	1034	63	118	276	148	48	29	9	20
Texas-U of, at Dallas	1138	16	16	35	55	18	21	8	1	3
TN-U of, Knoxville	814	658	16	30	92	44	22	8	2	4
Toledo-U of	1734	58	6	15	58	31	9	7	0	2
Tufts U	852	0	10	5	33	19	5	7	3	4
Tulane U	510	10	8	9	20	6	1	8	0	1
Utah State U	648	808	14	24	33	14	9	15	1	3
Utah-U of	1351	672	50	65	107	51	23	21	7	4
Virginia Tech	3924	206	19	23	50	22	15	15	3	4
Virginia-U of	1437	0	34	42	87	38	15	36	3	7
Wake Forest U	420	383	9	9	18	6	4	8	0	4
Washington State U	549	135	14	14	43	22	12	6	3	2
Washington U	444	146	16	18	91	43	13	14	2	9
Washington-U of	2202	770	70	16	206	28	44	78	18	16
Wayne State U	1738	977	10	11	41	21	14	3	7	3
West Virginia U	1582	553	8	6	53	26	13	8	1	2
Western Michigan U	799	957	9	23	33	25	11	5	1	4
WI-U of, Madison	2319	0	15	55	167	47	31	22	8	23
WI-U of, Milwaukee	2173	1690	22	14	32	19	5	6	1	3
William & Mary-Coll of	459	326	20	26	55	16	11	22	4	3
Worcester Polytech Inst	820	0	15	13	21	11	12	8	0	4
Yale U	850	0	42	26	118	55	15	23	3	10

2006 Roster Data

	Enrollments		Majors		Students			Degrees Awarded		
INSTITUTION	PHYS	SCI & ASTRO	JR	SR	TOT	FOR	1ST	BACH	MAST	PHD
AL-U of, Birmingham	833	911	2	11	27	19	9	3	2	3
AL-U of, Tuscaloosa	702	1139	5	8	41	25	7	7	2	5
Alaska-U of, Fairbanks	262	121	5	8	23	6	5	5	3	2
AR-U of, Fayetteville	1402	453	17	41	35	16	17	10	4	3
Arizona State U	0	0	34	56	123	54	35	19	11	5
Arizona-U of	1818	11	32	67	78	37	11	34	4	4
Boston Coll	349	0	12	8	45	34	7	6	1	3
Boston U	876	0	34	24	107	57	18	25	4	8
Brandeis U	174	82	12	14	32	15	11	16	2	6
Brown U	263	94	19	13	108	81	16	17	1	17
Bryn Mawr Coll	254	0	9	5	2	0	1	6	0	2
CA-U of, Berkeley	3036	0	34	107	250	55	33	79	1	24
CA-U of, Davis	2413	453	36	81	185	37	23	50	2	18
CA-U of, Irvine	1510	556	21	49	125	43	25	13	3	9
CA-U of, Los Angeles	2653	0	41	84	144	28	24	44	1	23
CA-U of, Riverside	1223	0	12	21	88	41	34	6	0	6
CA-U of, San Diego			71	52	145	36	40	45	1	14
CA-U of, Santa Barbara	872	575	42	49	129	26	11	23	1	23
CA-U of, Santa Cruz	1184	0	50	28	60	6	12	34	3	6
Cal Inst of Tech	198	0	35	27	144	60	23	40	2	21
Carnegie Mellon U	730	51	42	36	61	34	9	33	0	10
Case Western Reserve U	578	0	18	27	49	26	6	11	5	6
Catholic U	224	50	2	0	29	8	4	2	2	2
Central Florida-U of	1875	4788	15	40	50	23	13	13	7	5
Chicago-U of	358	73	46	41	127	68	12	32	2	23
Cincinnati-U of	1092	354	10	10	55	44	11	2	2	9
Clark U	114	124	2	6	14	5	3	5	1	1
Clarkson U	536	0	11	10	17	11	5	11	3	4
Clemson U			17	19	54		12	17	7	5
Colorado School of Mines	1012	16	42	45	41	2	13	56	5	4
Colorado St U-Fort Collins	1532	566	25	25	48	19	14	4	3	6
Colorado-U of, Boulder	2222	0	62	80	219	64	50	34	7	17
Columbia U	885	181	34	31	167	98	36	39	9	28
Connecticut-U of	1317	116	22	20	79	53	14	10	2	7
Cornell U	2016	0	66	80	278	131	45	51	7	33
Dartmouth Coll	372	318	18	17	45	16	8	17	6	1
Delaware-U of	867	1245	15	17	81	67	9	13	2	2
Drexel U	1574	789	14	7	36	17	9	4	4	3
Duke U	1155	60	25	20	67	35	16	15	0	11
Florida A&M U	648	624	1	3	17	4	4	3	1	1

Florida Atlantic U	686	1323	7	8	25	14	3	4	1	3
Florida International U	956	374	20	10	32	25	5	4	0	1
Florida State U	2462	1138	22	42	130	73	22	23	9	10
Florida-U of	2523	0	31	56	132	83	28	36	5	21
George Mason U	610	0	9	15	41	2	9	4	4	1
George Washington U	949	950	11	10	25	16	6	9	1	2
Georgia Inst of Tech	1842	190	33	38	121	69	21	9	1	12
Georgia-U of	1163	956	18	17	58	27	13	6	1	7
Hawaii-U of, at Manoa	468	0	15	12	36	14	4	7	0	2
Houston-U of	2262	514	18	29	92	74	20	13	1	22
Howard U	686	72	0	3	19	8	2	7	0	3
Idaho-U of	335	85	12	28	19	11	8	13	2	3
IL-U of, Chicago	1248	120	11	15	82	57	12	11	2	6
IL-U of, Urbana/Champaign	7578	0	41	70	298	159	53	40	5	41
Indiana U-Bloomington	1062	311	6	20	89	73	17	11	7	3
Iowa State U	990	0	10	32	72	49	17	5	3	10
Iowa-U of	1010	0	15	19	59	29	15	16	1	5
Johns Hopkins U	780	23	15	7	98	44	17	11	5	13
Kansas State U	1394	756	5	15	76	50	20	6	0	4
Kansas-U of	2327	0	5	30	47	29	10	15	7	4
Kent State U	3688	1206	8	20	60	43	7	9	0	2
Kentucky-U of	1239	1499	13	20	60	38	15	4	4	3
LA St U-Baton Rouge	4804	3105	20	29	84	34	37	20	2	7
Lehigh U	395	74	10	11	46	18	7	9	1	7
MA-U of, Amherst	789	0	15	18	75	51	18	16	7	5
MA-U of, Lowell	599	1186	12	11	72	34	18	5	1	6
Maine-U of	444	280	12	18	36	6	6	4	0	1
Maryland-U of, Balt Cnty	981	185	24	41	51	10	10	13	1	5
Maryland-U of, Coll Park	2643	0	56	63	218	86	31	36	3	33
Mass Inst of Tech (MIT)	811	0	67	90	255	126	67	83	5	40
Michigan State U	2241	0	81	42	142	77	27	31	0	17
Michigan Technological U	1052	46	18	8	41	29	9	10	4	2
Michigan-U of, Ann Arbor	972	17	23	69	196	70	40	39	4	31
Minnesota-U of, Minnpls	2519	0	20	58	133	66	17	27	6	16
Mississippi State U	929	498	4	14	36	27	6	6	0	1
Mississippi-U of	519	519	12	15	29	11	6	10	1	1
MO-U of Columbia	656	210	15	25	38	24	12	7	1	8
MO-U of, Kansas City	414	278	6	12	27	11	4	3	0	2
MO-U of, Rolla	356	34	15	21	30	13	6	7	4	9
MO-U of, St. Louis (1)	270	185	6	12	20	6	3	7	4	3
Montana State U	553	390	12	33	56	14	7	16	1	3
NC-U of, Chapel Hill	1866	651	31	30	76	14	12	9	0	12
Nebraska-U of, Lincoln	1472	1147	19	17	59	28	11	8	4	5
Nevada-U of, Reno	919	554	10	11	47	26	6	5	0	3

New Hampshire-U of	575	247	12	10	40	21	10	6	2	7
New Mexico St U	493	0	13	10	39	28	4	9	1	5
New Mexico-U of	1847	1753	32	44	123	58	28	15	6	6
New Orleans-U of	420	170	23	7	9	3	1	2	3	2
NM Inst of Mining & Tech	225	0	13	30	27	9	8	10	1	3
North Carolina St U	3030	344	35	47	113	35	20	14	3	6
North Texas-U of	747	1158		23	58	30	28	7	1	3
Northeastern U	1130	577	17	5	51	41	12	4	3	5
Northern Illinois U	525	465	13	23	56	14	16	15	2	5
Northwestern U	832	791	14	30	79	44	13	7	0	8
Notre Dame-U of	795	502	25	12	91	45	10	11	4	9
Ohio State U	2179	0	55	64	171	79	21	30	2	18
Ohio U	1111	1023	8	11	58	47	9	7	4	12
Oklahoma State U	900	408	5	13	39	26	14	6	3	7
Oklahoma-U of	1953	0	12	20	60	30	9	12	6	3
Old Dominion U	806	311	8	21	39	29	7	3	2	3
Oregon State U	1586	799	34	52	36	6	5	26	2	1
Oregon-U of	1078	2319	20	37	81	34	11	17	12	6
Pennsylvania St U	2921	0	41	45	117	66	23	40	5	17
Pennsylvania-U of	501	29	9	14	102		13	11	5	9
Pittsburgh-U of	1630	55	14	32	92	62	19	18	1	10
Portland State U	681	42	16	38	31	12	12	25	7	2
Princeton U			27	25	99	47	24	26	0	21
Purdue U-West Lafayette	1592	311	36	49	147	93	29	28	9	15
Rensselaer Polytech Inst	1094	300	17	42	66	44	18	18	7	8
Rhode Island-U of	774	140	6	6	15	12	4	2	3	2
Rice U	401	0	18	30	125	65	31	14	3	8
Rochester-U of	555	0	26	24	123	58	25	25	1	14
Rutgers U-New Brunswick	2279	654	38	43	107	68	19	33	6	15
Rutgers U-Newark/NJIT			23	4	37	25	15	4	3	4
South Carolina-U of	888	1231	11	20	47	22	7	2	0	4
South Florida-U of	2406	0	18	26	55	21	11	11	6	3
Southern Cal-U of (USC)	1137	0	8	7	82	64	13	9	2	5
Southern Methodist U	261	64	5	11	15	8	5	4	2	1
Stanford U	896	173	33	31	328	148	56	29	2	49
Stevens Inst of Tech	490	0	6	5	37	27	10	4	0	5
SUNY-Stony Brook U	1472	0	28	31	186	109	26	9	6	20
SUNY-U at Albany	445	875	33	32	40	27	18	15	5	9
SUNY-U at Buffalo	1713	131	10	33	103	76	31	16	3	7
Syracuse U	683	454	12	20	55	38	6	6	0	3
Temple U			14	9	28	14	4	7	1	1
Texas A&M-College Station	3435	221	27	27	150	87	33	22	6	15
Texas Tech U	1798	304	7	6	40	19	10	5	7	2
Texas-U of, at Austin	2663	1011	54	95	270	137	44	37	17	29

Texas-U of, at Dallas	671	203	31	30	77	30	15	11	8	6
TN-U of, Knoxville	1068	1060	11	11	103	45	28	11	8	13
Toledo-U of	1412	61	4	12	57	25	8	6	3	6
Tufts U	862	0	12	11	30	16	5	6	2	4
Tulane U			5	3	20	9	3	4	0	2
Utah State U	616	856	18	30	34	14	5	13	0	2
Utah-U of	1149	637	48	60	103	50	22	40	8	9
Vanderbilt U	371	101	4	18	75	28	12	12	2	3
Virginia Polytech Inst & St U	2351	196	17	22	55	23	15	12	4	1
Virginia-U of	1528	0	30	39	93	43	14	43	1	10
Wake Forest U	420	344	14	11	21	7	6	5	1	2
Washington State U	830	393	2	16	58	34	19	2	1	1
Washington U	426	127	18	17	90	39	14	15	1	12
Washington-U of	1066	237	78	144	199	26	27	61	16	19
Wayne State U	1577	841	8	14	49	32	19	7	4	3
Wesleyan U	235	0	19	16	8	4	2	10	4	3
West Virginia U	1831	586	10	11	50	22	7	4	4	6
Western Michigan U	727	738	15	25	37	25	8	14	1	1
WI-U of, Madison	2368	0	17	83	158	37	33	35	4	26
WI-U of, Milwaukee	1544	1220	11	25	36	25	10	3	3	3
William & Mary-Coll of	457	279	20	24	61	19	12	20	1	10
Worcester Polytech Inst	1582	69	35	9	17	9	3	10	0	3
Yale U	970	0	38	38	135	58	34	28	1	13

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	Enrollments		Majors		Students			Degrees Awarded		
INSTITUTION	PHYS	SCI & ASTRO	JR	SR	TOT	FOR	1ST	BACH	MAST	PHD
AL-U of, Birmingham	992	734	6	4	26	18	7	6	2	6
AL-U of, Huntsville	271	76	9	10	50	14	14	12	5	4
AL-U of, Tuscaloosa	850	1239	6	13	43	28	8	2	1	2
Alabama A&M U	354	804	0	5	32	18	8	4	2	3
Alaska-U of, Fairbanks	195	62	10	9	22	6	3	5	0	2
AR-U of, Fayetteville	1403	510	22	40	44	21	13	27	13	4
Arizona State U	2781	135	46	47	107	56	29	19	7	6
Arizona-U of	1957	0	36	59	89	43	15	34	1	9
Auburn U	2731	217	6	7	47	25	12	9	0	5
Baylor U	1426	511	11	6	29	17	9	3	5	2
Boston Coll	400	0	20	12	42	31	9	8	3	9
Boston U	1949	17	19	36	119	75	22	17	2	14
Brandeis U	181	69	7	16	35	18	5	14	2	5
Brigham Young U	2114	4671	65	115	27	7	10	62	6	1
Brown U	355	97	21	23	107	77	18	13	0	11
Bryn Mawr Coll	319	0	5	10	3	0	1	5	0	0
CA-U of, Berkeley	3307	0	48	131	240	57	31	61	2	34
CA-U of, Davis	2763	799	39	49	180	51	45	62	9	31
CA-U of, Irvine	1668	548	22	39	128	40	32	38	3	13
CA-U of, Los Angeles	2714	0	49	64	154	39	26	48	2	16
CA-U of, San Diego	3255	361	52	107	159	41	39	36	3	15
CA-U of, Santa Barbara	747	251	45	52	128	24	28	28	0	24
CA-U of, Santa Cruz	853	0	48	50	59	3	10	26	0	8
Cal Inst of Tech	197	0	32	31	144	61	32	25	0	24
Carnegie Mellon U	868	63	36	45	62	31	13	32	0	10
Case Western Reserve U	579	0	28	21	51	25	12	23	4	6
Catholic U	273	42	0	3	29	10	2	1	1	1
Central Florida-U of	1899	5331	20	52	106		21	8	8	6
Chicago-U of	428	0	42	41	131	60	26	39	2	21
Cincinnati-U of	1448	1072	5	9	57	45	10	6	3	13
Clark U	117	116	6	1	12	3	2	5	2	1
Clarkson U	459	0	7	6	17	11	3	8	1	0
Clemson U			15	21	49	18	20	15	3	6
Colorado School of Mines	1002	0	57	83	51	1	18	59	3	5
Colorado St U-Fort Collins	1711	533	23	25	49	14	12	17	3	4
Colorado-U of, Boulder	2394	1341	72	98	207	65	27	38		25
Columbia U	801	183	26	36	160	81	29	37	9	19
Connecticut-U of	1299	112	19	28	87	48	20	7	0	5
Cornell U	1941	0	59	75	276	130	40	75	8	42
Dartmouth Coll	339	282	16	22	45	15	9	13	0	8

Delaware-U of	793	803	23	28	76	63	7	12	1	6
Drexel U	2130	283	19	10	34	11	8	4	2	2
Duke U	1209	62	18	18	66	39	10	18	0	5
East Carolina U	1294	422	8	4	39	10	14	9	7	2
Emory U	810	349	7	15	23	13	4	5	0	0
Florida A&M U	537	551	2	4	13	3	2	1	1	4
Florida Atlantic U	668	1025	4	7	7	3	5	4	1	2
Florida Inst of Tech	416	0	12	18	17	9	4	18	2	2
Florida International U	1639	972	20	7	34	17	8	12	3	2
Florida State U	2440	1450	20	39	128	76	35	24	5	15
Florida-U of	2900	186	34	48	135	84	30	33	3	17
George Mason U	517	0	21	15	47		14	6	8	1
George Washington U	227	471	4	8	28	18	4	5	0	0
Georgetown U	346	59	14	13	30	17	5	7	0	0
Georgia Inst of Tech	2054	198	34	53	109	58	17	17	6	20
Georgia State U	950	41	17	20	42	29	8	8	2	5
Georgia-U of	1231	1188	14	9	57	31	11	7	2	5
Hampton U	259	0	4	6	48	24	8	3	1	2
Hawaii-U of, at Manoa	483	0	13	13	34	12	6	6	2	1
Howard U	342	42	0	1	17	6	3	3	0	5
Idaho State U	579	271	12	20	51	19	11	3	6	3
Idaho-U of	665	134	52	12	23	11	8	9	1	3
IL-U of, Chicago	644	107	15	24	71	50	10	8	10	2
IL-U of, Urbana/Champaign	7865	0	64	88	295	147	37	60	8	38
Illinois Inst of Tech	485	0	3	11	27	15	4	2	0	2
Indiana U Purdue U-Indpls	848	963	4	7	18	8	6	3	1	0
Indiana U-Bloomington	1072	362	12	15	101	59	22	16	2	5
Iowa State U	969	0	23	26	79	6	20	14	1	5
Iowa-U of	1107	0	22	20	61	28	9	11	2	3
Johns Hopkins U	802	29	16	20	108	58	22	6	2	10
Kansas State U	1855	610	3	11	75	51	13	8	2	8
Kansas-U of	1572	0	10	17	46	25	7	9	3	3
Kent State U	3500	904	22	16	56	40	6	14	1	4
Kentucky-U of	1816	1688	7	25	51	32	8	6	4	3
LA St U-Baton Rouge	438	650	67	28	79	27	12	12	10	4
Lehigh U	334	109	5	11	47	23	11	6	0	4
MA-U of, Amherst	810	0	17	14	72	51	10	18	2	13
MA-U of, Lowell	555	962	11	10	74	36	25	8	8	2
Maine-U of	738	744	17	18	38	3	12	8	3	2
Maryland-U of, Balt Cnty	892	48	21	33	46	20	11	12	1	7
Maryland-U of, Coll Park	2699	0	72	81	215	73	42	59	2	30
Mass Inst of Tech (MIT)	842	0	69	97	249	130	33	85	2	34
Miami-U of	742	159	5	8	27	23	9	6	1	5
Michigan State U	2997	0	79	54	142	73	37	25	9	21

