



UNIVERSITY OF  
MARYLAND

**GRADUATE PROGRAM IN ANIMAL SCIENCES**  
**HANDBOOK**

Animal Sciences Center, Room 1415A • College Park, Maryland 20742-2311 • 301-405-5781 • [www.ansc.umd.edu](http://www.ansc.umd.edu)

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## Introduction

The Graduate Program in Animal Sciences is an interdisciplinary and interdepartmental program administered by the Department of Animal and Avian Sciences (ANSC). It involves faculty from the Department of Animal and Avian Sciences and the Department of Veterinary Science, Virginia-Maryland Regional College of Veterinary Medicine, and scientists from nearby institutions, including U.S.D.A.'s Beltsville Agricultural Research Center, the Patuxent Wildlife Center, and the National Zoological Park. The Program offers graduate study leading to the Master of Science and Doctor of Philosophy degrees in Animal Sciences. A Director selected from amongst the faculty on a term basis administers the Program. Presently, Dr. Carol L. Keefer, Professor, Department of Animal and Avian Sciences, is the Director. Dr. Keefer's email address is [ckeefer@umd.edu](mailto:ckeefer@umd.edu). Currently, there are ~30 members of the graduate faculty from the two participating departments and five adjunct faculty from area institutions. The Graduate Program office is located in Room 1415A in the Animal Sciences Center. It's email address is [ansc-gradprogram@umd.edu](mailto:ansc-gradprogram@umd.edu).

## Admission into the Graduate Program

The Graduate Program in Animal Sciences (ANSC) admits students on a competitive basis from around the world. For selection, the primary criteria are the merits of the candidate as evidenced by the overall evaluation of the documents in the application package. Where possible, a candidate may be invited for a visit to the campus and an interview by the Program faculty. A strong background in animal or poultry science or one of the biological sciences, e.g., nutrition, physiology, biology, biochemistry, cell-molecular biology, genetics, microbiology, immunology, virology, or their sub-disciplines is required.

Applicants should familiarize themselves with the requirements, policies, and procedures of the University of Maryland Graduate School. They may do so by referring to the Graduate School Catalog, which is available at [www.gradschool.umd.edu/catalog](http://www.gradschool.umd.edu/catalog). The application package should contain the following:

1. An online application with the vital data on the candidate.
2. Statement of Goals summarizing the candidate's goals, intentions, and experiences.
3. Results of the General Record Examination (GRE) - General Aptitude Test.
4. Transcripts of all previously attended post-secondary colleges and universities.
5. Three letters of recommendation.
6. Certified copies of previously earned diploma(s) and degree(s) and, in the case of international students, results of the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS).
7. The application fee of \$75; an application without the fee cannot be considered.

All documents should be submitted electronically.

A minimum grade point average (GPA) of 3.0/4.0 in undergraduate study is required for consideration of an application. When an institution uses a different scale, the Program Office or, in the case of international students, the Office of International Education Services will normalize the grade point average to a scale of 4.0. For international applicants, a minimum score of 100 on the TOEFL and 7 on the IELTS is a requirement of the Graduate School to be admitted without provisional status. The Program may request advice from the Office of International Education Services on the quality of education of the institutions previously attended by a candidate and the overall credentials of an international applicant.

Applicants must indicate the need for financial assistance or provide documentation of adequate financial support for their studies. There are several types of financial support available within the Program. These include fellowships given to the Program by the Graduate School and graduate teaching and research assistantships available within the Program. It is highly advised that the applicant should, wherever possible, identify one or more faculty in the Statement of Goals and Intent who can serve as a potential advisor to guide research in his/her area of interest. A profile of individual faculty and their ongoing research programs can be viewed at sites linked to <http://www.ansc.umd.edu/graduate/index.cfm?directory=faculty.cfm> and [http://vetmed.umd.edu/index.php?option=com\\_content&view=article&id=195&Itemid=243](http://vetmed.umd.edu/index.php?option=com_content&view=article&id=195&Itemid=243).

The Graduate Program no longer mails out paper applications. All candidates are directed to apply online at **www.gradschool.umd.edu**. The applicants are advised to follow all the instructions; incomplete applications will delay consideration. Payment of your application fee of \$75.00 must be made on-line in order for your application to be submitted. Your application will not be processed until you pay your application fee and it is authorized. If you are unable to pay online please see the graduate school website listed above for guidance on submitting payment.

The Graduate Education Committee starts to review applications on a rolling basis after the deadline for the fall and spring semesters (given on page 10). The Director then considers the candidates who have been recommended positively by the committee for acceptance. In consultation with the Chair of either the Department of Animal and Avian Sciences or the Department of Veterinary Science, Virginia-Maryland Regional College of Veterinary Medicine (VMRCVM), as appropriate, and if funds are available, an assistantship offer is made to the accepted candidate. Simultaneously, the Dean of the Graduate School is notified for issuance of the letter of admission. In general, the Dean concurs with the decision made at the Program level and sends a formal letter offering admission to the candidate. For international applicants, after the Dean has issued the letter of admission, the Office of International Education Services is notified to process the Immigration and Naturalization Form I-20 and mail it to the candidate as well as to the U.S. Embassy in the country of the candidate. Upon presentation of the I-20 papers to the U.S. Embassy or its regional consulate in his/her country, a visa is issued to the student for travel to the U.S.A.

## Graduate Education Committee

The Graduate Education Committee (GEC) consists of five faculty members. Committee members must be Associate or Regular Graduate Program faculty. Four members are appointed by the Chair of the Department of Animal and Avian Sciences in consultation with the Director. One member may be recommended for appointment by the Associate Dean of the Virginia-Maryland Regional College of Veterinary Medicine. The Director of the Graduate Program in Animal Sciences serves as the fifth member and as Chair of the committee. The members serve a three-year appointment on a staggered basis but may be reappointed. The committee has the following responsibilities:

- Develops curriculum and policy; obtains approval of the faculty and implements the same.
- Serves as the admissions committee to screen and evaluate completed applications and recommends candidates to the Director for admission and for financial assistantships.
- Approves the Graduate Advisory Committees of the students.
- Reviews the progress of the students individually on an annual basis; approves all matters of an academic nature such as a change of advisor or member of the Graduate Advisory Committee, attendance at seminars, and other matters of a disciplinary nature.
- Evaluates all students on a competitive basis and selects one student each, for the annual “Most Outstanding M.S. Student of the Year Award” and the “Most Outstanding Ph.D. Student of the Year Award”.

## Master of Science Degree Requirements

- The Graduate School requires each student to complete a minimum of 30 semester hours including six hours of thesis research credit (ANSC 799) and a thesis for the degree of Master of Science (M.S.). Of the 24 credit hours required in graduate courses, no less than 12 must be earned in the major subject and no less than 12 must be from courses numbered 600 or above. Students must maintain an overall grade point average (GPA) of 3.0 or better in courses taken for graduate credit, otherwise they are placed on academic probation by the Graduate School and they may be dismissed from the Program.
- In addition to the Graduate School requirements, the following Program requirements apply to students pursuing an M.S. degree:
  - a. Satisfactory completion of a graduate level course in Statistics, typically BIOM 601, and either a course in Research Bioethics or completion of the Responsible Conduct of Research (RCR) – CITI Program provided through the Division of Research.
  - b. The Graduate Education Committee also strongly encourages all Animal Science Graduate Program students to have completed a 400-level or above course in Biochemistry prior to or during their graduate program.
  - c. Completion of the ANSC 698, Graduate Seminar requirements (described below).
  - d. If Special Problems (ANSC 699) are selected, no more than two such credits can be part of the 24 required course credits.
- Formation of a Graduate Advisory Committee by the end of the first semester that serves to guide and advise the student throughout the student's graduate studies. Masters Advisory Committees must consist of a minimum of three members, two of which must be Regular Graduate Faculty at College Park (tenured or tenure-track). The Chair must be from ANSC. See <https://ansc.umd.edu/graduate/student-resources-forms> for the Advisory Chair and Committee Form.
- The Advisory Committee and the student must meet before the end of the second semester to approve the student's Plan of Study (proposed schedule of courses), signed by the student and his/her Advisory Committee. By this time the student should also have completed a thesis research proposal, which is approved by his/her Advisory Committee (Appendix A). Because the Plan of Study represents the course work contract between the student and the Program, the student is expected to update and refile the Plan of Study if changes become necessary.
- Completion of a thesis, which will be presented in a public seminar and then defended by an oral examination, as per regulations of the Graduate School. Notice must be posted one week before the seminar and the notice sent electronically to all the graduate students and the faculty in the Program. The examining committee will reach one of the following decisions:
  - a. Pass, with a recommendation to pursue the Ph.D.
  - b. Pass, with a recommendation that the M.S. degree be terminal.
  - c. Fail, with a recommendation that the candidate be re-examined at a later date.
  - d. Fail, with the recommendation that the candidate should not be re-examined.



## Doctor of Philosophy Degree Requirements

The Doctor of Philosophy degree is granted to a student only after sufficient evidence of high achievement in scholarship and creativity and demonstrated ability to engage in independent research. A minimum of 12 research credits is required. The degree is not awarded for the completion of course requirements no matter how successfully that may have been completed.

