

**Committee on Graduate Studies  
Report to the Faculty  
July 2018 - June 2019**

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## **Introduction**

The structure of the Annual Report by the Committee on Graduate Studies (COGS) to the Arts & Sciences Faculty is as follows:

- brief introduction, including a discussion of the importance of Arts & Sciences graduate programs to the university
- new and recurring themes and issues facing graduate programs in Arts & Sciences
- highlights of items discussed and resolved by COGS
- highlights of administrative changes instituted by the OGSR
- presentation of Graduate Arts & Sciences Catalog changes that occurred over the past year
- report on the activities of the Graduate Center
- report by the A&S Graduate Ombudsperson
- appendices

## **The Importance of Arts & Sciences Graduate Programs to the University**

Graduate programs in Arts & Sciences are integral to the mission of William & Mary. By providing the expertise and opportunities of a major research university, combined with the faculty mentoring and dedication to teaching found at a small liberal arts and sciences college, W&M awards A&S graduate degrees that are essential for leadership positions across a broad spectrum of careers. In Arts & Science we have eleven selective graduate programs that are often recognized as being among the most academically rigorous in the nation. For example, in the 2018 *U.S. News & World Report's* rankings for Best Graduate Schools, the History doctoral program tied at 27<sup>th</sup> in the U.S. compared to 36<sup>th</sup> in the 2014 ranking (doctoral programs in History are evaluated every four years), and the colonial history program held its spot as third in the nation. *College Magazine* also recently ranked William & Mary the number one school for History buffs, thus demonstrating the value to the undergraduate programs when we have strong

graduate programs. Our master's programs in Psychological Sciences, Chemistry, and Biology are among the strongest research-focused terminal master's programs in the country. We punch well above our weight when it comes to the respect held for our graduate programs.

We are a university because of our graduate programs. Hence our identity as a *liberal arts and sciences university* is just as much tied to graduate excellence as it is to our reputation as an undergraduate liberal arts and sciences institution. Excelling at the graduate level and fostering a strong sense of community among our graduate students and graduate faculty has been a key component of the W&M Strategic Plan. The strength of our graduate programs places us in a higher select peer group, which helps attract new faculty, students, and staff, as well as instructional, research, and infrastructure resources that otherwise would not be available to us.

The departments and programs with A&S graduate programs award approximately 40% of the undergraduate A&S degrees, are vital in retaining roughly one-half of the A&S tenure-equivalent faculty, and justify William & Mary's inclusion on [The Carnegie Classification of Institutions of Higher Education](#)'s list of Research Universities with higher research activity (RU/H). In addition, in FY 2019, faculty members affiliated with any of the eleven A&S graduate programs generated almost 65% of the Facilities & Administrative (F&A) cost recovery in A&S. These funds are essential for maintaining the research infrastructure for all W&M faculty since A&S accounts for the lion's share of F&A recovery on the main campus.

Our ability to recruit and maintain a strong research-active faculty in several key disciplines depends on the strength of our graduate programs. The inability to recruit sufficient numbers of qualified doctoral students to work with research-active faculty members has caused some faculty members to leave W&M. The departure of these research-active faculty members represents a substantial pedagogical and financial loss to W&M. The research conducted by A&S graduate programs also enables a large proportion of the undergraduate research opportunities offered on campus. The graduate students help mentor undergraduate researchers and facilitate faculty-undergraduate research collaborations. As undergraduate research is a hallmark of W&M, recruiting and supporting research-active graduate students also strengthens our ability to deliver a distinctive undergraduate educational experience. In addition, A&S graduate students enrich the undergraduate program by serving as tutors, writing preceptors, lab and discussion section leaders, teaching assistants, instructors, and graders in courses with high enrollments and those central to the new COLL curriculum.

### **New and Recurring Themes and Issues**

In 2018-2019 members of the A&S Graduate Student Association identified their three top priorities to address in 2019-2020: provisions to pay – or at least subsidize – the university's student health insurance premium, better programming at the Wellness Center to address the mental wellness issues specific to graduate students (particularly those writing dissertations or theses, which is an unstructured and often lonely process), and a reexamination of the Consensual Amorous Relationship Policy approved by the faculty as part of the 2018-2019 revisions to the William & Mary Faculty Handbook.

### **Graduate Financial Aid**

Graduate student financial support – including the coverage of the student health insurance premium – continues to be the most pressing issue for the graduate programs and graduate students in A&S. Historically, financial aid increases for A&S graduate programs had been dependent on irregular and insufficient allocations from the Commonwealth. W&M's budget has never included A&S graduate students when there is a raise pool for faculty and staff, even though A&S graduate students are part-time employees of W&M who play an important role in the instructional and research missions of W&M. Base budget increases over the past ten years have allowed us to steadily raise stipends to students in the A&S graduate programs to levels that are competitive against many of the universities with whom we compete to

secure our top applicants. Arts & Sciences is delighted that increases in base funding for graduate stipends are understood as a W&M priority and that in the past decade the Office of Graduate Studies and Research has enjoyed several substantive increases in the financial support of the graduate students in A&S.

Where we remain at a distinct competitive disadvantage is that W&M neither covers nor supplements the mandatory student health insurance premium. Anecdotally, most of the universities against whom we compete do. It is common when top applicants decline an offer of admission from W&M to report that the institution where they will matriculate instead offered them a financial package that includes student health insurance coverage. Within the Commonwealth of Virginia, George Mason University, Old Dominion University, University of Virginia, and Virginia Tech all either cover or supplement the cost of their university's student health insurance premium.

At the May 6, 2019 meeting of the A&S Committee on Graduate Studies, ten graduate directors reported on the results of their recruiting efforts for Fall 2019 admissions. American Studies, Anthropology, and History all reported successful recruiting seasons. American Studies recruited four of their top seven applicants to the doctoral program. Anthropology recruited three of their top five candidates to their doctoral program. History secured six of their top ten applicants to the doctoral program; they lost candidates to Columbia, Georgetown, and Harvard – all worthy competitors. All three programs reported that previous increases to their base stipends helped make their offers more competitive against some stiff competition, with the recruitment fellowships available to offer to their very top candidates playing a crucial role. All reported that the open houses they conducted for applicants recommended for admission helped secure the successful outcomes.

For the doctoral programs in the sciences, recruitment successes were mixed. Applied Science recovered from a disappointing recruiting season for the Fall 2018 entering cohort (only four incoming students, with only three persisting to Spring 2019), with six students admitted for Fall 2019. In Computer Science graduate recruitment, while stronger than the previous year, fell below expectations for the Ph.D. program mainly due to a significant decrease in international applications, especially from China. A new outreach program was piloted in Fall 2018 to attract more domestic students to the doctoral program, which helped partially offset the decline in international applications. Additionally, two students active in the M.S.-only degree program transitioned to the doctoral program. In Physics, the number of applications continues to trend downward – a phenomenon also witnessed in Applied Science, but not Computer Science. In Physics, the final number of accepted offers was eight, which met the department's goal of 8-10 incoming students for Fall 2019. Due to funding uncertainties, the department was not as aggressive with offers to students interested in the popular condense matter sub-field as they might have otherwise. For all three programs, stipends proved to be competitive, and the recruitment fellowships helped secure top candidates.

Biology, Chemistry, and Psychological Sciences reported successful recruiting seasons; all were able to fill their entering cohort. All attribute the modest increases to their base stipend involving raises over the past several years, as well as recruitment fellowships, to their success. While the higher base stipend helped, the departments did lose some of their top candidates to doctoral programs at universities such as Tufts, University of Colorado, University of Kentucky, and University of Virginia. Biology and Psychological Sciences also report success in diversifying their master's student population due to intentional outreach efforts. Psychological Sciences noted that their recruiting season for the Fall 2019 entering cohort was an unprecedented success, which they attribute to the greater involvement of faculty mentors in the interviewing and recruiting process.

Computational Operations Research reported that their total number of applications for Fall 2019 was up over the previous year. Eleven applicants accepted offers of admission from among the 25 submitted applications. The Fall 2019 incoming class includes two international students (Nepal and China), one U.S. Coast Guard officer, three W&M graduates as well as students from Rice, Purdue, James Madison,

University of Massachusetts, Amherst, and Lehigh universities. Admitted students who chose other graduate offers will attend institutions including Georgetown, University of Illinois, University of Virginia, and George Mason University.

For Fall 2019, Provost Halleran suspended admissions to the Master of Public Policy program.

While factors in addition to the composition of financial aid packages figured into candidates' decisions, A&S continues to compete against universities – in particular, private universities – that offer better financial packages. These include not only higher stipends, but also health insurance or health insurance subsidies, as well as research allowances. The limited number of recruitment fellowships we are able to offer can help ameliorate the differences, but do not always overcome them.

Provisions for health insurance coverage or subsidies remain critical for the following reasons:

- **Diversity:** Members of groups traditionally under-represented in academia are those most likely to struggle with the increasingly onerous premium for the mandatory (unless eligible for a waiver) university student health insurance policy. They are most likely to come from families that do not have health insurance coverage or are older, returning students who are not eligible for coverage under the plans of their parents. Some have partners or spouses, but many of their partners or spouses do not have health insurance coverage either. Students with families, particularly international students, are particularly hard hit. The base premium of \$2,233 in 2018-2019 is a 45% increase over the base premium of \$1,541 in 2013-2014. Depending on the discipline, the mandatory premium is between 8.6% and 12% percent of an A&S graduate student's *pre-tax* stipend and summer research fellowship package.
- **Competitiveness:** In previous years, the Office of Graduate Studies and Research has used a series of base budget increases to institute stipend increases for doctoral students. However, competition remains strong as other universities continue to improve the financial aid packages they offer to incoming students. The A&S doctoral programs have reduced the size of their incoming cohorts in order to increase stipends. Chemistry has increased their supplement to the financial aid package offered to incoming master's students in order to remain competitive. Given that candidates from groups traditionally under-represented in academia are those most likely to receive generous financial aid offers from other universities, graduate program in A&S at W&M struggle to compete with these offers and often do not succeed.
- **Undergraduate teaching and mentoring:** A&S graduate students enrich the undergraduate program by serving as tutors, writing preceptors, lab and discussion section leaders, teaching assistants, instructors, and graders. They reach – and teach – hundreds and hundreds of undergraduates per semester in discussions sections such as AMST 202D, AMST 203D, AMST 209D, AMST 211D, and HIST 192D; in lab sections such as BIOL 203L and BIOL 204L, CHEM 103L and CHEM 206L, CSCI 140L and CSCI 141L, PHYS 101L, PHYS 102L, PHYS 107L, PHYS 108L, and PSYC 410L-418L; and in courses such as AMST 470, CSCI 243, HIST 121, HIST 211, and HIST 212. They also tutor hundreds of undergraduates in ANTH 200, ANTH 201, ANTH 202, ANTH 203, MATH 111, and MATH 112 (Calculus I & II) as well as the dozens of undergraduates who make full use of the History Writing Resource Center. In addition, A&S graduate student mentors contribute to the success of undergraduate research in a number of disciplines and through their roles as assistants and advisors in the Sharpe Community Scholars Program, the Lemon Project, and the joint degree program with St. Andrews University. It would be challenging for A&S to deliver the undergraduate curriculum without the invaluable support provided by A&S Graduate Assistants.
- **Faculty retention:** Many members of the A&S graduate faculty would not be able to maintain their research productivity and their ability to obtain external grant and contract funding without the participation of highly qualified graduate students.