Michigan Technological U	987	97	19	27	45	32	11	9	3	2
Michigan-U of, Ann Arbor	1010	20	27	62	203	72	37	44	4	27
Minnesota-U of, Minnpls	2489	0	17	49	128	62	27	36	5	22
Mississippi State U	1020	531	8	12	43	36	11	6	4	0
Mississippi-U of	600	805	9	12	32	13	8	5	2	2
MO-U of Columbia	2243	233	17	12	41	24	9	15	2	5
MO-U of, Kansas City	383	235	4	10	34	14	12	3	3	3
MO-U of, Rolla	400	56	13	23	32	14	8	13	4	2
MO-U of, St. Louis	328	146	12	18	21	5	7	5	0	1
Montana State U	539	393	19	20	58	13	12	18	1	4
NC-U of, Chapel Hill	2079	521	32	32	79	11	15	17	3	6
Nebraska-U of, Lincoln	1010	922	15	17	55	26	6	10	1	3
Nevada-U of, Las Vegas	660	728	25	19	22	7	5	5	0	1
New Hampshire-U of	704	175	22	14	43	20	12	11	1	5
New Mexico St U	620	0	18	21	40	25	7	4	1	9
New Mexico-U of	735	952	26	44	108	53	16	10	8	9
NM Inst of Mining & Tech	235	0	22	20	31	10	12	21	3	2
North Carolina St U	2954	318	37	55	110	36	25	24	1	16
North Dakota St U	1068	163	12	9	6	4	2	2	1	0
North Texas-U of	1887	2949	22	33	54	30	5	7	2	4
Northeastern U	1685	373	14	14	54	44	12	7	3	8
Northern Illinois U	561	479	14	24	59	12	13	8	9	0
Northwestern U	827	999	16	9	82	41	15	18	2	9
Notre Dame-U of	826	519	27	26	91	45	23	11	2	15
Oakland U	608	295	15	8	24	10	2	12	1	2
Ohio State U	3922	0	55	58	167	62	21	50	6	18
Ohio U	731	887	10	23	65	53	21	6	5	7
Oklahoma State U	700	466	10	11	41	32	9	10	2	6
Oklahoma-U of	1602	0	12	26	65	33	15	5	5	3
Old Dominion U	792	275	9	15	42	30	8	13	0	2
Oregon State U	1741	807	31	52	35	5	7	13	2	1
Oregon-U of	1249	2513	16	33	78	29	10	20	5	8
Pennsylvania St U	3334	0	40	46	125	73	25	35	3	13
Pennsylvania-U of	513	24	17	11	103	33	21	13	2	15
Pittsburgh-U of	1566	86	25	33	80	51	9	19	4	7
Portland State U	591	62	19	27	43	16	21	15	6	0
Princeton U			20	27	112	55	20	25	0	16
Purdue U-West Lafayette	1874	411	24	40	138	88	16	34	4	13
Rensselaer Polytech Inst	2027	297	35	25	66	42	18	35	3	8
Rhode Island-U of	768	121	5	3	15	12	4	7	1	2
Rochester-U of	506	123	23	28	114	55	14	24	4	10
Rutgers U-New Brunswick	2447	580	39	38	103	67	22	39	10	14
South Carolina-U of	1646	1554	12	12	47	27	10	7	6	2
Southern Cal-U of (USC)	1030	0	8	18	78	60	11	17	1	11

Stanford U	891	84	20	31	342	157	64	30	6	45
Stevens Inst of Tech	520	0	12	3	35	26	8	4	1	5
Sthrn IL U-Carbondale	524	174	6	18	29	19	5	3	2	2
SUNY-Stony Brook U	1682	0	18	27	194	132	50	24	6	27
SUNY-U at Buffalo	1881	123	21	34	105	72	23	14	4	8
Syracuse U	995	853	17	15	64	44	12	12	0	8
Temple U	2845	216	6	15	32	14	9	5	0	4
Texas A&M-College Station	3595	408	29	29	149	81	29	19	8	12
Texas Christian U	191	445	6	9	18	8	1	11	0	3
Texas Tech U	236	189	4	10	31	19	13	2	8	6
Texas-U of, at Arlington	2112	959	12	23	38	24	9	6	4	4
Texas-U of, at Austin	2698	1088	54	110	255	129	36	37	14	28
Texas-U of, at Dallas	610	25	29	32	75	24	31	11	8	1
TN-U of, Knoxville	1067	1043	33	24	105	44	23	11	7	10
Toledo-U of	1487	77	4	6	51	23	12	5	1	2
Tufts U	412	0	13	16	30	14	4	10	1	2
Tulane U			8	1	23	13	8	5	0	2
Utah State U	743	698	19	42	27	8	3	12	0	6
Utah-U of	1274	734	35	105	95	41	16	39	7	8
Virginia Polytech Inst & St U	4738	271	23	23	66	32	18	18	2	3
Virginia-U of	1586	0	42	36	105	60	27	33	3	12
Wake Forest U	385	355	16	13	20	5	2	13	1	3
Washington State U	923	981	10	19	60	35	16	9	2	4
Washington U	462	179	16	23	90	32	23	15	1	14
Washington-U of	2312	229	64	131	137	24	22	59	12	13
Wayne State U	1818	760	8	17	59	35	15	3	5	1
Wesleyan U	318	0	13	19	15	9	6	16	0	1
West Virginia U	1449	605	9	13	58	20	19	6	1	4
Western Michigan U	1115	618	17	18	38	26	6	7	1	1
WI-U of, Madison	4617	0	20	70	161	37	25	44	9	20
WI-U of, Milwaukee	1845	692	12	21	41	27	10	12	3	3
William & Mary-Coll of	509	258	16	20	59	19	13	21	2	11
Worcester Polytech Inst	1547	33	20	25	17	9	1	9	1	1
Yale U	860	0	33	25	123	47	17	36	1	15

2008 Roster Data

	Enrollments		Majors		Students			Degrees Awarded		
INSTITUTION	PHYS	SCI & ASTRO	JR	SR	TOT	FOR	1ST	BACH	MAST	PHD
AL-U of, Birmingham	954	858	6	9	29	18	8	3	5	1
AL-U of, Huntsville	555	76	17	21	55	11	12	13	7	2
AL-U of, Tuscaloosa	358	599	6	17	39	24	8	5	2	8
Alabama A&M U	259	420	1	4	24	12	4	1	1	5
Alaska-U of, Fairbanks	230	38	8	18	27	7	6	3	0	2
AR-U of, Fayetteville	2005	713	24	39	49	26	12	17	6	2
Arizona State U	2429	177	53	52	104	56	18	22	13	8
Arizona-U of	2320	0	44	78	80	35	15	23	1	5
Auburn U	3544	426	4	7	44	21	10	5	2	4
Baylor U	1361	608	5	9	28	12	3	4	2	1
Boston Coll	452	0	14	20	49	35	14	11	1	3
Boston U	1223	0	20	21	110	54	19	27	5	15
Brandeis U	187	68	10	7	36	19	12	11	1	5
Brigham Young U	2069	5292	74	121	31	4	6	59	8	1
Brown U	375	52	19	29	109	79	15	25	2	13
Bryn Mawr Coll	226	0	5	4	4	0	2	10	1	0
CA-U of, Berkeley	3288	0	39	125	250	60	41	69	1	27
CA-U of, Davis	2917	715	68	54	190	21	38	34	7	21
CA-U of, Irvine	1756	633	34	51	134	40	24	16	9	15
CA-U of, Los Angeles	2847	0	39	75	152	41	21	47	1	15
CA-U of, Riverside	1420	526	15	19	100	46	20	6	7	4
CA-U of, San Diego	3411	463	40	85	168	35	25	52	4	13
CA-U of, Santa Barbara	4264	763	51	47	142	27	25	44	2	13
CA-U of, Santa Cruz	1135	0	41	61	60	4	15	27	2	7
Cal Inst of Tech	208	0	25	26	143	63	21	30	0	21
Carnegie Mellon U	737	50	30	31	61	31	11	36	0	9
Case Western Reserve U	701	0	34	31	50	24	13	16	0	4
Catholic U	293	30	2	2	31	10	5	3	0	5
Central Florida-U of	1914	4536	17	39	68	45	18	13	5	2
Chicago-U of	359	78	35	37	132	57	24	40	1	21
Cincinnati-U of	1230	425	9	2	55	40	15	9	1	9
Clark U	123	130	3	7	10	3	0	1	0	1
Clarkson U	523	0	2	8	16	9	5	6	3	4
Clemson U	1578	314	21	17	41	18	9	13	4	8
Colorado School of Mines	985	0	59	86	60	6	23	54	4	6
Colorado St U-Fort Collins	1240	568	22	36	56	16	19	11	6	4
Colorado-U of, Boulder	2304	0	47	58	213	67	36	23	4	26
Columbia U	959	180	27	43	161	87	35	36	9	21
Connecticut-U of	1232	107	26	22	90	50	11	16	0	5
Cornell U	1926	0	62	67	264	123	34	68	8	34

Dartmouth Coll	363	379	18	13	45	17	7	21	4	5
Delaware-U of	820	656	23	31	71	57	10	12	2	16
Denver-U of	236	84	5	6	16	4	6	6	1	0
Drexel U	1885	198	23	11	38	13	8	6	1	2
Duke U	613	59	9	24	65	38	11	14	1	14
East Carolina U	1390	552	4	5	41	8	20	3	7	5
Emory U	882	321	15	9	25	15	2	13	0	3
Florida A&M U	946	1309	5	8	14	3	3	1		2
Florida Atlantic U	388	646	12	7	28	20	8	6	0	0
Florida Inst of Tech	495	114	16	30	20	11	4	17	2	1
Florida International U	1675	931	36	14	35	21	7	6	5	2
Florida State U	1081	450	21	45	119	60	15	6	9	21
Florida-U of	2778	0	27	50	134	83	26	37	2	19
George Mason U	750	564	13	21	54	8	29	5	6	1
George Washington U	257	474	4	6	28	11	3	3	1	2
Georgetown U	347	60	16	16	29	16	5	13		1
Georgia Inst of Tech	2185	218	32	43	100	54	15	38	7	15
Georgia-U of	1258	1084	11	17	60	29	8	10	5	3
Hampton U	278	0	3	6	39	21	1	3	2	3
Hawaii-U of, at Manoa	330	273	10	7	27	6	2	2	3	3
Houston-U of	3164	460	10	14	96	74	11	16	1	9
Howard U	342	42	5	6	17	4	5	1	0	2
Idaho State U	616	227	12	26	50	21	6	5	4	3
Idaho-U of	1069	97	11	17	28	14	8	13	3	0
IL-U of, Chicago	1427	283	16	28	74	56	11	8	2	7
IL-U of, Urbana/Champaign	8128	0	69	82	302	153	43	61	3	28
Illinois Inst of Tech	478	0	9	7	29	16	4	8	1	2
Indiana U Purdue U-Indpls	812	848	5	9	21	6	6	2	2	0
Indiana U-Bloomington	1132	344	15	30	85	51	15	8	4	13
Iowa State U	1042	366	18	30	97	57	19	13	1	5
Iowa-U of	966	841	19	25	70	27	15	10	2	6
Johns Hopkins U	789	46	17	17	104	56	14	15	1	10
Kansas State U	2586	140	5	7	71	49	8	7	0	7
Kansas-U of	2511	492	11	15	45	23	10	12	2	4
Kent State U	3291	656	18	28	51	38	5	6	2	6
Kentucky-U of	1214	1385	5	20	53	31	16	4	3	10
LA St U-Baton Rouge	1516	683	20	42	84	30	32	15	7	7
Lehigh U	328	139	5	7	46	21	10	7	4	9
MA-U of, Amherst	855	0	21	26	77	51	18	15	1	11
MA-U of, Lowell	897	1088	7	18	82	38	16	3	5	5
Maine-U of	654	285	22	15	39	3	6	6	2	2
Maryland-U of, Balt Cnty	1064	0	29	23	55	26	15	17	2	2
Maryland-U of, Coll Park	2877	0	77	142	230	83	44	52	3	32
Mass Inst of Tech (MIT)	894	0	65	80	238	129	33	88	3	37

Miami-U of	766	180	8	3	28	25	5	7	0	4
Michigan State U	3198	1491	102	62	128	61	19	26	3	13
Michigan Technological U	924	101	16	32	35	26	7	11	5	11
Michigan-U of, Ann Arbor	1770	0	26	54	214	71	40	35	0	24
Minnesota-U of, Minnpls	2711	0	11	75	137	65	27	33	2	14
Mississippi State U	1089	595	7	13	34	27	7	3	4	6
Mississippi-U of	693	798	6	15	29	17	4	7	3	2
Missouri U of Sci & Tech	361	46	12	22	33	16	7	12	0	1
MO-U of Columbia	654	241	14	24	49	30	15	4	2	5
MO-U of, Kansas City	550	30	2	8	44	22	14	6	1	1
MO-U of, St. Louis	296	132	10	16	23	6	10	7	5	2
Montana State U	563	389	21	31	59	11	10	13	2	5
NC-U of, Chapel Hill	984	367	25	28	90	12	25	17	1	5
Nebraska-U of, Lincoln	1698	1259	22	36	59	32	11	8	1	7
Nevada-U of, Las Vegas	700	672	14	23	27	7	5	5	1	0
Nevada-U of, Reno			12	17	50	27	11	3	1	3
New Hampshire-U of	657	137	21	15	49	25	11	9	0	3
New Mexico St U	676	0	10	18	37	26	10	4	1	0
New Mexico-U of	769	1055	22	35	117	48	31	22	15	11
New Orleans-U of	507	91	6	6	7	2	0	5	2	2
New York U (NYU)	1361	485	13	16	60		14	16	1	4
NJIT/Rutgers U-Newark			8	12	40	22	17	2	1	8
NM Inst of Mining & Tech	267	0	20	31	31	10	7	5	2	1
North Carolina St U	2669	321	41	50	120	52	26	27	2	12
North Dakota St U	1377	106	7	12	9	7	3	4	0	0
North Dakota-U of	675	190	4	4	9	4	1	4	2	0
North Texas-U of	2406	3418	24	30	56	27	12	15	0	8
Northeastern U	1101	495	25	10	57	42	16	14	3	8
Northern Illinois U	525	522	14	20	47	12	12	9	4	3
Northwestern U	744	650	15	4	76	40	14	21	3	10
Notre Dame-U of	1439	835	32	31	93	44	13	19	0	10
Oakland U	763	283	7	21	26	11	9	6	2	4
Ohio State U	3997	0	45	46	162	48	35	50	3	18
Ohio U	808	897	13	12	79	65	25	10	1	7
Oklahoma State U	1033	514	5	7	47	35	7	3	3	3
Oklahoma-U of	1713	335	7	7	69	38	9	8	1	4
Old Dominion U	814	259	11	12	45	35	7	6	0	2
Oregon State U	1779	813	23	29	31	10	9	14	7	6
Oregon-U of	1168	1974	32	37	77	27	20	28	3	9
Pennsylvania St U	3147	0	37	49	120	63	15	27	3	17
Pennsylvania-U of	486	35	3	34	96	23	16	14	3	17
Pittsburgh-U of	1736	1315	14	34	80	52	17	16	4	5
Portland State U	666	47	27	33	46	12	10	19	9	0
Princeton U	491	0	32	17	121	68	27	27	0	16

Purdue U-West Lafayette	3964	484	28	34	141	84	25	28	2	18
Rensselaer Polytech Inst	1762	325	32	34	67	47	17	22	2	8
Rhode Island-U of	799	347	4	6	16	13	3	2	0	3
Rice U	390	47	20	27	126	68	19	21	8	24
Rochester-U of	538	286	20	25	114	52	20	20	4	21
Rutgers U-New Brunswick	2594	537	34	39	106	58	27	34	9	14
South Carolina-U of	981	1485	12	19	53	37	12	8	1	3
South Florida-U of	3756	0	29	43	68	32	13	13	4	6
Southern Cal-U of (USC)	1096	329	13	14	76	54	9	8	0	10
Stanford U	710	189	27	35	325	150	32	30	2	39
Stevens Inst of Tech	545	0	10	14	39	30	18	4	0	4
SUNY-Stony Brook U	1839	706	25	40	180	103	30	24	0	24
SUNY-U at Albany	714	941	36	37	44	22	4	12	5	4
SUNY-U at Buffalo	1895	114	20	40	90	60	9	8	10	7
Syracuse U	1322	792	13	26	59	37	12	11	1	12
Temple U	2851	152	8	13	37	15	7	5	0	0
Texas A&M-College Station	3470	412	21	45	147	80	33	11	6	17
Texas Christian U	241	811	8	11	15	7	1	3	0	5
Texas Tech U	725	210	5	3	44	27	13	6	3	2
Texas-U of, at Austin	2803	1067	42	102	234	114	37	35	13	41
Texas-U of, at Dallas	835	58	30	33	76	27	21	11	6	5
TN-U of, Knoxville	1205	1135	9	22	112	50	23	4	11	7
Toledo-U of	1534	1508	11	4	51	23	11	2	3	9
Tulane U				12	29	18	6	8	1	2
Utah State U	791	959	26	38	27	9	5	21	1	6
Utah-U of	1336	745	53	110	85	39	22	37	4	12
Vanderbilt U	560	65	19	12	77	35	13	14	0	12
Virginia Polytech Inst & St U	2476	183	30	27	70	38	15	14	2	5
Virginia-U of	1542	0	47	47	91	53	11	35	1	17
Wake Forest U	414	340	9	16	27	9	11	13	0	4
Washington State U	804	895	8	28	58	29	10	5	2	5
Washington U	459	0	22	21	78	29	10	21	1	19
Washington-U of	2619	774	83	113	180	25	23	55	11	17
Wayne State U	2021	681	10	23	59	37	10	3	8	4
Wesleyan U	278	0	19	12	18	11	4	22	1	0
West Virginia U	1489	607	9	16	62	20	13	11	2	7
Western Michigan U	820	675	8	21	38	24	5	13	2	2
WI-U of, Madison	1292	62	22	96	153	38	25	39	9	18
WI-U of, Milwaukee	1602	411	4	22	38	26	5	6	0	4
William & Mary-Coll of	480	325	16	17	65	23	16	22	2	6
Worcester Polytech Inst	1695	0	16	18	16	9	3	19	1	3
Yale U	921	0	36	22	115	38	15	26	0	24

