

Faculty of Arts and Sciences

Annual Report of the Dean of Research and Graduate Studies

and the Committee on Graduate Studies (COGS)

February 2000

A. The State of Graduate Studies in Arts and Sciences

The last annual report of the Committee on Graduate Studies (COGS) was distributed to the faculty in December 1998. Since then there have been major changes in the organization and operation of graduate studies in Arts and Sciences. In this section we review these changes and report on the current state of graduate studies. Section B gives details on issues addressed since the last report, and Section C gives statistical data about Arts and Sciences graduate students who entered our programs in the fall of 1999.

Move to Graduate House

In December, the Office of the Dean of Research and Graduate Studies moved to new quarters in *Graduate House* (234 Jamestown Road, one of the old private houses owned by the College). This large, attractive space provides a common physical and intellectual center for our graduate students and our graduate programs. The House will also provide the much needed and long sought after main-campus office for VIMS/SMS and space for the new Ombudsperson for A&S graduate programs (Leisa Meyer). Moving the Graduate Office out of Ewell Hall and into separate quarters is an historic event that will have a significant impact on the future development of graduate studies at W&M. In particular, it has made it possible to move ahead with our plans for the Graduate Center Programs (or Graduate Center, for short). [The Graduate Center should not be confused with Graduate House; the former is a program (discussed below) and the latter a building.]

We invite all faculty and students to stop by and visit Graduate House. Coffee and daily newspapers are available (the first cup each day is free), and we hope the lounge area will be an attractive place for our graduate students and faculty to meet and discuss the issues of the day.

Opening of the Graduate Center

In the fall of 1999 we began operation of our new *Graduate Center Programs*, with Gene Tracy (Physics) as Director. This new program is W&M's response to the frequently stated criticism that graduate study in the United States is too specialized. Our response to this national criticism is unique; no program with such a broad scope has yet been started anywhere in the nation¹ even though the need for such a program (at least in the sciences) has long been recognized. The main reason for starting this program here is to improve the quality of our own graduate education, but we also hope that the quality of this new program will bring national recognition to W&M graduate programs as a whole, and will help us attract top students. Funding for the Graduate Center has so far come predominantly from donations of faculty time, with some seed money from the Dean's discretionary fund. The long-term survival of the Center will require new funds from the Commonwealth, private donors, or federal grants, which are currently being sought.

The goals of the Graduate Center are to (i) broaden the perspective of graduate students during their formative educational years, (ii) support and promote a culture of interdisciplinary advanced study at the College, (iii) offer graduate students a variety of opportunities and skills that will empower them to take charge of their own careers, and (iv) encourage them to develop a lifelong interest in community service. Open to all graduate students on a voluntary basis, Graduate Center will supplement the offerings of individual graduate programs, and will be an excellent focal point for contact between the College and the surrounding community. We also hope it will promote better public understanding of the role of graduate education in the life of both the College and the community.

¹ A similar program, referred to as the *Graduate School Professional Development Program*, is under development at the University of Texas at Austin. Its primary focus (somewhat more specific than ours) is to prepare graduate students to be *intellectually rigorous scholars and teachers (the next generation of professors), as well as professionally astute citizens qualified to meet the needs of society.*

So far the Graduate Center has sponsored a variety of College Courses (listed in Sec. B below) designed to develop skills (e.g. writing and teaching) that most of our students need. There has been a need for these courses for many years and they have been offered from time-to-time on an ad-hoc basis. No single graduate program had sufficient resources or student population to offer them on a regular basis. By pooling our resources and offering joint courses for all students we are now able to provide these valuable courses regularly.

This spring we begin our first project designed to give our graduate students direct experience with applying their knowledge toward the solution of community problems. In partnership with the WJCC school system, W&M science students (interns) will work in a team with WJCC science and mathematics teachers (from Clara Byrd Baker and James River Elementary schools), graduate student teachers (from the School of Education), and W&M faculty serving as project consultants. The teams will study the new Standards of Learning (SOLs) and look for ways to use them to improve the science and mathematics education of students in grades 3 – 5. Also, in cooperation with Career Services, we are offering a series of Friday noon workshops and discussions entitled: “Creating An Interdisciplinary Intellectual Community.” In another effort, Will Harris (Visiting Professor of Government, Public Policy, and Law) and Larry Becker (Philosophy) are planing series of interdisciplinary lectures for graduate students on the nature and unity of knowledge.