Dean Torczon, the Committee on Graduate Studies, and the Dean of the Faculty of Arts & Sciences have taken the following steps to increase needed support for A&S graduate students:

1. In FY 2019, the Dean of the Faculty of Arts & Sciences, in collaboration with the Dean of Graduate Studies and Research, once again submitted a Planning Budget Request asking for further investment in A&S graduate financial aid. The FY2019 PBR was approved by the Board of Visitors at their April 2019 meeting and allowed for increases to the nine-month stipends and summer graduate research fellowships for A&S doctoral students. In addition, it included a modest increase in funding for the A&S Graduate Center, which is seeing increased use of the graduate student resources it has developed, particularly by students in the Mason School of Business.
2. In Fall 2014, the Provost used his discretionary authority to establish the Walter J. Zable Graduate Recruitment Fellowships for the top applicants to doctoral programs in Arts & Sciences, thanks to the generous bequest left by the late Walter J. Zable. This commitment makes it possible to offer recruitment fellowships to five top applicants in the form of a supplementary stipend of \$5,000 per year for the recipient's first two years in the doctoral program, plus up to \$500 to cover the recipients' research expenses during their first two years. A faculty committee, composed of one representative from each of the six doctoral programs, ranks all the nominees based on the strength of the records they presented for admission. Five graduate students were secured for the Fall 2019 incoming cohort, thanks to this recruitment fellowship: one in American Studies, one in Computer Science, two in History, and one in Physics.
3. The Dean of Graduate Studies and Research used the discretionary portion of the base budget increase received in FY 2015 to establish the Dean's Recruitment Fellowships to help recruit top applicants to doctoral programs in Arts & Sciences. One fellowship is granted to each of the six doctoral programs to use at their discretion when recruiting. Fellows receive a lump sum payment in the Fall of \$4,000 per year for the recipient's first two years in the doctoral program. Given the success of this fellowship when recruiting for Fall 2018, it was continued in FY 2019 and again proved successful in recruiting strong applicants to the A&S doctoral programs.
4. In 2015, the Dean of Graduate Studies and Research secured the approval of the members of the GSAB to use their expendable account to establish the A&S Graduate Studies Advisory Board Recruitment Fellowships to help recruit top applicants to master's programs in Art & Sciences. One fellowship is granted to each of the terminal master's programs (only) to use at their discretion when recruiting. Fellows receive a supplementary stipend of \$2,000 per year for the recipient's first two years in the master's program. Given the success of this fellowship, it was continued in FY 2019 and again proved successful in recruiting strong applicants to the A&S master's programs.
5. In May 2014, the Dean of Graduate Studies and Research instituted the Provost Dissertation Fellowship program for doctoral students in American Studies, Anthropology, and History. This initiative was launched in response to the recommendation found in all three 2014 external review reports for American Studies, Anthropology, and History, that the university institute dissertation completion fellowships to address time-to-degree concerns identified by all three external review committees. Starting with the 2016 Provost Dissertation Fellows, selection is competitive with two faculty members from each of the three doctoral programs ranking applicants based on what of their dissertation they have drafted by the time of review, their plan for finishing their dissertation within a year, and the strength of the letter of support they have received from their primary advisor. Each doctoral student receives a one-year fellowship, with no instructional or other obligations; the recipients are to focus solely on the writing of their dissertation. As of June 30, 2019, all but one of the [Recipients](#) in the 2014, 2015, and 2016 cohorts had graduated; the one remaining fellow from these inaugural cohorts defended in Summer 2019 and was an August 2019 graduate. Seven of the fellows in the 2017 cohort of eight defended in time to graduate by no later than August 2018; the remaining fellow is now working towards a May 2020 degree. Five of the fellows in the 2018 cohort of eight defended in time to graduate by no later than August 2019; the remaining three fellows are expected to graduate in January 2020. Given the success of the program, particularly as the OGSR has worked to strengthen both the selection and mentoring processes, what had been a trial initiative has now become a standing program in Graduate Arts & Sciences. At the request of members of the A&S Graduate

Studies Advisory Board, Dean Conley and Dean Torczon agreed to rename these fellowships the [Michael R. Halleran Dissertation Completion Fellowships in the Humanities](#) in thanks to Provost Halleran, upon his return to the faculty, for his support of graduate students during his tenure as provost. The renaming of these fellowships was announced at the Friday morning coffee held during the May 2019 Commencement Weekend hosted by Provost Halleran for the 2018 cohort.

6. In Fall 2014, the Dean of the Faculty of Arts & Sciences instituted a Graduate Research Fund for doctoral students in American Studies, Anthropology, and History to provide competitive research grants in support of their dissertations. Faculty committees in each of these three doctoral programs put forward the top proposals from their students for review by the Director of the A&S Graduate Center, in consultation with the Dean of Graduate Studies and Research. With matching funding from external funding agencies, departmental resources, and in-kind contributions from the graduate student applicants, in Spring 2019 a total of 12 doctoral students received substantive funding that helped make it possible for them to travel to sites in Canada, Europe, Australia, and across the U.S. to pursue their research. Given the success of this program, in Fall 2017 the Dean of the Faculty of Arts & Sciences instituted a complementary Graduate Conference Travel Fund for senior doctoral students to provide competitive grants in support of travel to major conferences to present research; the administrative process and matching requirements are equivalent to those for the Graduate Research Fund. In Spring 2019, a total of 19 A&S doctoral students received substantive funding to make attendance possible at major conferences in the U.S., Australia, Canada, Europe, and Africa.

### **Graduate Student Mental Wellness**

The mental wellness of graduate students is becoming an increasing concern nationwide. A December 6, 2018 article in **Inside Higher Ed**, *A Very Mixed Result on Grad Student Mental Health* by Colleen Flaherty opens with a summary of the challenges faced by graduate students nationwide:

From impostor syndrome and other feelings of being out of place, to periods of isolation and to constant short- and long-term deadlines, graduate school presents serious potential challenges to students' mental health. There's also financial strain, navigating complex relationships with advisers and colleagues, the job market, and myriad other worries.

The article reports on a new study conducted by researchers at Harvard University that

...calls for more attention to the issue and suggests that the battle can't be fought by graduate students or campus health services alone. Departments, which are responsible for some of the environmental factors that impact students' outlook and health, also must change, the authors insist.

A&S graduate students are not immune to these pressures and at least some do experience environmental factors within their graduate program that impact their outlook and health. The Dean of Graduate Studies and Research and the Director of the A&S Graduate Center have been working with the Wellness Center to develop programming that is focused on the challenges particular to graduate students, as well as to make counselors there aware that strategies that are helpful to undergraduate students are not necessarily apropos for graduate students, particularly those in the process of writing dissertations or theses. This is an ongoing partnership. In addition, the Dean of Graduate Studies and Research will be working with COGS members to examine ways in which departmental cultures can be examined and possibly changed to eliminate or improve environmental factors that impact students' outlook and health.

### **The new Consensual Amorous Relationships Policy in the W&M Faculty Handbook**

The April 2019 revision of the William & Faculty Handbook includes a thorough revision to the policy on Consensual Amorous Relationships with Students. The new policy *prohibits* faculty consensual amorous relationships with undergraduate students. However, graduate students are not protected so long as the faculty member is not in their school or, in the case of A&S, any department or program in which the faculty member has taught, plans to teach, or holds an appointment. The Dean of the Faculty of Arts & Sciences, the Dean of Graduate Studies and Research, an overwhelming majority of the 2018-2019 members of COGS, and all of the 2018-2019 members of the A&S Graduate Student Association uniformly condemn the new policy and ask that graduate students be granted the same protection as undergraduates:

*prohibition* of faculty relationships with graduate students, with a provision for exemptions that require review and approval at the level of a dean. Tom Ward, the then incoming president of the Faculty Assembly promised A&S graduate student representatives at the April 2019 meeting of the Faculty Assembly that the policy would be revisited with an eye to revision by a new ad hoc committee. The Dean of Graduate Studies and Research, as well as members of the A&S Graduate Student Association, will be keeping a close watch on the activities of the ad hoc committee to ensure that input is solicited from graduate students, graduate directors, and graduate deans on the form a revised policy should take to protect graduate students from unwanted, unwelcomed, and intimidating sexual predations by any member of the W&M faculty.

### **Graduate A&S Recruitment**

In the Fall of 2018, William & Mary welcomed an impressive group of 85 new A&S graduate students in six doctoral programs and eleven master's programs. The applicant pool totaled almost 600 in 2018. More than 80% of the A&S graduate students entering in Fall 2018 had conducted research projects as undergraduate students, with most receiving awards or Honors for their scholarship. Almost 90% had contributed to their communities through volunteer service, and 56% had been teachers or mentors to preschoolers through senior citizens. Approximately 20% of the entering A&S graduate students were international students from 15 countries.

### **Graduate Student Research and Conference Travel Funds**

In Fall 2005, a new initiative to provide competitive support of A&S graduate student research travel, fieldwork, and minor research expenses was instituted by the Office of Graduate Studies and Research (OGSR), with the first awards made in Spring 2006. The purpose of the A&S Graduate Student Research program is to provide seed funding in support of A&S graduate student research.

As of the Fall 2007 semester, continuous enrollment fees from A&S graduate students have provided a stable source of funding for the A&S Graduate Student Research Grant program, enabling this program to be offered predictably each fall and spring semester. To aid graduate students in conducting summer research, the OGSR initiated a summer funding program in Summer 2009. In previous years, spring research grants could include funding for summer activities, but the funds had to be expended prior to July 1, which placed undue constraints on their use. In 2018-2019, the OGSR awarded a total of \$6,635 to 19 graduate students in Fall 2018, \$8,200 to 24 graduate students in Spring 2019, and \$2,800 to 8 graduate students for Summer 2019. The maximum award was \$350.

The OGSR and the W&M Student Activities Office provide financial support for the A&S Graduate Student Association (GSA) [Supplemental Conference Funding](#). The GSA is responsible for managing the application and selection process for conference travel funding, with priority given to students who are presenting at a conference. Since conference travel funds for A&S graduate students remains an unmet need, starting in Spring 2014 the OGSR raised the cap for each type of supplemental conference travel award by \$100. The OGSR provided \$3,500 for 10 awards in Summer 2018, \$5,250 for 15 awards in Fall 2018, \$6,350 for 17 awards in Spring 2019 and \$7,400 for 21 awards in Summer 2019.

### **A&S Graduate Studies Advisory Board**

The A&S [Graduate Studies Advisory Board](#) (GSAB), created in 2004, enhances the quality of A&S graduate programs in multiple ways, including providing financial support for the following initiatives:

- [Recruitment Fellowships](#): Effective with the Fall 2015 incoming cohort, GSAB recruitment fellowships make it possible for each of the five terminal master's programs in A&S to offer, at their discretion, a supplementary stipend of \$2,000 per year for the recipient's first two years in the master's program so that each of these programs can compete more effectively for their top applicant. In each instance, the offer of a recruitment fellowship secured an acceptance from one of the program's top applicants.

- [Distinguished Thesis and Dissertation Awards](#): Established in 2004-2005, these awards recognize exemplary achievement in original research that contributes to the discipline. Students are nominated by their thesis or dissertation advisor. The theses and dissertations nominated are ranked by a panel of faculty scholars. In 2018-2019, five A&S graduates received Distinguished Thesis and Distinguished Dissertation Awards, including a new Notable Dissertation award, each of which was presented to the recipient at their program's diploma ceremony.
- [Graduate Research Symposium](#): Board members provide substantive financial sponsorship for the annual research symposium, as well as serving as active participants.
- [Awards at the Graduate Research Symposium](#): In addition to providing financial support for the organization of the Graduate Research Symposium, the GSAB provided the funding for multiple outstanding research awards for both A&S graduate students as well as graduate student participants from other universities. The GSAB sponsored two Awards for Excellence in Scholarship of \$1,000 each to recognize exceptional A&S graduate student research.
- [Carl J. Strikwerda Awards for Excellence](#): Established in Spring 2011, these awards recognize A&S master's students for their outstanding written papers on thesis research or scholarship to earn an M.A., M.S., or M.P.P. degree. Students submit papers written for the Graduate Research Symposium for consideration by a ranking panel composed of faculty and GSAB members. Four awards of \$250 were presented at the 2019 Graduate Research Symposium Awards Luncheon to master's students whose papers were judged to be outstanding by the ranking panel.
- [S. Laurie Sanderson Awards for Excellence in Undergraduate Mentoring](#): Established in Spring 2011, these annual awards recognize A&S graduate students for outstanding undergraduate mentoring in scholarship and research outside of classroom teaching. In Spring 2012, board members voted unanimously to rename the awards to honor Laurie Sanderson's contributions to A&S graduate studies during her term as Dean of Graduate Studies and Research from July 1, 2005 to June 30, 2012. Undergraduate mentoring includes, among other examples, graduate students who mentor undergraduates in the context of the undergraduate students' senior theses, honors theses, writing projects, term papers, or research in a laboratory, field site, museum, or archive. Undergraduate students and faculty collaborate to nominate graduate students. Four awards of \$250 were presented at the 2019 Graduate Research Symposium Awards Luncheon.
- [Commencement reception for graduates from the A&S graduate programs](#): Established in Spring 2014, this reception, with funding by the GSAB, celebrates graduates, their families, and their faculty during Commencement Weekend. Provost Halleran, Dean Conley, and Dean Torczon attended the May 2019 event.
- [Graduate Student Commons](#): Opened in Fall 2015, board members sponsored, in collaboration with Carrie Cooper, Dean of University Libraries, the construction of a dedicated study space for all W&M graduate students. Located on the second floor of Swem Library, across from the Center for Geospatial Analysis, the Commons offers space to store research material, study areas, and a place to collaborate with peers. Graduate students access the space by swiping their W&M ID cards through the card reader at the doors. In addition, the Commons hosts programs tailored for graduate students.
- [Journal Club](#): In Spring 2016, members agreed to a request put forward by Andrew Kottick and Sean Koebley, then doctoral students in Applied Science, to partner with the OGSR to provide refreshments for a weekly gathering for sharing research with W&M Arts & Sciences and the W&M Virginia Institute of Marine Sciences (VIMS) graduate students. Their request on behalf of the A&S graduate student population was born out of a desire for graduate students to meet each other, mingle between departments, and to learn about the research being conducted across Arts & Sciences and at VIMS. Given the ongoing success of the students in building an interdisciplinary intellectual community, the GSAB has provided ongoing financial support, with additional support also provided by the OGSR, the A&S Annual Fund, and the VIMS, which hosts one event per semester on the VIMS campus.