2009 Roster Data

	Enrollments		Majors		Students			Degrees Awarded		
INSTITUTION	PHYS	SCI & ASTRO	JR	SR	TOT	FOR	1ST	BACH	MAST	PHD
AL-U of, Birmingham	985	849	5	14	33	15	11	3	2	2
AL-U of, Huntsville	623	72	19	30	55	12	13	14	6	3
AL-U of, Tuscaloosa	986	1253	11	15	40	22	11	14	2	7
Alabama A&M U	240	90	4	3	24		3	2	2	4
AR-U of, Fayetteville	1617	493	33	43	52	28	13	19	7	4
Arizona State U	3135	188	70	69	109	70	16	17	7	16
Arizona-U of	2318	27	55	70	94	49	18	32	5	8
Auburn U	1891	211	5	7	44	17	8	3	1	5
Baylor U	1472	602	7	12	27	11	7	5	1	5
Boston Coll	295	113	15	11	47	30	8	20	0	7
Boston U	564	0	24	13	104	49	18	11	1	16
Brandeis U	159	44	5	9	41	17	8	7	2	3
Brigham Young U	2163	4474	69	130	36	5	13	43	2	3
Brown U	431	59	25	18	101	68	19	31	0	18
Bryn Mawr Coll	233	0	6	6	3	0	0	4	0	0
CA-U of, Berkeley	3358	0	38	141	258	57	48	76	1	27
CA-U of, Davis	2831	719	43	60	203	54	39	27	8	14
CA-U of, Irvine	3306	416	29	41	136	31	25	23	5	13
CA-U of, Los Angeles	2714	0	51	69	144	32	23	63	2	30
CA-U of, Riverside	1886	439	17	24	109	50	24	13	3	9
CA-U of, San Diego	3573	372	47	82	168	42	29	38	1	17
CA-U of, Santa Barbara	3908	723	44	95	132	16	18	44	1	12
CA-U of, Santa Cruz	1231	0	39	94	59	0	15	40	1	15
Cal Inst of Tech	218	0	32	25	140	63	16	28	5	19
Carnegie Mellon U	756	68	34	36	69	38	14	29	1	4
Case Western Reserve U	657		32	34	50	21	14	21	4	10
Catholic U	257	48	1	1	25	8	5	2	2	4
Central Florida-U of	2096	3792	31	43	75	49	18	10	2	4
Chicago-U of	281	0	51	42	124	69	18	36	2	17
Cincinnati-U of	1276	479	8	6	57	43	14	1	3	6
Clark U	130	130	4	4	11	4	3	5	0	0
Clarkson U	592	0	8	5	13	7	1	7	1	2
Clemson U	22	15	11	21	47	23	18	14	6	8
Colorado School of Mines	1060	0	52	85	77	8	25	60	6	7
Colorado St U-Fort Collins	2097	526	19	31	53	14	10	12	5	2
Colorado-U of, Boulder	2338	1180	93	149	208	64	28	44	3	28
Columbia U			10	8	65	24	21	16	9	6
Connecticut-U of	815	191	13	22	91	51	11	14	2	6
Cornell U	2081	0	77	71	251	119	42	51	6	41
Dartmouth Coll	415	442	12	18	52	19	13	13	2	5

Delaware-U of	1055	650	13	19	77	52	19	24	1	11
Denver-U of	203	95	18	5	18	3	4	4	1	0
Drexel U	2224	258	19	16	38	9	7	5	2	2
Duke U	1303	45	17	12	68	43	13	15	1	8
East Carolina U	1494	567	5	12	35	8	7	3	6	1
Emory U	972	327	15	16	25	17	5	9	1	2
Florida A&M U	899	1263	5	6	18	4	6	5	1	0
Florida Atlantic U	1345	1769	7	15	26	17	5	3	1	1
Florida Inst of Tech	516	0	18	29	21	10	2	16	0	2
Florida International U	1914	845	28	21	36	19	9	8	1	3
Florida State U	1170	516	27	45	119	63	29	16	5	21
Florida-U of	2666	0	32	43	132	78	27	32	5	16
George Mason U	787	0	13	28	48	7	13	11	4	1
George Washington U	424	428	11	11	30	19	5	9	1	3
Georgetown U	283	48	16	14	30	18	5	12	0	2
Georgia Inst of Tech	2207	146	22	45	107	54	31	34	6	17
Georgia State U	4730	3478			40	31	7	1		3
Georgia-U of	2191	462	10	9	50	27	6	6	3	8
Hampton U	263	0	3	4	38	21	6	5	1	0
Hawaii-U of, at Manoa	371	0	6	6	22	5	3	6	2	1
Houston-U of	2586	485	19	22	91	77	19	8	2	10
Howard U	342	42	3	2	20	6	4	5	2	1
Idaho State U	620	250	22	28	66	26	12	9	2	1
Idaho-U of	1078	120	10	9	31	21	5	6	1	1
IL-U of, Chicago	1286	273	15	27	74	50	14	9	8	4
Indiana U Purdue U-Indpls	875	1000	3	14	26	11	10	6	2	1
Indiana U-Bloomington	1365	232	18	36	90	49	12	16	3	16
Iowa State U	1182	0	14	29	83	54	12	12	1	9
Iowa-U of	1733	0	19	23	68	27	4	13	2	3
Johns Hopkins U	872	69	21	16	109	50	19	16	1	15
Kansas State U	2749	74	8	8	63	48	13	6	1	7
Kansas-U of	2649	0	10	20	43	15	9	8	3	4
Kent State U	3157	552	8	30	46	31	11	8	1	10
Kentucky-U of	1237	1669	22	17	58	38	11	6	2	4
LA St U-Baton Rouge	2179	683	21	32	106	46	34	12	5	6
Lehigh U	358	141	4	9	48	20	9	10	1	7
MA-U of, Amherst	866	0	16	13	91	61	24	20	0	4
MA-U of, Lowell	510	480	13	20	78		15	6	19	2
Maine-U of	688	301	10	20	35	6	5	4	0	1
Maryland-U of, Balt Cnty	1089	0	22	35	50	26	7	9	6	6
Maryland-U of, Coll Park	2828	0	91	130	231	86	32	80	2	25
Mass Inst of Tech (MIT)	942	0	67	73	235	128	46	82	4	37
Miami-U of	721	108	9	6	26	20	5	4	3	3
Michigan State U	3107	0	95	75	146	67	28	37	3	18

Michigan Technological U	1089	78	17	23	41	30	13	22	2	3
Michigan-U of, Ann Arbor	1162	0	48	53	138	52	26	48	3	27
Minnesota-U of, Minnpls	2698	0	25	68	145	68	26	39	3	10
Mississippi State U	1115	650	2	7	42	35	11	7	1	2
Mississippi-U of	629	1139	4	7	27	14	7	14	2	4
Missouri U of Sci & Tech	417	41	14	16	36	20	5	14	2	4
MO-U of Columbia	1289	424	12	23	44	26	8	8	3	6
MO-U of, Kansas City	640	52	10	17	37	17	6	7	4	1
MO-U of, St. Louis	234	34	6	10	20	6	7	7	1	2
Montana State U	548	393	17	32	61	13	10	17	2	3
NC-U of, Chapel Hill	3136	902	8	12	90	14	10	21	4	8
Nebraska-U of, Lincoln	1272	1325	20	28	62	40	17	13	0	4
Nevada-U of, Las Vegas	712	766	18	28	30	9	7	5	0	1
Nevada-U of, Reno	1002	646		9	46	23	7	6	1	4
New Hampshire-U of	725	97	15	16	54	25	14	15	6	5
New Mexico-U of	772	880	33	55	119	50	27	10	3	14
New Orleans-U of	524	81	3	12	17	8	10	2	1	3
NM Inst of Mining & Tech	276	0	8	33	29	7	4	12	4	2
North Carolina St U	3428	300	46	33	115	51	18	40	4	13
North Dakota St U	1061	125	7	9	9	7	1	2	1	0
North Dakota-U of	684	187	1	5	11	5	5	2	2	1
North Texas-U of	2646	3157	19	42	61	34	12	11	1	2
Northeastern U	1086	375	14	26	52	36	14	8	5	6
Northern Illinois U	875	667	13	15	58	16	13	9	6	2
Northwestern U	810	798	16	12	82	41	16	17	0	13
Notre Dame-U of	924	794	32	25	90	36	10	30	0	10
Oakland U	832	227	12	14	26	11	5	10	1	3
Ohio State U	3841	0	49	35	176	44	42	23	3	24
Ohio U	803	971	17	18	77	60	11	3	0	4
Oklahoma State U	911	452	3	8	46	32	7	1	2	5
Oklahoma-U of	1570	0	6	17	62	32	11	7	2	6
Old Dominion U	858	498	6	23	51	36	9	6	0	2
Oregon State U	1821	626	40	49	36	8	10	15	2	3
Oregon-U of	1984	2871	32	46	83	23	18	14	6	7
Pennsylvania St U	3758	0	33	49	121	59	22	42	3	17
Pennsylvania-U of	480	29	5	33	110	33	23	16	1	15
Pittsburgh-U of	1784	62	25	42	79	51	18	20	2	15
Portland State U	803	61	23	43	49	12	14	18	3	0
Princeton U			36	31	115	65	13	17	0	25
Purdue U-West Lafayette	6952	887	39	69	147	85	31	20	3	16
Rensselaer Polytech Inst	1153	211	37	37	70	42	20	39	5	8
Rhode Island-U of	384	259	5	7	16	11	3	4	1	3
Rice U			24	26	121	65	31	19	6	17
Rochester-U of	625	0	23	22	119	55	26	24	0	18

Rutgers U-New Brunswick	2602	502	43	51	108	54	28	41	9	20
Rutgers U-Newark/NJIT			10	10	35	23	7	5	1	3
South Carolina-U of	1185	1373	11	18	45	33	7	9	9	6
South Florida-U of	3722	917	29	55	64	37	16	10	5	8
Southern Cal-U of (USC)	985	0	12	21	69	21	8	12	1	12
Southern Methodist U	253	28	7	4	15	13	7	2	0	1
Stanford U	711	174	28	34	305	127	40	25	1	42
Stevens Inst of Tech	595	0	13	11	40	29	6	12	1	4
Sthrn IL U-Carbondale	1140	339	8	12	25	14	6	3	4	1
SUNY-Stony Brook U	1988	0	28	30	171	100	27	17	4	25
SUNY-U at Albany	719	921	22	36	43	21	8	24	4	4
SUNY-U at Buffalo	1896	145	21	55	92	60	17	10	7	12
Syracuse U	1126	479	6	22	68	46	16	15	1	4
Temple U	3996	292	15	15	41	19	7	8	1	3
Texas A&M-College Station	3555	48	20	37	152	82	34	28	4	18
Texas Christian U			4	12	13	7	4	5		4
Texas Tech U	3342	1352	4	9	47	29	16	3	2	0
Texas-U of, at Arlington	660	292			44	24	13	12	2	4
Texas-U of, at Austin	2726	1087	61	119	233	104	52	34	6	40
Texas-U of, at Dallas	698	32	34	46	81	36	18	9	5	7
Texas-U of, at San Antonio	1531	885	13	27	65	6	12	2	2	0
TN-U of, Knoxville	1130	1172	9	20	109	46	24	9	17	15
Toledo-U of	1805	58	8	11	54	27	11	2	3	9
Tufts U	411	0	14	7	27	10	4	8	1	6
Tulane U			5	5	24	19	3	5	0	5
Utah State U	825	832	23	46	30	8	8	13	1	3
Utah-U of	1218	715	41	114	98	49	16	25	2	10
Virginia Polytech Inst & St U	5169	361	32	29	73	41	17	20	6	4
Virginia-U of	1551	0	28	43	97	62	25	37	1	7
Wake Forest U	474	289	20	12	32	10	8	12	0	2
Washington State U	940	963	14	19	64	32	12	9	4	2
Washington U	281	63	20	21	85	35	17	21	0	8
Washington-U of	2731	934	68	21	135	29	21	57	11	15
Wayne State U	1520	907	12	25	66	37	14	12	6	3
Wesleyan U	297	0	22	15	14	13	4	11	3	2
West Virginia U	1657	602	11	18	62	20	11	9	3	7
Western Michigan U	817	536	16	18	33	22	5	6	6	4
WI-U of, Madison	4426	0	20	84	184	50	49	46	5	19
WI-U of, Milwaukee	1668	710	5	23	35	21	8	8	6	3
William & Mary-Coll of	462	377	15	15	68	27	14	16	0	6
Worcester Polytech Inst	1569	0	22	23	16	8	3	16	1	1
Wyoming-U of	366	33	5	15	21	4	9	2	0	2
Yale U	700	0	22	24	98	24	26	37	0	6

2010 Roster Data

	Enrollments		Majors		Students			Degrees Awarded		
INSTITUTION	PHYS	SCI & ASTRO	JR	SR	TOT	FOR	1ST	BACH	MAST	PHD
AL-U of, Birmingham	796	722	12	9	37	18	9	5	1	2
AL-U of, Huntsville	623	72	20	28	73	30	13	14	2	1
AL-U of, Tuscaloosa	1138	1112	16	23	44	28	11	10	3	4
Alaska-U of, Fairbanks	409	60	6	18	32	7	9	3	0	3
AR-U of, Fayetteville	1652	459	33	49	46	26	10	24	3	2
Arizona State U	3270	205	67	78	156	75	39	22	9	5
Arizona-U of	1754	64	37	62	79	33	17	23	5	7
Auburn U	3394	264	10	13	50	20	13	9	4	1
Baylor U	1483	605	7	12	29	17	8	5	4	0
Boston Coll	312	148	16	10	46	29	9	11	1	7
Boston U	816	0	31	33	114	56	21	18	0	13
Brandeis U	195	86	14	7	43	19	13	8	1	5
Brigham Young U	1675	2338	68	126	36	1	9	54	7	4
Brown U	430	79	28	29	107	66	20	19	1	18
Bryn Mawr Coll	347	0	6	6	3	0	0	6	0	0
CA-U of, Berkeley	3207	0	89	121	246	59	27	76	0	40
CA-U of, Davis	3020	828	75	59	200	46	27	28	2	14
CA-U of, Irvine	3340	559	34	33	145	34	30	38	4	20
CA-U of, Los Angeles	2922	0	66	73	134	30	19	54	0	20
CA-U of, Merced	477	0	15	12	16	6	4	6	1	1
CA-U of, Riverside	2453	849	27	24	119	59	24	8	4	7
CA-U of, San Diego			56	84	170	45	28	37	6	9
CA-U of, Santa Barbara	1823	896	74	64	136	17	26	49	0	17
CA-U of, Santa Cruz	1278	0	100	114	57	6	10	30	0	2
Cal Inst of Tech	243	0	27	31	128	55	12	25	3	11
Carnegie Mellon U	725	73	36	32	76	44	19	29	2	6
Case Western Reserve U	646	0	30	30				27		
Catholic U	332	62	2	2	28	8	10	1	1	2
Central Florida-U of	2469	3861	43	53	85	56	22	18	1	10
Chicago-U of	456	0	51	40	132	61	24	39	1	16
Cincinnati-U of	1880	1548	7	10	57	40	9	7	2	7
Clark U	137	59	8	3	9	6	2	3	3	1
Clarkson U	633	0	14	16	13	7	4	12	2	4
Clemson U	283	226	25	19	63	27	22	20	4	10
Colorado School of Mines	1175	30	47	72	73	12	20	62	8	4
Colorado St U-Fort Collins	1713	542	23	31	58	12	11	10	2	6
Colorado-U of, Boulder	2340	0	77	186	218	74	38	52	2	25
Columbia U	1118	0	38	47	191	88	45	31	18	13
Connecticut-U of	1058	116	21	10	80	47	11	15	3	6
Cornell U	2129	0	77	88	230	113	40	67	8	35

Dartmouth Coll	426	522	17	12	50	19	9	17	1	9
Delaware-U of	1060	662	24	33	81	54	16	7	2	9
Denver-U of	231	83	13	12	23	3	5	5	0	0
Drexel U	2155	398	13	11	40	7	8	16	1	3
Duke U	1229	34	27	17	73	51	16	10	0	11
East Carolina U	2408	0	6	8	44	8	18	3	8	2
Emory U	1006	319	12	21	28	17	7	14	0	4
Florida A&M U	814	851	5	6	17	5	2	1	1	1
Florida Atlantic U	1889	1613	10	3	32	17	10	3	1	3
Florida Inst of Tech	428		13	29	18	8	4	26	2	3
Florida International U	1905	805	18	18	37	18	8	17	0	2
Florida State U	1708	858	36	44	138	63	35	9	2	12
Florida-U of	2715	0	52	51	150	83	28	28	0	11
George Mason U	868		13	24	50	8	22	12	4	3
George Washington U	438	421	5	12	28	15	6	8	1	1
Georgetown U	593	70	9	14	29	19	5	13	0	0
Georgia Inst of Tech	1022	224	34	41	119	58	30	34	7	17
Georgia State U	1352	1028	31	19	44	33	9	7	2	4
Georgia-U of	1462	1232	25	31	48	26	11	6	1	11
Hampton U	280	0	3	4	34	19	6	4	2	5
Harvard U	763	0	51	48	332	150	66	37	0	45
Hawaii-U of, at Manoa	406		16	10	28	5	8	5	3	1
Houston-U of	3631	422	53	63	91	76	24	8	4	14
Howard U	342	42	5	2	16	5	3	1	0	1
Idaho State U	697	289	20	17	62	27	6	6	2	4
Idaho-U of	592	122	23	15	30	17	7	6	1	1
IL-U of, Chicago	1340	205	18	19	76	47	16	9	5	3
IL-U of, Urbana/Champaign	3627	0	67	103	261	218	43	70	4	40
Illinois Inst of Tech	527	0	9	20	35	11	16	3	2	5
Indiana U Purdue U-Indpls	975	959	12	19	21	8	2	7	1	2
Indiana U-Bloomington			16	26	109	62	30	19	2	7
Iowa State U	1287	395	17	37	96	50	18	11	4	15
Iowa-U of	1781		23	35	73	27	15	9	0	10
Johns Hopkins U	974	82	13	28	110	48	21	9	2	8
Kansas State U	2927	78	5	8	56	42	7	5	1	9
Kansas-U of	1599		22	19	43	14	6	8	0	4
Kent State U	3229	454	15	16	46	32	15	13	1	11
Kentucky-U of	1227	825	15	22	77	49	24	2	1	8
LA St U-Baton Rouge	1037	771	16	32	106	47	26	16	7	11
Lehigh U	346	190	9	12	44	18	8	8	0	5
MA-U of, Amherst	1066	0	29	15	84	54	13	12	5	9
MA-U of, Lowell	700	1080	14	16	90	43	12	7	5	4
Maine-U of	777	305	12	20	40	8	9	4	1	3
Maryland-U of, Balt Cnty	1141	45	27	43	48	22	12	17	1	6