Reorganization of the Graduate Office

From 1982 (when Wanda Carter, our graduate enrollment services assistant, was hired by then Graduate Dean Rolf Winter) until 1996 (when Franz Gross became Dean), the support staff remained fixed at 1.5 positions. During this time the A&S graduate program almost doubled in size (see Figure 1). This has put an increasingly heavy burden on the support staff in the individual programs, and also left the central graduate office (responsible for overall graduate recruitment, admissions, records, student contracts, program reviews, aid budgets, publicity, and public relations) unable to plan or anticipate future needs. In response to these growing needs and the Graduate Center proposal, Dean Feiss and Provost Cell approved the creation of a new position, Manager of Graduate House, funded from savings realized when Franz Gross reduced his administrative commitment from 3/4 time to 1/2 time. Carol Arnette was hired to fill this position this fall, and together with Gene Tracy (Director of Graduate Center Programs; time donated by the Physics Department) and Cindy Hahamovitch (Assistant Dean and currently replace by Ellen Vinson for the year she is on leave) the Graduate Office staff has now reached 3.4 positions (two full time support staff and three faculty administrators: two at 1/2 time and one at 40% time). This staff will be able to provide better overall planning, support the operation of a separate building and the Graduate Center Programs, and lighten the loads of the support staff in the individual programs.

Preparation of the Faculty Manual

COGS drafted a new Sec. B on the *Conduct and Organization of Graduate Studies* for the Faculty Manual. The Faculty of Arts and Sciences approved a FAC revision of this draft in May 1999. This process gave the full faculty ownership of its graduate programs, and led to a major change in the grade review process, which was also adopted for the undergraduate program.

Recruitment of Graduate Students

The nation-wide decline in applications to graduate school continues. The decline in applications to our own programs (reported last year) leveled off this year, as shown in Figure 2.² This seems to be due to a combination of circumstances: (i) major efforts by some of the graduate directors, (ii) efforts by Assistant Deans Cindy Hahamovitch and Ellen Vinson, and (iii) continued development of our web site.

Our web site (developed by Cindy Hahamovitch and Carol Arnette) has undergone two major revisions since last January 1999. The most frequently hit pages are the main page (about 500 hits per week), the degree/program page (over 3200 hits since December 6, 1999), and the admissions page (over 800 hits since December 6, 1999). A questionnaire sent to our currently enrolled students told us that about 30% of them first learned about us through the

² The numbers shown in Figure 2 do *not* include applications to programs discontinued by restructuring. Only three programs (all Masters) had a smaller number of applications this year.