In Spring 2018, the Graduate Studies Advisory Board, initiated a partnership with the Provost, the Vice Provost for Research and Graduate Professional Studies, the Dean of the Faculty of Arts & Sciences, and the Dean of Graduate Studies and Research to create an award to recognize outstanding mentoring of graduate students by a member of the Arts & Sciences faculty:

- [Graduate Faculty Mentoring Award](#): This award recognizes faculty adept within the broad spectrum of activities that makes up graduate mentoring. Exemplary graduate mentoring supports the advancement of students as *scholars*, *teachers*, and *professionals*, and requires significant time and skill. The second recipient, acknowledged at the April 2019 Faculty of Arts & Science meeting, was Karin Wulf, Professor of History and Director of the Omohundro Institute of Early American History and Culture.

In 2018-2019, the GSAB continued to partner with the A&S Graduate Center and the [GSAB Mentoring Program](#), which fosters one-on-one mentorships intended to help students build professional skills. A student is paired with volunteer, who serves as a mentor for the academic year in recognition that graduate students are more successful when they receive mentoring from multiple sources.

The GSAB ended FY 2019 with 21 community, business, and education leaders as fully participating members, as well as two A&S graduate student members selected by the Graduate Student Association. In addition to providing financial support for A&S graduate students and programs, board members advocate on behalf of graduate studies in A&S, as well as coordinate with the A&S Graduate Center and the Cohen Career Center to support professional development opportunities for A&S graduate students.

The Graduate Studies Advisory Board met on campus October 21, 2018 and again on March 16-17, 2019. The fall meeting was preceded by the W&M [Three Minute Thesis](#) competition on October 20, 2018, which was held in collaboration with VIMS. The GSAB provided the money for the prizes awarded at the event. The OGSR covered the travel expenses of the winner, Kasey Sease, History, who competed at the 2019 Annual Meeting of the Council of Southern Graduate Schools held in Knoxville, TN, February 14-16, 2019. The GSAB spring meeting and the Graduate Research Symposium were coordinated to be held on the same weekend. Board participation in symposium events included six board members who served on the judging panel for the awards and nine board members who chaired oral sessions at the symposium. Members also attended oral and poster sessions and were involved in informal career mentoring and networking at the symposium reception and the awards luncheon. Committee on Graduate Studies members were invited to attend the evening reception at the board's March 2019 meeting to discuss their perspectives on the strengths and needs of A&S graduate programs.

### **COGS Highlights**

Members of the Arts & Sciences Committee on Graduate Studies met four times during Fall 2018 and five times during Spring 2019. A summary of highlights from their meetings includes:

- At Dean Conley's request, in Fall 2018 COGS approved 500-level cross-listings of new 400-level courses created by the Center for Geospatial Analysis (CGA); the 400-level courses had already been reviewed and approved by the Educational Policy Committee. Members also approved a new 500-level introductory course. All were created to support a new post-baccalaureate GIS certificate to be offered by the CGA.
- In Spring 2019, COGS approved new catalog language for the GIS postbaccalaureate certificate.
- At the request of the faculty in the Department of Psychological Sciences, COGS members approved a request to change the title of the master's degree conferred by the department from Master of Arts (M.A.) to Master of Science (M.S.). In addition, members approved allowing this title change to apply retroactively to the continuing graduate students in the department's master's program (specifically, the Fall 2017 entering cohort).

- COGS approved a proposal from the Department of Computer Science for a new Master of Computer Science (MCS) degree program.
- Following an extensive review and discussion, COGS members agreed to a thorough revision of the [Registration](#) section of the Graduate Art & Sciences Catalog, effective with the 2019-2020 catalog. The goals of the revision were: to clarify the requirements that all A&S graduate students must maintain an appropriate registration status (i.e., either [Standard](#), [Research Graduate Student](#), or [Continuous Enrollment](#) status) until all the requirements for their A&S graduate degree program have been satisfied; to add the proviso that if an A&S graduate student matriculates into a degree-granting program at another academic institution without prior approval from their advisor, their Director of Graduate Studies, and the Dean of Graduate Studies and Research, then they will be withdrawn from their graduate program in Arts & Sciences; and to add the proviso that if an international A&S graduate student transfers their visa to another U.S. institution without prior approval from their advisor, their Director of Graduate Studies, and the Dean of Graduate Studies and Research, then they will be withdrawn from their graduate program in Arts & Sciences.
- COGS members approved a revision to the [Grading and Quality Points](#) section of the Graduate Arts & Sciences Catalog that modified the definition of the grade of 'U' to extend its use as a grade for a student registered for a section of 800, Dissertation, 700, Thesis, or 710, Research Project. The grade of 'U' is to be used for any semester in which a graduate student is not making satisfactory progress on the research required for the course and for finishing one of these three major requirements specific to their A&S graduate degree.
- COGS members approved a revision to the [Grade Review Policy](#) section of the Graduate Arts & Sciences Catalog to better clarify how the grade review process is to be conducted. This review and revision to the Grade Review Policy was conducted in tandem with the administrative move to have individual sections of Dissertation, Thesis, and Research Project in place across all the A&S graduate research programs, effective with registration for Fall 2019, with the instructor of record responsible for issuing either a grade of 'G' (for satisfactory progress) or 'U' (for unsatisfactory progress).
- COGS members issued a statement to the Faculty Assembly proposing stronger wording for a policy in the [Faculty Handbook](#) on [Consensual Amorous Relationships with Graduate or Professional Students](#), voted to support a statement from the A&S Graduate Student Association to the Faculty Assembly expressing their concerns regarding the proposed wording of a new policy in the Faculty Handbook on [Consensual Amorous Relationships with Graduate or Professional Students](#), and unanimously agreed to request that both COGS members and A&S Graduate Student Association members be allowed to review and comment on any further proposals before revisions to the Faculty Handbook section on Consensual Amorous Relationships are voted on by the Faculty Assembly.

For those members of the Faculty of Arts & Sciences interested in further details regarding these discussions and decisions, upon request copies of the COGS minutes are available from the Office of Graduate Studies and Research.

### **Office of Graduate Studies and Research Administrative Highlights**

The following highlights were first announced in the 2017-2018 COGS Annual report, but went "live" on August 1, 2018. A meeting with the A&S graduate administrators in Summer 2019 confirmed what was being witnessed in the Office of Graduate Studies and Research: that A&S graduate students had a much clearer understanding of what needed to be done, made far fewer mistakes filling out forms, were much more likely to meet deadlines on time, and as a consequence were experiencing less anxiety about fulfilling final requirements for graduation.

- In Spring 2018, working with Steve Otto, A&S Director of Communications, the OGSR undertook a major review and revision of the forms used to document the progress of A&S graduate students. The new forms went live on August 1, 2018. This major undertaking was spearheaded by Sarah Glosson, Director of the A&S Graduate Center, with significant input from Wanda Carter, A&S Registrar & Administrator of Graduate Student Services. The revised forms can be found on the OGSR [Forms](#) webpage, including the new Qualtrics [Intent to Graduate](#) form designed to clarify the information required of students intending to either graduate in May or participate in the May Commencement ceremony.
- In Spring 2018, working with Kathy Larrieu, the OGSR undertook a major review and revision of the webpage and W&M Calendar events posted for students who submit either a dissertation or thesis to satisfy degree requirements. This major undertaking, which was spearheaded by Sarah Glosson and Vicki Thompson Dopp, Administrative Coordinator, led to a redesign of the webpage [Process for Submitting Your Thesis or Dissertation](#), a new [Deadlines](#) webpage that details the submission deadlines for each graduation term for the next two years, and the revision of calendar events (e.g., [Pre-Defense Deadline for Students Submitting a Thesis or Dissertation for January 2019](#)) with checklists and links back to the appropriate webpage(s). The intent is to make what is a complex process easier to navigate during a time that students find particularly stressful. The new webpages and calendar events debuted on August 1, 2018.
- The OGSR introduced a new requirement, also effective August 1, 2018, that the format for the Approval page for either a thesis or dissertation must be approved *in advance* of securing signatures from the members of the candidates' defense examination committee. This requirement has been initiated in an effort to eliminate the need to secure a second round of signatures following a successful defense examination – an occurrence that was happening far too often, and adding to the stress – when a student did not seek clearance in advance.

There was one new major administrative policy instituted for 2019-2020, and one standing obligation was fulfilled:

- Establishing individual sections of 800, Dissertation, 700, Thesis, and 710, Research Project, for each A&S faculty member engaged in advising students writing a dissertation, thesis, or research projects to satisfy degree requirements, and requiring the faculty member's advisees to register for the section for which their primary advisor is the instructor of record. With the expansion of the use of the grade 'U' – approved by COGS, as noted above – advisors can now use the grade of 'U' to flag when a student is not making satisfactory progress on their research. Such cases would be when the student is not responding to their advisor, attempts to reach out to the student have been ignored, or deadlines for the submission of drafts of chapters have been consistently missed.
- On November 14, 2018, the Dean of Graduate Studies and Research satisfied the requirement established by COGS at their October 13, 2011 meeting, that a statement be sent, annually, to the faculty members in A&S graduate programs regarding the importance of timely feedback on dissertations and theses.

## Course Approvals and Revised Degree Requirements

### AMERICAN STUDIES

The following changes were approved by COGS on May 6, 2019

William & Mary's Graduate Program in The American Studies Program has offered a flexible plan for rigorous, interdisciplinary course of graduate study of the United States and the Americas at William & Mary. The Program offers three degree tracks: the Ph.D., the M.A./Ph.D., and the M.A.. The Program also offers a joint degree-track with the School of Law that leads to the an M.A./-as well as J.D. is also offered.

The Program offers assistantships to funded M.A./Ph.D. and Ph.D. students that provide practical experiences in American Studies-related fields like such as archive and manuscript collections, editing, and museum researchwork. All Ph.D. students receive college-level teacher training and serve as teaching assistants, and can apply most have the opportunity to teach a course of their own design after passing their Ph.D. qualifying exams.

#### Program StructureDescription

Our M.A. and Ph.D. programs consist of coursework and independent research. Together with an advisor, gGraduate students have wide latitude to choose a program of study appropriate to their interests. Our special areas of strength include: Africana American Studies, Art History and Visual Culture, Critical Race Studies, Environmental Studies, Gender, Sexuality, and Women's Studies, American History and Culture, Digital Humanities, Literary Studies, Material Culture, Popular Culture, Native/Indigenous American Studies, Popular Culture, Postcolonial Studies, Ritual and Religious Studies, Southern Women's and Gender Studies, and Technology and Media Cultural Studies, and Modern America.

Our faculty hold joint appointments in Anthropology, Art and Art History, Education, English, Government, and History. They have expertise in interdisciplinary research methods, including literary analysis, visual cultural analysis, oral and archival history, community collaboration, digital humanities techniques, ethnography, archaeology, and other qualitative and quantitative research methods. Many of our faculty members are committed to research projects that engage local communities. Together with an advisor, students will design an educational program for themselves that is both individualized and coherent.