Maryland-U of, Coll Park	2730	0	96	128	237	81	40	79	5	34
Mass Inst of Tech (MIT)	1044	0	90	106	230	120	40	80	1	44
Miami-U of	758	185	8	8	24	17	4	7	0	2
Michigan State U	3192		101	72	132	61	19	47	6	9
Michigan Technological U	997	80	22	29	42	31	5	14	3	4
Michigan-U of, Ann Arbor	2767	0	51	57	209	62	28	37	2	27
Minnesota-U of, Minnpls	2791	0	30	84	156	68	32	29	3	20
Mississippi State U	1199	681	10	11	40	31	8	5	5	4
Mississippi-U of	398	492	7	8	29	15	8	8	0	3
Missouri U of Sci & Tech	460	45	14	22	35	21	4	4	1	7
MO-U of Columbia	1180	201	17	26	48	28	13	14	4	5
MO-U of, St. Louis	273	200	9	31	24	3	7	1	1	3
Montana State U	1118	824	14	26	52	10	7	17	4	8
NC-U of, Chapel Hill	1063	544	26	15	98	16	17	15	0	6
NC-U of, Charlotte	1645	598	40	60	56	40	15	14	3	0
Nebraska-U of, Lincoln	1272	1313	21	23	66	41	16	15	3	6
Nevada-U of, Las Vegas	1407	1656			22		5	2	7	2
Nevada-U of, Reno	1063	648		13	50	24	7	9	1	5
New Hampshire-U of	821	93	15	20	59	26	15	8	3	4
New Mexico St U	787	0	18	25	37	30	6	8	1	3
New Mexico-U of	765	855	28	58	122	49	23	9	6	10
New Orleans-U of			2	10	24	10	0	4	1	3
NJIT/Rutgers U-Newark (2)			12	11	34	25	9	7	0	4
North Carolina St U			36	67	119	55	25	18	2	13
North Dakota St U	762	118	1	9	8	6	1	4	1	0
North Dakota-U of	789	243	2	2	13	7	3	3	0	0
North Texas-U of	2451	2538	17	36	63	37	9	9	3	2
Northeastern U	1290	348	26	26	56	38	14	15	2	5
Northern Illinois U	794	573	11	11	48	22	7	13	4	2
Northwestern U	802	791	18	15	84	42	13	13	3	10
Notre Dame-U of	993	286	19	34	91	36	14	23	3	8
Oakland U	935	382	15	14	27	12	11	10	5	2
Ohio State U	3878	0	70	72	174	41	29	46	6	28
Ohio U	858	1059	10	20	84	66	19	11	2	10
Oklahoma State U	1294	390	9	8	53	40	9	1	1	7
Oklahoma-U of	1519		9	11	65	28	13	3	3	8
Old Dominion U	1002	279		23	52	33	10	6	0	9
Oregon State U	1914	669	37	46	48	10	11	16	0	3
Oregon-U of	2264	2543	44	59	75	19	11	17	6	13
Pennsylvania St U	7124	0	44	47	132	67	25	41	4	11
Pennsylvania-U of	529	27	6	41	109	26	20	17	2	14
Pittsburgh-U of	1820		19	42	92	60	27	16	2	9
Portland State U	849	98	22	45	51	10	15	22	7	3
Princeton U	424	0	41	29	110	60	20	30	0	18

Purdue U-West Lafayette	2213	307	34	72	145	76	22	27	2	19
Rensselaer Polytech Inst	2000	320	42	41	61	34	11	34	5	10
Rhode Island-U of	516	256	9	7	16	11	4	7	1	0
Rice U	476		17	22	127	73	23	21	8	20
Rochester-U of	597	31	15	21	116	50	14	21	2	12
Rutgers U-New Brunswick	2667	429	45	52	102	54	19	45	5	10
South Carolina-U of	1214	1723	18	19	39	28	7	5	5	6
South Florida-U of	2515	844	29	75	67	31	17	13	3	5
Southern Cal-U of (USC)	986		10	15	70	47	15	13	2	12
Stanford U	792	237	22	26	306	126	45	32	1	49
Stevens Inst of Tech	625	0	8	16	35	25	2	8	0	5
Sthrn IL U-Carbondale	1027	296	3	13	25	11	2	3	6	3
SUNY-Binghamton U	10	3	21	16	15	2	6	8	3	0
SUNY-Stony Brook U	2022		45	50	182	114	46	22	5	25
SUNY-U at Albany	774	940	39	23	48	20	10	28	1	4
SUNY-U at Buffalo	1895	159	18	47	90	56	18	27	5	8
Syracuse U	1024	745	12	14	71	49	11	14	0	5
Temple U	2064	277	13	11	39	17	8	9	1	7
Texas A&M-College Station	3508	1069	26	29	177	88	42	22	6	11
Texas Christian U	162	379	3	2	13	6	4	2	0	2
Texas Tech U	2120	908	14	12	50	32	11	3	4	4
Texas-U of, at Arlington	802	432	12	35	53	30	12	12	2	2
Texas-U of, at Austin	1876	514	93	150	225	102	38	52	11	27
Texas-U of, at San Antonio	3283	910	21	31	65	21	30	10	3	2
TN-U of, Knoxville	1227	816	17	30	120	44	26	12	4	10
Toledo-U of	1917	47	7	11	59	23	11	7	0	3
Tufts U	492		3	15	28	5	5	11	0	3
Tulane U	407	0	12	10	18	16	1	10	0	5
Utah State U	993	943	21	45	27	6	4	16	1	3
Utah-U of	2388	730	47	121	90	44	14	34	3	10
Virginia Polytech Inst & St U	5088	376	28	21	73	44	19	27	1	12
Virginia-U of	1409	150	46	30	94	63	11	46	2	10
Wake Forest U	656	310	20	21	40	16	10	12	0	2
Washington State U	1028	1003	8	21	72	39	16	13	3	5
Washington U	534	0	23	30	79	36	15	20	1	16
Washington-U of	2395	244	67	57	168	31	29	58	5	22
Wayne State U	2082	1404	13	33	60	38	12	5	2	11
Wesleyan U	574	0	22	18	17	12	1	15	2	0
West Virginia U	1651	625	9	19	67	23	14	13	0	7
Western Michigan U	850	553	13	23	37	26	11	4	2	0
WI-U of, Madison	2982	0	11	61	196	60	35	13	1	17
WI-U of, Milwaukee	1928	1328	6	28	35	22	8	9	1	4
William & Mary-Coll of	499	365	14	14	60	23	8	14	0	9
Worcester Polytech Inst	2229	0	19	21	15	7	2	13	2	2

Wyoming-U of	487	69	8	19	23	11	7	4	2	3
Yale U	828	0	24	23	114	38	20	22	3	22

2011 Roster Data

	Enrollments		Majors		Students			Degrees Awarded		
INSTITUTION	PHYS	SCI & ASTRO	JR	SR	TOT	FOR	1ST	BACH	MAST	PHD
AL-U of, Birmingham	695	806	12	14	37	13	9	3	1	4
AL-U of, Huntsville	623	72	20	34	58	14	16	16	8	5
AL-U of, Tuscaloosa	1146	926	20	27	47	29	8	15	2	2
Alabama A&M U	473	850	4	7	24	8	5	2	0	3
Alaska-U of, Fairbanks	333	60	5	17	29	11	5	3	0	2
AR-U of, Fayetteville	851	220	27	59	49	24	14	17	0	5
Arizona State U	3377	154	77	76	130	71	33	23	14	15
Arizona-U of	1884	56	44	51	81	35	18	31	4	9
Auburn U	2283	221	11	16	54	20	13	6	1	7
Baylor U	1472	607	4	11	29	19	6	5	2	5
Boston Coll	590	297	18	20	49	32	11	10	3	1
Boston U	789	0	31	33	110	52	17	30	0	13
Brandeis U	248	0	10	16	44	21	7	9	1	7
Brigham Young U	2162	4828	77	129	39	2	9	50	8	5
Brown U	443	43	39	29	106	63	21	26	0	15
Bryn Mawr Coll	275	0	8	7	6	0	3	6	0	0
CA-U of, Berkeley	3248	0	110	119	254	61	42	89	0	29
CA-U of, Davis	2909	958	64	64	147	23	23	34	3	16
CA-U of, Irvine	3239	441	41	37	143	34	23	25	2	17
CA-U of, Los Angeles	2887	0	46	87	135	34	23	41	1	20
CA-U of, Merced	691	0	17	13	19	5	4	7	0	1
CA-U of, San Diego	3497	260	44	102	167	33	26	40	0	18
CA-U of, Santa Barbara	1786	804	102	73	129	19	22	54	2	30
CA-U of, Santa Cruz	1446	993	65	132	56	1	7	40	3	10
Cal Inst of Tech	201	0	31	27	127	59	28	28	3	27
Carnegie Mellon U	757	107	49	34	69	35	12	27	0	15
Case Western Reserve U	650	0	28	31	54	14	12	25	2	5
Catholic U	232	76	3	2	31	10	5	1	0	4
Central Florida-U of	4447	3294	33	65	83	62	17	10	1	5
Chicago-U of	462	35	45	65	136	62	20	37	3	14
Cincinnati-U of	2040	1460	11	8	63	47	14	9	3	4
Clark U	150	132	7	7	10	7	3	3	2	3
Clarkson U	567	0	16	19	11	5	3	10	1	2
Clemson U	1814	568	21	21	66	30	13	14	1	8
Colorado School of Mines	1052	19	52	73	82	12	23	48	4	4
Colorado St U-Fort Collins	1957	523	19	35	70	17	20	12	1	3
Colorado-U of, Boulder	2014	0	62	126	223	77	48	52	1	35
Columbia U	1027	0	39	23	170	77	45	37	24	22
Connecticut-U of	1861	141	21	20	86	43	15	10	1	18
Cornell U	2126	0	62	85	243	116	49	84	8	31

Dartmouth Coll	442	0	9	19	50	22	6	11	1	6
Delaware-U of	1201	912	24	33	84	55	18	12	2	10
Denver-U of	228	50	3	11	24	3	5	5	0	2
Drexel U	2366	335	15	13	47	7	9	7	1	3
Duke U	1286	27	14	27	85	59	16	14	0	6
East Carolina U	2401	0	5	12	23	4	11	6	8	1
Emory U	1192	323	13	21	32	22	11	12	0	5
Florida A&M U	490	661	5	8	13	3	0	5	0	1
Florida Atlantic U	2170	1612	7	16	42	29	10	7	4	4
Florida Inst of Tech	43	0	12	13	22	9	4	20	2	1
Florida International U	2406	901	26	53	41	20	8	12	1	2
Florida State U	1576	764	33	59	138	69	31	19	4	19
Florida-U of	2864	0	38	62	139	72	17	38	4	24
Georgetown U	323	60	18	10	30	15	3	13	1	2
Georgia Inst of Tech	2154	212	34	54	113	55	24	24	4	21
Georgia State U	1377	907	28	31	53		10	8	7	6
Georgia-U of	1532	683	33	24	47	27	11	10	1	11
Harvard U	977	0	52	55	329	138	54	44	0	29
Hawaii-U of, at Manoa	1034	731	18	17	32	5	12	2	1	7
Houston-U of	3441	414	49	31	85	70	20	3	1	10
Howard U	332	49	7	2	16	6	2	2	0	3
Idaho State U	691	273	17	17	27	14	7	4	1	1
Idaho-U of	787	117	20	22	29	19	4	3	3	1
IL-U of, Chicago	1384	116	13	26	87	52	18	8	4	5
Illinois Inst of Tech	742	0	15	15	45	21	15	10	0	2
Indiana U Purdue U-Indpls	1637	1110	10	22	19	7	3	7	2	2
Indiana U-Bloomington	1015	0	22	30	93	55	29	23	2	10
Iowa State U	1325	506	18	34	77	43	15	11	5	13
Iowa-U of	2050	0	22	33	66	27	14	13	3	13
Johns Hopkins U	982	109	25	22	73	34	15	25	1	8
Kansas State U	2994	93	11	12	62	45	13	2	1	7
Kansas-U of	1537	0	19	29	45	11	12	4	2	4
Kent State U	3192	388	21	16	57	39	17	7	3	3
Kentucky-U of	1206	865	23	26	77	44	9	8	4	5
LA St U-Baton Rouge	2930	913	37	41	107	58	25	9	7	12
Lehigh U	374	192	5	16	43	22	8	5	3	10
Louisville-U of	1078	797	15	27	28	12	7	7	5	1
MA-U of, Amherst	1089	0	34	35	86	51	17	28	3	7
MA-U of, Lowell	864	1047	28	22	88	38	23	9	9	8
Maine-U of	632	356	10	20	42	4	7	17	0	8
Maryland-U of, Balt Cnty	1029	0	37	45	48	20	10	16	1	3
Maryland-U of, Coll Park	2714	0	85	140	228	78	39	65	5	25
Mass Inst of Tech (MIT)	1031	0	100	90	242	123	44	94	1	33
Miami-U of	1488	164	5	6	26	21	3	5	0	4

Michigan State U	3241	0	95	75	139	60	25	45	3	15
Michigan Technological U	986	88	15	19	35	25	6	11	5	6
Michigan-U of, Ann Arbor	3566	0	32	65	194	62	37	40	1	30
Minnesota-U of, Minnpls	3172	0	26	87	143	66	20	47	7	20
Mississippi State U	1218	742	12	19	41	33	10	3	3	3
Mississippi-U of	469	554	11	10	33	20	5	3	0	1
Missouri U of Sci & Tech	1058	45	13	19	44	28	6	17	2	4
MO-U of Columbia	1442	431	19	33	53	31	13	14	2	3
MO-U of, Kansas City	986	174	8	14	33	14	10	7	2	2
MO-U of, St. Louis	450	376	7	30	22	5	7	6	2	0
Montana State U	1329	859	25	18	56	6	14	16	0	8
NC-U of, Chapel Hill	1054	540	31	42	91	14	11	39	3	11
Nebraska-U of, Lincoln	1126	898	13	25	78	48	16	8	0	2
Nevada-U of, Las Vegas	888	1194	23	33	15	4	0	4	2	5
Nevada-U of, Reno	1166	582	12	29	48	22	8	8	0	12
New Hampshire-U of	809	136	18	29	63	25	15	14	3	5
New Mexico St U	924	0	24	32	40	27	16	11	2	11
New Mexico-U of	779	847	28	67	122	55	26	11	6	9
New Orleans-U of	504	110	6	8	30	10	8	5	3	2
New York U (NYU)	60	80	29	14	79			20	2	13
NM Inst of Mining & Tech	532	0	12	25	32	9	5	10	3	3
North Carolina St U	3495	184	39	60	116	55	16	29	5	9
North Dakota St U	832	168	7	5	9	6	2	4	0	0
North Dakota-U of	651	357	3	3	12	8	3	1	2	1
North Texas-U of	2259	2219	21	16	64	39	10	6	2	5
Northeastern U	1370	210	28	18	59	39	17	20	1	9
Northern Illinois U	979	369	11	14	45	15	7	7	6	3
Notre Dame-U of	934	898	31	17	105	36	22	32	1	6
Oakland U	1021	440	16	17	28	12	9	5	2	1
Ohio State U	4554	0	64	63	188	43	44	57	4	23
Ohio U	941	1051	21	20	84	67	15	7	5	9
Oklahoma State U	1400	432	15	11	53	40	8	2	2	8
Oklahoma-U of	1562	0	6	15	65	31	10	4	2	5
Old Dominion U	698	323	23	24	51	30	11	5	5	5
Oregon State U	1973	682	33	67	42	9	8	18	3	3
Oregon-U of	2106	2405	49	66	80	19	16	26	9	14
Pennsylvania St U	6830	0	49	60	136	68	16	31	0	11
Pennsylvania-U of	516	39	3	43	105	21	11	21	5	17
Pittsburgh-U of	2176	0	23	40	90	54	16	12	5	6
Portland State U	922	94	30	45	51	8	12	26	3	3
Princeton U	400	0	22	35	110	67	19	27	0	19
Purdue U-West Lafayette	3991	174	40	63	151	80	26	47	1	17
Rensselaer Polytech Inst	1911	227	44	58	61	33	24	34	7	16
Rhode Island-U of	891	499	11	4	18	12	6	6	1	5

Rice U	549	0	18	19	87	50	16	11	1	12
Rochester-U of	665	0	27	22	114	45	10	19	1	5
Rutgers U-New Brunswick	2784	441	55	62	108	56	21	60	10	14
South Carolina-U of	1282	1142	13	21	40	30	7	5	6	3
South Florida-U of	4363	783	42	75	86	36	18	10	2	8
Southern Cal-U of (USC)	1076	0	19	15	72	51	11	14	1	6
Southern Methodist U	400	50	5	6	20	16	5	3	0	1
Stanford U	803	242	20	26	311	124	57	25	3	47
Stevens Inst of Tech	630	0	5	12	32	23	2	10	0	7
Sthrn IL U-Carbondale	847	225	2	8	26	13	6	4	5	3
SUNY-Binghamton U	1279	732	11	35	19	5	6	9	1	0
SUNY-Stony Brook U	2019	0	38	77	174	108	27	25	7	29
SUNY-U at Buffalo	2124	136	10	35	85	53	21	18	4	10
Syracuse U	1043	737	13	15	74	55	13	8	2	6
Temple U			29	20	45	28	7	5	3	3
Texas A&M-College Station	3528	1164	20	23	186	92	41	12	7	17
Texas Christian U	194	342	5	6	14	6	5	2	0	2
Texas Tech U	2096	1125	14	15	62	41	18	3	1	3
Texas-U of, at Arlington	1446	425	17	35	46	28	13	19	3	8
Texas-U of, at Dallas	1016	27	33	33	62	18	10	18	4	4
TN-U of, Knoxville	1147	585	24	31	114	42	21	10	5	8
Toledo-U of			14	21	64	26	12	10	1	6
Tufts U	728	0	6	8	26	11	6	11	1	5
Tulane U	543	95	21	15	21	17	3	7	0	1
Tulsa-U of	336	71	6	14	7	4	3	4	2	0
Utah State U	961	1124	24	47	23	4	7	19	4	4
Utah-U of	2688	780	51	119	101	55	27	24	2	11
Vanderbilt U	267	80	10	17	83			13	0	6
Virginia Polytech Inst & St U	5060	647	25	20	73	42	9	19	3	9
Virginia-U of	1277	100	52	62	84	59	12	28	1	16
Wake Forest U	664	269	15	20	36	13	3	20	1	4
Washington State U	1131	828	6	31	71	39	9	9	2	6
Washington U	495	36	33	21	86	37	17	20	0	10
Washington-U of	3185	879	87	76	170	26	32	68	8	20
Wayne State U	1936	1431	15	33	61	35	14	18	2	11
Wesleyan U	707	0	18	20	11	10	1	16	4	2
West Virginia U			3	18	54	15	13	4	2	7
Western Michigan U	928	485	10	21	36	24	8	5	1	7
WI-U of, Madison	2462	0	20	69	172	47	21	24	5	34
WI-U of, Milwaukee	2003	1231	5	12	41	23	14	8	1	8
William & Mary-Coll of	476	337	9	22	66	27	13	12	2	10
Worcester Polytech Inst	2236	0	16	25	17	6	5	14	0	2
Wyoming-U of	513	67	8	15	30	14	7	5	0	0
Yale U	766	0	36	27	123	45	28	26	1	19