Students must maintain an overall grade point average (GPA) of 3.0 or better in courses taken for graduate credit, otherwise they are placed on academic probation by the Graduate School and they may be dismissed from the Program.

In addition to the Graduate School requirements, the following program requirements apply to students pursuing a Ph.D. degree:

- All Ph.D. candidates must also meet the course requirements for the M.S. degree.
- All students must meet the ANSC 698, Graduate Seminar requirements, as given elsewhere.
- During the student's first semester, the student and his/her advisor will recommend at least four additional members of the graduate faculty to serve on the student's Advisory Committee (See Resources and Forms). Doctoral Advisory Committees must consist of a minimum of five voting members, three of which must be Regular Graduate Faculty at College Park (including the Chair and the Dean's Rep). Two must be ANSC faculty (the Chair and at least one other). The individual who will act as Dean's Rep must be indicated on the form. Typically for ANSC committees the Dean's Rep is a voting member, if not, then be sure to have a fifth voting member (Regular Graduate Faculty). Other committee members must have Graduate Faculty status at UMCP. Up to two scientists from outside institutions who hold Special Graduate Faculty status may be appointed to the Graduate Advisory Committee. See <https://ansc.umd.edu/graduate/student-resources-forms> for the Advisory Chair and Committee Form.
- Before the end of the third semester, the student will also submit to his/her Advisory Committee a dissertation research proposal (Appendix A).
- Teaching experience is mandatory for all students during their Ph.D. program (equivalent to 8-10 hours of effort per week during a single semester).
- During the second year of study for the Ph.D. degree (or after approximately 80 percent of the Plan of Study has been completed), a written examination and an oral comprehensive examination are required for advancement to candidacy. For the written examination, each member of the Graduate Advisory Committee submits one or more questions in the animal sciences area, defined in the broadest sense. The student is well advised to meet individually with every member of the committee and receive general guidance. It is expected that the individual members of the committee will submit questions that can be reasonably answered in a three-hour period. The mentor/major

advisor receives the questions in advance and conducts the examination within a pre-announced one-week period. The student answers the question(s) for one member of the Graduate Advisory Committee on a given day. The examination may be open or closed book, as stipulated by the examiner. The student is expected to follow the Honor Code of the University and return the completed examination to his mentor. The individual components of the written examination are evaluated by the members of the committee who submitted their question(s).

After the written examination, the major advisor/mentor will schedule an oral examination. It is expected that a major part of the oral examination will focus on questions and issues arising out of the written examination, the ongoing dissertation research of the student, and, to a lesser extent, the general knowledge and background that is deserving a pass for advancement to candidacy for the Ph.D. degree.

- Following the oral examination, the Advisory Committee must reach a decision regarding advancement to candidacy. The committee may recommend one of the following:
  - a. Passing the student with no conditions.
  - b. Passing the student with conditions, stating how and when these conditions must be met.
  - c. Failing the student.
- After completion of the research, the student will write a scholarly dissertation as per rules of the Graduate School. The dissertation will be presented in a public seminar. Notice of the seminar must be posted one week prior to the seminar. Also, the notice will be sent electronically to all the graduate students and the faculty in the Program.
- A dissertation defense examination follows a public seminar. The examination is a closed meeting. This examination will focus primarily on questions and issues arising out of dissertation research. It is expected that at this point there will be minimal necessity to test the student on background areas that should have been covered in formal courses and written and oral comprehensive examinations. The Dean of the Graduate School will designate one of the members of the Graduate Advisory Committee as his representative. The role and duties of the representative are defined by the Dean. His/her primary role is to oversee and ensure that the examination is conducted fairly and as per guidelines of the Graduate School.

## ANSC Seminar Requirements

The Graduate Program holds a regular seminar during the academic year and special seminars during the summer period. Additionally, a number of related graduate programs on the campus also hold weekly and special seminars. The seminar requirements in ANSC are given below:

- M.S. students are required to take either ANSC 698D *Developing Presentation Skills* (one credit) early in their studies or one credit of ANSC 698C *Recent Advances in Animal and Avian Sciences* at some point after the first year of study. Placement in either seminar option will be at the discretion of the student and his/her advisor.
- Ph.D. students are required to take a total of two credits of seminar, one of which must be ANSC 698C. The ANSC seminars will be taken in non-consecutive semesters. Registration for seminars outside of the ANSC Program must be discussed and approved by the student's Dissertation Advisory Committee in advance and documented with the Program Office for record keeping in the student's folder.
- The Seminars will be graded on the standard A/B/C/D/F grading system.
- The Seminar course will feature outside speakers scheduled approximately once a month, invited either by students or faculty. These seminars will cover the most recent advances in animal sciences by leading scientists within or outside the United States. They will be about 40-45 minutes long, with ample time for discussion and, as schedules allow, one-on-one interaction between the students and the speaker. Students are strongly encouraged to take advantage of this opportunity as they seek opportunities for additional graduate work (M.S. students) or postdoctoral research (Ph.D. students) and avenues for further professional advancement.
- The regular and adjunct faculty within the program will be scheduled into ANSC 698C to give a seminar on their ongoing research every 3-4 years.
- Students are expected to attend the weekly seminar in ANSC or another related graduate program during the academic year, regardless of whether they are signed up for credit. This may be monitored at the discretion of the instructor-in-charge.

## Responsible Conduct of Research (RCR) Training

All graduate students are required to complete RCR training. Courses such as BISI712 *Responsible Conduct of Research for Biologists* meet this requirement. Alternatively, **CITI Training for RCR** may be completed online. It is highly recommended that students complete this training within their first academic year. If a student completes the online training in their first year, it is recommended that they also consider taking one of the courses offered on campus, as the classroom discussions are more comprehensive than the online training and also provides graduate credit.

### **CITI Training for RCR (<https://research.umd.edu/rcr>):**

Log on to: <https://www.citiprogram.org/> to complete the training. You will be able to create your own user name and password as this is not linked to your UMD ID. Be sure to select University of Maryland College Park as your institution and select the track that is most appropriate for the research you are conducting. If you cannot complete the training in one sitting, you may save and finish at a later time (you can stop and start as many times as you need).

After you complete the CITI training, be sure to print a copy of your certificate of completion (either electronic or printed copy) and give it to the ANSC Graduate Office.

## Grading Policy for ANSC 799, 898, and 899

University policy states the S-F grading system must be used for master's thesis (ANSC799) and doctoral dissertation (ANSC899) research. A grade of S indicates satisfactory progress towards the completion of the thesis or dissertation; a grade of F indicates failure to make satisfactory progress. A grade of F will trigger a review to determine whether the student's enrollment should be terminated. Determinations of satisfactory progress occur at the graduate program level. A grade of I (incomplete) may be assigned if the advisor is unable to determine that the student is making satisfactory progress. *The grade of I should be used sparingly and only after the advisor has spoken with the student about concerns regarding satisfactory progress.* For 799 and 899 there are no incomplete contracts. Advisors should change grades of I to S when the student has demonstrated satisfactory progress, or to F if the advisor determines the student is incapable of making satisfactory progress. Upon successful completion of all degree requirements and the award of the degree, any remaining I grades for 799 and 899 will automatically be changed to S.

ANSC 898: The S-F grading system should also be used for pre-candidacy (898) research. This grading system for ANSC898 has been designated by the ANSC graduate faculty.

Please remember to check at the end of the semester that your mentor has entered a grade for your research credits. If s/he forgets, then a NG (no grade) will be entered. You will then need to have your advisor sign a form, which must be processed through the department and the graduate school, to get the correct grade entered; so it is better to remind them at the end of the semester that you are taking research credit and that they should enter a grade.

In computation of cumulative averages a mark of S will not be included" (<http://www.umd.edu/catalog/index.cfm/show/content.section/c/27/ss/1584/s/1534>). Please note that 799, 898, and 899 courses are not used in the calculation of GPA, whether or not the A-F grading system is used ([http://www.gradschool.umd.edu/catalog/academic\\_record.htm](http://www.gradschool.umd.edu/catalog/academic_record.htm)).

## Graduate Student Deadlines

### Program Deadlines:

By the End of the 1 <sup>st</sup> Semester	Advisory Chair and Committee Members Form
By the End of the 2 <sup>nd</sup> Semester	Plan of Study Form (MS and PhD) MS Thesis Research Proposal and Proposal Coversheet Form
By the End of the 3 <sup>rd</sup> Semester	PhD Dissertation Research Proposal and Proposal Coversheet Form
By Mid-April, annually	Student's Annual Progress Report Advisor's Annual Evaluation (Signed by advisor and student) Report of the Graduate Advisory Committee Meeting Student's CV Unofficial Transcript

### Graduate School Deadlines:

All Graduate Degree Candidates:	Must submit electronically <b>Application for Graduation</b> to the Registrar's Office for graduation that semester.
Doctoral Students:	Must submit <b>Nomination of Dissertation Committee Form</b> to the Office of Registrar, 1113 Mitchell Bldg. at least 6 weeks before the scheduled defense.
Master's Thesis Students:	Must submit <b>Approved Program Form</b> and <b>Nomination of Thesis Committee Form</b> to the Office of Registrar, 1113 Mitchell Bldg. at least 6 weeks before the scheduled defense.
Doctoral Students:	Must submit electronically <b>Dissertation, Thesis and Dissertation Publication Form</b> , and the <b>Report of Examining Committee Form</b> to the Office of the Registrar, 1113 Mitchell Building.
Master's Thesis Students:	Must submit electronically <b>Thesis, Thesis and Dissertation Publication Form</b> , and the <b>Report of Examining Committee Form</b> to the Office of the Registrar, 1113 Mitchell Building.