#### Admission Requirements

William & Mary uses an online application system. All applicants submit official copies of scores from the Graduate Record Examination taken within five years prior to the application submission date, are required to submit test scores, official transcripts, three letters of recommendation, a sample of writing of approximately 20 pages in length, and a short essay detailing intellectual interests and motives for pursuing a graduate degree in American Studies. American Studies requires candidates to submit three scores for a GRE test taken within five years prior to application: Verbal, Quantitative, and Analytical Writing. The Miller Analogies test is not acceptable. If English is not your first language, your Test of English as a Foreign Language (TOEFL) or International English Language Testing System (IELTS) scores are required and must be sent directly to William & Mary by the Educational Testing Service or IELTS. The TOEFL/IELTS requirement can be waived for applicants who will have received a degree from a college or university in which English is the primary language of instruction. A transcript required as evidence of successful instruction in English as a primary language.

To ensure full consideration for admission and financial assistance, applications, including all supporting materials and test scores, should be completed by December 15. Applications received after December 15 will be reviewed on the basis of available space. There are no spring admissions. Only

applicants intending to enter as full-time M.A./Ph.D. or Ph.D. students are considered for financial [funding](#) support.

### Description of Courses

Unless otherwise noted, all courses are graded using standard grading [A, B, C, D, F] scheme (See [Grading and Academic Progress](#) in the section entitled Graduate Regulations) and may not be repeated for credit (See [Repeated Courses](#) requirements in the section entitled Graduate Regulations).

- **AMST 5970 - Topics in American Studies**

#### AMST 5970 - Topics in American Studies

*Fall and Spring (3) Various Faculty. Note: Topics change each semester; see open course list.*

These seminars explore specific areas, themes, or critical issues in American Studies. *If there is no duplication of topic, may be repeated for credit.*

- 
- **AMST 661 - Introduction to American Studies**

#### AMST 661 - Introduction to American Studies

*Fall (3) Staff. ~~Thompson.~~*

This course is required of all entering graduate students in American Studies. In this reading- and writing-intensive seminar, students encounter both current and classic works of the field. They will acquaint themselves with a wide array of interdisciplinary approaches, focusing on both critical theory and practical application in research. MA-only and MA/Ph.D. students will produce the first iterations of the Master's thesis. MA/Ph.D. students will acquire interdisciplinary research skills for use in their two thesis papers, while Ph.D. students will produce the first outline of their comprehensive fields or alternatively, a dissertation topic. The course also provides training in the responsible and ethical conduct of research including discussions of fabrication, falsification, and plagiarism. *May be repeated for credit with permission from Instructor and Grad Director.*

- 
- **AMST 671 - American Studies: Profession and Practice**

**AMST 671 - American Studies: Profession and Practice**

Spring (1) Staff.

This course investigates both practical and theoretical issues relevant for American Studies in and outside the academy. The class offers students strategic approaches to areas critical for successful careers, areas such as planning long term research, writing grant applications, conference planning, and honing classroom teaching skills. As well, we explore pertinent issues that influence American Studies today: the university system, public culture, and professionalism. The course features the regular participation of guests from American Studies and outside the program. ~~The course is open only to American Studies graduate students, preferably nearing their comprehensive exams.~~

**AMST 685 - Colloquium**• **AMST 690 - Directed Research****AMST 690 - Directed Research**

Fall and Spring (3) Various Faculty. Prerequisite(s): **Permission of the Program Director is required.**

A program of extensive reading, writing and discussion in a special area of American Studies for **MA level** ~~advanced students~~. Students accepted for this course will arrange their program of study with an appropriate faculty advisor. ~~Permission of the Program Director is required.~~ *This course may be repeated for credit if there is no duplication of topic.*

• **AMST 695 - Directed Thesis Master's Research****AMST 695 - Directed Thesis Master's Research**

Fall and Spring (variable 3-9) Graded Pass/Fail. Note: *Students who are not submitting a master's thesis may not use this course to satisfy degree requirements.*

Students design and conduct research in support of their master's thesis under the direction of a faculty advisor. *This course may be repeated, but no more than 9 semester credit hours may be used to satisfy degree requirements for submitting a master's thesis.*

• **AMST 700 - Thesis**

**AMST 700 - Thesis**

*Fall and Spring (variable 1-12) Graded :Grade of either G or U converts to P upon successful completion of a defense and submission and acceptance of the thesis [700]. Note: Students who are not submitting a master's thesis may not use this course to satisfy degree requirements.*

Students finish the research for and the writing of their master's thesis under the direction of a faculty advisor. *This course may be repeated, but no more than 6 semester credit hours may be used to satisfy degree requirements for a thesis master's (only).*

- 
- **AMST 701 - Pedagogy**

**AMST 701 - Pedagogy**

*Spring (1) Staff.*

This course introduces graduate students to various pedagogical methods and issues. It also covers handling challenging situations in the classroom; the design of course syllabi; and preparing discussion topics and lectures.

- 
- **AMST 715 – Topics Seminar in American Studies**

**AMST 715 – Topics Seminar in American Studies**

*Fall and Spring (3) Various Faculty. Prerequisite(s): Open only to candidates for advanced degrees. Note: Topics change each semester; see open course list.*

These seminars explore specific areas, themes, or critical issues in American Studies. *If there is no duplication of topic, may be repeated for credit.*

- 
- **AMST 766 - Directed Studies**

**AMST 766 - Directed Studies**

*Fall and Spring (1-12) Staff Graded Pass/Fail*

No credits earned in this course may be applied to the number of credits required to satisfy graduate degree requirements. *This course may be repeated.*

- 
- **AMST 790 - Directed Research**

**AMST 790 - Directed Research**

*Fall and Spring (3) Various Faculty. Prerequisite(s):* Permission of the Program Director is required.

A program of extensive reading, writing and discussion in a special area of American Studies for **Ph.D. level the advanced students**. Students accepted for this course will arrange their program of study with an appropriate faculty advisor. ~~Permission of the Program Director is required.~~ *This course may be repeated for credit if there is no duplication of topic.*

- 
- **AMST 795 - Directed Dissertation Research**

**AMST 795 - Directed Dissertation Research**

*Fall and Spring (variable 3-12) Graded Pass/Fail. Note: Students who are not submitting a dissertation may not use this course to satisfy degree requirements.*

Students design and conduct research in support of their dissertation under the direction of a faculty advisor. *This course may be repeated, but no more than 12 semester credit hours may be used to satisfy degree requirements for a student submitting a dissertation.*

- 
- **AMST 800 - Dissertation**

**AMST 800 - Dissertation**

*Fall and Spring (variable 1-12) Staff. Graded : Grade of either G or U converts to P upon successful completion of a defense and submission and acceptance of the dissertation.*

Students finish the research for and the writing of their dissertation under the direction of a faculty advisor. Students who are not submitting a dissertation may not use this course to satisfy degree requirements. *This course may be repeated, but no more than 24 semester credit hours may be used to satisfy degree requirements for a doctorate (only).*

**ANTHROPOLOGY**

**The following changes were approved by COGS on December 3, 2018.**

**COURSE DELETION:****ANTH 625 - Field Work in Archaeology**

Summer 6 Brown, Gallivan.

The application of archaeological methods to an individual field project within the framework of a supervised archaeological field program.

**The following changes were approved by COGS on April 22, 2019.****COURSE ADDITION:****ANTH 528 - Methods in Archaeological Science**

(4) Kahn. Note: There will be 1.5 hours of lecture/class discussion and 1.5 hours of lab/discussion per week.

This survey and lab course focuses on the application of scientific methods of analysis to archaeological materials, including stone, bone, coral, charcoal, plant remains, and other organic materials. The emphasis will be on the history of archaeological science within the discipline and current advances in physical science applications in archaeology. Topics to be covered include Dating Techniques (Relative and Absolute, with an emphasis on Chronometric techniques), Geomorphology, Soils Analysis, and Environmental Reconstruction; Compositional Analysis, Materials Analysis, and Technology; Microscopy and Provenance Studies. At least half of the course will involve hands on learning with archaeological materials and datasets in the lab.

**BIOLOGY****The following changes were approved by COGS on October 8, 2018.****COURSE ADDITION:****BIOL 560 – Stem Cell Research**

Spring. (3) Wawersik.

An in-depth exploration of the field of stem cell research ranging from basic stem cell behavior and regulation, to stem cell therapies and cancer, as well as ethics and government oversight. Topics are based around readings of primary literature, with emphases placed on evaluating the validity of data as well as scientific communication through written and oral presentation. Three class hours. Cross-listed with BIOL 460

**The following changes were approved by COGS on October 29, 2018.****COURSE DELETIONS:**

BIOL 511 - Animal Behavior Laboratory  
BIOL 531 - Physiological Ecology of Plants  
BIOL 566 - Directed Studies  
BIOL 610 - Topics in Animal Behavior  
BIOL 617 - Population and Community Ecology  
BIOL 627 - Wetland Ecosystems  
BIOL 636 - Topics in Advanced Cell Biology  
BIOL 637 - Topics in Immunology  
BIOL 639 - Gene Regulation  
BIOL 646 - Nuclear Structure and Gene Activity  
BIOL 649 - Sexual Selection  
BIOL 650 - Microbial Pathogenesis  
BIOL 659 - Topics in Evolutionary Genetics  
BIOL 660 - Topics in Functional Ecology  
BIOL 662 - Concepts of Community Ecology  
BIOL 664 - Topics in Plant Conservation  
BIOL 665 - Topics in Endocrinology  
BIOL 667 - Mechanisms of Bacterial Symbiosis  
BIOL 668 - Experimental Endocrinology  
BIOL 673 - Topics in Developmental Biology

**The following changes were approved by COGS on May 6, 2019.****COURSE ADDITION:****BIOL 602 - Research Design and Methods**

Fall (1-3) Staff.

This three module course complements BIOL 601 by focusing on techniques and skills that will facilitate successful thesis research. All students take the initial half-semester module which focuses on best practices for statistically robust experimental design (replication, sample size, data independence). The other two modules are offered during the second half of the semester. The quantitative module covers data exploration and data management, and introduces students to statistical analyses in Research. The molecular module covers principles and pitfalls of cell and molecular techniques that are directly relevant to the students enrolled.

### **COMPUTER SCIENCE**

**The following changes were approved by COGS on October 8, 2018.**

COGS unanimously approved the Computer Science Department's petition to remove from the Graduate Arts & Sciences Catalog the subsection "Residence Requirement" found in the program description for the department's doctoral program in light of the change in residency requirement approved by COGS in Spring 2018.

**The following changes were approved by COGS on February 11, 2019.**

#### **COURSE ADDITION:**

##### **CSCI 564 - Applied Cybersecurity**

Fall or Spring (3) Prerequisite(s): Unix/Linux command line; Basic networking; Languages: C, Javascript, PHP, SQL

This is a systems-level security course involving hands-on labs, lecture, student presentations and a term project. Students will learn about secure systems design, vulnerabilities and how to defend against attacks to network, hardware and software components covering security issues and defenses from IoT to the cloud. Lab exercises will teach students how vulnerabilities work and how to document and mitigate them. Cross-listed with CSCI 464

#### **COURSE REQUIREMENT ADDITION:**

##### **Computer Science, Specialization in Computational Operations Research, M.S.**

The following Mathematics courses may count towards the 32 credit hours and do not require the graduate credit permission form for a course taken outside of their program of study.

**MATH 524, MATH 551, and/or MATH 552**

Any Computer Science (CSCI) course not designated as a Computational Operations Research course (last digit in the course number is an 8), may not be used to satisfy degree requirements without prior written approval of the Director of Graduate Studies for Computational Operations Research.

**The following changes were approved by COGS on April 1, 2019.**

COGS unanimously approved the proposal from the Department of Computer Science for a new Master of Computer Science (MCS) degree program.

### **A proposal for a professional Master of Computer Science program**

March 27, 2019  
(revised)

This document lays out a proposal for a professional Master of Computer Science (MCS) program in the Department of Computer Science at William & Mary.<sup>1</sup> This proposal is made in response to the Commonwealth's call for vastly increased production of degrees in computer science.

As part of the state's commitment to Amazon and its recently announced Northern Virginia "HQ 2", the Commonwealth seeks to *double* the number of degrees in computer science and computer engineering produced in Virginia.<sup>2</sup> The recent legislative session produced the Tech Talent Investment Program (HB 2490), which sets the goal of producing an additional 25,000 BS and MS degrees in computer science and computer engineering between now and 2039.<sup>3</sup> This proposal assumes a concomitant expansion of our undergraduate program.

In addition to responding to a priority of the Commonwealth, the proposed MCS program will also increase the options available to our students. Our existing MS program is more oriented towards research than is appropriate for a professional master's program. The professional MCS will attract a different type of student than our MS and broaden the appeal of our graduate program.

