Annual Report of the Committee on Graduate Studies

to the Faculty of Arts and Sciences

December, 1998

A. Overview

The last annual report of the Committee on Graduate Studies (COGS) was distributed to the faculty in February, 1997. This report covers actions by COGS since that date. This first section briefly summarizes three of last year's most significant developments, Section B gives more details on these and other issues addressed by COGS, and Section C gives statistical data about Arts and Sciences graduate students who entered our programs in the Fall or 1998.

Synergism between graduate and undergraduate studies

At its May, 1998 meeting, the Faculty approved two policies which affect the synergism between graduate and undergraduate programs. The policy on *Courses offered jointly to graduates and undergraduates* clarifies the relation between courses at the 400 and 500 levels, which are sometimes taken jointly by advanced undergraduates and beginning graduate students. A second policy on *Graduate courses taught by units which do not offer a graduate degree* provides a procedure under which any program may introduce and teach graduate courses. These courses are encouraged both because they often provide essential support to programs offering graduate degrees and because they may provide additional opportunities for advanced undergraduates.

These policies provide opportunities to improve the quality of both our graduate and undergraduate programs.

Support for graduate students

It is essential that we maintain a climate which supports and encourages learning for all of our students. Training programs for Teaching Assistants (TAs) and Teaching Fellows (TFs) were formalized and further developed this year. A new policy that provides health coverage to research graduate students on a case-by-case basis, without violating confidentiality, was developed. Currently only students supported by the Dean's office are covered by this policy; units are encouraged to extend it to students they support. A Task Force on the learning climate for A&S graduate students was appointed, and is expected to complete its report in February.

Recruitment and organization of graduate studies

There is a nation-wide decline in applications to graduate school. Applications to our own programs have also declined, as shown in Figure 1 (next page). Following an initial rise, which reflects the growth of new programs in the early 90's, the number of applications has fallen steadily since 1996 (the numbers do *not* include applications to programs discontinued by restructuring). Furthermore, *all of our PhD programs and our Psychology MA program* each show a decrease in applications since 1996.

A decrease in the number of completed applications does *not* necessarily lead to a decrease in the quality of the graduate students who are *admitted*. John Milliman has informed us that the School of Marine Science has also experienced a decline in the number of completed applications, but they find that the number of applications from better students is actually *increasing*. Apparently they are getting more applications from serious students and fewer from those who are marginal. We have less complete data, but the indications are that we are also admitting students of the same quality that we always have. However, if the number of

applications continues to decline, this will not remain true, and the continued health of our graduate programs requires that we take a more systematic, A&S-wide approach to graduate recruitment. We need to recruit actively, and provide more support for the recruitment activities already undertaken by each program.

Cindy Hahamovitch (History) was appointed to a 40% part-time position as Assistant Dean of Graduate Studies this Fall. She is responsible for graduate student recruitment and is working with the graduate programs to help and enhance their recruitment efforts.

Completed Graduate Application 10 A&S graduate programs

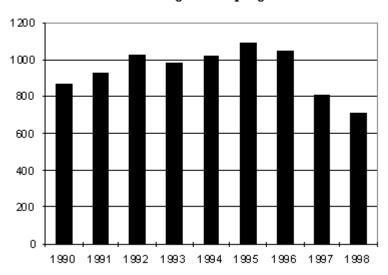


Figure 1: Completed applications received by American Studies, Anthropology, Applied Science, Biology, Chemistry, Computer Science, History, Mathematics (now merged with Computer Science), Physics, Psychology, and Public Policy for the years 1990 to 1998.

B. Issues

1. New policies approved by the Faculty

At its May meeting, the Faculty approved two new policies which may effect the synergism between graduate and undergraduate programs:

Courses offered jointly to graduates and undergraduates

1. Any course which awards graduate credit must carry a 500 (or higher) course number. All such courses must be approved by the Committee on Graduate Studies, or, if delegated by the Committee, one of its Subcommittees or the Dean of Research and Graduate Studies. Courses at the 600 level or above are open to undergraduates only by special petition approved by the Dean. The 500 level designation is reserved for either (a) graduate courses that are cross listed at the 400 level and open to undergraduates, or (b)

especially designed courses open solely to graduate students from outside the program. Undergraduates may take 400/500 courses by registering for them at the 400 level and graduate students may take them by registering at the 500 level. Under no circumstances may any student receive credit for both the 400 level and 500 level versions of the same cross-listed course. No more than 12 credit hours of 500 level courses can be applied toward a graduate degree. Programs that wish to allow additional credit hours at the 500 level must obtain approval from COGS.