The Graduate School deadlines can be found in the following locations:

1. Online at: <https://gradschool.umd.edu/calendar/deadlines>
2. In the Graduate Catalog

## Guidelines for the Submission of Thesis and Dissertation

Thesis and dissertation should be electronically submitted to the graduate school at <https://www.etsadmin.com/main/home?siteId=76>. The new edition of the Thesis and Dissertation Style Guide is located on the Graduate School website at: [https://gradschool.umd.edu/sites/gradschool.umd.edu/files/uploads/DissertationThesis/etd\\_style\\_guide\\_201708.pdf](https://gradschool.umd.edu/sites/gradschool.umd.edu/files/uploads/DissertationThesis/etd_style_guide_201708.pdf)

**Graduate School Catalog** The latest edition of the Graduate School Catalog is located at <http://www.gradschool.umd.edu/catalog/>. It contains comprehensive information on programs, courses, policies, and protocols of the Graduate School and has direct links to the often-used sections that contain details regarding graduate education at the University of Maryland, College Park. This information includes (but is not limited to) the following policies.

**Graduate School Policies** (See <http://gradschool.umd.edu/policies>)

- Academic Policies
- Registration Policies
- Master's Degree Policies
- Doctoral Degree Policies

### Policies for Graduate Assistantships

(See [http://apps.gradschool.umd.edu/catalog/assistantship\\_policies.htm](http://apps.gradschool.umd.edu/catalog/assistantship_policies.htm))

- I. General Policies
- II. Appointments
- III. Duties and Time Commitments
- IV. Compensation
- V. Tuition Remission and Benefits
- VI. Codes of Conduct
- VII. Grievance Procedure

Graduate Assistants are, first and foremost, graduate students pursuing an education. The opportunity to work closely with faculty and undergraduate students in teaching, research, or administrative environments is an integral part of that education. The University is committed to ensuring that graduate assistant assignments are productive, enhance student qualifications, meet funding support and workload goals, and are consistent with the educational objectives of the student and his or her program.

The University of Maryland is an academic and collegial community. Regular and clear communication between Graduate Assistants and their advisors and supervisors is essential to maintaining an effective educational environment. Occasionally, problems may occur. A Graduate Assistant who experiences problems related to workload is encouraged to consult with his or her advisor or supervisor. Should the need arise, a Grievance Procedure is detailed in section VII of Policies for Graduate Assistantships.

[http://apps.gradschool.umd.edu/catalog/assistantship\\_policies.htm](http://apps.gradschool.umd.edu/catalog/assistantship_policies.htm)

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## Graduate Student Rights and Responsibilities

The Graduate School has prepared this guide in order to provide you with information about graduate course policies, other policies related to graduate study, and relevant on-campus resources. Your syllabus applies specifically to a given course. The following applies in general to your graduate coursework and experience at UMD.

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[https://gradschool.umd.edu/sites/gradschool.umd.edu/files/uploads/docs/course\\_related\\_graduate\\_policies.pdf](https://gradschool.umd.edu/sites/gradschool.umd.edu/files/uploads/docs/course_related_graduate_policies.pdf)

Please note the following:

- Your services will be required during the entire period of your appointment, with the exception of official University holidays (see University Holiday Schedule <http://www.umd.edu/calendars/>).
- Your responsibilities will require an average weekly time commitment of 20 hours a week, for full time students, working for the department by teaching and/or working for your advisor. This is in addition to your course work and your own research project. You are required to abide by all the requirements of the ANSC Graduate Program as summarized in the ANSC Graduate Program Handbook which can be found on our website at ([http://www.ansc.umd.edu/sites/default/files/\\_docs/GraduateHandbook11.11.14.pdf](http://www.ansc.umd.edu/sites/default/files/_docs/GraduateHandbook11.11.14.pdf)).
- Benefits of this appointment include up to ten credits of tuition remission per academic semester and four credits over the winter term and participation in the employee's health benefits program. The assistantship does not, however, cover the cost of mandatory fees.

## Advising and Mentoring

Given the diverse scope of research activities in several focal areas, at the time of admission the Program tries to match candidates with one or more faculty who would be best suited to the background and research goals of the selected applicants. In the letter offering a graduate teaching cum research assistantship, the Director and the Chair of the department providing the assistantship assign an appropriate faculty member who would serve as the student's advisor at the start of education in the Program. As stated elsewhere, the Dean of the Graduate School sends the official letter of admission to the selected applicants.

There is a period of several months between the offer of admission and actual enrollment of a student into the Graduate Program. After a candidate has accepted the offer, the Director puts him/her and the faculty advisor in touch with each other. This is designed to encourage interaction between the two parties and explore mutual research interests early on and before the arrival of the 'student'. The Program realizes that a student may find that his/her research interests do not match the initial advisor and may want to select another advisor with the approval of the Graduate Education Committee and the Director of the Program. All graduate students, whether working for the M.S. or Ph.D. degree, are advised to finalize their advisor before the end of their first semester. The student and the advisor together propose a Graduate Advisory Committee and submit the specified form for approval by the Graduate Education Committee and endorsement by the Director before the end of the first semester of entry into the Program.

The student and the advisor work out a project for research toward the M.S. or Ph.D. degree as soon as possible. A Research Proposal and a Plan of Study must be presented to the Graduate Advisory Committee for approval and routed to the Graduate Education Committee at the end of the second semester for MS students and the end of the 3<sup>rd</sup> semester for PhD students. After the Graduate Education Committee has endorsed the Research Proposal and the Plan of Study, the documents become a record in the Program Office. It is recognized that sometimes a Research Proposal may require a major shift in direction to provide a productive lead. In such circumstances, a revised proposal, duly approved and endorsed by the above committees, should be deposited in the Program Office. It should be emphasized that a delay or delinquency in the submission of the Plan of Study and the Research Proposal within the stipulated time may adversely affect and risk the student being put on Academic Probation. Should this happen, the student will be notified and asked to remove the deficiency within one semester or risk dismissal.

It is worth reminding that, more often than not, a research project takes longer to complete than initially anticipated. The student and the advisor along with the Graduate Advisory Committee should continually monitor the progress and work diligently to achieve the goal side by side with fulfillment of all other requirements for completion of the degree. It is at this point that the advisor assumes the responsibility of a mentor. The role of a mentor is a matter of much philosophical discussion; suffice it to say that it represents the epitome of a true relationship between a *guru* and a *disciple* at the highest order. It is a very individualistic relationship and may be summarized in a variation of the words of Anne Todd ([www.vale.w-sussex.sch.uk/contentpage](http://www.vale.w-sussex.sch.uk/contentpage)) as thus: "The mentor is a critical friend. He/she supports, enables and facilitates the personal and professional advancement of the student/trainee. The two act as a link, or interface with other professionals engaged in the fulfillment of the goals of the student/trainee. The mentor sets high professional standards and ethics as a 'role model' for the aspiring student/trainee." Indeed, a graduate student may have more than one mentor, e.g., members of his/her Graduate Advisory Committee or even other professors in the Program. After the 'rites of passage', today's student may be tomorrow's colleague for the mentor. Ideally, it should build into a life-long relationship between the two. Today's protégé will be tomorrow's mentor!



## **Graduate Assistantships and Policy on their Award**

Research in animal sciences entails concerted commitment and experimental work. Students are normally not admitted into the Program unless they have a sponsor; their own finances to support them; or the Program funds can provide financial assistance that will provide for subsistence, tuition, and university-subsidized health insurance.

The Department of Animal and Avian Sciences and the Department of Veterinary Science, Virginia-Maryland Regional College of Veterinary Medicine, have similar assistantship programs. The following is a summary of the salient features of the policy within the Department of Animal and Avian Sciences:

1. The ANSC department's teaching and research assistantships have been pooled to create uniform 9.5-month graduate assistantships;
2. All recipients must contribute to the departmental mission in a teaching-related activity;
3. Proficiency in both written and spoken English is an important issue for the admission of international students;
4. Candidates reviewed by the Graduate Education Committee for financial support are ranked by the Department Chair and the Director and considered for assistantship after consultation with the Business Manager for budgetary provision;
5. M.S. students will receive support for two years, Ph.D. students for four years. The department may support a graduate assistant for an additional year at 50 percent of the stipend. The research advisor will provide support beyond that from his/her grants;
6. Assistantship duties would cover a broad range of assistance needs in the department. The Chair in consultation with the Undergraduate and Graduate Program Directors assigns assistantship duties. All Ph.D. students are required to assist in teaching duties for one semester as a requirement.