A&S Graduate Enrollment (less PsyD) 1982 - 1998

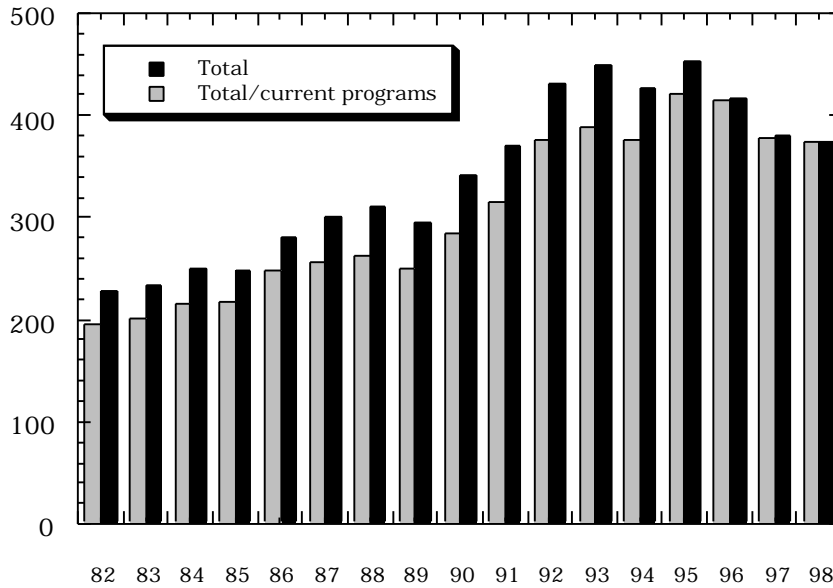


Figure 1: Graduate enrollment in all programs (Total) and those programs currently supported (Total/current programs) since 1982. The fall-off in enrollment since 1995 has not been due only to the closing of some masters programs, but also reflects a national trend. (The Doctor of Psychology program, not included in the above numbers, currently enrolls about 55 students.)

Completed Graduate Applications 10 A&S graduate programs

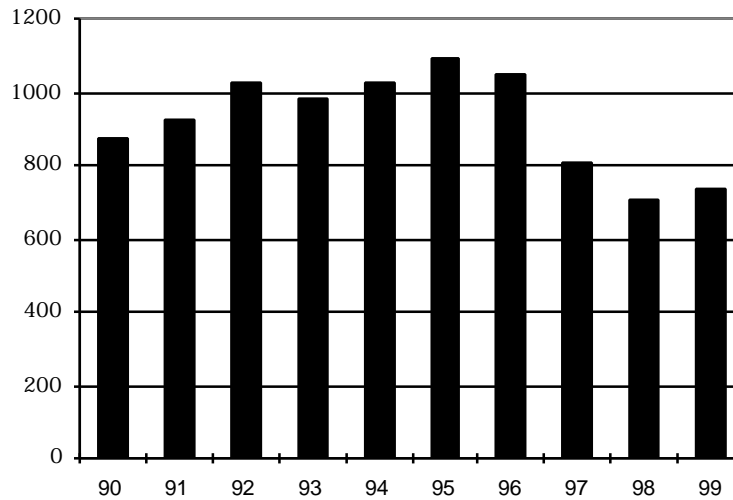


Figure 2: Completed applications received by American Studies, Anthropology, Applied Science, Biology, Chemistry, Computer Science, History, Mathematics (now merged with Computer Science), Physics, Psychology, and Public Policy for the years 1990 to 1999.

internet, either from our web site or from an internet directory. Clearly, the maintenance of a first class web page is essential to a successful recruitment effort.

Development of the Graduate Student Database

With substantial help from IT, the graduate office has developed a new graduate student database for student records and admissions. The student records part of this database was launched in February 1999 and the admissions part this fall. Ellen Vinson wrote the database with the support of Soon Min and others from IT. Vanessa Godwin (Computer Science) has been a great help finding and eliminating bugs from the database. The database uses Microsoft's ACCESS 97, and allows data to be moved and shared between the central office and the support staff in each program.

Summary of Section A – State of Graduate Studies

The move into Graduate House, the beginning of the Graduate Center Programs, and the addition of support staff have initiated an historic new phase in the development of graduate studies at W&M. To maintain this momentum, it is essential that we continue in the next few years to put a significant effort into recruitment and the writing of proposals for outside funding.

While the support received this year has moved graduate studies at W&M closer to the standard of excellence set by our undergraduate programs, a substantial increase in the overall budget for graduate student aid is essential if we are get there. This is being seriously considered by the administration at this time.

B. Issues

1. Climate for graduate students

Office of Ombudsperson

The *Task Force on the learning climate for A&S graduate students*, appointed in April 1998, reported to COGS in March 1999, and the chair of the Task Force, Gina Hoatson (Physics) reported to the Faculty in May 1999. One recommendation of the Task Force, the appointment of an Ombudsperson, has already been implemented, and Leisa Meyer (History and Women's Studies) has agreed to serve for an initial term. A charter for the office, modeled after one developed recently by the University of Virginia, is currently being developed with Dick Williamson (Law) and the Provost. The office will open formally for business as soon as the charter is in place. The Ombudsperson has been assigned a convenient office in Graduate House, and the Manager of Graduate House will act as the Ombudsperson's confidential secretary.

The excellent research and recommendations of this Task Force have provided the foundation for further action by the faculty and administration.