2. Approved courses which are jointly listed at the 400 and 500 level will be listed by their 500 level number in the graduate catalogue, even if they are already listed by their 400 level in the undergraduate catalogue. The graduate description must state that the course is also open to undergraduates, and must briefly describe additional requirements which must be met in order to complete the course at the graduate level.

Graduate courses taught by units which do not offer a graduate degree

Departments or Programs (Units) that do not offer a graduate degree are encouraged to offer graduate courses which may be made available to students in units which do offer graduate degrees. These courses are encouraged because they often provide essential support to programs offering graduate degrees. Examples include courses in American literature offered by the English department which support the American Studies degrees, courses in Mathematics offered in support of the Applied Science, Computer Science, and Physics degrees, and courses in Government and Economics offered in support of the Masters in Public Policy. It is important that these courses be recognized as an essential part of graduate studies at William and Mary, and that the faculty and departments who offer these courses be recognized for their important contributions to graduate studies. For these reasons the policy covering such offerings includes the following:

- 1. In order to ensure that courses taught by units which do not offer a graduate degree will play a role in the overall graduate program at William and Mary, submissions for approval of such courses must include a discussion of what students are expected to take the course and the impact the course is expected have on the degree programs of the College, both graduate and undergraduate.
- 2. It is anticipated that such courses will normally be open to both graduate and undergraduate students, and will carry the 400/500 joint designation. Exceptions are expected in interdisciplinary programs where members of one unit teach a course at the 600 or 700 level leading to a graduate degree in another unit, and may also be granted in other cases when a justification is provided.
- 3. Graduate courses offered by units which do not themselves offer a graduate degree will be listed in a separate (last) section of the graduate catalogue.

COGS recommends that this section carry the following title and text:

"Additional Graduate Courses and Course Descriptions

Some departments at William and Mary offer courses for graduate students even though these departments do not themselves offer a graduate degree. These courses are listed in this section.

Note that some of the courses listed in this section are offered as regular courses in one of our degree granting programs. In this case the course description will be found under the listings for that program. In other cases courses are offered in support of our degree

granting programs, but are not themselves a regular part of any program. The course description for these courses is given here."

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

Fall training sessions

The Dean of Research and Graduate Studies organized two half-day training sessions for both TAs and TFs. On Monday afternoon before classes began, Geoff Feiss welcomed the students and Mark Fowler commented on academic regulations. The remaining program included discussion of the honor code, the learning climate, sexual harassment and consensual amorous relations, an overview of support services, how to deal with a disruptive student and what to do when a student is in trouble, the Counseling Center, Academic Support Services, the Oral communication program and the Writing Center, and the University Teaching Project. The presenters included Vi Chalkley, Martha Christiansen, Heather Macdonald, Susie Mirick, Trish Volp, and Sharon Zuber.

On Tuesday morning before classes there were separate initial TA/TF training sessions for science and humanities students. Presenters for the science session were Paul Heideman, and Hans von Baeyer, with graduate students Karen Anewalt (Computer Science) and Sean Majoy (Biology). The presenters for the humanities session included Theresa Castor and Sharon Zuber, with graduate students Matt Cohen (American Studies) and Kelly Gray (History).

Evaluation forms were distributed to all of the participants and will be used to improve next year's program.

Programs for training TFs in Computer Science

Units employing teaching fellows (WM ABD graduate students who are instructors of record) must submit formal plans for their training and supervision to COGS and EPC for their approval.

This year a plan submitted by Computer Science was approved by COGS. A plan from History has been received, and one from American Studies is expected soon. The number of graduate students who serve as TFs at W&M continues to be small. This semester 111 students serve at TAs but only 7 serve as TFs.