## Annual Review of Graduate Students

The Graduate Education Committee (GEC) shall conduct a review of all students annually, near the end of the spring semester, to evaluate student progress toward the desired degree. Each graduate student will provide the following documents to the Director's office by April 15:

1. A Student's Annual Progress Report on their research project.
2. Advisor's Annual Evaluation, co-signed by both the advisor and the student.
3. Report of the Graduate Advisory Committee meeting
4. Student's Updated CV
5. Unofficial Transcript.

The forms for the above reports are available in the Program office and also on the program website. A copy of these forms is also included in Appendix A of the Handbook. The manner of the review will be determined by the GEC, but students should be aware that they might be asked to appear for an interview to answer questions regarding their progress and/or prepare a written report regarding their progress. The purpose of the review will be the following:

1. To determine if the student is making satisfactory progress toward the desired degree.
2. To determine if a change in graduate student status is warranted.
3. To determine if requirements as presented to the student in the Handbook are being met (participation in seminars, filing of a Plan of Study and Research Proposal, etc.).

Students on grade probation should be aware that the Program will not use grades or credits from ANSC 699 earned while on grade probation in calculating the GPA for removal from grade probation.

The student and the advisor will be informed in writing of any review findings that result in a change of student status.

Any student whose overall grade point average falls below 3.0 will go on "academic probation" in the program. Students may also be placed on "probation" for failure to make satisfactory progress toward the intended degree or for failing the comprehensive/prelim examination for the Ph.D. degree. The student and the mentor will be informed in writing to remove the academic probation. Failure of the student to correct the reason for probation status during the following semester will result in dismissal.

## Annual Symposium

Each year during the first week in June, the department holds a Graduate Student Presentation Day (also known as 'The One-Day Wonder') when graduate students in the Department of Animal and Avian Sciences can show off their research findings to the department, campus, and local research institutions. This also gives students the opportunity to practice their presentation skills in front of a knowledgeable audience. All graduate students are required to give an oral presentation or a poster of their research. However, only those students presenting a completed piece of research and who will also be presenting this research at a scientific meeting will be eligible for travel awards. In the past, the department has awarded \$500 for first place and \$250 for second place in each of the oral and poster presentation categories. In addition, those students presenting poultry research are eligible to compete for the Shafner Award, which awards travel money of \$500 for first place and \$250 for second place in the combined categories of oral and poster presentations. Again, as with the department awards, students are only eligible for the Shafner Award if they plan to present the research at a scientific meeting. Students cannot win awards in both the department and Shafner Award categories, and again, the money can only be used to support travel to and accommodation at a scientific meeting.

## **Most Outstanding Student of the Year Award**

Starting in 2003, the Graduate Program established the ‘Most Outstanding Student of the Year’ award program. In 2004, the program was expanded to separately give awards to the most outstanding student in M.S. and Ph.D. degree categories. The current levels of the award consist of an unrestricted cash prize of \$400 and \$600, respectively for the two programs, and a Citation. The funds for the award are derived from an endowment in the Department of Animal and Avian Sciences. As the endowment increases and grows in the future, it is anticipated that a portion of the earnings will be spun off to give a small scholarship to the winner to supplement the financial assistantship for recruiting outstanding candidate(s) into the Program. The supplement may be used in any way, e.g., purchase of books and supplies, payment towards security deposit for housing, or any other personal needs.

The Graduate Education Committee selects the winner of the award at the time of the Annual Review of all graduate students in May each year. The Program Office provides the following documents to the members of the committee on every student:

1. A copy of the Curriculum Vitae (CV) of each student in the Program.
2. The master control sheet summarizing the overall performance and progress of the student.
3. The transcript summarizing the grades in all the courses taken to date.
4. The annual self-evaluation completed by the student.
5. The annual evaluation of the student by the mentor.
6. The report of the thesis/dissertation advisory committee.
7. Abstracts of papers presented at scientific meetings.
8. Other professional recognitions and awards such as prize(s) for papers presented at professional conferences.
9. Manuscripts accepted or papers published from thesis/dissertation research and any other meritorious features in a student’s dossier.

Prior to the review in person with each student in the Program, the members of the GEC score individual students privately on a scale of 1.0 to 5.0, with 1.0 being the highest score. The members submit the scores confidentially to the Administrative Assistant in the Program Office, where they will be averaged. After the GEC has interviewed and reviewed all the students, each member of the committee is asked to rank the top three students in both M.S. and Ph.D. in the Program. At this time, the average score on those students is revealed to the committee. After discussion, the most outstanding student is selected. The winner’s name is forwarded to the

Chair of the Department of Animal and Avian Sciences with a short report highlighting the achievements of the student. Throughout the deliberations and until the announcement, the name of the winner is kept confidential. The Chair announces the winner and publicly recognizes the winner at the awards presentation session during the Annual Symposium.

## Regulatory Issues

### Animal Care and Use

Campus and federal requirements very clearly stipulate that any research project involving human subjects or animals must be approved by the appropriate campus committee **PRIOR** to the initiation of the research. The campus committee that governs the use of animals for teaching and research purposes is the Institutional Animal Care and Use Committee (IACUC). Approval by the campus committee is also a stipulation for grant applications to USDA, NIH, NSF, and other granting agencies that require at the time of grant submission or at the time the grant is funded that any projects involving humans or animals be approved by the appropriate campus committee. Further, **NO** vertebrate animals may be used under campus auspices without prior approval of the IACUC. Examples of animal activities requiring IACUC approval include the following:

1. Animal research conducted on campus or on MAES facilities.
2. Animal research conducted in the field by UM faculty, graduate students, or staff under the auspices of the campus.
3. Animal research conducted by UM graduate students at other institutions (e.g., USDA, NIH, Patuxent Wildlife Center) as part of completion of a graduate degree.
4. Animal research conducted at another institution as part of a joint contract with a UM faculty member.
5. Animal activities used in the teaching of UM undergraduate and graduate courses.

Compliance with IACUC and its regulations is **MANDATORY**. Therefore, it is imperative that the graduate student discusses both department and university requirements and policies/procedures with their research advisor well in advance of proposed animal-related projects or course requirements for animal use in order to obtain the appropriate approvals.

Prior to graduation, all Animal and Avian Sciences graduate students must attend the UM Animal Users Training Program. Students who plan to conduct research with animals are required to attend the program prior to planning their animal research. The program is a one-day lecture offered in the fall and spring semesters (or when needed) by the Director of Laboratory Animal Care. Prior to submitting an Animal Use Protocol Form for review by the campus IACUC, the student should visit with the Director of Laboratory Animal Care to make sure all forms are filled out correctly and that all information is up-to-date. Dr. Angela Black is the department's Veterinarian and oversees animal research in the Animal Wing. It is also important that the student makes an appointment with Dr. Black prior to submitting a proposal to make sure that facilities will be available and that the protocol contains appropriate documentation for use of drugs or pain relievers if this is required for research.

For more information concerning the Animal Care and Use Program, the student may call 301-405-4921 or visit the website at [www.umresearch.umd.edu/iacuc/index.html](http://www.umresearch.umd.edu/iacuc/index.html). The necessary forms, guidelines and regulations, and dates when the IACUC meets to review proposals are given here. The student should note the submission deadlines for each month's review of proposals and make sure to submit their proposal before this date.

## **Radiation Safety and Chemical Hygiene in the Laboratory**

All students, upon arriving in the department, must take part in either seminars or online training courses offered by the Department of Environmental Safety (DES) for work in the laboratory. Not all the training courses are required, so students should consult with their advisor or laboratory technician to find out what types of laboratory hazards they will encounter and how to work safely in the lab environment. Prior to working in the lab, the technician should have students read and sign the Laboratory Safety Checklist sheet, which affirms that they have been made aware of and fully recognize the lab hazards, where to get help, how to dispose of various materials appropriately, and who to contact in the case of an emergency. Further information can be obtained from Mr. Tim Shellem, the department's Compliance Officer, at 301-405-8358 or by going online to the DES website at [www.inform.umd.edu/des](http://www.inform.umd.edu/des). Here students can find dates when seminars are held, online training courses, and forms. It is recommended that students first read the information for **Laboratory Workers** on the DES website prior to undertaking any procedures in the lab. The site also contains information and training videos documenting handling and disposal procedures for radioactive materials and biological wastes (bacteria, viruses, etc.). If students are in doubt about any hazardous procedure or material, it is best to consult with the lab technician, the department's Compliance Officer, or the website prior to proceeding further. Always be **SAFE and SURE!**

## **Motor Transportation Services**

Many graduate students will be teaching assistants one semester out of the year, and in some courses it may be necessary for them to rent a vehicle to transport students on field trips. The Motor Transportation Services Unit of the Department of Business Services offers a wide variety of transportation-related services to the University. You can go to their website at: [www.dbs.umd.edu/motor/index.php](http://www.dbs.umd.edu/motor/index.php) to rent a vehicle or to find out the University Vehicle Information and Policies. A student must be at least 18 years of age to drive a University vehicle.