Health insurance for graduate students

The GSA and COGS continue to place a very high priority on obtaining funding to purchase health insurance for all graduate students who receive full support from the College. Funding for this initiative has been requested and is under consideration by the administration.

2. New procedures approved by COGS

Drafting the new section of the Faculty Manual approved by the faculty as described in Sec. A above, occupied a major portion of the COGS discussion for the spring 1999 semester. In addition to this major effort, two new policies were approved:

Composition of the dissertation committee

Until this year, all PhD dissertation committees were required (as stated in the graduate catalogue) to consist of "at least five (5) members, one of whom must be from outside of the student's department or program". The History program suggested that five members were more than necessary, and that requiring all programs to appoint such a large committee was not a wise use of faculty time. After a review of common practice at other institutions, COGS agreed, and this fall decided to reduce the minimum size of the dissertation committee from five (5) members to four (4), but to leave otherwise the composition of the committee and the manner of its appointment unchanged.

Distribution of questionnaires to students

In the fall of 1999, the Office of the Dean of Research and Graduate Studies distributed a questionnaire to all graduate students. The questionnaire included questions designed to tell (as stated in the cover letter) “what factors influenced [the student’s] decision to select William and Mary for graduate studies, and whether or not [they] have been satisfied with [their] decision to attend William and Mary.” Some members of COGS said that this questionnaire should have been first reviewed by the graduate directors, and asked that this always be done in the future. Dean Gross agreed, and COGS passed the following motion:

Questionnaires that the Office of Dean of Research and Graduate Studies would like to distribute to graduate students should first be reviewed by the Graduate Directors.

It was emphasized that this review did not necessarily require a formal meeting of the whole committee and might be done by email. It was left to the Dean’s discretion how to proceed after the review was completed.

3. Results from graduate program reviews

Completed reviews

Reviews of the Computer Science and History Masters and PhD programs, and of the Psychology MA program, were completed this year, and final reports submitted to the Provost. All of these programs received very good reports and the reviews have served as the basis for funding decisions.

Stimulated by its review, the **History** department has gone to a 2-2 teaching load, and is considering developing an Atlantic World specialty for its PhD program. In support of the move to a 2-2 load, and of a novel proposal for a History Writing Resources Center, a sixth year of support for two PhD students was approved (normally, History PhD students are supported for only five years).

As a result of its review, the **Computer Science** department is receiving support to renovate and convert laboratory space into desperately needed graduate student work spaces, and some additional resources to equalize stipends paid to graduate students who pursue different specializations within the program.

The **Psychology MA** review committee believes that W&M’s research oriented program fills a valuable niche in the nation’s offerings, and as a result Masters stipends were increased. The W&M program is most effective if students remain and work here over the summer, but summer support must eventually come from sponsored research. In the interim, to encourage the search for this sponsored research, Psychology MA graduate students are being offered summer support from the Dean’s office.

The review of the **Chemistry MA** program, completed in the 1995-96 academic year, recommended the MA program “develop a special niche in the academic community which can be identified as highly innovative and characteristic *only* of William and Mary.” An ad-hoc committee was appointed shortly after this review, and discussed the possible creation of joint programs leading to an MA (or MS) in Chemistry followed by a PhD in Applied Science or Marine Science. This year, under the leadership of Michael Kelley (Applied Science) and Dick Kiefer and Chris Abelt (Chemistry), a joint Chemistry/Applied Science MS/PhD program was designed and approved by COGS. Using existing courses, the program defines a special two-year curriculum that both prepares students for the MS in Chemistry and the comprehensive examination in Applied Science, and defines other joint arrangements that will smooth the transition from Chemistry to Applied Science. It can serve as a model for other joint programs that will give W&M’s masters programs a unique flavor.

New reviews

The external and internal reviews of the Anthropology and Applied Science programs were both completed early last fall and have already been reviewed by COGS. Summary recommendations will be submitted to the Provost and reviewed by COGS in the next few months. Both reviews found that these programs suffer from lack of space, and this long-term need is already under consideration by the administration.