2012 Roster Data

	Enrollments		Majors		Students			Degrees Awarded		
INSTITUTION	PHYS	SCI & ASTRO	JR	SR	TOT	FOR	1ST	BACH	MAST	PHD
AL-U of, Birmingham	771	732	7	14	35	11	5	5	1	4
AL-U of, Huntsville	623	72	20	27	59	19	16	22	6	5
AL-U of, Tuscaloosa	1304	965	19	25	43	25	5	8	2	5
Alabama A&M U	432	487	6	5	23	3	4	2	1	5
AR-U of, Fayetteville	2935	645	26	64	54	30	12	23	3	4
Arizona State U	3367	504	72	79	121	57	42	34	15	26
Arizona-U of	2084	0	33	36	77	36	16	26	4	13
Auburn U	2268	254	16	22	53	21	12	3	1	9
Baylor U	1713	595	17	8	29	20	8	7	2	5
Boston Coll	318	146	14	15	54	37	9	14	0	6
Boston U	635	0	26	34	107	58	19	23	1	13
Brandeis U	194	92	12	13	46	24	10	14	1	7
Brigham Young U	2053	4230	78	143	37	3	9	45	6	4
Brown U	453	77	26	40	94	56	9	23	2	17
Bryn Mawr Coll	392	0	6	9	6	1	1	7	0	1
CA-U of, Berkeley	3213	0	73	150	252	67	42	84	0	35
CA-U of, Davis	3176	1069	74	89	137	23	19	45	2	26
CA-U of, Irvine	3626	388	27	31	139	33	22	27	1	24
CA-U of, Los Angeles	3225	0	94	93	135	36	22	56	0	17
CA-U of, Merced	703	0	12	21	20	5	11	7	0	1
CA-U of, Riverside	1996	1523	10	47	122	66	29	15	2	19
CA-U of, San Diego					175	40	41	40	0	28
CA-U of, Santa Barbara	1908	752	93	88	129	17	26	66	3	20
CA-U of, Santa Cruz	1386	0	73	128	54		9	56	0	12
Cal Inst of Tech	219	0	25	30	119	57	20	27	4	23
Carnegie Mellon U	705	129	40	42	79	42	21	28	0	12
Case Western Reserve U	535	0	30	28	63		13	27	3	4
Catholic U	214	79	1	3	37	16	6	1	3	1
Central Florida-U of	4659	3208	39	88	86	56	11	14	5	19
Chicago-U of	411	0	50	44	131	71	35	37	0	14
Cincinnati-U of	2028	1524	4	12	65	48	15	5	3	6
Clark U	150	125	11	9	6	5	1	6	1	2
Clarkson U	543	0	10	19	13	6	5	13	3	1
Clemson U	2085	423	19	25	61	30	12	13	6	7
Colorado School of Mines	1006	20	67	80	81	17	13	55	10	3
Colorado St U-Fort Collins			26	45	71	17	9	13	5	3
Colorado-U of, Boulder	2463	0	95	104	224	78	33	66	2	25
Columbia U	1027	0	30	49	179	88	51	37	14	25
Connecticut-U of	1983	184	19	20	80	43	10	14	2	10
Cornell U	2177	0	58	64	288	137	64	82	11	28

Dartmouth Coll	372	0	14	14	52	25	13	15	3	6
Delaware-U of	1115	733	10	20	82	50	16	16	5	12
Denver-U of	232	46	10	5	24	4	4	9	1	1
Drexel U	2690	296	13	21	45	3	11	8	3	8
Duke U	1287	59	29	20	75	50	10	12	1	13
East Carolina U	1395	372	10	10	39	12	8	7	9	3
Emory U	1152	323	15	24	30	24	4	14	0	6
Florida A&M U	697	1021	2	13	10	3	1	3	1	2
Florida Atlantic U	1700	1675	14	19	32	18	1	2	2	3
Florida Inst of Tech	333	0	13	23	17	6	4	9	4	1
Florida International U	2562	1151	41	60	38	22	5	13	0	5
Florida State U	1801	781	41	65	144	74	28	19	6	13
Florida-U of	2910	0	48	69	127	64	21	38	5	27
George Mason U	1020	0	22	36	54	6	11	8	3	6
George Washington U	407	456	11	11	26	16	12	4	1	4
Georgetown U	494	42	18	15	28	16	4	10	2	2
Georgia Inst of Tech	2272	191	31	50	132	64	43	27	8	10
Georgia State U	1627	887	58	24	38		5	6	13	2
Harvard U	537	59	46	54	342	149	58	51	3	54
Hawaii-U of, at Manoa	397	300	21	15	41	10	9	3	0	2
Houston-U of	3245	493	35	32	90	82	19	8	1	12
Howard U	312	21	3	3	16	5	2	2	1	2
Idaho State U	788	211	11	19	27	11	5	6	2	1
Idaho-U of	841	127	13	27	27	15	3	3	0	3
IL-U of, Chicago	1414	112	15	30	87	55	20	14	5	15
Illinois Inst of Tech	406	0	10	24	48	24	20	3	5	0
Indiana U Purdue U-Indpls	1117	1065	11	37	20	9	3	12	2	0
Indiana U-Bloomington	2772	0	22	49	101	49	24	23	3	13
Iowa State U	3047	0	19	30	83	49	19	8	0	9
Iowa-U of	2155	885	21	29	70	27	10	16	1	8
Johns Hopkins U	793	0	23	29	71	33	8	18	3	7
Kansas State U	2953	60	19	21	63	44	9	6	0	7
Kansas-U of	1489	0	15	33	51	15	13	10	0	8
Kent State U	3095	442	17	23	68	55	15	5	4	6
Kentucky-U of	1362	900	19	20	73	38	7	7	5	4
LA St U-Baton Rouge	3089	810	19	52	110	52	43	24	9	7
Lehigh U	432	193	10	14	41	14	10	9	0	12
Louisville-U of	1163	781	15	38	31	13	8	18	5	0
MA-U of, Amherst	1132	0	35	22	87	51	14	25	0	8
MA-U of, Lowell	882	951	25	28	87			6	8	9
Maine-U of	659	355	17	15	37	4	5	7	5	3
Maryland-U of, Balt Cnty	1051	59	38	48	47	15	6	15	2	5
Maryland-U of, Coll Park	2839	0	83	136	227	83	33	57	5	27
Mass Inst of Tech (MIT)	986	0	87	77	228	114	34	83	2	37

Miami-U of	1112	155	12	19	22	18	9	7	0	7
Michigan State U	3292	0	96	81	137	53	29	42	4	14
Michigan Technological U	1001	77	9	27	38	28	12	14	5	3
Michigan-U of, Ann Arbor	3361	0	45	59	234	79	54	43	1	32
Minnesota-U of, Minnpls	3074	0	38	80	150	61	28	37	4	14
Mississippi State U	1273	613	10	14	46	36	13	3	3	7
Mississippi-U of	684	575	11	16	33	23	9	2	5	3
Missouri U of Sci & Tech	484	33	15	18	39	23	8	11	1	3
MO-U of Columbia	878	201	21	32	56	29	11	16	1	7
MO-U of, Kansas City	620	128	11	29	45	18	8	7	3	4
MO-U of, St. Louis	417	159	7	28	21	5	6	4	1	1
Montana State U	1476	941	12	20	54	7	11	8	6	4
NC-U of, Chapel Hill	1111	942	40	51	86	12	16	25	2	12
Nebraska-U of, Lincoln	1225	854	16	25	77	46	12	7	0	10
Nevada-U of, Las Vegas	851	1032	28	13	15	5	4	3	2	2
Nevada-U of, Reno	607	392	18	32	48	22	7	13	2	5
New Hampshire-U of			14	22	74	25	13	15	1	5
New Mexico St U	1002	0	25	41	40	27	10	9	1	6
New Mexico-U of	782	848	23	58	85	25	14	17	5	13
New York U (NYU)	1450	360	23	28	80	58	12	13	2	4
NM Inst of Mining & Tech	473	0	20	23	32	8	4	10	1	2
North Carolina St U	3559	286	37	82	128	56	26	28	2	16
North Dakota St U	1224	113	6	8	8	6	3	2	0	1
North Dakota-U of	1009	394	5	13	11	7	3	2	0	2
North Texas-U of	2555	2006	32	36	65	36	5	9	1	6
Northeastern U	1326	220	15	23	75	47	24	19	0	5
Northern Illinois U	693	301	10	18	47	19	14	3	6	4
Northwestern U	1576	629		15	90		14	14	1	16
Notre Dame-U of	1054	764	36	31	106	31	19	17	0	17
Oakland U	1196	387	19	17	23	10	8	7	1	2
Ohio State U	4402	0	64	67	197	37	40	56	4	20
Ohio U	1011	1193	18	14	88	67	15	14	0	11
Oklahoma State U	1414	478	14	16	52	36	8	2	2	6
Oklahoma-U of	1711	0	15	11	65	30	17	5	2	13
Old Dominion U	1239	404	21	25	50	30	6	10	0	6
Oregon State U	2074	664	24	46	38	8	10	14	6	8
Oregon-U of	1207	862	45	57	87	17	16	22	4	5
Pennsylvania St U	3247	0	51	65	125	70	24	42	4	22
Pennsylvania-U of	705	21	4	43	101	16	13	19	4	11
Pittsburgh-U of	2116	0	34	34	95	57	26	23	6	11
Portland State U	924	117	37	54	45	7	8	19	7	3
Princeton U	510	0	26	22	111	68	21	36	0	19
Purdue U-West Lafayette	4717	204	37	63	154	74	22	34	3	9
Rensselaer Polytech Inst	1817	331	42	64	53	25	9	43	6	4

Rhode Island-U of	891	467	6	11	17	8	7	5	0	4
Rice U	609	0	18	19	103	58	27	13	1	11
Rochester-U of	842	0	20	27	119	48	22	21	0	11
Rutgers U-New Brunswick	2863	560	60	62	105	54	17	57	4	12
Rutgers U-Newark	412	65	8	4	3	2	1	5	0	0
SD Sch of Mines & Tech	4640	764	44	95	87	37	17	17	2	6
South Carolina-U of	1309	1125	12	21	42	27	6	6	1	3
Southern Cal-U of (USC)	1358	0	11	20	71	49	12	10	0	9
Southern Methodist U	490	45	3	12	19	14	3	3	0	5
Stanford U	883	171	18	29	311	136	63	21	1	51
Stevens Inst of Tech	690	0	8	13	33	21	0	18	0	6
Sthrn IL U-Carbondale	833	211	6	11	27	15	8	4	4	3
SUNY-Binghamton U	1681	774	22	19	27	8	8	17	0	0
SUNY-Stony Brook U	2048	0	59	119	178	122	40	19	6	23
SUNY-U at Albany	829	942	33	40	43	18	7	28	5	5
SUNY-U at Buffalo	3544	246	16	29	83	53	13	15	4	13
Syracuse U	1038	810	18	18	69	38	11	13	4	14
Temple U	3653	686	29	24	51	23	11	4	0	3
Texas A&M-College Station	3514	1072	26	32	184	96	24	32	8	11
Texas Christian U	242	270	9	8	15	7	2	3	0	1
Texas Tech U	1994	1059	2	20	48	34	16	7	13	5
Texas-U of, at Arlington	2583	1441	40	50	48	26	8	8	3	5
Texas-U of, at Austin	4456	1884	85	167	225	111	39	55	4	31
Texas-U of, at Dallas	1198	51	40	41	67	25	17	7	6	5
Texas-U of, at San Antonio	2104	903	27	42	80	33	11	8	1	2
TN-U of, Knoxville	1520	767	20	31	115	45	25	10	5	22
Toledo-U of			9	25	67	31	20	3	5	8
Tufts U	897	0	10	5	28	12	7	7	1	1
Tulane U			7	16	23	17	9	11	1	5
Tulsa-U of	337	69	8	10	8	6	4	8	1	0
Utah State U	1049	1202	27	56	27	6	10	16	2	2
Utah-U of	3063	896	50	116	92	57	17	32	3	13
Virginia Polytech Inst & St U	5607	1179	32	25	75	48	17	17	1	6
Virginia-U of	1673	0	41	58	91	66	22	48	2	13
Wake Forest U	415	252	18	17	37	13	8	18	1	8
Washington State U	1145	799	4	26	69	29	17	9	3	8
Washington U	583	0	30	29	84	42	20	24	2	19
Washington-U of	3255	543	92	52	182	29	41	84	7	13
Wayne State U	2095	1277	29	26	63	33	10	14	2	5
Wesleyan U	348	0	15	15	16	14	7	17	0	2
West Virginia U	1215	351	14	21	71			10	1	3
Western Michigan U	954	482	14	22	36	26	8	11	3	3
WI-U of, Madison	2845	0	11	67	181	45	34	33	4	22
WI-U of, Milwaukee	1971	1088	8	11	45	24	8	9	2	3

William & Mary-Coll of	507	341	13	14	72	28	15	15	0	7
Worcester Polytech Inst	1755	0	16	24	23	6	12	12	2	3
Wyoming-U of	778	62	6	17	26	6	6	7	2	2
Yale U	853	0	31	32	109	29	19	22	0	16

2013 Roster Data

	Enrollments		Majors		Students			Degrees Awarded		
INSTITUTION	PHYS	SCI & ASTRO	JR	SR	TOT	FOR	1ST	BACH	MAST	PHD
AL-U of, Birmingham	746	690	4	17	32	10	6	5	2	3
AL-U of, Huntsville	588	72	20	27	55	21	16	10	2	3
AL-U of, Tuscaloosa	1473	1096	22	26	47	24	12	12	1	3
Alabama A&M U	321	636	5	8	22	6	8	2	2	2
Alaska-U of, Fairbanks	475	64	9	9	27	8	5	4	0	2
AR-U of, Fayetteville	1924	529	28	65	51	27	9	25	0	3
Arizona State U	1468	127	74	112	101	45	25	38	4	16
Arizona-U of	2544	64	42	44	84	37	16	26	3	7
Auburn U	1893	208	11	29	52	24	15	6	0	3
Baylor U	1753	608	8	14	30	20	7	3	1	2
Boston Coll	476	0	18	17	47	30	8	15	2	7
Boston U	1009	0	30	29	102	55	16	26	0	14
Brandeis U	201	0	22	12	49	22	9	11	1	3
Brigham Young U	2109	3847	69	152	30	4	9	54	2	3
Brown U	423	57	24	28	94	57	15	39	2	10
Bryn Mawr Coll	336	48	6	7	6	1	0	8	2	0
CA-U of, Berkeley	3069	0	106	144	266	71	52	97	2	36
CA-U of, Davis	1116	371	52	61	150	77	38	42	8	34
CA-U of, Irvine	3732	412	25	23	137	25	26	30	1	22
CA-U of, Los Angeles	3226	0	76	119	151	35	41	48	5	20
CA-U of, Riverside	1940	1157	19	31	123	63	26	22	6	17
CA-U of, San Diego	3589	116	59	86	186	46	32	44	4	18
CA-U of, Santa Barbara	3182	765	110	99	141	20	27	66	10	20
CA-U of, Santa Cruz	1724	0	78	116	59	4	18	54	0	10
Cal Inst of Tech	231	0	31	26	125	63	35	30	0	27
Carnegie Mellon U		170	35	39	69	40	18	36	2	4
Case Western Reserve U	879	0	19	34	52		12	21	2	2
Catholic U	347	95	6	1	36	18	6	3	9	2
Central Florida-U of	2110	1149	42	83	92	57	9	22	4	
Chicago-U of			70	62	147		20	54	3	12
Cincinnati-U of	2986	664	10	7	53	43	7	11	2	9
Clark U	115	118	17	15	7	6	2	6	3	1
Clarkson U	1143	0	12	14	12	5	3	12	3	1
Clemson U	2131	444	17	33	62	32	16	13	4	6
Colorado School of Mines	937	0	46	105	75	13	12	48	3	10
Colorado St U-Fort Collins	2769	512	30	40	60	12	9	14	3	2
Colorado-U of, Boulder	2687	0	139	193	228	75	32	55	0	25
Columbia U	2342	28	35	31	174	87	32	59	0	21
Connecticut-U of	2351	106	34	33	82	37	14	12	0	9
Cornell U	2014	0	32	41	177	77	28	31	5	31

Dartmouth Coll	452	0	8	14	57	28	10	13	1	7
Delaware State U	229	134	9	18	21	7	5	7	3	0
Delaware-U of	1336	822	15	15	80	46	10	17	4	9
Denver-U of	239	58	7	12	22	3	4	4	0	6
Drexel U	2849	351	8	17	45	4	10	15	2	4
Duke U	956	54	25	27	77	48	15	19	2	11
East Carolina U	2320	0	6	18	33	10	8	6	0	5
Emory U	1173	160	16	20	33	24	10	22	2	3
Florida A&M U	700	1017	2	9	7	2	1	5	1	4
Florida Atlantic U	567	469	24	30	32	18	5	3	4	2
Florida Inst of Tech	433	0	12	20	18	7	5	12	4	3
Florida International U	3200	1000	51	56	37	20	9	15	4	5
Florida-U of	3020	0	29	85	136	76	22	29		15
George Mason U	1071	0	22	42	53	7	4	17	2	3
George Washington U	624	356	11	8	24	13	5	7	1	6
Georgetown U	513	15	15	16	25	13	6	15	1	7
Georgia Inst of Tech	2302	174	41	45	138	22	22	36	2	8
Georgia State U	1606	0	25	47	45	13	8	15	1	5
Georgia-U of	1709	603	17	18	57	29	13	12	2	6
Hampton U	234	0	3	5	25	13	7	8	0	5
Harvard U	838	0	56	44	346	151	41	52	1	53
Hawaii-U of, at Manoa	410	0	18	21	42	9	7	7	0	3
Houston-U of	4416	528	23	40	108	85	28	7	5	6
Howard U	299	20	3	3	16	8	2	3	4	1
Idaho State U	759	220	8	17	23	12	0	7	1	2
Idaho-U of	799	14	15	33	25	13	3	8	1	6
IL-U of, Chicago	1303	170	7	27	85	52	12	14	4	6
IL-U of, Urbana/Champaign	3476	0	128	168	262	119	39	65	0	41
Illinois Inst of Tech	742	36	9	19	53	31	19	11	4	4
Indiana U Purdue U-Indpls	1077	973	14	25	20	9	1	8	2	1
Iowa State U	2434	0	24	31	92	56	15	2	2	7
Iowa-U of	1798	0	23	41	75	30	6	10	2	8
Johns Hopkins U	739	0	22	26	77	32	12	23	2	7
Kansas State U	2855	70	11	18	63	49	11	8	2	9
Kansas-U of	1499	0	18	11	50	15	12	11	0	7
Kent State U	2964	1211	13	27	81	65	14	9	2	5
Kentucky-U of	2959	1001	25	31	72	36	9	8	8	8
LA St U-Baton Rouge	5320	1329	22	36	108	47	21	25	1	13
Lehigh U	397	183	12	17	41	17	10	7	2	9
Louisville-U of	1279	736	19	40	34	14	11	8	0	1
MA-U of, Amherst	1133	0	46	44	81	50	15	31	1	14
MA-U of, Lowell	1026	730	19	26	94	34	27	12	4	8
Maine-U of	734	369	26	8	32	5	7	9	3	2
Maryland-U of, Balt Cnty	1123	0	45	61	46	9	9	14	6	2