## **Facilities of the Program**

### **Facilities on the Campus of the University**

The Department of Animal and Avian Sciences and the nearby Gudelsky Veterinary Center housing the Department of Veterinary Medicine, Virginia-Maryland Regional College of Veterinary Medicine, have extensive facilities consisting of faculty research laboratories, an animal holding area, a campus farm, an aquaculture facility, and the outlying research farms. Additionally, the department maintains two computer laboratories—a teaching laboratory with 30 workstations and a smaller laboratory exclusively for the use of graduate students on a 24-hour basis.

The research laboratories comprise nearly 28,000 square feet for bench work, averaging over 1,000 square feet per faculty member. Over 2,800 square feet of cold room and 2,000 square feet of freezer room are integral components of the research laboratories. The laboratories are fully equipped with state-of-the-art modern instrumentation and equipment for the entire range of research carried out by the faculty, e.g., research in biochemistry, cell-molecular biology, physiology, nutrition, behavior, virology, immunology, microbial pathogenesis, etc. Individual laboratories are fully self-standing units, yet there is free exchange between laboratories having shared and collaborative interests. All the laboratories and offices are networked to the campus server for direct Internet access.

Nearly 15,000 square feet of space is dedicated for animal holding in the Animal Wing of the Animal Sciences Center. This facility is capable of handling all kinds of animals, for example, rodents, birds, fish for aquaculture, and large animals for research in separate rooms. A new aquaculture facility, adjoining Gudelsky Center, was recently built and is operational for research. The Animal Wing is under the care of staff and is supervised by a professional veterinarian. In addition, a new equine research unit has been established at the Central Maryland Research and Extension Center at Clarksville.

The department maintains a state-of-the-art confocal microscope. Other facilities, such as the Electron Microscopy Unit, DNA Sequencing Laboratory, etc., are available to the faculty and students as part of the Central Core Facilities on the campus.

### **Research Facilities Off Campus**

#### **1. University of Maryland/USDA-Beltsville Animal Biotechnology Facility**

A new 11,000 square feet cooperative facility for research in animal biotechnology was recently established at the Beltsville Agricultural Research Center. It includes laboratories specifically designed for research in cloning and transgenic biology. It has its own self-standing laboratories and animal facilities for rodents and avian. ANSC faculty engaged in nuclear cloning, stem cell and transgenic biotechnology would use this facility to investigate genes of significance for the growth, development, and physiology of domestic animals.



## **2. Central Maryland Research and Education Center, Clarksville, Maryland**

This 925-acre dairy and horse research center, located ~25 miles from the campus, houses 200 head of Holstein dairy cattle, including 110 milking cows, 90 head of young stock, and 20 horses. ANSC faculty engaged in nutrition, reproduction, physiology, herd health, behavior and management research conduct their experiments at this facility.

## **3. Applied Poultry Research Laboratory, Upper Marlboro, Maryland**

This 202-acre facility is located approximately 20 miles from the campus. It is used for conducting research in nutrition, physiology, and behavior. There is another Poultry Behavior Research facility on the campus farm adjoining the Animal Sciences Center.

## **4. Wye Beef Cattle Research Center**

This 450-acre facility is located on Maryland's Eastern Shore near Queenstown. It has 250 Registered Beef Angus Cows plus young stock and bulls that are direct descendants of Wye Angus herd. The facility is used to support research associated with beef cow-calf management, pasture management, and growth physiology.

## **Overview of Research Areas**

### **Genetics and Cell Biology**

The primary thrust of the Genetics and Cell Biology Group is to illuminate the molecular and cellular basis of complex biological systems using a multi-organismal and multi-faceted approach. The group comprises faculty that span across multiple disciplines with research focuses in basic and translational research and with implications for animal health and diseases and the environment. Key problems being addressed by this group include the following:

- Nutrient-gene interactions that influence nutrient partitioning
- Cell biology and genetics of nutrient homeostasis
- Molecular basis for the maintenance of pluripotency and cell lineage determination
- Molecular dynamics of lipid secretion
- Genetics and endocrine regulation of growth and metabolism
- Statistical genomics, bioinformatics and gene regulatory networks
- Developmental biology, embryonic patterning, and cell migration
- Molecular mechanisms of protective memory in mucosal infections
- Interactions between nutrition and the immune system
- Selection theory and quantitative genetics

### **Reproduction and Development**

The Reproduction and Development faculty possess a wide range of scientific expertise that, in many instances, spans multiple core research areas. Through both basic and applied research, our faculty continues to make important contributions to the fields of animal agriculture and the biomedical sciences. Key questions being addressed by this group include the following:

- Etiology of implantation failure and early pregnancy loss through an understanding of placental development.
- Development of self-renewing, pluripotent cell lines.
- Reproductive physiology and cryobiology.
- Signaling pathways and gene expression regulating neural crest induction, migration and differentiation.
- Molecular, cellular and genetic regulation of animal growth and reproduction by the neuroendocrine system.
- Neuroendocrine and behavioral regulation of reproduction.
- Brain-pituitary-gonadal axis regulation of reproduction, including the development of sex-specific characteristics.

### **Nutrient Utilization and Metabolism**

The Nutrient Utilization and Metabolism faculty possess expertise in both basic and applied research approaches to systemically address important nutritional issues facing animal agriculture at the local, state and national levels. Key issues being addressed by this group include the following:

- Optimization of dietary energy, nitrogen and phosphorus use by ruminants and poultry to decrease impacts on the environment.
- Improve survival and growth of chicken embryos and post-hatch chicks.
- Develop mathematical models of whole-animal nutrient utilization for research investigation and to improve predictions of animal performance.
- Nutrient-gene interactions that affect milk composition.
- Reduce methane emissions by ruminants.
- Utilization of traditional and novel forages by horses and beef cattle.
- Establish best feeding practices for insectivorous birds.

### **Pathobiology and Infectious Diseases**

The major task for this pathogen-host interacting group is to decipher how hosts launch efficient immunity against infections, thus information obtained will be useful for the development of vaccine and control of infectious diseases. This group include faculty with expertise covering multiple disciplines in both basic and translational research. Key projects including the following:

- Regulation of inflammatory cytokines on memory CD8 T cell generation.
- Interaction of metabolic pathways with those of inflammatory cytokines in CD8 T cell activation.
- Regulation of CD8 T cell responses by cigarette smoking.
- CD8 T cell activation under malnutrition.
- Development of cross-protective vaccine against swine influenza.
- Epigenetic study of chicken response in Marek's disease virus infection.
- Dynamic mechanism of host-virus interaction.
- Epigenetics of CD4+ T cell and CD8+ T cell in response to virus infection.
- Beef quality and epigenetics.
- Computational epigenetics and statistical genomics in animal health.
- Construction of a novel vaccine of animal against the colonization of foodborne bacterial pathogens.
- Development of monoclonal antibody for quick detection and identification of foodborne pathogens.
- Control of foodborne bacterial colonization in animals using natural products and mechanism of antimicrobial activity of the components.
- Prevention of cross contamination in food and products in processing and preservation.

## Faculty

### Regular Faculty in the Department of Animal and Avian Sciences

**C. Roselina Angel** ▪ Email: [rangel@umd.edu](mailto:rangel@umd.edu) ▪ Phone: 301-405-8494 ▪ Research Interest: Avian Nutrition

**Debabrata Biswas** ▪ Email: [dbiswas@umd.edu](mailto:dbiswas@umd.edu) ▪ Phone: 301-405-3791 ▪ Research Interest: Food Borne Bacterial Infections and Safety

**Angela Black** ▪ Email: [ablack1@umd.edu](mailto:ablack1@umd.edu) ▪ Phone: 301-405-8970 ▪ Research Interest: Department Veterinarian

**Amy Burk** ▪ Email: [amyburk@umd.edu](mailto:amyburk@umd.edu) ▪ Phone: 301-405-8337 ▪ Research Interest: Equine Nutrition

**Rachel Dennis** ▪ Email: [rldennis@umd.edu](mailto:rldennis@umd.edu) ▪ Phone: 301-405-5923 ▪ Research Interest: Behavioral Neurophysiology

**Iqbal Hamza** ▪ Email: [hamza@umd.edu](mailto:hamza@umd.edu) ▪ Phone: 301-405-0649 ▪ Research Interest: Cell Biology and Genetics of Micronutrient Metabolism

**Younggeon Jin** ▪ Email: [ygin@umd.edu](mailto:ygin@umd.edu) ▪ Phone: 301-405-0372 ▪ Research Interest: Apical junctional complex in gastrointestinal homeostasis and disease

**Carol L. Keefer** ▪ Email: [ckeefer@umd.edu](mailto:ckeefer@umd.edu) ▪ Phone: 301-405-3933 ▪ Research Interest: Reproductive Biology and Embryology

**Byung-Eun Kim** ▪ Email: [bekim@umd.edu](mailto:bekim@umd.edu) ▪ Phone: 301-405-3977 ▪ Research Interest: Cellular and Molecular Nutrition/ Metal Metabolism

**Richard Kohn** ▪ Email: [rkohn@umd.edu](mailto:rkohn@umd.edu) ▪ Phone: 301-405-4583 ▪ Research Interest: Animal Nutrition Management