4. Anthropology PhD

On March 4, 1997, the Faculty of Arts and Sciences approved the creation of an Anthropology PhD with the following words:

With the understanding that the program will be implemented only within available funds, and not at the cost of existing programs, the Faculty of Arts and Sciences approves the establishment of a PhD in Anthropology with specializations in Historical Archaeology and Historical Anthropology.

Over the summer the Deans identified funds consistent with this motion and described them in an August 27, 1999 memo to the Faculty. The Provost has recently accepted the Deans' proposal, and a resolution approving the submission of the proposed program to the State Council on Higher Education will be submitted on February 5 to the Board of Visitors for its approval.

5. Training for Teaching Assistants (TAs) and Teaching Fellows (TFs)

Fall training sessions

Once again, for the third year, the Dean of Research and Graduate Studies and the Dean of Students organized two half-day training sessions for TAs and TFs. Based on the evaluations filled out by students last year, changes were made in both the Monday afternoon and Tuesday morning sessions. The Monday session included a new presentation on teaching methods by Hans von Baeyer (Physics), Theresa Castor (Theater and Speech), and Kelly Grey (History graduate student), and a dramatization of how to handle disruptive students by Trish Volp (Dean of Students) and Amy Howard (American Studies graduate student). The Tuesday morning session included special sessions for science TAs lead by Paul Heideman (Biology) and Jenny Gamble (Biology graduate student) and for humanities TAs lead by Sharon Zuber (English) and Kyle Zelner (History graduate student). The morning sessions closed with joint discussion of learning climate scenarios lead by Leisa Meyer.

Once again evaluation forms were distributed to all participants and will be used to improve next year's program.

Programs for training TFs in American Studies

The American Studies plan for the training of TFs was approved by COGS.

6. Graduate course approvals -- additions and changes since the 1998 Annual Report

Applied Science

New courses: (approved 10/99)

APSC xxx, Lasers in Medicine, Science, and Technology

Biology

New courses: (approved 11/99)

BIO 504, General Endocrinology

BIO 524, Comparative Cell Biology

Computer Science

New Course: (approved 5/99)

CSCI 652, Advanced Compiler Construction (replaces CSCI 702)

Renumbering: (approved 5/99)

CSCI 654, Advanced Computer Architecture, formerly CSCI 714 (with slight revision in description)

CSCI 663, Theory of Computation, formerly CSCI 703

CSCI 664, Advanced Operating Systems, formerly CSCI 704 (with slight revision in description)

Graduate Center

New Courses:

COL 506, Writing for the Public, (approved 2/99, later renumbered as COL 507)

COL 510, Oral Presentation Skills (approved 10/99)

COL 511, Oral Presentation Skills for International Students (approved 10/99)

COL 521, College Teaching (approved 2/99)

Renumbering: (approved 10/99)

COL 507, Writing for the Public, formerly COL 506

Cross listing:

APSC 598 with COL 503, Scientific Writing for International Students (approved 2/99)

APSC 698 with COL 504, Advanced Scientific Writing for International Students (approved 2/99)

VIMS 506 with COL 506, Scientific Communication Skills (approved 10/99)

History

New Course:

HIST 705, Teaching History (approved 2/99)

Psychology

Division of PSY 793 into two courses: (approved 9/99)

PSY 793, Practicum

PSY 795, Clinical and Ethical Issues

C. Statistical Summary

The following pages present statistical data for the fall 1999 incoming graduate classes in Arts and Sciences. They were prepared by Wanda Carter.

1. ADMISSIONS - Fall Semester 1999

| Department | ¹ Number Applicants | ² Number Accepted | Number Matriculated |
|------------------|--------------------------------|------------------------------|---------------------|
| American Studies | 63 | 36 | 14 |
| Anthropology | 39 | 9 | 8 |
| Applied Science | 29 | 17 | 11 |
| Biology | 28 | 18 | 9 |
| Chemistry | 21 | 4 | 4 |
| Computer Science | 205 | 54 | 28 |
| History | 117 | 38 | 24 |
| Physics | 106 | 35 | 18 |
| Psychology | 60 | 19 | 10 |
| Public Policy | <u>64</u> | <u>34</u> | <u>15</u> |
| Totals | <u>732</u> | <u>264</u> | <u>141</u> |

Psy.D. Program ³ 79 11 10

¹ Figures based on completed applications for fall admission as reported by each graduate department.