The main selling points of the program would be:

- a relatively small program with limited cohort sizes (at most 30–40);<sup>4</sup>
- a high-quality W&M education;
- a curriculum tailored towards professional needs with a solid academic foundation;
- qualification for Curricular Practical Training (CPT); and
- qualification for Optional Practical Training (OPT).<sup>5</sup>

One particular group of students we would target would be students with some computer experience but who have little or no formal training in computer science. We already see quite a few such applicants in the pool for our existing MS program. For example, this year's MS applicant pool includes applicants with degrees in economics, physics, information technology, engineering, cognitive science, software engineering, and Spanish. The field of data science may become another source of applicants. We have had success attracting our own undergraduate CS minors to our fifth-year MS program (particularly students who discover CS late in their undergraduate careers) and the MCS would provide another appealing option. William & Mary's reputation for teaching would make the MCS program attractive to those seeking to make a transition into computer science.

## The program

The MCS program would consist of 32 credits, 12 credits at the 500 level and 20 at the 600 level. MCS students would not be eligible for any stipend or tuition support.

The prerequisites for the program are CSCI 141, 241, 243, 301, 303, or equivalent professional experience. These courses roughly comprise an undergraduate CS minor at W&M. The equivalence of professional experience for these prerequisite courses will be determined by the graduate admissions committee. These prerequisites have been chosen so that students with little formal background in computer science can pick up the necessary prerequisites during the summer (these courses are currently offered as summer courses or soon will be). Students that need to take summer courses should

expect to pay summer tuition for these courses.

To ensure that students have a solid foundation to successfully complete the MCS program, the MCS program would require students to take four 500 level courses, These classes include a number of courses cross-listed as undergraduate courses (with additional requirements as 5xx courses). Examples of such courses are:

- CSCI 515: Systems Programming,
- CSCI 524: Computer Architecture, CSCI 526: Simulation,
- CSCI 527: Computer Graphics,
- CSCI 534: Network and Systems Design, CSCI 542: Compiler Construction,
- CSCI 554: Computer and Network Security, CSCI 564: Applied Cybersecurity.

Students who demonstrate a strong prior background in computer science (by attaining a 3.7 average GPA on three 5xx courses), can elect to substitute one 5xx course with an independent project (a new MCS-only course, CSCI 610).

The degree would also require six additional courses at the 600 level. Four of these courses will be specially geared towards the MCS degree and have a practical orientation. These four courses will be exclusive to the MCS degree and cannot be taken by doctoral students. These four new courses are:<sup>6</sup>

- CSCI 603 (Applied Algorithms, 3 credits): a course similar to our extant graduate algorithms course, but with an emphasis on implementation and applications rather than theoretical analysis.
- CSCI 604 (Applied Software Engineering, 3 credits): modern software development methods and experience working in groups.
- CSCI 606 (Practical Machine Learning + lab, 4 credits): application of machine learning techniques to real-world problems.
- CSCI 609 (Programming Modern Architectures + lab, 4 credits): programming modern and emerging hardware architectures (e.g., multi-core CPUs, GPGPUs).

Two additional 600 level courses would be chosen from the existing set of 6xx offerings as electives. This will offer our MCS students the opportunity to study the latest developments in focused areas of computer science.

We imagine most students would take three or four semesters to complete the MCS. Tables 1–3 lay out representative paths through the program. Table 1 shows how a well-prepared and ambitious student could finish the program in two semesters.

semester	courses		
	5xx	60x	6xx
1	3	2	
2	1	2	2

Table 1: A two-semester track through the MCS program.

Table 2 shows how students might complete the program in three semesters. We expect this to be the most common situation.

semester	courses		
	5xx	60x	6xx
1	2	1	
2	1	2	
3	1	1	2

Table 2: A three-semester track through the MCS program.

Finally, Table 3 shows a four-semester track through the program. This course of study would be pursued by students who need to make up gaps in their background in their first semester. The 3xx classes would be taken pass/fail in addition to those required for the MCS program.

semester	courses			
	3xx	5xx	60x	6xx
1	2	1		
2		2	1	
3		1	2	
4			1	2

Table 3: A four-semester track through the MCS program.

The professional MCS degree is designed as a terminal degree. Students who desire to enter the doctoral program will need to take two additional 780 courses, and four additional 6xx courses. Consequently, students electing to continue in the PhD program will need to complete one additional year of graduate courses (and attain a 3.7 GPA on at least five of their 6xx and 780 courses, excluding 60x and 610).

## Resource requirements

This is an on-going conversation with the administration. Virginia's new Tech Talent Investment Fund is the logical place to seek funding for the faculty needed for the MCS program. The proposed MCS program would require at least, five additional TE faculty. These resource requirements are

intertwined with those needed for the anticipated expansion of the undergraduate program in response to the Commonwealth's call for increased production of computer science and computer engineering degrees.

## Assessment

The MCS program will begin with small cohorts of students. In the long-term, we foresee a program with entering cohorts in the range 30–40. The success of the program will be measured in terms of

1. the number of students in the program,
2. the number of students successfully completing the program,
3. positive employment results for the MCS graduates.

In case the professional MCS program does not meet these goals, the teaching power will be re-committed to the greatly expanded undergraduate program that the Commonwealth envisions.

<sup>1</sup>We have borrowed the naming convention used at the University of Virginia, which distinguishes between a professional MCS, a research MS, and a PhD in computer science.

<sup>2</sup>See the Governor's website, <https://www.governor.virginia.gov/amazon/>, "About the Proposal" tab, question 2.

<sup>3</sup>See the proposed changes to the [Code of Virginia](#), §§ 23.1-1239 – 23.1-1243.

<sup>4</sup>In contrast, Virginia Tech plans to graduate 750 Masters students per year at their Northern Virginia campus.

<sup>5</sup>The CPT program allows non-citizens to work while enrolled as students. The OPT program allows non-citizens to work after graduation. In computer science, OPT can last up to 36 months.

<sup>6</sup>The titles of the new courses are tentative and we may add other options later.

## PHYSICS

**The following changes were approved by COGS on December 3, 2018.**

Physics petitions COGS to approve deleting the text from the physics catalog on residency requirements from both the [Physics, M.S.](#) and [Physics, Ph.D.](#) pages:

~~Residence Requirement~~

~~Candidates are required to remain in residence for at least two semesters.~~

## GIS POST-BACCALAUREATE CERTIFICATE

**The following changes were approved by COGS on April 1, 2019.**

### GIS Certificate

The Certificate in Geographic Information Science provides students with a post-baccalaureate level academic credential in geospatial technologies including geographic information systems, remote sensing, global positioning systems, and more. This program is designed for individuals who wish to enhance current knowledge and skills they may be using professionally, or want to pursue a fuller understanding of professional practice applying geospatial technologies to increase their competitiveness, or may not yet be ready to commit to a full graduate program.

The Certificate can be completed in one year full-time, but may be completed on a full-time or part-time basis. This certificate is not available to current William & Mary undergraduate students. The Certificate in Geographic Information Science program requires a minimum of 15 credit hours of specified coursework.

Individuals seeking admission into the GIS Certificate Program must have completed a Bachelor's degree prior to their first semester enrolled as a Certificate program student. The Certificate program is administered through the Center for Geospatial Analysis, the intellectual nexus for geospatial education and research at William & Mary.

The requirements and restrictions unique to the GIS Certificate are spelled out here; otherwise, GIS Certificate students have access to the services and are governed by the policies spelled out in the Arts & Sciences Section of this Catalog.

## Admission

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The Post-Baccalaureate GIS Certificate Program has rolling admissions. The Center for Geospatial Analysis welcomes applications for admissions in the following semester with decision deadlines of October 1 for Spring course enrollments, April 1 for summer course enrollments, and July 1 for fall course enrollments. You will be notified of the decision about one month after we have received your application.

Individuals who wish to apply to the program should submit the following materials to the GIS Certificate Coordinator:

**Application.** A completed application for the GIS Certificate Program.

**Transcripts.** Official transcripts from all colleges or universities you have attended, with date of actual or expected degree(s) clearly indicated. This should be sent to the GIS Certificate Coordinator at the address found in the application.

**Application to Determine Physical Residency and In-State Tuition.** All applicants must complete and submit the Application to Determine Physical Residency and In-State Tuition form.

**Letter of Recommendation.** A minimum of one letter of recommendation from an employer or professor. This must be sent directly to the GIS Certificate Coordinator at the address found in the application.

**A Resume or CV (curriculum vitae) and Personal Statement.** A resume or CV must be provided stating relevant work experience. If the applicant has no geospatial work experience, then the applicant must include a personal statement, not more than one single-spaced page, explaining their interest in, or prior experience with GIS and other geospatial technologies, and how this certificate program will meet their personal or professional goals.

**Application Fee.** See application for submission address and fee amount.

International applicants needing F-1 student visa sponsorship will not be enrolled in the program until the university has received approval from the Department of Homeland Security for inclusion of the program on its I-17.

Applicants whose first language is not English must be able to demonstrate English language proficiency through one of the following ways: A test of English as a Foreign Language (TOEFL) minimum composite score of 100 for the Internet Based Test (IBT) or 600 for the paper-based score; or an International English Language Testing System (IELTS) score minimum of 6.5 on the academic exam.

In cases where a test score is within 5% of the above scores, a student may be admitted pending a successful oral interview with the GIS Certificate Coordinator.

Successful completion of undergraduate or graduate study in a school where English is the language of instruction.

## Program of Study

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The courses for the GIS Certificate Program are as follows (all courses are 3 credit hours, unless otherwise noted) :

**Fundamentals and Foundations of Geospatial Technology**

GIS 501: Fundamentals of Geographic Information Science and Analysis (required)

GIS 505: Geovisualization & Cartographic Design Techniques (required)

GIS 510: Introduction to Remote Sensed Imagery and Analysis (required)

**Advanced Geospatial Topics/Discipline Uses of Geospatial Technology**

GIS 520: Advanced GIS Analysis and Programming (required)

GIS 550: Independent Research in GIS (1-3 credits variable) (optional)

GIS 590: Topics: Geospatial Technologies GIS (1-4 credits) (optional)

Courses of interest related to the professional work or career interest of the student at the 400/500-level in departments across campus, may be submitted for review with the GIS Certificate Coordinator. For example, a wildlife biologist enrolled in the Certificate program may wish to take a 400-level course in Biology such as Ornithology. This request would be reviewed for its relevancy to the work of the individual and the applicability to the Certificate program.

Students who wish to substitute a different 400/500 level GIS course for one of those listed below must consult with the GIS Certificate Coordinator in advance; otherwise the course will not count towards the Certificate. No transfer credit is allowed for courses taken outside of William & Mary.

Students who have taken INTR 204/GIS 201 as an undergraduate at W&M cannot transfer those hours into the Certificate but may be able to place out of the GIS 501 through a skills and knowledge demonstration and substitute another course to meet the credit hour requirement. Students in this situation should consult with the GIS Certificate Coordinator.

**Enrollment Expectations**

GIS Certificate Students are expected to enroll in at least 1 course per regular semester; otherwise, they will not be considered as making satisfactory progress in their certificate program.

**Continuance Requirement**

To continue as a student in the GIS certificate program, you will need to meet these minimal requirements:

<i>Cumulative Course Credits</i>	<i>Cumulative G.P.A.</i>
1 - 6	2.50
7 - 12	2.75
13 - 18	3.00

**Certificate Requirements:**

Earn a minimum of 15 credit hours of required coursework; and achieve a cumulative grade point average of 3.0 on a 4.0 scale in all courses taken for certificate credit at William & Mary after admission to the certificate program.

## Tuition and Fees

This post-baccalaureate GIS certificate program charges students at a tuition rate based on enrollment in this program. The Tuition and Fees do not include room & board, books, travel, and incidentals. The per-credit hour rate for the GIS Certificate applies to all students who enroll in the GIS Certificate program, regardless of residency status. Tuition and fees are due and payable by the due date as established by the Bursar's Office. The cost of the program will be based on number of certificate courses taken per semester and is calculated as a fee. After the Add/Drop period tuition and fees will be non-refundable.

The 2019-2020 per-credit hour rate for the GIS Certificate is \$560.00. A majority of the courses will be three credit hours and the program may be completed with a minimum of 15 -credit hours.

Financial Aid is not available for GIS Certificate Program students.