**Li Ma** ▪ Email: [lima@umd.edu](mailto:lima@umd.edu) ▪ Phone: 301-405-1389 ▪ Research Interest: Population Genetics and Mechanisms of Complex Diseases

**Robert Peters** ▪ Email: [bobp@umd.edu](mailto:bobp@umd.edu) ▪ Phone: 301-405-1374 ▪ Research Interest: Extension Dairy Specialist: Dairy Management

**Tom Porter** ▪ Email: [ansc-chair@umd.edu](mailto:ansc-chair@umd.edu) ▪ Phone: 301-405-1366 ▪ Research Interest: Molecular and Cellular Endocrinology of Animal Growth and Development

**Mohamed Salem** ▪ Email: mosalem@umd.edu ▪ Phone: 301-405-4243 ▪ Research Interest: Omics approaches to enhance muscle growth and aquaculture production

**Jiuzhou “John” Song** ▪ Email: songj88@umd.edu ▪ Phone: 301-405-5943 ▪ Research Interest: Statistical Genomics and Bioinformatics

**Nishanth E. Sunny** ▪ Email: nsunny@umd.edu ▪ Phone: (301) 405-1379 ▪ Research Interest: Nutritional Biochemistry and Metabolism

**Lisa Taneyhill** ▪ Email: ltaney@umd.edu ▪ Phone: 301-405-0597 ▪ Research Interest: Developmental Biology/Embryonic Patterning

**Bhanu Telugu** ▪ Email: btelugu@umd.edu ▪ Phone: 301-405-5295 ▪ Research Interest: Stem Cell Biology and Molecular Reproduction

**Zhengguo Xiao** ▪ Email: xiao0028@umd.edu ▪ Phone: 301-405-6258 ▪ Research Interest: Immunology

### **Regular Faculty in the Department of Veterinary Science, Virginia-Maryland Regional College of Veterinary Medicine**

**Utpal Pal** ▪ Email: upal@umd.edu ▪ Phone: 301-314-6830 ▪ Research Interest: Lyme Disease -- Host-pathogen interactions to understand the mechanisms by which arthropod-borne pathogens persist in nature.

**Siba Samal** ▪ Email: ssamal@umd.edu ▪ Phone: 301-314-6830 ▪ Research Interest: Molecular Biology and Pathogenesis of Two Economically Important Negative-strand RNA Viruses

**Nathaniel L. Tablante** ▪ Email: nlt@umd.edu ▪ Phone: 410-742-8788 ▪ Research Interest: Poultry Health Management, Biosecurity, and Disease Prevention

**Yanjin Zhang** ▪ Email: zhangyj@umd.edu ▪ Phone: 301-314-6596 ▪ Research Interest: Viral diseases and pathogenesis.

**Xiaoping Zhu** ▪ Email: xzhu1@umd.edu ▪ Phone: 301-314-6814 ▪ Research Interest: Molecular Immunology and Immune Regulations of Infectious Diseases

## **Adjunct Faculty**

See <https://ansc.umd.edu/people/adjunct-affiliated-faculty>

## Graduate Student Life at the University of Maryland, College Park

The following information has been assembled by the graduate students in the Program. It is designed to inform the students about resources in and around the College Park campus. Other special needs of the students in the Program are also described.

### Animal and Avian Sciences Graduate Student Association (AASGSA)

The Animal and Avian Sciences Graduate Student Association (AASGSA) is made up of current graduate students in the Animal and Avian Sciences Department as well as those in veterinary medicine and the MEES program. AASGSA is frequently asked to provide assistance with departmental events, such as a cookout for the department, for which funding was received from the Graduate Student Government. They also help out where needed on Ag Day, especially helping the Poultry Science Club (another club that many graduate students are a part of even if they are not doing research in the area of poultry). AASGSA also attempts to do social events as a way for students to relax, have a good time, and socialize with each other. If there are any questions about this association, please contact the Graduate Program Office.

### Parking

There are three kinds of parking on campus: parking with a permit, parking at a meter, and parking after listed hours. One of the very **FIRST** things a student should take care of when they get to Maryland is their parking permit. Waiting too long may result in a student having to walk pretty far just to get to the Animal Science building. Permits usually begin and expire at the end of August; however, the Department of Transportation Services (DOTS) starts accepting applications for permits around May-June. This is primarily a first-come first-served system, so the sooner the better. If students are parking "after hours," they should not assume that parking is unrestricted after 4:00 p.m.—**READ** signs carefully since the rules can differ by lot.

#### Register for a Parking Permit

Campus parking at the University of Maryland is managed by the [Department of Transportation Service \(DOTS\)](#). Students can purchase permits by the semester or the year through their office in Regents Parking Garage or via their website. For students who aren't interested in a regular parking pass, there are some limited meter, hourly parking, and special passes available.

Graduate students are considered "commuters" (there is no on-campus housing for grads) and thus are eligible for the least-expensive permit available. Graduate Assistants (or anyone receiving a UMD paycheck) can opt to pay for their parking pass in monthly installments using payroll deduction. For other questions about parking, satellite parking, carpool options and more, contact the Department of Transportation Services at 301-314-PARK.

#### Parking Lots

- 1) Lot 5: This is the parking garage and is centrally located. Students need to put their name into the campus lottery in order to qualify for this permit.
- 2) Lots 9 and 11: These are the two large lots behind the Animal Science building, but they will

quickly fill up when classes are in session. In that case, students could end up walking from overflow parking.

- 3) Lot 6: This is the other parking garage (not to be confused with Lot 5) located in the middle of the Comcast Center, the Recreation Center, and the Health and Human Performance building.
- 4) Lot 4: This is overflow parking where students park if there are no spaces left in their assigned lot or if DOTS runs out of permits for a requested lot.

#### **Metered Parking** (have variable maximum times)

- 1) Two spaces next to the Animal Science building near the dumpster and loading dock.
- 2) Two spaces behind the Animal Science building, where the animal wing loading dock and elevator are located. They are mixed in with the Lot CC parking.
- 3) Multiple spaces across the street from the Animal Science building and the farm, in the parking lot next to the Institute for Physical Science and Technology.
- 4) Multiple spaces near Lot 9.

#### **Visitor Lots** (more expensive than metered parking)

- 1) Paint Branch Drive Visitor Lot: located directly behind the Animal Science building; this is the closest visitor lot on campus.
- 2) Union Lane Garage: located between the Stamp Student Union and Cole Field House.
- 3) Stadium Drive Garage: located adjacent to Byrd Stadium and the Clarice Smith Center for Performing Arts.
- 4) Mowatt Lane Garage: located on the other side of campus near the Preinkert Field House.

#### **Carpooling**

Carpooling is encouraged and will reduce the price of the parking permit. The University will also help locate students within a specific zip code who wish to carpool. Unfortunately, carpooling is not very realistic for most graduate students. It might be a feasible option for those on a regular schedule, but graduate school may not be that predictable.

#### **Motor Vehicle Administration**

The Motor Vehicle Administration (MVA) has a full-service station in Beltsville. It is located at 11760 Baltimore Avenue (Route 1). It is always busy and has a poor response time. The best advice is to get there before it opens and plan to be there a while. Their hours are Monday-Friday from 8:30 a.m. to 4:30 p.m. for all services and Saturday from 8:30 a.m. to noon for Driver's License Services only. If you need to take the Driver's Road Test (you have never had a license in the U.S.), they are handled by appointment only. Call 888-212-4709 24 hours a day, 7 days a week to schedule an appointment. If you are trying to transfer your license to Maryland, you will need to bring personal identification as well as two forms of proof of residence (a list of what they accept is available on their website; they do not accept credit card bills). It will cost \$45 per license, this means if you have a class M (motorcycle license) or any other class, it will cost \$90 to transfer the license. Even though it is on the same card, they will charge twice because technically it is two licensures. One good thing about Maryland is that they do not have personal property tax on vehicles; they also do not do annual state inspections. However, they do have a rather expensive initial state inspection (around \$50) and emissions inspections once every other



year. Proof that the car has passed the state inspection will be needed before the title can be changed to Maryland. A letter will be mailed stating when the emissions inspection must be done, so students should make sure that MVA has their correct address. There is a location finder for emissions inspection stations on the MVA website. Transferring car title and tags to Maryland should be done within 30 days of residing in state. After that, a one-time titling tax based on a car's value will be charged. There is also a fee for titling and registration (a list of these is also available on their website). Please be aware that these times, amounts, and guidelines may change. The number to contact MVA is 800-950-1MVA, and their website is <http://mva.maryland.gov/>.