² Figures include all applicants offered admission as reported by each graduate department.

³ Total matriculated are first-year students in the Consortium.

**2. AVERAGE UNDERGRADUATE GRADE POINT
AVERAGE OF ENTERING STUDENTS (4.0 SCALE)**

| DEPARTMENT | FALL 1997 | FALL 1998 | FALL 1999 |
|------------------|--------------------|--------------------|--------------------|
| AMERICAN STUDIES | 3.3 (22 of 23) | 3.41 (11 of 13) | 3.5 (13 of 15) |
| ANTHROPOLOGY | 3.5 | 3.38 (9 of 10) | 3.71 |
| APPLIED SCIENCE | 3.44 (11 of 12) | 3.4 (10 of 11) | 3.47 (10 of 11) |
| BIOLOGY | 3.36 | 3.06 | 3.14 |
| CHEMISTRY | 3.26 | 3.18 | 3.73 (3 of 4) |
| COMPUTER SCIENCE | 3.42 (15 of 17) | 3.29 | 3.37 (23 of 28) |
| HISTORY | 3.61 (12 of 13) | 3.56 (14 of 15) | 3.6 (21 of 23) |
| PHYSICS | 3.16 (8 of 9) | 3.13 (5 of 8) | 3.51 (14 of 18) |
| PSYCHOLOGY | 3.47 | 3.41 (9 of 10) | 3.3 |
| PSY.D. PROGRAM | 3.63 | 3.42 | 3.5 |
| PUBLIC POLICY | 3.46 (20 of 21) | 3.51 (14 of 17) | 3.38 (14 of 15) |

3. AVERAGE GRADUATE RECORD EXAMINATION SCORES OF ENTERING STUDENTS ¹

| DEPARTMENT | FALL 1998 | | | | FALL 1999 | | | |
|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------|
| | VERB | MATH | ANALY | ADV | VERB | MATH | ANALY | ADV |
| American Studies | 608 | 544 | 588 | ***** | 607 (13 of 15) | 562 (13 of 15) | 560 (13 of 15) | ***** |
| Anthropology | 550 | 574 | 613 | ***** | 610 | 585 | 640 | ***** |
| Applied Science | 526 (9 of 11) | 681 (9 of 11) | 610 (9 of 11) | ***** | 514 (10 of 11) | 718 (10 of 11) | 697 (10 of 11) | ***** |
| Biology | 549 (14 of 15) | 651 (14 of 15) | 664 (14 of 15) | 655 (10 of 15) | 573 | 639 | 633 | ***** |
| Chemistry | 532 (5 of 6) | 680 (5 of 6) | 662 (5 of 6) | ***** | 583 (3 of 4) | 713 (3 of 4) | 697 (3 of 4) | ***** |
| Computer Science | 527 | 730 | 695 | ***** | 526 (25 of 28) | 719 (25 of 28) | 643 (25 of 28) | ***** |
| History | 632 (14 of 15) | 578 (14 of 15) | 674 (14 of 15) | ***** | 611 (22 of 23) | 615 (22 of 23) | 657 (22 of 23) | ***** |
| Physics | 520 (7 of 8) | 746 (7 of 8) | 644 (7 of 8) | 602 (6 of 8) | 472 (15 of 18) | 693 (15 of 18) | 603 (15 of 18) | ***** |
| Psychology | 570 | 547 | 635 | 650 (6 of 10) | 534 | 609 | 624 | ***** |
| Psy.D. | 555 | 580 | 633 | 597 | 573 | 563 | 605 | 611 |
| Public Policy | 583 | 686 | 693 | ***** | 589 | 618 | 643 | ***** |

¹ Table includes all regular and provisional students. Scores on the advanced portion of the GRE are not reported unless at least 70% of the enrolling students took the test.