There are a number of William & Mary services available for students enrolling in the GIS Certificate program:

Swem Library

Dean of Students Office

Student Accessibility Services

Parking & Transportation (requires a purchase of permit)

Writing Resources Center

Cohen Career Center

There are William & Mary services not covered in the GIS Certificate Program fees if you are not also a full-time student (paying full tuition and fees); these include:

Free admission to Athletic Events; you are welcome to attend but there will be a minimal cost.

Campus Recreation Center; certificate students can purchase a membership for regular access.

University Sponsored Events; many events are open to the public or may be available at a minimal cost.

Student clubs and organizations.

## Courses

[GIS 501 - Fundamentals of GIS \(3\)](#)

[GIS 505 - Geovisualization & Cartographic Design Techniques \(3\)](#)

[GIS 510 - Introduction to Remote Sensed Imagery and Analysis \(3\)](#)

[GIS 520 - Advanced GIS Analysis and Programming \(3\)](#)

[GIS 550 - Independent Research in GIS \(1-3\)](#)

[GIS 590 - Topics: Geospatial Technologies GIS \(1-4\)](#)

### ADDITIONAL GRADUATE COURSES

The following changes were approved by COGS on September 10, 2018.

#### **COURSE DELETIONS:**

**GEOL 565 - Hydrology**

Spring. Offered in alternate years. (4) Hancock. Prerequisite(s): GEOL 101 or GEOL 110 or GEOL 150, and MATH 111, or permission of instructor.

Quantitative investigation of the major components of the hydrologic cycle and their interactions, including atmospheric water, surface water, and groundwater. Graduate students will be required to research topics or questions as given by the instructor and make presentations to the class. Field trips required. Three class hours, three laboratory hours. Cross-listed with (GEOL 315)

### **MATH 509 - Probability and Statistics for Teachers**

Summer 3 Prerequisite(s): Consent of instructor.

An introduction to probability, descriptive statistics, and data analysis; exploration of randomness, data representation and modeling. Descriptive statistics will include measures of central tendency, dispersion, distributions, and regression. Methods of reliable data gathering. First approaches to statistical inference. A basic course for preparation of K-8 Mathematics teachers.

### **MATH 516 - Geometry and Measurement for Teachers**

Summer 3 Prerequisite(s): Consent of instructor.

Explorations of the foundations of informal measurement and geometry in one, two, and three dimensions. The van Hiele model for geometric learning is used as a framework for how children build their understanding of length, area, volume, angles, and geometric relationships. Visualization, spatial reasoning, and geometric modeling are stressed. As appropriate, transformational geometry, congruence, similarity, and geometric constructions will be discussed. A basic course for preparation of K-8 Mathematics teachers.

### **MATH 536 - Functions and Algebra for Teachers**

Summer 3 Prerequisite(s): Consent of instructor.

Examination of representation and analysis of mathematical situations and structures using generalization and algebraic symbols and reasoning. Attention will be given to the transition from arithmetic to algebra, working with quantitative change, and the description of a prediction of change. A basic course for preparation of K-8 Mathematics teachers.

## **GRADUATE REGULATIONS**

The following changes were approved by COGS on October 8, 2018.

### **COURSE DESCRIPTION CHANGES:**

#### **700 - Thesis**

Fall and Spring (variable 1-12) Graded :Grade of either G or U converts to P upon successful completion of a defense and submission and acceptance of the thesis [700]. Note: Students who are not submitting a master's thesis may not use this course to satisfy degree requirements.

Students finish the research for and the writing of their master's thesis under the direction of a faculty advisor. This course may be repeated, but no more than 6 semester credit hours may be used to satisfy degree requirements for a ~~thesis~~-master's (only).

#### **800 - Dissertation**

Fall and Spring (variable 1-12) Staff. Graded : Grade of either G or U converts to P upon successful completion of a defense and submission and acceptance of the dissertation.

Students finish the research for and the writing of their dissertation under the direction of a faculty advisor. ~~Students who are not submitting a dissertation may not use this course to satisfy degree~~

**requirements.** This course may be repeated, but no more than 24 semester credit hours may be used to satisfy degree requirements for a doctorate (only).

**The following changes were approved by COGS on February 25, 2019.**

### **A&S: Grading and Academic Progress**

#### Grade Review Policy

A student who believes that a final course grade has been unfairly assigned may request a review of the grade within the first six weeks of the next regular semester following that in which the grade was assigned (see **Grade Review Policy in Case of Withdrawal** below in the event that the student is withdrawing). The expectation is that this review will be completed by the end of that semester in which it was requested.

The student first must confer with the instructor of the course to discuss the grade. The student may wish to ask about such matters as the particular strengths and weaknesses of his or her course work, the general grade scale used by the instructor, and the relative ranking of the student's work in the class as a whole.

If the issue remains unresolved the student may, within the first six weeks of the next academic semester for which the grade was received, present a written statement requesting a further review and giving a full explanation of the reasons for the request. The written statement must be sent to the instructor, the Director of Graduate Studies for the student's graduate program, the chair or program director of the graduate program in which the course was taught, and the Dean of Graduate Studies and Research. If the course is cross-listed in two or more graduate programs, the chair of the instructor's home department must be the one to receive the written statement. If the grade in question was given by the department chair, the program director, or the Director of Graduate Studies, then the student will ask the Dean of Graduate Studies and Research to appoint another faculty member in the graduate program to oversee the review process. Unless the chair, program director, Director of Graduate Studies, or faculty member appointed by the Dean of Graduate Studies and Research (in cases where the grade in question was given by the chair, the program director, or the Director of Graduate Studies) decides the student's case is wholly without merit, he or she must discuss the matter with the instructor and seek to resolve the issue. This part of the review process should be completed within three weeks of receipt of the written statement by the student.

If the student is not satisfied with the outcome of the above procedure, he or she may appeal to the Dean of Graduate Studies and Research. Unless the Dean of Graduate Studies and Research decides the student's case is wholly without merit, he or she will ask the chair, the program director, the Director of Graduate Studies, or the faculty member appointed by the Dean of Graduate Studies and Research (in cases where the grade in question was given by the chair, the program director, or the Director of Graduate Studies) to appoint a committee of at least three faculty members in the graduate program who then will review all relevant and available materials supplied by the student, the instructor, or other individuals (when relevant). Both the student and the instructor have the right to meet with the committee.

After reviewing the matter, the committee must decide if the grade should be changed and, if so, what the proper grade should be. It must inform the instructor and the student of its conclusions in

writing and, if it concludes that the grade should be changed, recommend that the instructor change the grade accordingly.

If the instructor refuses to accept the committee's recommendation, and the committee believes that the faculty member is acting inappropriately in assigning the grade, then the committee may appeal to the Dean of Graduate Studies and Research. The decision by the Dean of Graduate Studies and Research to accept or reject the committee's recommendation will be final.

## **A&S: Registration**

### Registration Requirements

All full-time and part-time degree-seeking graduate students in Arts & Sciences must maintain an appropriate registration status (i.e., Standard, Research Graduate Student, or Continuous Enrollment status) during all fall and spring semesters until all the requirements for the Arts & Sciences graduate degree for which they were admitted have been satisfied.

Unless granted a leave of absence or a medical withdrawal, a graduate student who fails to register each semester will have discontinued enrollment, and will be withdrawn from their graduate program in Arts & Sciences by the Dean of Graduate Studies and Research. If the student wishes to resume progress toward the degree, it will be necessary to reapply for admission to the Arts & Sciences graduate degree program and meet any changed or additional degree requirements established in the interim. In addition, the student will owe Continuous Enrollment fees for the term(s) for which they were not enrolled.

Due to the high cost of health care in the U.S. and the importance of adequate health insurance coverage, William & Mary requires all full-time graduate students to be enrolled in the university-endorsed Student Insurance Plan. The cost will be billed to your student account in two installments (fall and spring semester) unless proof of other adequate health insurance coverage is furnished. Students who already have health insurance for the entire year/term must submit a Waiver Request by the posted deadline each academic year, and the Waiver Request must be approved to avoid being enrolled in the Student Insurance Plan. The services of the Student Health Center, the Counseling Center, and the Campus Recreation Center are not available to part-time students unless the required additional fees (charged per semester) are paid.

If an Arts & Sciences graduate student enrolls in a degree-granting program at another academic institution without prior approval from their advisor, their Director of Graduate Studies, and the Dean of Graduate Studies and Research, then they will be withdrawn from their graduate program in Arts & Sciences by the Dean of Graduate Studies and Research.

If an international Arts & Sciences graduate student transfers their student visa to another U.S. institution without prior approval from their advisor, their Director of Graduate Studies, and the Dean of Graduate Studies and Research, then they will be withdrawn from their graduate program in Arts & Sciences by the Dean of Graduate Studies and Research.

### Standard Registration Status

All graduate students registered for a course in their graduate program numbered 500 or above will receive graduate degree credit upon satisfactory completion of the course.

Graduate students are allowed to register for undergraduate courses in Arts & Sciences, which are numbered below 500, provided they submit the appropriate form with the approvals of the instructor and their Director of Graduate Studies, prior to registration. Enrollment is subject to review and approval by the Dean of Graduate Studies and Research. No credit towards a graduate degree is allowed for a course numbered below 500.

No credit towards a graduate degree is allowed for a course numbered above 499 in which a student receives a grade below C (grade point = 2.0); however, some graduate programs hold their students to higher standards.

With the approval of the Committee on Graduate Studies, 500-level graduate courses may be cross-listed with 400-level undergraduate courses. There are higher expectations and additional requirements for students taking the 500-level version of the course. Under no circumstances may any student receive credit for both the 400-level and 500-level versions of the same cross-listed course.

The expectation is that full-time graduate students in Arts & Sciences will register for a minimum of 12 graduate credit hours, but no more than 15 graduate credit hours. Students receiving financial aid (e.g., a Graduate Assistantship or a fellowship) must register for a minimum of 9 credit hours per semester to maintain their eligibility for financial aid.

### Research Graduate Student Status

Upon the recommendation of a student's graduate program and approval by the Dean of Graduate Studies and Research, a student's eligibility for Research Graduate Student status can be established if the following conditions are met:

- The student must have successfully completed all course work, excluding the required semester credit hours of 700 (Thesis) or 800 (Dissertation), necessary to satisfy the requirements for their degree and their degree program, while sustaining a minimum cumulative grade point average of 3.0 on a 4.0 scale.
- The student must not be employed significantly in any academic activity other than research and writing in fulfillment of degree requirements. A student holding a Graduate or Research Assistantship remains obligated to perform the duties assigned to them by their graduate program or research advisor.
- The student must be present on campus or engaged in field work approved by their advisor and their Director of Graduate Studies.

While classified as a Research Graduate Student, a student must register for 12 credit hours per semester, or 6 credit hours in the summer, of either the Directed Studies, Thesis, or Dissertation course for which payment of the part time rate of one credit hour is required. A Research Graduate Student may take courses other than 666/766 (Directed Studies), 700 (Thesis), or 800 (Dissertation), but only if payment for additional tuition has been made. If a student takes any additional courses while classified as a Research Graduate Student, the additional courses taken while classified as a Research Graduate Student cannot be used to fulfill degree requirements.

A Research Graduate Student is not eligible for services that are paid for by fees (e.g., the Student Health Center, the Counseling Center, and the Campus Recreation Center) unless the required additional fees (charged per semester) are paid.

### Continuous Enrollment Status

Upon the recommendation of a student's graduate program and approval by the Dean of Graduate Studies and Research, a student can be considered for Continuous Enrollment status if the following conditions are met:

- The student must have successfully completed all required course work, including the required semester credit hours of 700 (Thesis) or 800 (Dissertation), necessary to satisfy the requirements for their degree and their degree program, while sustaining a minimum cumulative graduate point average of 3.0 on a 4.0 scale. All that remains to satisfy degree requirements is the completion and successful defense of either a dissertation or a thesis. A student is not eligible for Continuous Enrollment status if additional credit hours are needed to satisfy degree requirements.
- The student must satisfy the guidelines specific to their graduate program regarding eligibility for Continuous Enrollment status.

To secure Continuous Enrollment status, the student must request permission from their program to enroll in GRAD 999, and must pay the Continuous Enrollment Fee. A student in Continuous Enrollment status may not register for any other credit-bearing courses at William & Mary.

Continuous Enrollment status allows students to maintain active graduate student status with William & Mary and to access some William & Mary resources, including the libraries, email, and laboratories. A student with Continuous Enrollment status may obtain access to the Counseling Center and the Campus Recreation Center upon payment of the appropriate fees. The services of the Student Health Center are not available to students with Continuous Enrollment status.