## Post Offices

The post offices closest to the University of Maryland include:

1. 1.0 mi N      **North College Park**, 301-345-8923, 9591 Baltimore Avenue, College Park, MD 20740
2. 1.3 mi S      **College Park Post Office**, 301-699-0258, 4815 Calvert Road, College Park, MD 20740
3. 2.1 mi SW     **Calvert DDC Station**, 301-209-8926, 6511 Baltimore Avenue, Hyattsville, MD 20782
4. 2.1 mi SW     **Hyattsville Main Office**, 301-209-8902, 6511 Baltimore Avenue, Hyattsville, MD 20782
5. 2.2 mi SW     **Riverdale Main Office**, 301-699-1253, 6411 Baltimore Avenue, Riverdale, MD 20737

Other places where stamps can be bought (besides supermarkets) include:

1. 0.0 mi E      **Chevy Chase Bank**, PO Box 170 Stamp Student Union, College Park, MD 20742
2. 0.3 mi W      **7-Eleven**, 301-474-7612, 8600 Baltimore Avenue, College Park, MD 20740
3. 0.3 mi W      **American Express**, 8600 Baltimore Avenue, College Park, MD 20740
4. 0.8 mi E      **Ahold Financial Services**, 6000 Greenbelt Road, Greenbelt, MD 20770
5. 0.8 mi E      **Chevy Chase Bank**, 6000 Greenbelt Road, Greenbelt, MD 20770

More information on post offices can be found at [www.usps.com](http://www.usps.com).

## **Banks and Insurance Agencies**

**Bank of America**, 7370 Baltimore Avenue, College Park, MD 20740, 301-454-8412

**BB&T**, 9658 Baltimore Avenue, College Park, MD 20740, 301-220-1122

**BB&T - ATM Location**, 8951 Edmonston Road, Greenbelt, MD, 301-982-4525

**BB&T - ATM Location**, 9658 Baltimore Avenue, College Park, MD 20740, 301-220-1122

**BB&T - Cherry Hill Beltsville**, 11428 Cherry Hill Road, Beltsville, MD, 301-595-7058

**BB&T – Greenbelt**, 8951 Edmonston Road, Greenbelt, MD, 301-982-4525

**Capital One Bank – Greenbelt**, 6107 Greenbelt Road, Greenbelt, MD, 301-345-2424

**Citizens Bank – Washington, D.C.**, 11<sup>th</sup> and G Streets, NW, Washington, D.C.

**Citizens National Bank – Beltsville**, Chestnut Hills Shopping Center, Beltsville, MD, 301-937-4520

**Commerce Bank**, 9658 Baltimore Avenue, College Park, MD 20740, 301-220-1122

**Kirk & Associates**, College Park, MD 20740, 301-345-0400

**Royal Mortgage**, College Park, MD 20740, 301-441-4700

**Smear, Stephen J. (State Farm)**, 7307 Baltimore Avenue, College Park, MD 20740, 301-345-6667

**Suntrust – Bowie ATM**, 15994 Annapolis Road, Bowie, MD, 301-982-2120

**Suntrust - Marlboro Crossroads ATM**, 5750 Southeast Crain Highway, Upper Marlboro, MD, 301-486-7120

**Suntrust – St. Charles ATM**, 10 Saint Patrick’s Drive, 301-982-7830

**Tai, Neville P. (State Farm)**, 10005 Rhode Island Ave, Suite 106, 301-474-0300

**University of Maryland at College Park – Capital One Bank**, 301-864-8722

## **Apartments**

The university does provide on-campus housing for graduate students in the Graduate Hills and Graduate Gardens apartment complexes; however, these cost more than apartments off campus. Information for on-campus housing can be found at <http://gsg.umd.edu/resources/housing>.

This site also provides information on a graduate housing co-op and a graduate housing needs assessment. A student would probably do much better on their own using the apartment-finding sites [www.campusrent.com](http://www.campusrent.com) or [www.apartmentfinder.com](http://www.apartmentfinder.com).

## **Emergency Services**

The University of Maryland website [www.inform.umd.edu/about/emergency](http://www.inform.umd.edu/about/emergency) provides information on a number of emergency services, including health, building repair (on-campus), police, and telephone service. The website for the University Health Center is [www.health.umd.edu](http://www.health.umd.edu).

Off-campus health services in Maryland are numerous and include:

- **Adventist HealthCare – [www.adventisthealthcare.com](http://www.adventisthealthcare.com)**  
Adventist HealthCare is a non-profit, fully integrated network of hospitals, home health care agencies, senior living services, urgent care centers, sleep disorders centers, wellness and prevention programs and other health care services.
- **Anne Arundel Health System – [www.aa-healthsystem.org](http://www.aa-healthsystem.org)**  
Descriptions and directory information about services provided by the Anne Arundel Medical Center are the focus of this site. The Medical Center is part of the Anne Arundel Health System.
- **Bon Secours Health System – [www.bshsi.com](http://www.bshsi.com)**  
Directory and guide to services available at Bon Secours Hospital, Marriottsville, MD.
- **Carroll County General Hospital – [www.ccggh.com](http://www.ccggh.com)**  
Directory and guide to services available at the Carroll County General Hospital, Westminster, MD.
- **Dimensions Healthcare System – [www.laurelregionalhospital.org](http://www.laurelregionalhospital.org)**  
Dimensions Healthcare System was formed in 1982 and is an integrated, not-for-profit healthcare system serving residents of Prince George’s County and the surrounding area.
- **Frederick Memorial Healthcare System – [www.fmh.org](http://www.fmh.org)**  
FMH is a healthcare system located in Frederick, Maryland.
- **Good Samaritan Hospital – [www.goodsam-md.org](http://www.goodsam-md.org)**  
Located in Baltimore, Maryland, the Good Samaritan, a 271-bed adult care community teaching hospital, provides comprehensive services.
- **Greater Baltimore Medical Center - GBMC – [www.gbmc.org](http://www.gbmc.org)**  
GBMC is located in Baltimore MD. This website provides directory and other introductory information about services available through the hospital.
- **Holy Cross Hospital – [www.holycrosshealth.org](http://www.holycrosshealth.org)**  
Located in Silver Spring, Maryland, the Holy Cross Health is part of Trinity Health. A health system comprising 47 hospitals and dozens of other healthcare organizations in seven states.
- **Hospice of the Chesapeake – [www.hospicechesapeake.org](http://www.hospicechesapeake.org)**  
Hospice of the Chesapeake provides medical, nursing, social work and spiritual and grief care to people with life-limiting illnesses and their loved ones.
- **Hospice of Prince George’s County – [www.hospicepg.org](http://www.hospicepg.org)**  
The mission is to provide medical, emotional, practical and spiritual support for the terminally ill, their families and caregivers. In addition, bereavement support and

counseling services are provided to the community.

- **Johns Hopkins Bayview Medical Center – [www.jhbmc.jhu.edu](http://www.jhbmc.jhu.edu)**  
The Johns Hopkins Bayview Medical Center, formerly the Francis Scott Key Medical Center, is located in Baltimore MD. This website provides directory and introductory information about the services it offers, including the Baltimore Regional Burn Center.
- **The Johns Hopkins Breast Center – [www.med.jhu.edu/breastcenter](http://www.med.jhu.edu/breastcenter)**  
Breast cancer treatment, research and patient support are the focus of this site. The JHU Breast Center is located in Baltimore, MD.
- **Johns Hopkins Medicine – [www.hopkinsmedicine.org](http://www.hopkinsmedicine.org)**  
The Johns Hopkins Medical Institutions are located in Baltimore MD. This site, also known as InfoNet, provides directory and introductory information about the services available from JHMI, as well as the School of Medicine, School of Hygiene, School of Nursing and Bayview Medical Center.
- **Kennedy-Krieger Institute – [www.kennedykrieger.org](http://www.kennedykrieger.org)**  
KKI provides services to children, adolescents, and young adults with disorders of the brain, including developmental disabilities and injuries. Directory information about their services is listed on this website.
- **Kernan Hospital – [www.umd.edu/kernan](http://www.umd.edu/kernan)**  
Kernan Hospital is a rehabilitation facility located in Baltimore MD. It is part of the University of Maryland Medical System. The site provides directory and introductory information about the services available.
- **Laurel Regional Hospital – [www.laurelregionalhospital.org/lrh.shtml](http://www.laurelregionalhospital.org/lrh.shtml)**  
Includes directory and services information for the Laurel Regional Hospital, located in Laurel MD, Prince George’s County. This hospital is part of the Dimensions Healthcare System.
- **Levindale Hebrew Geriatric Center and Hospital – [www.levindale.com](http://www.levindale.com)**  
Levindale is part of the Sinai Health Care System. Information about Levindale’s services for the elderly is described here.
- **Mercy Medical Center – [www.mdmercy.com](http://www.mdmercy.com)**  
Mercy Medical Center is located in Baltimore MD. It provides comprehensive health care. Mercy is covering many different specialized areas including: Women’s Health & Medicine Center, Eye and Cosmetic Surgery, The Vascular Center, The Neurosurgery Program.
- **Mid-Atlantic Non-Profit Health and Housing Association (MANPHA) – [www.manpha.org](http://www.manpha.org)**  
This association includes providers who support retirement homes, assisted living, nursing homes, and senior housing. Includes links to consumer information.
- **Montgomery Hospice Society – [www.montgomeryhospice.org](http://www.montgomeryhospice.org)**  
This site provides information about hospice care, supportive care, bereavement services, AIDS services, volunteer opportunities, making a referral, and employment opportunities.
- **Mt. Washington Pediatric Hospital – [www.mwph.org](http://www.mwph.org)**  
Mt. Washington Pediatric Hospital is located in Baltimore MD. This website includes directory and introductory information about the services offered.
- **National Institutes of Health – [www.nih.gov](http://www.nih.gov)**  
NIH, part of the U.S. Public Health Service, is a biomedical research center located in

Bethesda, MD. This site provides links to specific institutes (National Institute on Aging, National Library of Medicine) and to health information sources such as CancerNet.