The Committee on Graduate Studies believes that training doctoral students to teach is an important part of their graduate education. When this training is carried out by faculty mentors who really care about the quality of the education offered to their students, the experience is beneficial to both the graduate students, who enjoy a unique opportunity to learn, and the undergraduate students, who may be stimulated by the enthusiasm brought to their disciplines by people close to their age and experience. Allowing some graduate students to teach undergraduate courses is fully consistent with the educational mission of a small public university like William and Mary, where graduate student teachers will never teach more than a very small fraction of the courses offered, and where the dedication of the faculty to excellence in teaching is beyond question.

3. Climate for Graduate Students

Health benefits for research graduate students

Research graduate students pay a reduced tuition which does not include fees, and therefore they do not have free access to the Student Health Center. In the past such coverage was provided on a case-by-case basis when it was needed, but this procedure was unsatisfactory because it required the Health Center to

disclose the name of the student, thus violating confidentiality. In cooperation with Dr. Gail Moses, Director of the Student Health Center, a new policy was developed which permits us to provided full coverage on a case-by-case basis without violating confidentially. Fees for the recreation center and the costs of health insurance are not covered by this policy, and currently remain the responsibility of the student.

Learning climate

Following the Faculty reaction to last year's report on the learning climate, the Dean of Research and Graduate Studies prepared a special summary on learning climate, he and the Dean of the Faculty met with the faculty of each graduate program in A&S, and a *Task Force on the learning climate for A&S graduate students* was appointed.

The faculty meetings provided an opportunity to discuss the results obtained from last year's survey, to ask and answer questions, and to discuss how the learning climate can be improved. The meetings were very useful and a summary of some of the points raised in the meetings was distributed on June 5 to those who participated.

The Task Force was appointed in April. The members of the Task Force are: Gina Hoatson (Physics, Chair), Dorothy Coleman (Philosophy), David Finifter (Public Policy), Susan Grover (Law), Amy Howard (President of the GSA, grad student in American Studies), Leisa Meyer (Women's Studies), Andy Minor (grad student in Computer Science), and John Selby (History). Its charge includes, in part, the following:

"Are our existing procedures sufficient to deal with serious complaints of sexual harassment, racial discrimination, or homophobia? If serious complaints are not being dealt with, is this because the individuals in positions of responsibility are failing to act effectively, or is the fault with the system itself?

Study the existing W&M policy and procedures for reporting sexual harassment. Does data obtained from the Affirmative Action office, the Deans, and the Chairs show that these procedures are effective, or if not, why not? How do our procedures compare with those at other institutions? Identify two or three institutions where the sexual harassment policy is effective and explain why. Use these examples to suggest how our policy might be improved.

In the light of your findings, are there any major changes in procedures or policy which should be made at William and Mary?

How can we best articulate and publicize our policies so that all students and faculty know when to make complaints and are encouraged to do so?"

The Task Force will report to COGS and to the Deans in early February.

4. Graduate Program Reviews

Computer Science and History

Last year the Computer Science and History programs had joint (graduate and undergraduate) program reviews. In connection with the graduate part of this process, Henry Krakauer (Physics), Rahul Simha (Computer Science), and Mary Voigt (Anthropology) served on the internal review committee for

Computer Science, and John Selby (History), Virginia Torczon (Computer Science), and Alan Wallach (Art and Art History and American Studies) served on the internal review committee for History.

All reports for the History review have been completed, and the recommendations are currently being considered by COGS. The Computer Science review will be considered after the department's response to the external and internal reports is received.

Anthropology, Applied Science, and the Psychology MA

Three graduate programs are scheduled for review this year. Anthropology will be joint, while Applied Science and the Psychology MA will be graduate only.

The Psychology program had a joint review two years ago, but the graduate part was never completed. Dean Feiss agreed that a new, interim MA review is needed and appointed an internal review committee consisting of Franz Gross (chair of the committee), Laurie Sanderson (Biology), John Selby (History), and Kelly Shaver (Graduate Director of the Psychology MA Program). Two external reviewers have been identified and have agreed to come in the spring. The internal review committee for Anthropology is Jim McCord (History, and chair of the committee), Yana Rodgers (Public Policy and Economics), and Norman Barka (Graduate Director of Anthropology). The internal review committee for Applied Science is Gene Tracy (Physics, and chair of the committee, Susan Grover (Public Policy and Law), and Mark Hinders (Applied Science and chair of it's Academic Progress Committee). Three external reviewers for Anthropology have been selected, and three for Applied Science are currently being solicited.