Continuous Enrollment status does not apply to students who have been officially granted an approved leave of absence or a medical withdrawal.

If the student's deadline for degree completion has passed, registration for Continuous Enrollment is not sufficient to maintain good academic standing; the student must also request an extension (see section on [Time Limits for Degrees and Extensions](#)).

The following students are not eligible for Continuous Enrollment status and must register either as a regularly enrolled degree-seeking student or as a full-time Research Graduate Student:

- Students employed in a graduate student appointment (i.e., Graduate Assistant, Research Assistant, Teaching Assistant, Teaching Fellow, etc.).
- In general, international students on student visas. Questions about eligibility for Continuous Enrollment status must be directed to Office of International Students, Scholars, and Programs.
- Students who need to maintain a full-time registration status for the purpose of deferring the repayment of student loans.
- Students who, upon payment of the appropriate premium or fee, wish to be eligible either for the William & Mary Student Health Insurance Plan or to use the Student Health Center.
- Students who wish to be eligible for either hourly student employment at William & Mary or for any form of student financial aid that requires full-time registration status.

### Repeated Courses

Certain courses are specifically designated in the Graduate Arts & Sciences catalog as courses that may be repeated for credit. With the exception of these specially designated courses, no course for graduate credit in which a graduate student receives a grade of G, I, or P, or a grade between A and B-, may be repeated except as an audit. A student who receives a grade of C+ or lower in a course may repeat that course one time; see [Grading and Repeated Courses](#). Students are responsible for ensuring they do not register more than once for a course that may not be repeated.

### Auditing

Any graduate student may audit a graduate or undergraduate course with permission of the instructor and Director of Graduate Studies for the student's graduate program. The Arts & Sciences graduate Audit Form must be completed and submitted to the Office of Graduate Studies and Research prior to the end of the add/drop period as defined in the [A&S Academic Calendar](#).

Before beginning the audit, the student and the instructor must agree on what is required for the audit to be successful. The audited course will be listed on the student's official William & Mary transcript with a grade of either 'O' for a successful audit or 'U' for an unsuccessful audit.

### Language Requirements

In graduate degree programs for which there are language requirements, the graduate program in which a student is enrolled will determine the method(s) by which a student satisfies the language requirements.

For students who wish instruction in a language, the Departments of Classical Studies and Modern Languages and Literature recommend courses numbered 101-102 for those with fewer than two high school units in a language, 103-104 or 201-202 for those with fewer than three. Successful completion of a course at the 202 level, or the equivalent, usually is sufficient to pass examinations for reading knowledge.

### Registration for Courses Outside of the Program

A graduate student in Arts & Sciences may be allowed to register for graduate credit for graduate courses taken in another graduate program in Arts & Sciences. If the graduate course taken outside of the student's graduate program is listed in the Graduate Arts & Sciences Catalog for the year in which the student matriculated into the graduate program as one for which graduate degree credit earned can be used to satisfy the student's degree requirements, then no advance permission is required. Otherwise, an Arts & Sciences graduate student is allowed to register for graduate courses in other graduate programs in Arts & Sciences provided the student submits, prior to the end of the add/drop period, the Permission for Graduate Course for Graduate Credit form with the approvals of the instructor and the student's Director of Graduate Studies. Enrollment is subject to review and approval by the Dean of Graduate Studies and Research.

A graduate student in Arts & Sciences may be allowed to register for graduate credit for graduate courses taken in the School of Education, the School of Marine Science, the School of Business, or the School of Law, provided the student submits, prior to the end of the add/drop period, the Permission for Graduate Course for Graduate Credit form with the approvals of the instructor, the student's Director of Graduate Studies, and the designated official for the William & Mary academic unit in which the course is being taken. Enrollment is subject to review and approval by the Dean of Graduate Studies and Research.

A graduate student in Arts & Sciences may be allowed to register for undergraduate courses taken in another program in Arts & Sciences, provided the student submits, prior to the end of the add/drop period, the Permission for Undergraduate Course form with the approval of the instructor and the student's Director of Graduate Studies. Enrollment is subject to review and approval by the Dean of Graduate Studies and Research. Credit earned for an undergraduate course (i.e., a course numbered below 500) may not be used to satisfy graduate degree requirements, but will be listed on the student's official William & Mary transcript with the grade assigned by the instructor for the course.

### Changes in Registration

The last day for Arts & Sciences graduate students to make changes to their course registration will be the last day of the add/drop period as defined in the **A&S Academic Calendar**. Changes to a student's course registration after the last day of the add/drop period must be initiated through the Director of Graduate Studies for the student's graduate program using an Add/Drop/Withdrawal form and requires the approval of the instructors involved, the student's Director of Graduate Studies, and the Dean of Graduate Studies and Research.

If an Arts & Sciences graduate student drops a course or courses before the end of the ninth week of classes but remains registered for other academic work, the course or courses dropped will be expunged from the student's record. If the student withdraws from a course or courses after the end of the ninth week of classes through the last day of classes, but remains registered for other academic work, the grade 'W' or 'F' will be awarded by the instructor in the course depending upon whether or not the student was passing the course at the time of the withdrawal.

If an Arts & Sciences graduate student withdraws from William & Mary before the end of the ninth week of classes, a grade of 'W' will appear on the record for each course in progress at the time of withdrawal. After the end of the ninth week of classes through the last day of classes, students who withdraw from William & Mary will be awarded a 'W' or 'F' by the faculty member teaching each course in progress at the time of withdrawal. Students may not withdraw from a course after the last day of classes.

If for medical reasons an Arts & Science graduate student does not complete a course, "WM" will be entered on their transcript upon approval of the Dean of Students and the Medical Review Committee; see [Leaves of Absence/Withdrawals](#).

See [A&S Financial Obligations](#) for regulations governing refunds of tuition and fees.

### **Grading and Quality Points**

#### **Added:**

U indicates unsatisfactory performance for the term in either 700, Thesis, 710, Research Project, or 800, Dissertation. U also is used to indicate an unsuccessful audit. A grade of U carries no credit towards the graduate degree.

## **Graduate Center Annual Report 2018**

### **Staff and Facilities**

The Graduate Center organizes and sponsors a variety of activities, events, and zero-credit courses for W&M graduate and professional students. Sarah Glosson, Director of the Arts & Sciences Graduate Center, administers the Center, which resides in Stetson House at 232 Jamestown Road.

In Fall 2018, Spring 2019 and Summer 2019, five W&M faculty and staff members taught fourteen Graduate Center courses. The Graduate Center continued to work collaboratively with other W&M offices and schools to expand the scope of activities and events offered in order to enhance the participation of all A&S graduate students, as well as W&M undergraduate students when appropriate.

### **Graduate Center Highlights**

Appendix I provides a listing and summary of participation in selected Graduate Center activities, events, and courses since Fall 2012.

- **GRAD Courses:** Total course enrollment for the calendar year was 101. The students enrolled were a mix of domestic and international graduate students from A&S, VIMS, and Education. The director of the Graduate Center continued a process of reviewing and updating the GRAD course curriculum to better address current needs of A&S graduate students. The revised English language courses have proved to be successful. Increasingly, in order to better fit students' schedules and research demands, GRAD courses are offered as one-week "boot camps" rather than as 10-week courses.
- **3MT:** In October 2018, the Graduate Center offered the third Three Minute Thesis Competition hosted by Arts & Sciences. The OGSR and GSAB sponsored \$1,000 in prizes. Eight students competed before an audience of 65 and a panel of four judges. Raffle prizes for the audience and other supplies for the event were sponsored by the GSAB. The event was held in ISC 1221.
- **Graduate Writing Resources Center:** The Graduate Center partners with the Writing Resources Center to offer graduate-level writing consultation at the Graduate Writing Resources Center (GWRC). In 2018-19, 5 graduate students from A&S and one in Education were hired and trained in peer writing consultation at the graduate level. The GWRC offered a total of 108 consultations in the fall and 105 in the spring. Write-Ins, a GWRC sponsored opportunity for lightly facilitated quiet writing time, continue to be popular with 44 participants in 9 sessions (Saturdays) in the fall and 34 participants at 8 sessions in the spring.
- **Professional Development Workshops:** In partnership with individual graduate programs, W&M Libraries, the Cohen Career Center, the Wellness Center, and the Reves Center, the Graduate Center offered/supported ten workshops and panels on a variety of topics including Academic Writing, "Invisible Careers" in Humanities, The Elevator Pitch, Scholarly Publishing and Author's Rights, Applying for Fellowships, and more. Attendance across all workshops totaled roughly 118 attendees.
- **GSAB Mentoring Program:** The goal of this program is to foster one-on-one mentorships intended to help students build professional skills. In Spring 2018 we piloted this new program with volunteer mentors from the GSAB. In 2018-19 we expanded the pilot to include "friends and family" of the GSAB to serve as mentors; Thirteen students signed up to participate and 9 GSAB members served as mentors. Mentors help direct students toward resources and key connections in their fields and discuss a variety of career-building topics.

**Other Activities Sponsored by the Office of Graduate Studies and Research**

- **Graduate Research Symposium:** A&S graduate students on the 2019 Graduate Research Symposium Committee and the Graduate Student Association worked with the Office of Graduate Studies and Research and the Graduate Center. The 2019 Graduate Research Symposium was highly productive, with 140 oral and poster presentations and a total of more than 1100 attendees at symposium events. Presenters included 35 graduate students from 14 visiting institutions, including Brandeis University, Drew University, George Mason University, Georgetown University, University of Pennsylvania, University of Virginia, Virginia Commonwealth University, and Virginia Tech. Based on papers submitted by presenters and ranked by a judging panel of A&S faculty and Graduate Studies Advisory Board members, awards totaling \$10,000 were provided to W&M graduate students and visiting student scholars. To recognize the significance of the GRS the Interdisciplinary Award for Excellence in Research was created. The top three papers submitted in the category of W&M Humanities and the top three papers submitted in the category of W&M Natural and Computational Sciences completed for the overall award for Excellence in Research. In 2019, the Interdisciplinary Awards was given to David Marquis, a Ph.D. candidate in the department of History. The Graduate Studies Advisory Board was a symposium sponsor in 2019 and board members also participated in the symposium by chairing oral sessions, serving on the judging panels, offering recruitment and mentoring opportunities, and providing two awards of \$1,000, each, as well as corporate sponsorship for the symposium.
- **Raft Debate:** On March 14, 2019, an audience of approximately 650 undergraduate and graduate students, faculty, and community members attended the popular annual Raft Debate, sponsored by the Office of Graduate Studies and Research, the Graduate Center, and the A&S Graduate Student Association. The Raft Debate numbers among the favorite traditions featured on the William & Mary webpage <http://www.wm.edu/about/history/traditions/index.php>.
- **Newsletter:** The Graduate Center's "Graduate A&S Newsletter" (formerly "Did You Know That?") is distributed by email to A&S graduate students as well as faculty and staff affiliates every Monday during the academic year. Each academic year there are approximately thirty issues of the newsletter. Entries include links to Events posted in the [A&S Graduate Studies & Research Events Calendar](#), as well as to webpages containing pertinent information. The format and organization were substantially revised in 2018-19 to improve readability.

## **A&S Graduate Ombudsperson Report for July 2018 - June 2019**

Peter Vishton, Associate Professor, Department of Psychology, vishton@wm.edu

A total of 19 graduate students contacted the ombudsperson for consultation.

A wide range of issues arose over the course of the year, including student-advisor conflicts over timing of feedback and progress toward degree completion, student collegial conflicts, and dealing with the abrupt departures of faculty advisors.

The time-scale of meetings varied widely. The shortest cases were resolved through a meeting and set of e-mails exchanged within a few days. The longest case required an extensive set of conversations and interactions with several professors and directors of graduate studies.

The ombudsperson presented a discussion of "pedagogical pitfalls" with incoming graduate students at the graduate school orientation. In part this was to discuss the role of graduate students as teachers, but primarily the aim was to increase students' familiarity with the Ombudsperson and the process of addressing potential grievances.

The ombudsperson participated in meetings of the Committee on Graduate Studies as well, with the goal of maintaining close contact with the many graduate studies programs.

The ombudsperson met periodically with Mark Patterson, the general College ombudsperson. We discussed how our two positions should interact to best serve the College community.

After the departure of Patterson, the ombudsperson served on the search committee for his replacement.

All cases have been resolved.