4. REGISTERED REGULAR & PROVISIONAL GRADUATE STUDENTS ¹
Fall 1997 to Fall 1999

| DEPARTMENT | FALL 1997 | SPRING 1998 | FALL 1998 | SPRING 1999 | FALL 1999 |
|-----------------------------|------------|-------------|------------|-------------|------------|
| AMERICAN STUDIES | 63 | 61 | 61 | 49 | 42 |
| ANTHROPOLOGY | 20 | 21 | 28 | 25 | 28 |
| APPLIED SCIENCE | 54 | 44 | 45 | 40 | 42 |
| BIOLOGY | 15 | 17 | 25 | 23 | 23 |
| CHEMISTRY | 6 | 6 | 7 | 8 | 8 |
| COMPUTER SCIENCE | 62 | 63 | 69 | 70 | 85 |
| HISTORY | 63 | 60 | 59 | 55 | 62 |
| PHYSICS | 48 | 45 | 44 | 38 | 47 |
| PSYCHOLOGY | 16 | 14 | 20 | 19 | 18 |
| PUBLIC POLICY ³ | 46 | 41 | 41 | 33 | 29 |
| TOTALS | 393 | 372 | 399 | 360 | 384 |
| PSY.D. PROGRAM ² | 56 | 52 | 55 | 54 | 53 |

¹ Totals include both full-time and part-time registration.

² Total in Consortium.

³ Totals do not include all joint degree students. For example, in Fall 1999 there were 40 students, 29 with primary registration in A&S and 11 with primary registration in another school.

5. GRADUATE DEGREES CONFERRED 1998-99

| DEPART- MENT | DEGREE | AUGUST 1998 | DECEMBER 1998 | MAY 1999 | TOTAL |
|---------------------|--------|----------------|------------------|-------------|-------|
| American Studies | M.A. | 2 | 6 | 5 | 13 |
| | Ph.D. | 2 | 1 | 0 | 3 |
| Anthropology | M.A. | 1 | 1 | 2 | 4 |
| Applied Science | M.A. | 0 | 0 | 0 | 0 |
| | M.S. | 0 | 7 | 4 | 11 |
| | Ph.D. | 0 | 3 | 3 | 6 |
| Biology | M.A. | 4 | 2 | 5 | 11 |
| Chemistry | M.A. | 1 | 3 | 0 | 4 |
| Computer Science | M.S. | 5 | 2 | 1 | 8 |
| | Ph.D. | 4 | 0 | 1 | 5 |
| English | M.A. | 1 | 2 | 2 | 5 |
| Government | M.A. | 0 | 1 | 0 | 1 |
| History | M.A. | 5 | 1 | 5 | 11 |
| | Ph.D. | 6 | 1 | 2 | 9 |
| Mathematics | M.A. | 0 | 0 | 0 | 0 |
| | M.S. | 0 | 0 | 0 | 0 |
| Physics | M.A. | 0 | 0 | 0 | 0 |
| | M.S. | 0 | 0 | 6 | 6 |
| | Ph.D. | 3 | 4 | 2 | 9 |
| Psychology | M.A. | 0 | 0 | 7 | 7 |
| | Psy.D. | 3 | 2 | 1 | 6 |
| Public Policy | M.P.P. | 0 | 0 | 14 | 14 |
| Sociology | M.A. | 0 | 0 | 0 | 0 |
| TOTALS | M.A. | 14 | 16 | 26 | 56 |
| | M.S. | 5 | 9 | 11 | 25 |
| | M.P.P. | 0 | 0 | 14 | 14 |
| | Ph.D. | 15 | 9 | 8 | 32 |
| | Psy.D. | 3 | 2 | 1 | 6 |

5. GRADUATE DEGREES CONFERRED 1998-99 (cont'd.)

TOTAL NUMBER OF DOCTORATES CONFERRED
AUGUST 1998 THROUGH MAY 1999

| | | |
|-------------------|---|--------------------|
| Arts and Sciences | * | 32 Ph.D., 6 Psy.D. |
| Education | * | 7 Ed.D., 6 Ph.D. |
| Marine Science | * | 15 Ph.D. |

M.A. IN EDUCATION¹

| | | |
|---------------------------|---|----|
| Secondary School Teaching | * | 20 |
|---------------------------|---|----|