5. Administrative organization of the Graduate Program

Work on a new section of the Faculty Manual

COGS has been drafting a new section of the faculty manual which will follow Section IIA, *Conduct of Undergraduate Classes*, recently approved by the Faculty. This section will describe the Conduct and Organization of Graduate Studies. The draft will be reviewed next by the Faculty Affairs Committee and the faculty of all programs in A&S which offer graduate studies. After this review, COGS will submit its final draft to the FAC to present to the Faculty in the spring semester.

The Graduate Student Database (GSD)

In cooperation with the Information Technology (IT) department, a new graduate student database (GSD) is being developed. The GSD will be simple and user friendly, and will use Microsoft's Access 97, which is part of the professional Office 97 package. Information will be entered only once, and the GSD will give the Dean's Office the capability to generate reports without asking the programs to supply information they have previously supplied. We will be able to monitor the progress of our graduate students more efficiently, and respond easily and quickly to requests for information. Because the computing environment changes continually, we have decided that we can't wait the 2-3 years it will take the College to introduce a new data base, and that must begin the development and learning process now.

The full data base will include (1) records of our current students, (2) admissions records, and (3) alumni records. The software for the records of our current students has been planned in cooperation with the graduate program support staff, and will be implemented very soon. The admissions data base will follow later this year and the alumni data base next year.

6. Graduate course approvals -- additions and changes since the 1995 Annual Report

The COGS annual reports issued in 1996 and 1997 did not include graduate course additions and changes made in those years. To rectify this omission, this report includes most graduate course additions and changes approved since the 1995 annual report (presented to the faculty in December, 1995).

American Studies New courses:

- (approved 5/96) AMST 533 The World of Whitman
- (approved 3/98) AMST 551 Music of the South
- (approved 4/98) AMST 529 Exploring the Afro-American Past

Anthropology New courses:

- (approved 4/96) ANTH 630 Writing and Publishing in Anthropology
- ANTH 532 Maroon Societies Cross listed as ANTH 432, AMST 412/512, HIST 432/532
- ANTH 572 Ethnographic History Cross-listed as ANTH 472, AMST 434/534, HIST
- 474/574
- ANTH 581 Artists and Cultures Cross-listed as ANTH 481, AMST 415/515
- ANTH 618 Independent Study in Anthropology

Applied Science New courses:

- (approved 2/96) APSC 611/612 Introduction to Materials Science I & II
- (approved 3/96) APSC 635 Clouds
- (approved 11/96) APSC 550.01 Computational Approaches and Applications to Physical Systems;
- Cross listed as PHYS 690.01
- (approved 1/97) APSC (unnumbered) Introduction to Control Theory to be cross-listed with Physics
- (approved 2/97) APSC 636.01 Interpretation of Clouds in Satellite Imagery
- (approved 10/97) APSC 598 Introduction to Scientific Writing for International Students
- APSC 698 Advanced Scientific Writing for International Students
- (approved 4/98 new core courses for the Applied Science program)
- APSC 603/604 Introduction to Scientific Research
- APSC 607/608 Mathematical and Computational Methods
- APSC 621 Principles of Materials Science
- APSC 622 Quantitative Materials Characterization

Biology New courses:

- (approved 3/96) BIO 518 Functional Ecology
- BIO 660 Topics in Functional Ecology
- BIO 536,636 Advanced Cell Biology
- BIO 422/522 Phycology
- (approved 11/97) BIO 537 Immunology
- BIO 610 Animal Behavior
- (approved 3/98) BIO 538 Immunology Laboratory
- BIO 546 Topics in Nuclear Structure and Gene Activity
 - BIO 637 Immunology
- BIO 646 Topics in Nuclear Structure and Gene Activity

Chemistry New course:

• (approved 10/96) CHEM 668-01 Topics in Polymer Chemistry; Cross-listed with APSC 768-08

Computer Science New courses:

•	(approved 4/97) CS 618 Models and Application of Operations Research
•	CS 628 Linear Programming
•	CS 638 Non-Linear Programming
•	CS 718 Statistical Decision Theory
•	CS 728 Network Optimization
•	CS 738 Discrete Optimization
•	CS 768 Reliability
•	(approved 10/97) CS 515 Systems Programming
•	(approved 5/98) CSCI 529 Computer Organization and Programming
	Languages
•	CSCI 539 Data Structures and Algorithms
•	CSCI 549 Scientific Computing
•	CSCI 649 Parallel Computing
•	CSCI 749 Numerical Algorithms
•	CSCI 754 Performance Evaluation of Computer Science

In September 1996, the Computer Science department requested approval for a one-year MS program in Computer Science. Since the degree program already existed, it was concluded that formal approval by COGS was not required.

History New courses:

• (approved 4/96) HIST 758 Directed Research (In place of courses: HIST 505/506; 512; 515/516; 517/518; 519/520; 523/524; 531; 533/534; 535/536; 537/538; 539/540; 543/544; 548/549; 550; 507/508; 555/556; 558; 579/580; 583; 584, the following courses were approved in 5/98)

•		HIST 605/606 American History to 1820
•		HIST 612 European History 1357-1598
•		HIST 615/616 European History 1648-1871.
•		HIST 617/618 European History 1870-1974.
•		HIST 619/620 English History.
•		HIST 623/624 Women's History in America 1600 to the
	present	•
•	-	HIST 631 Spanish History 1469-1939
•		HIST 633/634 German History
•		HIST 635/636 Modern European Intellectual History
•		HIST 637/638 French History 1648 to the present
•		HIST 639/640 History of Latin America
•		HIST 643/644 United States Foreign Relations
•		HIST 648/649 Russian History
•		HIST 650 Exploration and Colonization f Eastern North
	America	1
•		HIST 651/652 History of Africa
•		HIST 653 Race Relations in South Africa
•		HIST 655/656 Medieval Europe
		•

HIST 658 European Exploration of the World 1450-1600
 HIST 679/680 The Middle East in the Modern Period
 HIST 683 Japanese History 1600 to the present
 HIST 684 Chinese History 1644 to the present

Course changes

- (approved 4/96) From: HIST 701 Method and Theory in American History To: HIST 701, 702 History and Literature of American History
- (approved 4/96) *From*: HIST 710-714 Fall and Spring (3, 3) *To*: HIST 710-714 Fall (3)
- (approved 6/96) History 701-02 *From:* The Literature and History of American History *To:* The Literature and History of American or European History: Section 1 American History; Section 2 European History
- (approved 11/96) History 719-724 change in listing to add, "Topic changes each semester"

Psy.D. New course:

• (approved 4/96) PSYC 765 Clinical Health Psychology

C. Statistical Summary

The following pages present statistical data for the Fall 1998 incoming graduate classes in Arts and Sciences.

ADMISSIONS - Fall Semester 1998

AVERAGE UNDERGRADUATE GRADE POINT AVERAGE OF ENTERING STUDENTS (4.0 SCALE)

AVERAGE GRADUATE RECORD EXAMINATION SCORES OF ENTERING STUDENTS

REGISTERED REGULAR & PROVISIONAL GRADUATE STUDENTS (Fall 1996 to Fall 1998)

GRADUATE DEGREES CONFERRED 1997-98

GRADUATE DEGREES CONFERRED 1997-98 (cont'd.)

GRADUATE DEGREES AWARDED DURING THE LAST 10 YEARS

1. ADMISSIONS - Fall Semester 1998

Department	¹ Number Applicants	² Number Accepted	Number Matriculated
American Studies	63	30	13
Anthropology	39	13	10
Applied Science*	28	17	11
Biology	31	21	15
Chemistry	35	7	6
Computer Science	171	58	19
History	112	28	15
Physics*	86	47	8
Psychology	57	12	10
Public Policy	82	44	17
Totals	704	277	124
Psy.D. Program ³	105	15	10

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

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

³ Total in Consortium.