Maryland-U of, Coll Park	2521	0	93	134	209	80	25	58	2	30
Mass Inst of Tech (MIT)	1018	0	74	99	229	119	49	104	4	37
Miami-U of	794	168	8	22	26	24	6	15	4	3
Michigan State U	3665	0	90	84	125	47	20	38	1	18
Michigan Technological U	1047	59	13	14	42	31	10	11	7	5
Michigan-U of, Ann Arbor	2488	0	50	79	226	79	33	50	0	35
Minnesota-U of, Minnpls	3146	0	47	68	150	61	28	42	4	12
Mississippi State U	1328	673	12	11	50	37	10	10	1	3
Mississippi-U of	1368	1174	8	16	34	26	2	7	10	3
Missouri U of Sci & Tech	443	0	26	25	45	30	6	9	0	8
MO-U of Columbia	1380	310	23	28	58	31	10	14	5	4
MO-U of, Kansas City	416	132	13	18	48	18	14	7	7	3
MO-U of, St. Louis	426	644	12	14	24	5	7	5	1	2
Montana State U	1405	1031	21	19	58	7	12	5		3
NC-U of, Chapel Hill	2221	1040	25	57	70	10	14	22	5	8
NC-U of, Charlotte	1697	484	28	68	54	29	14	29		4
Nebraska-U of, Lincoln	1430	733	21	31	77	46	14	6	4	9
Nevada-U of, Las Vegas	815	944	20	18	20	5	6	9	2	2
Nevada-U of, Reno	2080	1139			43	11	4	14	2	7
New Hampshire-U of	843	281	6	25	64	24	7	11	0	8
New Jersey Inst of Tech	1054	200	10	9	24	19	7	8	0	9
New Mexico St U	956	0	20	47	34	24	4	13	5	3
New Mexico-U of	777	765	24	57	119	56	16	7	4	11
New Orleans-U of	440	124	3	10	28	9	5	3	0	1
New York U (NYU)	768	260	7	28	87	64	21	22	3	13
NM Inst of Mining & Tech	161	0	16	39	28	6	2	7	0	2
North Carolina St U	3870	238	41	44	109	53	17	32	0	25
North Dakota St U	800	123	8	7	10	6	0	1	1	1
North Texas-U of	2485	1629	35	46	57	33	6	15	3	7
Northeastern U	1381	149	28	47	80	48	17	24	1	7
Northern Illinois U	910	376	12	21	55	21	14	1	8	3
Northwestern U	713	208	14	18	84	36	14	14	1	5
Notre Dame-U of	966	992	34	35	93	30	10	31	1	20
Oakland U	1132	332	16	16	20	9	6	7	12	2
Ohio State U	2871	0	56	76	212	41	48	48	5	21
Ohio U	1490	1061	9	25	83	65	14	10	0	10
Oklahoma State U	1627	532	10	14	45	30	12	6	0	10
Oklahoma-U of	1824	0	10	22	70	29	17	8	1	5
Old Dominion U	1223	390	11	18	49	29	10	3	2	5
Oregon State U	1913	642	35	42	39	10	10	19	4	3
Oregon-U of	1451	255	33	45	97	18	27	26	0	10
Pennsylvania St U	3120	0	38	80	135	70	26	47	6	18
Pennsylvania-U of	536	38	17	38	102		25	22	19	
Pittsburgh-U of	2217	0	24	50	96	56	20	16	2	11

Portland State U	846	117	35	47	43	5	5	22	2	7
Princeton U	204	0	24	24	116	77	26	17	0	13
Puerto Rico-U of, Rio Piedras	780	52	20	11	66	39	10	8	1	9
Purdue U-West Lafayette	4325	132	24	70	148	73	22	33	1	26
Rensselaer Polytech Inst	1141	198	42	51	57	16	22	52	0	6
Rhode Island-U of	885	601	9	2	18	9	3	5	0	3
Rice U	617	0	15	21	111	63	20	18	0	9
Rochester-U of	703	0	24	17	100	37	6	28	3	17
Rutgers U-New Brunswick	3068	564	65	78	114	57	21	67	2	14
Rutgers U-Newark	958	0						8	0	
SD Sch of Mines & Tech	505	678	8	10	11	0	6	3	5	0
South Carolina-U of	1470	1183	15	26	50	31	9	3	2	1
South Florida-U of	2051	302	50	102	79	39	10	14	2	9
Southern Cal-U of (USC)	1367	0	20	15	80	56	17	12	8	8
Southern Methodist U	517	39	2	8	19	12	4	3	12	2
Stanford U	948	164	27	23	298	117	54	22	6	62
Stevens Inst of Tech	582	10	7	8	22	17	0	8		3
Sthrn IL U-Carbondale	767	162	8	13	28	19	9	3	4	0
SUNY-Binghamton U	526	786	28	38	31	9	7	15	4	0
SUNY-Stony Brook U	2142	0	64	91	172	114	31	39	0	21
SUNY-U at Albany	1365	757	36	32	67	21	15	25	1	1
SUNY-U at Buffalo	3824	227	20	33	84	49	21	19	0	13
Syracuse U	954	775	17	17	70	38	16	12	3	9
Temple U	3550	469	16	20	55	26	7	7	0	4
Texas A&M-College Station	3366	1016	28	36	186	98	22	12	6	14
Texas Christian U	194	328	4	10	19	11	4	1	2	2
Texas Tech U	2053	1006	16	23	57	37	13	12	1	2
Texas-U of, at Arlington	1571	835	36	56	47	26	9	17		11
Texas-U of, at Austin	4336	1864	116	198	215	106	28	78	1	24
Texas-U of, at Dallas	1119	52	29	48	58	23	13	14	3	8
Texas-U of, at San Antonio	2210	1032	36	42	89	25	27	14	2	7
TN-U of, Knoxville	1489	503	25	27	125	46	23	16	5	13
Toledo-U of			7	25	67	28	9	11		5
Tufts U	878	0	13	13	31	13	5	7	1	3
Tulane U	453	33	7	8	27	12	8	11	4	4
Tulsa-U of	470	55	9	9	13	9	8	7	1	0
Utah State U	1066	1117	28	53	23	4	4	12	5	4
Utah-U of	1838	889	74	129	97	51	18	35	4	11
Vanderbilt U	370	107	9	12	77	23	11	12	3	11
Virginia Polytech Inst & St U	3636	560	54	32	76	24	14	21	5	13
Virginia-U of	1534	0	62	48	92	68	23	61	5	7
Wake Forest U	473	201	35	17	43	16	11	16	2	2
Washington State U	1330	847	8	21	63	23	13	13	0	10
Washington U	761	0	19	34	82	42	14	25	10	13

Washington-U of	3280	275	82	70	209	33	44	102	4	14
Wayne State U	1747	1294	18	38	62	33	11	10	0	7
Wesleyan U	456	0	25	14	15	13	3	15	3	4
West Virginia U	1919	737	13	30	72	20	13	10	0	5
Western Michigan U	1042	300	17	32	35	28	10	6	2	5
WI-U of, Madison	2767	0	20	70	181	42	38	33	0	29
WI-U of, Milwaukee	1856	990	6	15	44	22	10	9	4	5
William & Mary-Coll of	547	331	32	18	69	25	8	14	0	5
Worcester Polytech Inst	4237	0	12	14	19	7	10	19	1	2
Wyoming-U of	787	150	20	15	35		9	10	0	2
Yale U	913	0	35	39	121	46	26	31	2	12

Appendix B: National Research Council Data

The following abbreviations are used in addition to the abbreviations listed in appendix A. Values are for the fiscal year Fall 2005 to Spring 2006 unless otherwise stated or defined in section 1 of this project.

ALLOCATED FAC	Allocated Faculty Members
ASST PROF	Assistant Professors as a Percent of Total Faculty
AWARDS	Awards per Allocated Faculty Member
C&N FAC	Core and New Faculty
CITATIONS	Citations per Publication
COMPL	PhD Completion Percentage (6 years or less)
ENR	Total Graduate Students (enrolled)
EXT FLW	Percent of First Year Graduate Students with External Fellowships
FAC	Total Faculty
FLW & ASST	Percent of First Year Graduate Students with a Combination of
	Fellowships and Assistantships
FLW & TRN	Percent of First Year Graduate Students with a Combination of
	Fellowships and Traineeships
FULL FIN	Percent of First Year Graduate Students with Full Financial
	Support
FY ENR	First Year Graduate Students (Enrolled)
GR FAC	Percent of Faculty with Grants
GRE	Average GRE Scores of Graduate Students
H INS	Is Health Insurance Provided (1=yes, -1=no)
I FAC	Percent of Interdisciplinary Faculty
INST FLW	Percent of First Year Graduate Students with Institutional
	Fellowships
MLT ASST	Percent of First Year Graduate Students with Multiple
	Assistantships
National Research Council Data	Data from the *Data-Based Assessment of Research Doctorate*
	Programs in the United States
PHD	Average Number of PhDs Awarded
PUBLICATIONS	Publications per Allocated Faculty Member
RA	Percent of Graduate Students with Research Assistantships
SA	Number of Student Activities (>18 are listed as 18)
TA	Percent of Graduate Students with Teaching Assistantships
TEN FAC	Tenured Faculty as a Percent of Total Faculty
TIME	Median PhD Completion Time in Years

2010 National Research Council Data Table 1

INSTITUTION	ALLOCATED FAC	AWARDS	PUBLICATIONS	CITATIONS
AL-U of, Birmingham	16.13	0.06	1.9	1.53
AL-U of, Huntsville	26.75	3.18	1.27	2.05
Alabama A&M, U of	23.27	1.15	3.13	2.44
Alaska-U of, Fairbanks	14.43	0	1.09	1.67
AR-U of, Fayetteville	8.84	0.06	3.15	1.68
Arizona State U	38.83	0.4	3.33	2.01
Arizona-U of	80.6	0.7	3.44	2.17
Auburn U	18.5	0.54	2.96	1.19
Baylor U	14	0.07	2.68	2.45
Boston Coll	15.09	0.07	3.34	4.35
Boston U	37.03	1.73	4.21	3.94
Brandeis U	14.81	2.42	5.18	2.99
Brigham Young U	28.4	1.17	0.79	1.2
Brown U	29.25	0.68	3.59	3.04
CA-U of, Berkeley	70.4	5.31	6.21	3.56
CA-U of, Davis	66.97	0.49	4.12	2.79
CA-U of, Irvine	48.85	0.57	5.05	3.97
CA-U of, Los Angeles	51.74	0.8	2.94	3.13
CA-U of, Riverside	33.21	0.26	7.93	2.22
CA-U of, San Diego	48.23	2.65	4.46	2.99
CA-U of, Santa Barbara	45.87	5	5.93	3.6
CA-U of, Santa Cruz	19.74	0.9	8.16	3.52
Cal Inst of Tech	50.57	8.93	4.95	2.98
Carnegie Mellon U	30.58	0.37	7.57	2.64
Case Western Reserve U	20.08	1.64	2.23	1.83
Catholic U	10.5	0	2.98	2.83
Central Florida-U of	22.86	0.01	2.16	2.15
Chicago-U of	49.78	3.75	4.62	2.74
Cincinnati-U of	26.45	0.19	4.06	2.24
Clark U	6	0	2.02	1.38
Clemson U	20.97	0.43	2.53	2.69
Colorado St U-Fort Collins	18	2.06	3.28	1.67
Colorado-U of, Boulder	58.97	2.6	6.05	3.24
Columbia U	33.26	3.79	5.73	3.08
Connecticut-U of	30.13	0.09	2.48	1.64
Cornell U	56.57	2.99	5.85	2.85
Dartmouth Coll	21.5	0.16	1.95	2.55
Delaware-U of	36.28	0.1	3.99	2.83
Drexel U	20.5	0	1.91	4.67
Duke U	33.97	0.44	3.49	3

Florida Atlantic U	12.91	0	1.21	1.31
Florida International U	22	0	2.29	3.72
Florida State U	45	0.16	4.83	1.92
Florida-U of	53.32	0.51	5.78	2.33
George Washington U	14.15	0.35	3.87	2.26
Georgia Inst of Tech	25.03	1.68	2.37	3.19
Georgia State U	12.31	0.42	2.77	2.23
Georgia-U of	23.06	0.26	2.69	1.4
Harvard U	54.21	12.16	5.41	3.48
Hawaii-U of, at Manoa	15	0.33	9.09	5.41
Houston-U of	23.46	0.55	2.9	1.61
IL-U of, Chicago	25.27	0.24	4.15	2.93
IL-U of, Urbana/Champaign	64.44	2.58	5.37	2.61
Illinois Inst of Tech	15.13	0	1.42	1.69
Indiana U-Bloomington	47.52	0.3	4.3	2.22
Iowa State U	43.87	0.31	6.9	2.83
Iowa-U of	28.31	0.42	3.24	2.16
Johns Hopkins U	25.79	1.74	7.09	2.94
Kansas State U	27.4	0	5.47	1.84
Kansas-U of	22	0.05	7.46	2.23
Kentucky-U of	29.74	0.07	2.11	1.86
LA St U-Baton Rouge	35.98	0.48	2.87	2.11
Lehigh U	18.82	0	1.62	0.96
MA-U of, Amherst	30.4	0.25	6.37	2.48
Maryland-U of, Balt Cnty	27.11	0	1.48	2.96
Maryland-U of, Coll Park	100.2	3.92	4.78	2.44
Mass Inst of Tech	83.03	3.64	6.5	3.11
Miami-U of	17.5	0	1.17	1.66
Michigan State U	60.73	0.25	5.96	2.71
Michigan Technological U	17.88	0.04	1.56	1.28
Michigan-U of, Ann Arbor	78.56	1.91	4.98	2.41
Minnesota-U of, Minnpls	46.57	0.32	5.02	2.37
Mississippi-U of	25	0.04	6.37	2.5
MO-U of Columbia	24.67	0.04	1.97	2.05
MO-U of, Kansas City	9	0	1.54	1.64
MO-U of, Rolla	28.43	0.09	1.78	1.12
MO-U of, St. Louis	10.67	0	0.79	2.58
Montana State U	25.5	0.39	2.03	1.6
NC-U of, Chapel Hill	34.11	0.26	2.44	2.72
Nebraska-U of, Lincoln	25.22	0.14	4.82	1.74
Nevada-U of, Reno	17.7	0.1	2.21	0.96
New Hampshire-U of	27.16	0	2.98	2.48
New Jersey Inst of Tech	37.5	0	0.86	1.46
New Mexico St U	19.5	0.04	2.93	3.65

New Mexico-U of	43.42	0.18	4.81	2.68
New Orleans-U of	35.5	0	0.96	0.97
New York U (NYU)	34.25	1.5	2.96	3.65
North Carolina St U	43.29	0.45	2.49	1.97
North Texas-U of	22	0.27	0.86	0.91
Northeastern U	26.26	0.11	5.6	1.8
Northern Illinois U	26	0.04	4.34	2.66
Northwestern U	27.15	1.06	6.4	1.93
Notre Dame-U of	41.61	0.24	6.98	2.17
Ohio State U	60.37	1.33	6.56	2.58
Ohio U	26	0	3.62	2.22
Oklahoma State U	26.85	0.12	1.26	1.8
Oklahoma-U of	27.64	0	4.05	2.23
Old Dominion U	24.64	0.54	2.64	3.45
Oregon State U	20.53	0	1.23	1.3
Oregon-U of	28.55	1.48	8.53	2.52
Pennsylvania St U	40.8	2.68	4.51	3.39
Pennsylvania-U of	37.33	1.03	5.58	4.21
Pittsburgh-U of	51.86	0.14	4.66	2.52
Princeton U	46.97	5.3	4.95	3.95
Purdue U-West Lafayette	48.67	0.45	4.93	2.41
Rensselaer Polytech Inst	25.31	0.76	4.39	2.96
Rice U	35.29	1.09	3.66	3.33
Rochester-U of	51.8	1.58	6.25	1.95
Rutgers U-New Brunswick	65.1	0.78	3.43	2.76
South Carolina-U of	24	0.54	5.39	2.24
South Florida-U of	19	0.37	1.69	1.66
Southern Cal-U of	27.65	0.18	3.32	1.6
Stanford U	78.15	3.63	5.82	3.52
Stevens Inst of Tech	16.5	0.61	0.83	1.05
SUNY-Albany	11	0	9.16	1.95
SUNY-Buffalo	31.75	0.31	3.21	1.68
SUNY-Stony Brook U	72.16	0.67	4.06	3.49
Syracuse U	25.8	0	4.89	2.03
Temple U	16.5	0	1.3	1.56
Texas A&M-College Station	42.83	0.87	5.53	2.72
Texas Christian U	8.5	0.59	1.24	0.89
Texas Tech U	18	0	2.16	1
Texas-U of, at Austin	69.89	1.74	3.91	2.6
Texas-U of, at Dallas	17.53	0.34	4.77	1.97
TN-U of, Knoxville	44.73	1.11	2.68	2.11
Toledo-U of	26.5	0.02	1.47	1.48
Tufts U	18.5	0	3.83	2.16
Tulane U	11	0	2.65	6.43

Utah State U	13.5	0	1.21	1.67
Utah-U of	28.75	1.02	3.74	2.6
Vanderbilt U	38.61	0.41	4.37	1.9
Virginia Polytech Inst & St U	24.73	0.04	3.2	2.29
Virginia-U of	37.87	0.5	3.55	2.37
Wake Forest U	14.07	1.49	1.8	2.74
Washington State U	14.89	1.08	4.08	1.76
Washington U	28.67	1.64	2.76	1.82
Washington-U of	64.48	0.47	2.89	3.33
Wayne State U	26.31	0	5.56	3.09
Western Michigan U	17.12	0	2.3	1.46
WI-U of, Madison	72.99	0.77	4.83	2.41
WI-U of, Milwaukee	21	0.29	2.2	1.96
William & Mary-Coll of	47.5	0.02	2.14	2.72
Yale U	44.34	2.42	5.28	3.18