¹Includes Museum Education

6. GRADUATE DEGREES AWARDED DURING THE LAST 10 YEARS ¹ (August - June)

| DEPARTMENT | INITIATED PROGRAM | 89-90 | 90-91 | 91-92 | 92-93 | 93-94 | 94-95 | 95-96 | 96-97 | 97-98 | 98-99 | 8/99 | TOTAL |
|------------------|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-----------------------|
| | | | | | | | | | | | | | SINCE AUG. 1989 |
| American Studies | 1982-MA | 11 | 14 | 8 | 12 | 10 | 9 | 11 | 6 | 4 | 13 | 1 | 99 |
| | 1988-PhD | 0 | 0 | 0 | 1 | 2 | 1 | 4 | 4 | 2 | 3 | 0 | 17 |
| Anthropology | 1979-MA | 9 | 8 | 7 | 5 | 12 | 10 | 10 | 9 | 5 | 4 | 2 | 81 |
| Applied Science | 1970-MA/MS | 0 | 1 | 1 | 1 | 2 | 6 | 9 | 9 | 11 | 11 | 1 | 52 |
| | 1990-PhD | | | 0 | 1 | 1 | 4 | 5 | 6 | 6 | 6 | 0 | |
| Biology | 1963-MA | 10 | 4 | 5 | 7 | 8 | 13 | 15 | 10 | 8 | 11 | 1 | 92 |
| Chemistry | 1964-MA/MS | 7 | 4 | 5 | 7 | 11 | 2 | 8 | 7 | 9 | 4 | 0 | 64 |
| Computer Science | 1984-MS | 19 | 15 | 13 | 23 | 16 | 12 | 9 | 15 | 13 | 8 | 6 | 149 |
| | 1986-PhD | 3 | 0 | 3 | 2 | 4 | 3 | 0 | 3 | 1 | 5 | 1 | 25 |
| English | 1970-MA ² | 9 | 18 | 11 | 15 | 17 | 15 | 11 | 19 | 9 | 5 | 0 | 129 |
| Government | 1966-MA | 8 | 9 | 10 | 4 | 7 | 12 | 7 | 3 | 2 | 1 | 0 | 63 |
| History | 1955-MA | 16 | 13 | 10 | 10 | 7 | 16 | 12 | 8 | 16 | 11 | 2 | 121 |
| | 1967-PhD | 5 | 2 | 9 | 6 | 4 | 1 | 3 | 4 | 3 | 9 | 2 | 48 |
| Mathematics | 1961-MA/MS | 5 | 10 | 6 | 8 | 9 | 9 | 7 | 6 | 0 | 0 | 0 | 60 |
| Physics | 1959-MA/MS | 14 | 8 | 10 | 8 | 11 | 9 | 7 | 11 | 12 | 6 | 0 | 96 |
| | 1964-PhD | 6 | 6 | 7 | 7 | 7 | 6 | 5 | 10 | 8 | 9 | 5 | 76 |
| Psychology | 1953-MA | 11 | 5 | 7 | 7 | 9 | 5 | 8 | 8 | 9 | 7 | 1 | 77 |
| | 1978-PsyD | 14 | 8 | 7 | 5 | 6 | 13 | 7 | 8 | 12 | 6 | 7 | 93 |
| Public Policy | 1991-MPP | | | | | 17 | 14 | 13 | 21 | 23 | 14 | 0 | 102 |
| Sociology | 1967-MA | 5 | 5 | 5 | 2 | 6 | 2 | 7 | 3 | 2 | 0 | 0 | 37 |
| A&S Totals | MA-MS-MPP | 124 | 114 | 98 | 109 | 142 | 134 | 134 | 135 | 123 | 95 | 14 | 1222 |
| | PhD | 14 | 8 | 19 | 17 | 18 | 15 | 17 | 27 | 20 | 32 | 8 | 195 |
| | PsyD | 14 | 8 | 7 | 5 | 6 | 13 | 7 | 8 | 12 | 6 | 7 | 93 |

¹ See Table 5 for M.A. in Education degrees.² Earlier Program suspended in 1963.