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

DEPARTMENT	FALL 1996	FALL 1997	FALL 1998
AMERICAN STUDIES	3.51 (13 of 16)	3.3 (22 of 23)	3.41 (11 of 13)
ANTHROPOLOGY	3.44 (9 of 10)	3.5	3.38 (9 of 10)
APPLIED SCIENCE	3.53 (13 of 15)	3.44 (11 of 12)	3.4 (10 of 11)
BIOLOGY	3.13	3.36	3.06
CHEMISTRY	3.24	3.26	3.18
COMPUTER SCIENCE	3.55 (15 of 16)	3.42 (15 of 17)	3.29
HISTORY	3.57 (21 of 25)	3.61 (12 of 13)	3.56 (14 of 15)
PHYSICS	3.55 (7 of 9)	3.16 (8 of 9)	3.13 (5 of 8)
PSYCHOLOGY	3.46	3.47	3.41 (9 of 10)
PSY.D. PROGRAM	3.34	3.63	3.42
PUBLIC POLICY	3.35 (20 of 22)	3.46 (20 of 21)	3.51 (14 of 17)

3. AVERAGE GRADUATE RECORD EXAMINATION SCORES OF ENTERING STUDENTS $^{\rm 1}$

		FA	LL 199	7	FALL 1998				
DEPARTMENT	VERB	MATH	ANALY	ADV	VERB	MATH	ANALY	ADV	
American Studies	585	510	579	****	608	544	588	****	
Anthropology	541	559	598	****	550	574	613	****	
Applied Science	487 (11 of 12)	723 (11 of 12)	667 (11 of 12)	****	526 (9 of 11)	681 (9 of 11)	610 (9 of 11)	****	
Biology	610	610	645	673	549	651	664	655 (10	
				(3 of 4)	(14 of 15)	(14 of 15)	(14 of 15)	of 15)	
Chemistry	528 (4 of 5)	703 (4 of 5)	630 (4 of 5)	****	532 (5 of 6)	680 (5 of 6)	662 (5 of 6)	****	
Computer Science	551	744	687	****	527	730	695	****	
History	634	570	665	****	632 (14 of 15)	578 (14 of 15)	674 (14 of 15)	****	
Physics	518	757	660	802	520 (7 of 8)	746 (7 of 8)	644 (7 of 8)	602 (6 of 8)	
Psychology	556	565	592	608 (10 of	570	547	635	650 (6 of 10)	

Psy.D.	542	646	636	629	555	580	633	597
Public Policy	576	634	689	****	583	686	693	****

 $^{^1}$ Table includes all regular and provisional students. Scores on the advanced portion of the GRE are not reported unless at least 70%

4. REGISTERED REGULAR & PROVISIONAL GRADUATE STUDENTS $^{\rm 1}$

DEPARTMENT	FALL 1996	SPRING 1997	FALL 1997	SPRING 1998	FALL 1998
AMERICAN STUDIES	52	51	63	61	61
ANTHROPOLOGY	23	22	20	21	28
APPLIED SCIENCE	49	49	54	44	45
BIOLOGY	27	30	15	17	25
CHEMISTRY	8	8	6	6	7
COMPUTER SCIENCE	64	59	62	63	69
HISTORY	68	69	63	60	59
PHYSICS	55	46	48	45	44
PSYCHOLOGY	16	15	16	14	20
PUBLIC POLICY ³	43	46	46	41	41
TOTALS	405	395	393	372	399
PSY.D. PROGRAM	59	55	56	52	55

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, the number including joint degree students for Fall 1997 is 53.