2010 National Research Council Data Table 2

INSTITUTION	C&N FAC	FAC	GR FAC	I FAC	ASST PROF	TEN FAC
AL-U of, Birmingham	15	29	69.70%	48.30%	14.00%	90.00%
AL-U of, Huntsville	22	45	86.50%	51.14%	9.11%	---
Alabama A&M, U of	26	26	68.30%	0.00%	0.00%	77.00%
Alaska-U of, Fairbanks	13	17	89.40%	23.50%	18.00%	71.00%
AR-U of, Fayetteville	13	19	65.90%	31.60%	5.00%	84.00%
Arizona State U	44	53	86.20%	17.00%	---	---
Arizona-U of	80	125	80.19%	36.02%	17.66%	---
Auburn U	18	19	75.00%	5.30%	21.00%	74.00%
Baylor U	14	14	50.00%	0.00%	7.00%	64.00%
Boston Coll	15	16	73.50%	6.30%	25.00%	63.00%
Boston U	36	47	92.40%	23.40%	9.00%	89.00%
Brandeis U	15	16	71.40%	6.30%	25.00%	69.00%
Brigham Young U	28	39	68.80%	28.20%	26.00%	72.00%
Brown U	26	44	88.70%	40.90%	14.00%	43.00%
CA-U of, Berkeley	74	90	93.30%	17.80%	11.00%	78.00%
CA-U of, Davis	69	89	81.65%	22.46%	8.76%	76.46%
CA-U of, Irvine	49	49	87.20%	0.00%	---	100.00%
CA-U of, Los Angeles	46	67	87.70%	31.30%	13.00%	81.00%
CA-U of, Riverside	30	37	84.40%	18.90%	24.00%	65.00%
CA-U of, San Diego	51	62	85.00%	17.70%	10.00%	87.00%
CA-U of, Santa Barbara	50	51	94.40%	2.00%	10.00%	90.00%
CA-U of, Santa Cruz	20	27	83.60%	25.90%	15.00%	85.00%
Cal Inst of Tech	59	124	84.76%	52.43%	8.37%	81.74%
Carnegie Mellon U	29	56	93.20%	48.20%	2.00%	75.00%
Case Western Reserve U	19	23	90.00%	17.40%	4.00%	96.00%
Catholic U	10	11	88.90%	9.10%	9.00%	55.00%
Central Florida-U of	23	32	64.90%	28.10%	9.00%	50.00%
Chicago-U of	48	68	94.90%	29.40%	13.00%	76.00%
Cincinnati-U of	26	27	73.50%	3.70%	4.00%	96.00%
Clark U	6	6	50.00%	0.00%	17.00%	83.00%
Clemson U	21	27	85.50%	22.20%	11.00%	63.00%
Colorado St U-Fort Collins	18	18	87.50%	0.00%	0.00%	100.00%
Colorado-U of, Boulder	59	68	89.40%	13.20%	21.00%	54.00%
Columbia U	33	40	95.00%	17.50%	0.00%	70.00%
Connecticut-U of	31	36	87.90%	13.90%	8.00%	72.00%
Cornell U	55	60	88.40%	8.30%	13.00%	72.00%
Dartmouth Coll	19	24	85.70%	20.80%	13.00%	54.00%
Delaware-U of	34	48	79.00%	29.20%	8.00%	75.00%
Drexel U	21	23	45.20%	8.70%	22.00%	65.00%
Duke U	34	43	96.60%	20.90%	14.00%	70.00%
Florida Atlantic U	14	14	62.70%	0.00%	7.00%	57.00%

Florida International U	22	22	77.80%	0.00%	9.00%	86.00%
Florida State U	45	45	92.10%	0.00%	27.00%	67.00%
Florida-U of	53	58	83.80%	8.60%	7.00%	84.00%
George Washington U	14	15	87.70%	6.70%	20.00%	67.00%
Georgia Inst of Tech	28	29	84.40%	3.40%	24.00%	76.00%
Georgia State U	13	20	63.40%	35.00%	20.00%	80.00%
Georgia-U of	23	27	86.60%	14.80%	19.00%	74.00%
Harvard U	91	139	86.00%	34.51%	7.24%	---
Hawaii-U of, at Manoa	15	15	100.00%	0.00%	7.00%	87.00%
Houston-U of	27	27	82.60%	0.00%	15.00%	85.00%
IL-U of, Chicago	25	29	95.00%	13.80%	14.00%	79.00%
IL-U of, Urbana/Champaign	71	87	91.60%	18.40%	16.00%	79.00%
Illinois Inst of Tech	16	16	75.30%	0.00%	19.00%	81.00%
Indiana U-Bloomington	47	65	86.10%	27.70%	17.00%	65.00%
Iowa State U	44	49	94.20%	10.20%	20.00%	71.00%
Iowa-U of	31	31	100.00%	0.00%	16.00%	84.00%
Johns Hopkins U	38	46	78.10%	17.40%	20.00%	76.00%
Kansas State U	26	34	87.00%	23.50%	15.00%	74.00%
Kansas-U of	22	22	85.70%	0.00%	14.00%	82.00%
Kentucky-U of	28	49	81.50%	42.90%	10.00%	90.00%
LA St U-Baton Rouge	37	38	80.90%	2.60%	18.00%	82.00%
Lehigh U	19	19	67.50%	0.00%	0.00%	79.00%
MA-U of, Amherst	29	35	75.40%	17.10%	9.00%	0.00%
Maryland-U of, Balt Cnty	21	36	75.60%	41.70%	11.00%	47.00%
Maryland-U of, Coll Park	127	166	75.01%	23.51%	10.45%	19.40%
Mass Inst of Tech	92	92	81.80%	0.00%	20.00%	52.00%
Miami-U of	17	26	75.00%	34.60%	12.00%	81.00%
Michigan State U	56	96	88.30%	41.70%	16.00%	74.00%
Michigan Technological U	19	29	78.30%	34.50%	7.00%	86.00%
Michigan-U of, Ann Arbor	148	211	86.86%	29.83%	12.10%	83.55%
Minnesota-U of, Minnpls	55	56	84.10%	1.80%	13.00%	86.00%
Mississippi-U of	25	25	73.70%	0.00%	28.00%	32.00%
MO-U of Columbia	25	25	73.50%	0.00%	32.00%	56.00%
MO-U of, Kansas City	8	10	80.00%	20.00%	10.00%	70.00%
MO-U of, Rolla	19	55	65.60%	65.50%	9.00%	31.00%
MO-U of, St. Louis	13	13	33.30%	0.00%	0.00%	77.00%
Montana State U	19	32	92.30%	40.60%	16.00%	44.00%
NC-U of, Chapel Hill	29	57	92.30%	49.10%	12.00%	60.00%
Nebraska-U of, Lincoln	25	30	100.00%	16.70%	20.00%	67.00%
Nevada-U of, Reno	17	25	67.50%	32.00%	8.00%	44.00%
New Hampshire-U of	28	28	95.00%	0.00%	14.00%	64.00%
New Jersey Inst of Tech	15	44	83.90%	20.50%	9.00%	23.00%
New Mexico St U	19	23	91.70%	17.40%	26.00%	57.00%
New Mexico-U of	41	91	82.02%	54.92%	9.59%	65.08%

New Orleans-U of	35	36	58.80%	2.80%	31.00%	56.00%
New York U (NYU)	35	35	71.70%	0.00%	29.00%	71.00%
North Carolina St U	43	49	90.90%	12.20%	12.00%	69.00%
North Texas-U of	22	22	62.50%	0.00%	5.00%	73.00%
Northeastern U	25	29	95.20%	13.80%	14.00%	76.00%
Northern Illinois U	26	26	82.40%	0.00%	8.00%	58.00%
Northwestern U	29	42	89.60%	31.00%	5.00%	90.00%
Notre Dame-U of	42	45	78.30%	6.70%	9.00%	76.00%
Ohio State U	81	84	80.79%	3.54%	9.57%	84.52%
Ohio U	26	26	88.00%	0.00%	23.00%	65.00%
Oklahoma State U	45	45	71.43%	0.00%	11.11%	71.11%
Oklahoma-U of	29	34	92.90%	14.70%	6.00%	94.00%
Old Dominion U	20	37	63.60%	45.90%	8.00%	78.00%
Oregon State U	25	30	62.30%	16.70%	13.00%	53.00%
Oregon-U of	29	34	87.90%	14.70%	18.00%	76.00%
Pennsylvania St U	49	99	95.10%	50.50%	16.00%	79.00%
Pennsylvania-U of	34	48	88.30%	29.20%	19.00%	63.00%
Pittsburgh-U of	46	77	89.90%	40.30%	14.00%	73.00%
Princeton U	45	69	90.77%	34.74%	5.97%	71.12%
Purdue U-West Lafayette	47	73	78.10%	35.60%	19.00%	75.00%
Rensselaer Polytech Inst	25	49	73.00%	46.90%	12.00%	76.00%
Rice U	51	51	97.71%	0.00%	19.71%	62.80%
Rochester-U of	48	74	89.32%	35.13%	5.55%	74.69%
Rutgers U-New Brunswick	70	70	86.10%	0.00%	9.00%	87.00%
South Carolina-U of	24	24	79.20%	0.00%	13.00%	75.00%
South Florida-U of	19	19	57.90%	0.00%	26.00%	---
Southern Cal-U of	33	33	70.70%	0.00%	3.00%	94.00%
Stanford U	79	95	78.30%	16.80%	8.00%	71.00%
Stevens Inst of Tech	12	21	20.00%	42.90%	14.00%	57.00%
SUNY-Albany	11	11	60.00%	0.00%	9.00%	73.00%
SUNY-Buffalo	33	35	72.50%	5.70%	---	---
SUNY-Stony Brook U	74	75	84.20%	1.30%	11.00%	61.00%
Syracuse U	26	26	95.20%	0.00%	4.00%	73.00%
Temple U	17	17	66.70%	0.00%	12.00%	82.00%
Texas A&M-College Station	52	53	82.30%	1.90%	8.00%	81.00%
Texas Christian U	8	9	50.00%	11.10%	11.00%	67.00%
Texas Tech U	18	18	64.70%	0.00%	6.00%	78.00%
Texas-U of, at Austin	71	137	83.30%	48.20%	13.00%	85.00%
Texas-U of, at Dallas	19	19	80.20%	0.00%	5.00%	79.00%
TN-U of, Knoxville	41	52	79.00%	21.20%	6.00%	62.00%
Toledo-U of	22	31	82.40%	29.00%	10.00%	87.00%
Tufts U	18	19	88.20%	5.30%	5.00%	74.00%
Tulane U	11	11	75.00%	0.00%	27.00%	73.00%
Utah State U	13	14	75.00%	7.10%	7.00%	86.00%

Utah-U of	30	30	83.00%	0.00%	23.00%	70.00%
Vanderbilt U	42	58	86.70%	27.60%	22.00%	69.00%
Virginia Polytech Inst & St U	25	43	75.70%	41.90%	16.00%	79.00%
Virginia-U of	38	38	88.86%	0.00%	21.18%	68.68%
Wake Forest U	14	17	77.90%	17.60%	18.00%	88.00%
Washington State U	17	23	82.60%	26.10%	9.00%	83.00%
Washington U	29	29	79.90%	0.00%	17.00%	72.00%
Washington-U of	77	103	88.80%	25.20%	8.00%	76.00%
Wayne State U	23	30	82.20%	23.30%	0.00%	80.00%
Western Michigan U	16	20	56.20%	20.00%	5.00%	90.00%
WI-U of, Madison	80	80	76.01%	0.00%	19.73%	---
WI-U of, Milwaukee	21	21	78.90%	0.00%	14.00%	71.00%
William & Mary-Coll of	46	56	89.75%	17.89%	14.32%	71.21%
Yale U	61	72	97.33%	15.27%	17.94%	73.50%

2010 National Research Council Data Table 3

INSTITUTION	FY ENR	FULL FIN	EXT FLW	INST FLW	FLW & TRN	FLW & ASST	MLT ASST
AL-U of, Birmingham	5.6	100.00%	0%	25%	0%	0.00%	0%
AL-U of, Huntsville	13.8	80.29%	0%	0%	0%	0.00%	0%
Alabama A&M, U of	7.2	100.00%	0%	0%	0%	0.00%	0%
Alaska-U of, Fairbanks	1.4	95.00%	0%	0%	0%	0.00%	0%
AR-U of, Fayetteville	7.2	87.50%	0%	0%	0%	0.00%	0%
Arizona State U	14.4	100.00%	0%	0%	0%	18.20%	0%
Arizona-U of	49	71.24%	5%	0%	5%	0.00%	0%
Auburn U	8.5	100.00%	50%	---	---	---	---
Baylor U	3.6	100.00%	0%	0%	0%	0.00%	0%
Boston Coll	7.8	100.00%	0%	0%	0%	0.00%	0%
Boston U	21	100.00%	6%	11%	6%	0.00%	0%
Brandeis U	8.6	100.00%	0%	0%	0%	100.00%	0%
Brigham Young U	1.8	100.00%	0%	0%	0%	0.00%	50%
Brown U	17.8	100.00%	13%	13%	---	---	---
CA-U of, Berkeley	39	97.70%	14%	0%	9%	81.40%	0%
CA-U of, Davis	43	93.49%	0%	8%	0%	23.94%	0%
CA-U of, Irvine	24.6	100.00%	71%	0%	71%	0.00%	0%
CA-U of, Los Angeles	25.4	100.00%	50%	0%	50%	50.00%	0%
CA-U of, Riverside	15.2	100.00%	0%	33%	0%	58.30%	0%
CA-U of, San Diego	26.2	96.60%	14%	7%	0%	0.00%	0%
CA-U of, Santa Barbara	27	97.30%	19%	0%	8%	70.30%	0%
CA-U of, Santa Cruz	11.4	100.00%	0%	0%	0%	100.00%	0%
Cal Inst of Tech	37.8	100.00%	8%	38%	---	---	---
Carnegie Mellon U	14.2	100.00%	0%	0%	0%	0.00%	0%
Case Western Reserve U	9.6	100.00%	0%	0%	0%	0.00%	0%
Catholic U	5.6	75.00%	0%	33%	0%	0.00%	0%
Central Florida-U of	12.6	100.00%	0%	0%	0%	7.70%	0%
Chicago-U of	22.4	100.00%	0%	9%	0%	36.40%	5%
Cincinnati-U of	12.4	87.50%	0%	11%	0%	0.00%	0%
Clark U	3	100.00%	0%	0%	0%	100.00%	0%
Clemson U	11	100.00%	0%	0%	0%	0.00%	0%
Colorado St U-Fort Collins	12.2	100.00%	0%	---	---	28.60%	---
Colorado-U of, Boulder	39.2	96.70%	7%	0%	7%	90.00%	0%
Columbia U	19	100.00%	5%	0%	5%	94.70%	0%
Connecticut-U of	16.67	90.90%	0%	0%	0%	40.00%	0%
Cornell U	33	95.20%	0%	25%	0%	10.00%	0%
Dartmouth Coll	10.6	100.00%	0%	73%	0%	0.00%	0%
Delaware-U of	15.6	94.70%	0%	---	0%	---	36%
Drexel U	7	100.00%	0%	0%	0%	0.00%	0%
Duke U	13.4	100.00%	0%	8%	0%	0.00%	8%
Florida Atlantic U	4.2	100.00%	0%	0%	0%	0.00%	0%

Florida International U	5.6	100.00%	0%	0%	0%	0.00%	0%
Florida State U	27.8	95.70%	0%	0%	0%	0.00%	0%
Florida-U of	26.6	100.00%	0%	13%	0%	0.00%	3%
George Washington U	5.2	100.00%	20%	20%	20%	0.00%	0%
Georgia Inst of Tech	29.2	100.00%	0%	0%	0%	0.00%	0%
Georgia State U	6.2	83.30%	0%	43%	0%	0.00%	43%
Georgia-U of	9.4	87.50%	25%	0%	25%	0.00%	0%
Harvard U	46	100.00%	36%	0%	36%	64.38%	0%
Hawaii-U of, at Manoa	7	100.00%	0%	---	---	---	---
Houston-U of	14.2	100.00%	52%	0%	0%	0.00%	0%
IL-U of, Chicago	13.8	100.00%	0%	12%	0%	0.00%	0%
IL-U of, Urbana/Champaign	50.6	100.00%	4%	4%	4%	0.00%	0%
Illinois Inst of Tech	4.4	100.00%	0%	---	---	---	---
Indiana U-Bloomington	18	100.00%	0%	0%	0%	0.00%	0%
Iowa State U	18.6	100.00%	0%	---	0%	---	16%
Iowa-U of	12.4	100.00%	0%	11%	0%	0.00%	0%
Johns Hopkins U	11.4	100.00%	0%	0%	0%	36.40%	0%
Kansas State U	10.8	100.00%	0%	---	---	35.70%	---
Kansas-U of	9.6	100.00%	0%	0%	0%	0.00%	9%
Kentucky-U of	13.6	100.00%	0%	10%	0%	0.00%	0%
LA St U-Baton Rouge	11.8	100.00%	17%	0%	0%	0.00%	0%
Lehigh U	7.6	85.70%	0%	8%	0%	0.00%	0%
MA-U of, Amherst	13	100.00%	0%	11%	0%	11.10%	22%
Maryland-U of, Balt Cnty	7.4	100.00%	13%	0%	0%	0.00%	0%
Maryland-U of, Coll Park	48.2	100.00%	0%	4%	0%	27.52%	0%
Mass Inst of Tech	30.2	90.50%	5%	71%	5%	0.00%	5%
Miami-U of	7.6	80.00%	0%	0%	0%	0.00%	0%
Michigan State U	24.6	100.00%	28%	0%	28%	0.00%	17%
Michigan Technological U	5.8	100.00%	0%	0%	0%	0.00%	25%
Michigan-U of, Ann Arbor	37.4	100.00%	0%	50%	---	---	---
Minnesota-U of, Minnpls	28	100.00%	0%	0%	0%	5.70%	3%
Mississippi-U of	2.8	100.00%	0%	5%	---	10.50%	---
MO-U of Columbia	9.4	100.00%	0%	0%	0%	0.00%	0%
MO-U of, Kansas City	2.6	100.00%	0%	0%	---	---	---
MO-U of, Rolla	7.8	100.00%	0%	0%	0%	0.00%	0%
MO-U of, St. Louis	2.2	100.00%	0%	0%	0%	33.30%	0%
Montana State U	10	61.80%	6%	---	---	---	---
NC-U of, Chapel Hill	16	100.00%	0%	6%	0%	33.30%	0%
Nebraska-U of, Lincoln	13.4	100.00%	0%	0%	0%	0.00%	33%
Nevada-U of, Reno	7.2	100.00%	0%	0%	0%	0.00%	0%
New Hampshire-U of	8.4	50.00%	0%	0%	0%	0.00%	0%
New Jersey Inst of Tech	4.6	100.00%	0%	0%	0%	0.00%	0%
New Mexico St U	10.8	100.00%	13%	0%	0%	0.00%	0%
New Mexico-U of	19	93.79%	0%	0%	0%	0.00%	16%