NOTE: In September 2019, Vishton accepted a temporary "rotator" position, working with the National Science Foundation as their Program Director for Developmental Sciences. This detail will require frequent travel to the DC area over the next several years. As such, Vishton has stepped down from the ombudsperson position. Phil Daileader, professor of History and former ombudsperson, graciously stepped forward to fill the position on an interim basis. A search for a long-term replacement is underway.

**Committee on Graduate Studies Members, 2018-19**

Virginia Torczon, Chair  
Hannah Rosen, American Studies  
Neil Norman, Anthropology  
Michael Kelley, Applied Science  
Diane Shakes and Patty Zwollo (co-directors), Biology  
Robert Pike, Chemistry  
Pieter Peers, Computer Science  
Larry Leemis, Computational Operations Research  
Kathrin Levitan, History  
Jeff Nelson, Physics  
Danielle Dallaire, Psychological Sciences  
Elaine McBeth, Public Policy

# APPENDICES

## APPENDIX I

## GRADUATE CENTER PARTICIPATION

Fall 2014 - Summer 2019

Course	F 2014	S 2015	F 2015	S 2016	Summer 2016	F 2016	S 2017	Summer 2017	F 2017	S 2018	Summer 2018	F 2018	S 19	Summer 2019
GRAD 501 001	14		11			11			9			5		
GRAD 503 001				9			7			8		9		
GRAD 503 002				9										
GRAD 505 001	5	8	11			12	9		8	3			10	
GRAD 505 002		10												
GRAD 510												7	3	
GRAD 512											6	10		7
GRAD 520 001							8		5	5			7	
GRAD 522							4					4		
GRAD 529					8			8			8			9
GRAD 530 001	7	2	10	10		8	8		9	7		8	8	
GRAD 530 002			5	6										
GRAD 540 001								9	9	13			6	
GRAD 540 002									9	6			8	
GRAD 550				6					4					
<b>Course Subtotals</b>	<b>26</b>	<b>20</b>	<b>37</b>	<b>40</b>	<b>8</b>	<b>31</b>	<b>36</b>	<b>17</b>	<b>53</b>	<b>42</b>	<b>14</b>	<b>43</b>	<b>42</b>	<b>16</b>
Workshops	F 2014	S 2015	F 2015	S 2016	Summer 2016	F 2016	S 2017	Summer 2017	F 2017	S 2018	Summer 2018	F 2018	S 19	Summer 2019
Poster Workshop - Research Symposium							7							
Oral Presentation Skills Workshop - Symposium							2							
Academic Writing in the US						11			18			25		
CV for the Humanities						29								
Job Market for the Humanities						12				8				
Prep for Provost Dissertation Fellowship Application						12			13			8		
CV for the Sciences						8								
Preparing for the Scientific Job Market										23				
History Careers						21								
Alt-Ac-Careers						16						6		
ETD/Copyright/Embargo						11	2			8	8	7		9
Digital Identity Roundtable/Digital Scholarship							16		8					
Writing Skills for Chemistry									9			4		
Oral Presentation Skills for Computer Science							35					35		
Grants and Fellowship Applications - Humanities							21							
Bibliographies & Citations Made Easy												11		
Author's Rights & Publishing													7	
Elevator Pitch (Symposium)													6	
3MT Presentation Workshop									10			9		
<b>Workshop Subtotals</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>120</b>	<b>83</b>	<b>0</b>	<b>58</b>	<b>39</b>	<b>8</b>	<b>105</b>	<b>13</b>	<b>9</b>
Programs	F 2014	S 2015	F 2015	S 2016	Summer 2016	F 2016	S 2017	Summer 2017	F 2017	S 2018	Summer 2018	F 2018	S 19	Summer 2019
Graduate Research Symposium		1100		1200			1100			1100			1000	
Raft Debate	600		675			675				465			650	
<b>Program Subtotals</b>	<b>600</b>	<b>1100</b>	<b>675</b>	<b>1200</b>	<b>0</b>	<b>675</b>	<b>1100</b>	<b>0</b>	<b>0</b>	<b>1565</b>	<b>0</b>	<b>0</b>	<b>1650</b>	<b>0</b>
<b>GRAND TOTAL</b>	<b>626</b>	<b>1120</b>	<b>712</b>	<b>1240</b>	<b>8</b>	<b>826</b>	<b>1219</b>	<b>17</b>	<b>111</b>	<b>1646</b>	<b>22</b>	<b>148</b>	<b>1705</b>	<b>25</b>

**APPENDIX II**  
**APPLIED, ACCEPTED and ENROLLED**  
**Fall 2014 - Fall 2018**

		Applied	Accepted		Enrolled		Avg UG <sup>(1)</sup>	Avg GRE Scores <sup>(2)</sup>		
			Total	Rate	Total	Rate	GPA	Verbal	Math	Writing
American Studies	2014	59	17	29%	7	41%	3.71	163	150	4.58
	2015	64	11	17%	4	36%	3.86	163	152	5.00
	2016	52	17	33%	8	47%	3.67	161	153	4.63
	2017	41	20	49%	10	50%	3.59	157	139	4.25
	2018	39	15	38%	7	47%	3.69	162	153	5.08
Anthropology	2014	59	15	25%	5	33%	3.41	161	154	4.83
	2015	39	7	18%	3	43%	3.72	164	157	5.16
	2016	47	9	19%	5	55%	3.76	152	156	3.75
	2017	39	13	33%	5	38%	3.65	163	155	5.00
	2018	37	11	30%	6	55%	3.73	163	148	4.17
Applied Science	2014	40	13	33%	7	54%	3.04	154	162	3.12
	2015	29	11	38%	5	45%	3.31	149	155	3.10
	2016	37	8	22%	6	75%	3.24	154	163	4.00
	2017	44	16	36%	10	63%	3.71	154	161	3.55
	2018	20	6	30%	4	67%	3.74	161	163	4.00
Biology	2014	65	22	34%	9	43%	3.59	160	154	4.57
	2015	74	11	15%	9	82%	3.66	158	157	4.40
	2016	67	13	19%	8	62%	3.49	159	156	4.62
	2017	44	10	23%	8	80%	3.60	162	155	4.70
	2018	40	12	30%	8	67%	3.85	163	158	4.71
Chemistry	2014	19	3	16%	2	67%	3.48	152	161	4.50
	2015	17	6	35%	3	50%	3.64	159	159	4.50
	2016	18	7	39%	6	86%	3.68	162	147	4.58
	2017	28	11	39%	6	56%	3.42	157	156	4.10
	2018	18	7	39%	5	71%	3.40	161	157	4.38
Computer Science <sup>(3)</sup>	2014	118	64	54%	32	50%	3.47	473 / 155	760 / 162	3.65
	2015	166	60	36%	20	33%	3.50	650 / 154	780 / 164	3.50
	2016	141	76	54%	33	43%	3.35	153	165	3.68
	2017	131	43	38%	22	51%	3.48	155	165	3.75
	2018	139	50	36%	17	34%	3.57	157	162	3.87
History	2014	122	19	16%	12	63%	3.74	161	155	4.59
	2015	119	33	28%	12	36%	3.74	165	153	4.88
	2016	107	26	24%	18	69%	3.79	166	152	4.88
	2017	103	28	27%	18	64%	3.70	158	151	4.75
	2018	96	17	18%	11	65%	3.60	164	153	4.75
Physics	2014	112	49	44%	16	33%	3.54	153	160	3.68
	2015	122	47	39%	14	30%	3.66	154	163	3.57
	2016	101	22	22%	6	27%	3.65	157	162	3.33
	2017	105	20	19%	7	35%	3.89	153	165	3.40
	2018	61	17	28%	8	47%	3.73	155	159	3.69
Psychological Sciences	2014	112	9	8%	8	85%	3.60	161	157	4.12
	2015	83	14	17%	10	71%	3.60	158	154	4.45
	2016	107	9	8%	8	89%	3.64	160	154	4.25
	2017	78	9	12%	8	89%	3.76	160	155	4.50
	2018	116	15	13%	9	60%	3.57	161	158	4.89
Public Policy	2014	65	37	57%	20	54%	3.60	160	157	4.77
	2015	51	33	65%	18	55%	3.59	161	155	4.72
	2016	62	43	69%	19	44%	3.63	160	155	4.50
	2017	75	48	64%	22	46%	3.55	160	155	4.15
	2018	42	28	67%	10	36%	3.66	159	158	4.43

<sup>(1)</sup> Average of UG transcripts submitted by enrolled students.

<sup>(2)</sup> Average GRE scores submitted by enrolled students. GRE General Test (tests taken prior to August 1, 2011) scores reported 200–800, in 10-point increments GRE revised General Test (tests taken on or after August 1, 2011) scores reported 130–170, in 1 point increments.

<sup>(3)</sup> This includes students in the Computational Operations Research.

**APPENDIX III  
GRADUATE STUDENT ENROLLMENTS<sup>(1)</sup>**

**Fall 2014 to Fall 2018**

Department	Fall 2014	Fall 2015	Fall 2016	Fall 2017	Fall 2018
American Studies	57	56	45	45	43
Anthropology	41	38	38	33	37
Applied Science	36	34	34	36	35
Biology	18	20	17	16	23
Chemistry	8	5	9	13	12
Computer Science <sup>2</sup>	107	119	107	100	85
History	66	72	55	59	48
Physics	86	91	80	63	56
Psychology	19	20	20	16	20
Public Policy	45	41	39	38	26
<b>TOTALS</b>	<b>483</b>	<b>496</b>	<b>444</b>	<b>419</b>	<b>385</b>

Notes:

<sup>1</sup> Totals include full-time, part-time and continuous enrollment registration, including (8) dual degree students in Law, Business, Marine Science, and Education in 2018.

<sup>2</sup> Includes Computational Operations Research.

**APPENDIX IV  
GRADUATE STUDENT ENROLLMENT BY DEGREE FALL 2018**

Program	MA	MS	MA/PhD	MS/PhD	PhD	MPP	Total
American Studies	6		2		35		43
Anthropology	7		5		25		37
Applied Science					35		35
Biology		23					23
Chemistry		12					12
Computer Science		9		5	58		72
COR		13					13
History	7		5		36		48
Physics					56		56
Psychological Sciences	2	18					20
Public Policy (MPP)						26	26

	<b>MA</b>	<b>MS</b>	<b>MA/PhD</b>	<b>MS/PhD</b>	<b>PhD</b>	<b>MPP</b>	
<b>Total Enrollment</b>	<b>22</b>	<b>75</b>	<b>12</b>	<b>5</b>	<b>245</b>	<b>26</b>	<b>385</b>

**APPENDIX V  
GRADUATE DEGREES AWARDED DURING THE LAST 10 YEARS  
(August 2009 – May 2019)**

DEPARTMENT	PROGRAM INITIATED	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	SINCE AUG. 2009
American Studies	1982-MA	6	9	4	6	7	5	3	3	8	3	54
	1988-PhD	5	4	4	7	6	9	5	11	4	5	60
Anthropology	1979-MA	8	5	6	7	8	3	6	5	2	4	54
	2001-PhD	0	0	0	4	7	2	1	5	7	4	30
Applied Science	1970-MA/MS	11	4	3	4	6	2	2	0	2	7	41
	1990-PhD	3	2	2	8	4	6	2	5	5	3	40
Biology	1963-MA/MS	12	6	11	11	8	7	9	9	7	8	88
Chemistry	1964-MA/MS	4	4	7	6	6	8	4	4	7	7	57
Computer Science <sup>1</sup>	1984-MS	11	18	26	15	23	17	17	30	20	13	190
	1986-PhD	9	3	6	7	6	4	12	8	9	12	76
History	1955-MA	13	22	15	14	12	13	7	16	11	16	139
	1967-PhD	3	3	7	3	2	5	4	9	5	4	45
Physics	1959-MA/MS	14	13	9	13	13	5	7	18	12	6	110
	1964-PhD	6	12	6	5	5	7	9	16	16	14	96
PsyD	1978-PsyD	4	0	0	0	0	0	0	0	0	0	4
Psychological Sciences	1953-MA	8	4	7	4	8	12	7	8	10	4	72
	2019-MS										2	2
Public Policy	1991-MPP	25	19	19	20	19	18	20	18	21	13	192
Totals	MA/MS/MPP	112	104	107	100	110	90	82	111	100	83	999
	PhD	26	24	25	34	30	33	33	54	46	42	347
	PsyD	4	0	0	0	0	0	0	0	0	0	4

<sup>1</sup>Includes Computational Operations Research.