5. GRADUATE DEGREES CONFERRED 1997-1998

DEPARTMENT	DEGREE	AUGUST 1997	DECEMBER 1997	MAY 1998	TOTAL
American Studies	M.A. Ph.D.	1 0	1 0	2 2	4 2
Anthropology	M.A.	0	2	3	5
Applied Science	M.A. M.S. Ph.D.	0 1 1	0 4 3	0 6 2	0 11 6
Biology	M.A.	3	3	2	8
Chemistry	M.A.	0	8	1	9
Computer Science	M.S. Ph.D.	2 1	5 0	6 0	13 1
English	M.A.	3	5	1	9
Government	M.A.	0	1	1	2
History	M.A. Ph.D.	4 1	4 1	8 1	16 3
Mathematics	M.A. M.S.	0 0	0 0	0 0	0 0
Physics	M.A. M.S. Ph.D.	0 1 3	0 3 2	0 8 3	0 12 8

M.A.	2	3	4	9
PSy.D.	0	4	2	12
M.P.P.	0	2	21	23
M.A.	1	0	1	2
M.A.	14	27	23	64
M.S.	4	12	20	36
M.P.P.	0	2	21	23
Ph.D.	6	6	8	20
Psy.D.	6	4	2	12
	Psy.D. M.P.P. M.A. M.A. M.S. M.P.P. Ph.D.	Psy.D. 6 M.P.P. 0 M.A. 1 M.A. 14 M.S. 4 M.P.P. 0 Ph.D. 6	Psy.D. 6 4 M.P.P. 0 2 M.A. 1 0 M.A. 14 27 M.S. 4 12 M.P.P. 0 2 Ph.D. 6 6	Psy.D. 6 4 2 M.P.P. 0 2 21 M.A. 1 0 1 M.A. 14 27 23 M.S. 4 12 20 M.P.P. 0 2 21 Ph.D. 6 6 8

5. GRADUATE DEGREES CONFERRED 1997-1998 (cont'd)

TOTAL NUMBER OF DOCTORATES CONFERRED

Arts and Sciences * 20 Ph.D., 12 Psy.D. Education * 11 Ed.D., 7 Ph.D.

Marine Science * 5 Ph.D.

M.A. IN EDUCATION¹

Secondary School Teaching * 18

¹Includes Museum Education

6. GRADUATE DEGREES AWARDED DURING THE LAST 10 YEARS $^{\rm 1}$

(August - June)

	PROGRA M												TOTA L SINCE
DEPARTMEN T	INITIATED	88 - 89		90- 91		92- 93			95- 96	96- 97	97- 98	8/9 8	AUG. 1988
American Studies	1982-MA 1988-PhD	4	11 0	14 0	8	12 1	10 2	9	11 4	6 4	4 2	2 2	91 16
Anthropology	1979-MA	8	9	8	7	5	12	10	10	9	5	1	84
Applied Science	1970- MA/MS 1990-PhD	0	0	1	1	1 1	2	6 4	9 5	9	11 6	0	40 23
Biology	1963-MA	5	10	4	5	7	8	13	15	10	8	4	89
Chemistry	1964- MA/MS	5	7	4	5	7	11	2	8	7	9	1	66
Computer Science	1984-MS 1986-PhD	15 0	19 3	15 0	13 3	23 2	16 4	12 3	9	15 3	13 1	5 4	155 23
English	1970-MA 2	10	9	18	11	15	17	15	11	19	9	1	135
Government	1966-MA	8	8	9	10	4	7	12	7	3	2	0	70
History	1955-MA 1967-PhD	7 1	16 5	13 2	10 9	10 6	7 4	16 1	12 3	8 4	16 3	5 6	120 44
Mathematics	1961-	9	5	10	6	8	9	9	7	6	0	0	69

MA/MS

	1959-												
Physics	MA/MS	6	14	8	10	8	11	9	7	11	12	0	96
	1964-PhD	3	6	6	7	7	7	6	5	10	8	3	68
Psychology	1953-MA	3	11	5	7	7	9	5	8	8	9	0	72
	1978-PsyD	10	14	8	7	5	6	13	7	8	12	3	93
Public Policy	1991-MPP						17	14	13	21	23	0	88
Sociology	1967-MA	6	5	5	5	2	6	2	7	3	2	0	43
	MA-MS-		12	11		10	14	13	13	13	12		
A&S Totals	MPP	86	4	4	98	9	2	4	4	5	3	19	1218
	PhD	4	14	8	19	17	18	15	17	27	20	15	174
	PsyD	10	14	8	7	5	6	13	7	8	12	3	93

¹ See Table 5 for M.A. in Education degrees.

² Earlier Program suspended in 1963.