New Orleans-U of	6.6	100.00%	60%	---	60%	40.00%	---
New York U (NYU)	8.4	100.00%	0%	88%	0%	0.00%	0%
North Carolina St U	16.4	94.70%	0%	0%	0%	0.00%	0%
North Texas-U of	8	100.00%	6%	---	---	---	---
Northeastern U	14.2	100.00%	0%	0%	0%	51.50%	0%
Northern Illinois U	9	77.80%	0%	11%	0%	0.00%	0%
Northwestern U	14.2	100.00%	0%	82%	0%	0.00%	0%
Notre Dame-U of	21.6	100.00%	0%	16%	0%	0.00%	4%
Ohio State U	26.25	100.00%	4%	7%	0%	0.00%	0%
Ohio U	16.6	100.00%	0%	0%	0%	5.30%	11%
Oklahoma State U	10.6	100.00%	0%	0%	0%	0.00%	0%
Oklahoma-U of	10.4	100.00%	0%	0%	0%	0.00%	0%
Old Dominion U	7.6	100.00%	0%	0%	0%	0.00%	100%
Oregon State U	7.2	66.70%	0%	0%	0%	0.00%	0%
Oregon-U of	16.2	95.20%	5%	0%	5%	0.00%	0%
Pennsylvania St U	23.6	100.00%	10%	3%	7%	3.20%	16%
Pennsylvania-U of	17.6	100.00%	0%	0%	0%	0.00%	0%
Pittsburgh-U of	16.6	100.00%	0%	11%	0%	0.00%	0%
Princeton U	26	100.00%	32%	68%	0%	0.00%	0%
Purdue U-West Lafayette	27	60.00%	0%	0%	0%	0.00%	0%
Rensselaer Polytech Inst	13	100.00%	20%	20%	0%	0.00%	0%
Rice U	32.8	100.00%	2%	25%	0%	0.00%	33%
Rochester-U of	30.2	100.00%	24%	41%	0%	0.00%	8%
Rutgers U-New Brunswick	16	100.00%	5%	26%	0%	0.00%	0%
South Carolina-U of	8.8	100.00%	33%	0%	0%	0.00%	0%
South Florida-U of	9	91.70%	0%	0%	0%	0.00%	8%
Southern Cal-U of	15	100.00%	0%	0%	0%	0.00%	0%
Stanford U	29.2	82.10%	14%	4%	11%	3.60%	21%
Stevens Inst of Tech	5	62.50%	---	---	---	---	---
SUNY-Albany	7.4	100.00%	0%	0%	0%	0.00%	0%
SUNY-Buffalo	16.6	80.00%	0%	13%	0%	20.00%	0%
SUNY-Stony Brook U	34.8	100.00%	9%	0%	1%	4.30%	0%
Syracuse U	10.4	100.00%	0%	0%	0%	0.00%	0%
Temple U	5.4	100.00%	0%	0%	0%	0.00%	0%
Texas A&M-College Station	24.8	100.00%	9%	3%	0%	78.80%	3%
Texas Christian U	4	100.00%	17%	0%	0%	0.00%	0%
Texas Tech U	5.8	0.00%	0%	0%	0%	0.00%	0%
Texas-U of, at Austin	46.4	100.00%	0%	0%	0%	0.00%	0%
Texas-U of, at Dallas	28.2	100.00%	3%	0%	0%	0.00%	0%
TN-U of, Knoxville	15.6	76.20%	25%	0%	25%	60.00%	0%
Toledo-U of	10.8	100.00%	0%	0%	0%	0.00%	0%
Tufts U	5.4	100.00%	0%	0%	0%	0.00%	0%
Tulane U	4.6	100.00%	0%	0%	0%	0.00%	0%
Utah State U	4	100.00%	0%	0%	0%	0.00%	0%

Utah-U of	27.4	90.90%	0%	0%	0%	0.00%	0%
Vanderbilt U	13	100.00%	0%	0%	0%	0.00%	0%
Virginia Polytech Inst & St U	14	93.80%	9%	0%	0%	0.00%	9%
Virginia-U of	26.6	100.00%	4%	20%	0%	0.00%	0%
Wake Forest U	4.6	100.00%	0%	33%	---	---	---
Washington State U	10	72.70%	0%	0%	0%	0.00%	0%
Washington U	16.8	76.90%	13%	---	7%	53.30%	---
Washington-U of	25.8	100.00%	0%	9%	0%	87.00%	4%
Wayne State U	10.8	69.20%	0%	14%	0%	0.00%	0%
Western Michigan U	5	100.00%	40%	0%	40%	0.00%	0%
WI-U of, Madison	44.2	94.20%	2%	---	---	---	---
WI-U of, Milwaukee	8.6	100.00%	0%	0%	0%	0.00%	0%
William & Mary-Coll of	17.2	100.00%	14%	27%	0%	0.00%	0%
Yale U	20.2	100.00%	8%	6%	8%	86.83%	0%

2010 National Research Council Data Table 4

INSTITUTION	COMPL	TIME	GRE	RA	TA	ENR	PHD	SA	H INS
AL-U of, Birmingham	31.70%	5	708	40.90%	31.80%	23	2.6	17	1
AL-U of, Huntsville	39.09%	5.4	765	61.29%	32.85%	45	6	13	1
Alabama A&M, U of	47.70%	5.3	757	50.00%	42.10%	38	4.2	17	1
Alaska-U of, Fairbanks	36.70%	6	770	83.30%	16.70%	5	1.4	9	-1
AR-U of, Fayetteville	33.20%	5.8	729	57.90%	42.10%	19	3.6	17	1
Arizona State U	13.20%	7.3	769	33.30%	49.30%	79	5.4	18	1
Arizona-U of	44.17%	5.3	764	64.30%	24.43%	225	23.4	18	1
Auburn U	24.00%	6.2	726	26.70%	22.70%	36	1.6	14	-1
Baylor U	5.00%	8.7	762	0.00%	83.30%	19	1.6	13	1
Boston Coll	13.70%	6.8	782	34.90%	60.50%	43	2.4	18	1
Boston U	8.60%	6	797	48.60%	22.90%	110	9.2	12	1
Brandeis U	18.10%	4.9	747	0.00%	0.00%	31	3.2	17	1
Brigham Young U	62.50%	6	760	15.60%	28.10%	15	1.4	15	-1
Brown U	34.70%	6	780	63.80%	23.40%	95	3.4	18	1
CA-U of, Berkeley	35.60%	6.3	800	54.00%	17.20%	239	27	18	1
CA-U of, Davis	38.00%	6	771	33.83%	37.73%	195	16.6	18	1
CA-U of, Irvine	27.50%	6	782	42.30%	16.20%	111	6	15	1
CA-U of, Los Angeles	28.60%	6	777	14.20%	6.10%	148	14	16	1
CA-U of, Riverside	29.40%	6	771	35.20%	33.80%	71	4.8	16	1
CA-U of, San Diego	43.20%	6	784	48.40%	23.80%	128	14.6	18	1
CA-U of, Santa Barbara	43.10%	6	793	37.90%	0.00%	145	16.8	18	1
CA-U of, Santa Cruz	43.50%	5.5	745	32.10%	35.70%	56	5.6	17	1
Cal Inst of Tech	43.53%	5.7	798	55.44%	23.40%	214	26	12	1
Carnegie Mellon U	48.60%	6.1	786	50.00%	48.40%	67	8.6	17	-1
Case Western Reserve U	59.60%	5.4	760	53.50%	30.20%	44	4.6	17	-1
Catholic U	12.90%	10	733	65.00%	20.00%	28	1.2	10	-1
Central Florida-U of	59.70%	4	725	34.60%	40.40%	53	3.6	17	-1
Chicago-U of	56.70%	5.6	800	52.20%	21.00%	138	16.6	18	1
Cincinnati-U of	38.90%	6	760	27.30%	69.10%	63	6	17	1
Clark U	28.00%	6.7	760	0.00%	0.00%	14	2.2	17	-1
Clemson U	59.80%	3	718	40.60%	59.40%	34	4.4	16	1
Colorado St U-Fort Collins	31.40%	5	729	52.10%	33.30%	44	5.2	12	-1
Colorado-U of, Boulder	33.40%	6.2	784	52.40%	4.30%	193	18.4	15	1
Columbia U	43.40%	6	797	54.90%	0.00%	113	13.8	16	1
Connecticut-U of	27.90%	6.5	758	23.00%	32.40%	76	4.8	14	1
Cornell U	39.00%	6	800	52.00%	26.90%	176	20.4	18	1
Dartmouth Coll	28.70%	5.1	772	0.00%	0.00%	42	2.8	17	1
Delaware-U of	20.40%	7	760	17.30%	7.90%	80	4.2	13	1
Drexel U	26.50%	6	767	15.60%	81.30%	35	2.8	17	-1
Duke U	29.40%	5.6	798	56.60%	30.30%	76	7.8	16	1
Florida Atlantic U	40.90%	4.8	720	0.00%	100.00%	20	4.2	13	-1
Florida International U	50.00%	5.5	718	33.30%	59.30%	25	1.6	14	1

Florida State U	41.70%	6	759	63.40%	35.10%	131	11.6	16	1
Florida-U of	48.20%	5.8	775	38.50%	40.00%	132	14.8	16	1
George Washington U	12.50%	6.7	772	10.50%	31.60%	24	2	13	1
Georgia Inst of Tech	35.00%	5.3	768	41.30%	57.90%	121	8.6	14	-1
Georgia State U	27.30%	5	753	0.00%	0.00%	29	2	17	1
Georgia-U of	35.30%	7.3	732	45.70%	19.60%	52	2.8	18	1
Harvard U	53.70%	6	798	5.10%	0.00%	258	27	16	1
Hawaii-U of, at Manoa	25.70%	6.4	754	34.30%	60.00%	35	1.8	16	1
Houston-U of	35.20%	7	769	0.00%	19.00%	99	8.6	10	1
IL-U of, Chicago	20.80%	6.7	726	19.20%	52.10%	68	5.6	15	1
IL-U of, Urbana/Champaign	26.80%	6.4	796	45.70%	39.40%	291	28.2	16	1
Illinois Inst of Tech	52.00%	4	742	0.00%	0.00%	20	2.2	11	-1
Indiana U-Bloomington	63.10%	5.6	790	69.90%	26.00%	82	8.8	18	1
Iowa State U	25.50%	6	780	51.90%	30.40%	83	8	16	1
Iowa-U of	22.50%	5.7	757	40.60%	43.80%	52	4.2	16	1
Johns Hopkins U	36.50%	6	793	36.40%	43.60%	55	6.4	16	1
Kansas State U	64.20%	5	760	88.90%	0.00%	56	6.2	18	1
Kansas-U of	49.70%	5.9	760	57.50%	35.00%	40	3.4	17	-1
Kentucky-U of	19.70%	5.1	767	33.30%	56.30%	52	4.4	17	1
LA St U-Baton Rouge	29.50%	5.7	760	50.00%	41.40%	62	5	14	1
Lehigh U	36.50%	6	757	31.00%	42.90%	44	4.2	18	1
MA-U of, Amherst	22.70%	7	779	49.20%	29.20%	65	6	15	1
Maryland-U of, Balt Cnty	27.00%	6	728	44.00%	44.00%	29	2.4	16	1
Maryland-U of, Coll Park	38.93%	5.9	791	56.47%	25.98%	259	27.8	16	1
Mass Inst of Tech	61.30%	5.8	800	61.40%	15.20%	184	29.6	18	1
Miami-U of	23.70%	6.4	781	7.70%	84.60%	26	1.4	18	1
Michigan State U	38.10%	5.7	764	56.40%	22.20%	117	14.2	17	1
Michigan Technological U	30.60%	5.2	754	56.50%	26.10%	23	2	18	1
Michigan-U of, Ann Arbor	33.30%	6.3	789	40.45%	26.88%	168	19.6	18	1
Minnesota-U of, Minnpls	38.90%	5.7	760	22.90%	48.60%	149	14.6	17	1
Mississippi-U of	54.20%	4	751	46.70%	44.40%	20	1.2	12	1
MO-U of Columbia	45.50%	5.4	760	20.50%	69.20%	39	5	16	1
MO-U of, Kansas City	73.80%	4.5	688	8.30%	25.00%	10	1	14	-1
MO-U of, Rolla	43.10%	4	708	40.70%	55.60%	27	4.8	14	-1
MO-U of, St. Louis	56.70%	5	730	23.10%	38.50%	13	1.6	18	1
Montana State U	15.40%	5.8	754	---	---	50	3.8	4	-1
NC-U of, Chapel Hill	31.00%	6	753	35.10%	37.70%	77	7.6	18	1
Nebraska-U of, Lincoln	54.50%	5.2	760	55.20%	8.60%	59	6	15	1
Nevada-U of, Reno	49.20%	4	760	64.50%	29.00%	33	2.6	15	1
New Hampshire-U of	21.70%	6	759	67.50%	27.50%	40	3	17	1
New Jersey Inst of Tech	58.90%	4.5	762	0.00%	60.70%	31	5.4	17	1
New Mexico St U	45.90%	5	760	52.60%	44.70%	38	4.6	10	1
New Mexico-U of	35.88%	6.1	765	43.86%	36.68%	107	9.6	18	1
New Orleans-U of	40.00%	4	658	0.00%	0.00%	35	6	6	-1

New York U (NYU)	34.50%	5.7	764	9.30%	62.80%	43	7.6	17	1
North Carolina St U	16.80%	6	743	56.80%	37.50%	93	9.6	18	1
North Texas-U of	23.20%	5.8	663	0.00%	0.00%	36	3.4	17	1
Northeastern U	24.10%	6.1	730	19.00%	29.30%	60	5	17	1
Northern Illinois U	25.00%	5.5	678	37.00%	29.60%	31	1.4	15	1
Northwestern U	26.50%	6	784	0.00%	19.70%	76	7.2	15	1
Notre Dame-U of	31.50%	6	767	20.40%	50.50%	98	7.6	16	1
Ohio State U	33.61%	6.1	772	42.90%	47.87%	173	20	18	1
Ohio U	49.80%	5	760	35.80%	35.80%	69	7	16	-1
Oklahoma State U	52.55%	5.3	760	46.51%	53.49%	41	4.8	17	-1
Oklahoma-U of	24.10%	6.5	770	34.80%	60.90%	47	4.6	16	1
Old Dominion U	26.70%	6.3	719	0.00%	0.00%	38	3.8	12	-1
Oregon State U	34.40%	6.6	760	20.80%	79.20%	27	4	16	1
Oregon-U of	18.50%	7.5	753	50.00%	37.80%	82	6	12	1
Pennsylvania St U	44.80%	5.4	800	32.10%	32.10%	111	11.6	18	1
Pennsylvania-U of	45.00%	5.7	782	71.90%	23.60%	95	10.4	18	1
Pittsburgh-U of	28.40%	6.5	798	3.50%	35.30%	90	8.4	18	1
Princeton U	63.04%	5.4	798	37.72%	3.28%	122	19.2	14	1
Purdue U-West Lafayette	25.00%	7	796	36.40%	53.40%	128	11.4	18	1
Rensselaer Polytech Inst	45.20%	4.5	768	30.50%	37.30%	59	6.2	11	-1
Rice U	30.59%	5.9	776	61.74%	0.00%	143	9.4	16	1
Rochester-U of	21.98%	7	774	20.56%	11.42%	175	20.6	16	1
Rutgers U-New Brunswick	27.10%	6.1	755	28.00%	30.80%	106	13.8	15	1
South Carolina-U of	16.00%	5	680	33.30%	47.20%	39	2.6	17	1
South Florida-U of	62.50%	4	728	39.50%	51.20%	46	2	13	1
Southern Cal-U of	42.40%	5	790	41.30%	58.70%	75	5.2	16	1
Stanford U	47.10%	6	800	50.00%	0.60%	170	19.2	13	1
Stevens Inst of Tech	35.10%	8.4	---	---	---	35	6	15	---
SUNY-Albany	28.60%	6	760	22.60%	71.00%	33	6	13	1
SUNY-Buffalo	27.00%	6.5	747	33.30%	35.90%	85	6.4	18	1
SUNY-Stony Brook U	45.60%	5.8	790	57.10%	30.40%	184	21.4	16	1
Syracuse U	33.50%	5.3	781	15.20%	23.90%	50	5	18	1
Temple U	17.30%	7	718	32.10%	57.10%	26	1.8	11	1
Texas A&M-College Station	35.90%	6	785	37.60%	31.60%	123	9	17	1
Texas Christian U	47.70%	8	743	0.00%	68.80%	17	2.2	16	-1
Texas Tech U	39.00%	4	705	18.20%	77.30%	24	2.2	16	1
Texas-U of, at Austin	45.20%	5	767	50.80%	49.20%	268	27.6	18	1
Texas-U of, at Dallas	57.40%	7	725	42.90%	54.30%	38	5	13	1
TN-U of, Knoxville	40.50%	6.5	760	44.40%	6.20%	84	7.8	15	1
Toledo-U of	43.20%	6.5	742	2.10%	33.30%	52	4.2	17	1
Tufts U	38.30%	7	783	17.20%	48.30%	31	3	18	1
Tulane U	74.00%	5	717	25.00%	54.20%	24	3.2	13	1
Utah State U	31.30%	6	713	17.90%	51.30%	23	2.4	13	-1
Utah-U of	17.80%	7	760	54.50%	26.00%	81	6.4	16	1

Vanderbilt U	24.10%	6.7	743	45.70%	51.40%	70	6.8	16	1
Virginia Polytech Inst & St U	55.10%	4	741	26.90%	50.00%	27	3.4	17	1
Virginia-U of	44.63%	5.2	769	55.26%	27.94%	126	10	15	1
Wake Forest U	52.10%	4.5	742	17.20%	75.90%	16	3.4	18	1
Washington State U	16.90%	6	755	38.90%	55.60%	39	2.6	18	1
Washington U	41.40%	5.3	754	41.80%	19.80%	89	8.4	18	1
Washington-U of	48.50%	5.8	797	48.80%	19.70%	131	16.4	17	1
Wayne State U	21.80%	5.9	752	42.30%	34.60%	28	2.6	15	1
Western Michigan U	53.00%	4.6	680	5.00%	35.00%	23	2.4	18	1
WI-U of, Madison	45.07%	5.9	766	0.00%	0.00%	226	25.2	18	1
WI-U of, Milwaukee	23.30%	5	764	27.80%	69.40%	36	3.2	16	1
William & Mary-Coll of	49.89%	4.7	749	57.88%	26.19%	84	10.2	17	-1
Yale U	25.97%	5.9	794	2.61%	0.00%	114	13.4	18	1

Appendix C: Other Data

Annual Report, 2007 Faculty Member Counts					
Professors	Associate Professors	Assistant Professors	Research Professors	Full Time Adjunct Faculty	Part Time Adjunct Faculty
6	3	2	2	3	1

Web of Science Publication and Citation Counts										
Professor	Publications		Citations							
	1981-2006	2000-2006	2000	2001	2002	2003	2004	2005	2006	Total
Aravind	77	12	26	47	42	35	41	59	72	322
Jasperson	3	0	2	4	2	1	2	3	5	19
Keil	147	4	2	4	2	1	2	3	9	23
Phillies	111	13	111	72	107	80	80	94	71	615
Ram-Mohan	120	30	106	115	152	222	250	254	351	1450
Zozulya	156	27	98	150	136	155	112	91	120	862
Burnham	75	25	278	247	246	240	239	279	327	1856
Iannacchione	49	17	35	61	51	67	109	113	80	516
Quimby	65	6	43	46	44	58	72	78	69	410
Garcia	9	9	0	0	0	0	0	1	2	3
Koleci	1	1	0	0	0	0	0	0	0	0
Total	*813*	*144*	701	746	782	859	907	975	1106	*6076*
Publications Per Faculty Member Per Year: 1.87										
Citations Per Publication: 7.47										

Census Data, 2014 Assistantship Counts	
Research Assistants	**Teaching Assistants**
3	10