- **Peninsula Regional Medical Center – [www.peninsula.org](http://www.peninsula.org)**  
Peninsula Regional offers specialty services not available elsewhere on the Eastern Shore. For 100 years, Peninsula Regional has been saving thousands of lives and enhancing the quality of life for tens of thousands of others.
- **Potomac Center – [ddamaryland.org/potomac](http://ddamaryland.org/potomac)**  
Potomac Center is a residential center serving people with developmental disabilities. Located in the western sector of Hagerstown, Maryland.
- **Prince George’s Hospital Center – [www.princegeorghospital.org/pghc.shtml](http://www.princegeorghospital.org/pghc.shtml)**  
Includes directory and services information for the Prince George’s Hospital Center, which is located in Cheverly MD, Prince George’s County. This hospital is part of the Dimensions Healthcare System.
- **St. Agnes HealthCare - SAHC – [www.stagnes.org](http://www.stagnes.org)**  
St. Agnes HealthCare is a hospital located in Baltimore MD, with additional facilities in Elkridge, Catonsville, Ellicott City, and Glen Burnie. Special programs include Women’s Health and Early Heart Attack Care.
- **St. Joseph Medical Center – [www.sjmcmd.org](http://www.sjmcmd.org)**  
Directory and services information are included. The hospital is located in Towson MD.
- **Sheppard Pratt Health System – [www.sheppardpratt.org](http://www.sheppardpratt.org)**  
Sheppard Pratt provides services in the greater Baltimore area for behavioral health, mental illness and addictions. This website provides a comprehensive directory to all the services offered and their locations.
- **Shore Health System – [shorehealth.org](http://shorehealth.org)**  
The Shore Health System includes the Memorial Hospital at Easton and the Dorchester General Hospital, both located on Maryland’s Eastern Shore. This site offers a directory of services, medical staff and organizational information about the recently developed health system.
- **Sinai Health System – [www.sinai-balt.com](http://www.sinai-balt.com)**  
Sinai Health System, located in Baltimore MD, consists of the Sinai Hospital and the Levindale Hebrew Geriatric Center and Hospital. This website includes directory and introductory information about the services, staff and subsidiary organizations.
- **Southern Maryland Hospital – [www.ohwy.com/md/m/md210054.htm](http://www.ohwy.com/md/m/md210054.htm)**  
Directory of services provided by this hospital located in Clinton, Maryland.
- **Spring Grove Hospital Center – [www.springgrove.com](http://www.springgrove.com)**  
Information about the services available from Spring Grove Hospital Center, a psychiatric hospital located in Catonsville, MD.
- **Suburban Hospital Healthcare System – [home.suburbanhospital.org/suburban](http://home.suburbanhospital.org/suburban)**  
Directory and guide to services available at Suburban Hospital, Bethesda, MD.
- **Union Hospital – [www.uhcc.com](http://www.uhcc.com)**  
Union Hospital, located in Elkton, Maryland, serves residents and businesses in Cecil County, Maryland, Western New Castle County Delaware and Southern Chester County, Pennsylvania.
- **University of Maryland Medical Center – [www.umm.edu/center](http://www.umm.edu/center)**  
The University of Maryland Medical Center, also known as University Hospital, is located in Baltimore. This website provides directory and other introductory information

about the services available.

- **University of Maryland Medical System – [www.umm.edu/system](http://www.umm.edu/system)**  
The University of Maryland Medical System (UMMS) is a private, not-for-profit hospital system with 1,652 licensed beds and more than 9,000 employees. It provides a complete range of inpatient and outpatient services to more than 300,000 patients a year.
- **University of Maryland’s Women’s Health – [www.umm.edu/womenscenter](http://www.umm.edu/womenscenter)**  
This University of Maryland site brings together directory, services and research information about several UM initiatives related to women’s health: UM’s Center of Excellence in Women’s Health; UM’s Women’s Health Research Group; UM’s Women’s Health Links; and UM’s Maryland Women’s Center.
- **University Specialty Hospital – [www.umm.edu/ush](http://www.umm.edu/ush)**  
University Specialty Hospital—formerly known as Deaton Specialty Hospital—serves a unique group of patients that require some of the most complex, interdisciplinary medical care available.
- **Warren Grant Magnuson Clinical Center, National Institutes of Health – [www.cc.nih.gov](http://www.cc.nih.gov)**  
Directory and service information about the Clinical Center at the National Institutes of Health, Bethesda, MD.
- **Western Maryland Health System (WMHS) – [www.wmhs.com](http://www.wmhs.com)**  
WMHS provides health care services in Allegany County, including Memorial Hospital, Sacred Heart Hospital and the St. Vincent de Paul Nursing Center in Cumberland.
- **Wilmer Eye Institute – [www.wilmer.jhu.edu](http://www.wilmer.jhu.edu)**  
The Wilmer Eye Institute of Johns Hopkins University is located in Baltimore, MD. This website provides directory information about the Institute, plus an excellent set of links to other eye treatment and research institutions.

## Libraries

Information concerning the University of Maryland’s library can be found at [www.lib.umd.edu](http://www.lib.umd.edu); however, this one is not the only game in town. Other biology/science/animal science related libraries in the area include the following:

1. National Agricultural Library - [www.nal.usda.gov](http://www.nal.usda.gov)
2. Patuxent Wildlife Research Center - [www.pwrc.usgs.gov/library](http://www.pwrc.usgs.gov/library)
3. Public libraries - [www.sailor.lib.md.us/md\\_topics/lib/\\_pub.html](http://www.sailor.lib.md.us/md_topics/lib/_pub.html)
4. Johns Hopkins Library - [webapps.jhu.edu/jhuniverse/libraries](http://webapps.jhu.edu/jhuniverse/libraries)
5. Library of Congress - [www.loc.gov](http://www.loc.gov)
6. National Library of Medicine - [www.nlm.nih.gov](http://www.nlm.nih.gov)
7. National Oceanic and Atmospheric Administration Central Library - [www.lib.noaa.gov](http://www.lib.noaa.gov)
8. College and university libraries - [www.sailor.lib.md.us/md\\_topics/lib/\\_col.html](http://www.sailor.lib.md.us/md_topics/lib/_col.html)

## Supermarkets

There is a “College Park Downtown Guide” that will help in locating the closest supermarket.

Brochures are available at the College Park Municipal Building, 4500 Knox Road, 301-864-8666.

University Blvd. (Route 193) has several large supermarkets (such as Shoppers Food Warehouse, Giant, Safeway, etc.) and numerous small international food markets. Directions can be found at [www.mapquest.com](http://www.mapquest.com). For those without cars, there are Metrobuses and campus shuttles that will run to plazas, one detailed below.

### **Beltway Plaza**

Beltway Plaza (located on Greenbelt Road about two miles northeast of campus) offers movie theaters, a Giant supermarket, a Target store, specialty shops, and restaurants. Beltway Plaza can be reached by taking the UM Shuttle to Greenbelt or Springhill Lake and getting off near Giant.

Other shopping centers include Prince George's Plaza, Wheaton Plaza, Montgomery Mall, White Flint Mall, and Georgetown Park Mall, all accessible by bus and Metro.

Current sales tax on most goods is 5% in Maryland, 4.5% in Virginia, and 5.75% in D.C.

### **International Food Markets**

**Asian Village Supermarket**, 2101 University Blvd., Hyattsville, 301-422-2511.

**Casa Viega Supermarket**, Flower Avenue, Silver Spring, 301-587-7747.

**Korean Korner**, 12207 Viers Mill Road, Wheaton, 301-933-2000.

**Jin Mi** (Korean, Japanese), 10800 Rhode Island Avenue, Beltsville, 301-937-7171.

**Middle East Market**, 7006 Carroll Avenue, Takoma Park, 301-270-5154.

**Thomas Market** (Greek, Armenian, Arabic), 2650 University Blvd., Wheaton, 301-942-0839.

**Thai Market**, 902 Thayer Avenue, Silver Spring, 301-495-2779.

**Silver Spring Market** (Hispanic foods), 1525 University Blvd., Wheaton, 301-439-8033.

For more listings of grocery stores, look in the Yellow Pages under "Grocery"

## **Basketball/Football Tickets**

To get tickets to home basketball and football games, go to [www.tickets.umd.edu](http://www.tickets.umd.edu) and click on 'SIGN IN'. Click on 'How to sign in for the first time' and enter the appropriate information. A student can request one student ticket for themselves for every home game. The more games a student goes to, the more loyalty points they can acquire. This is especially beneficial for attending a bowl game or the NCAA National Championships (Final Four). Tickets may typically be requested a week before the game is scheduled. Once a student has requested a ticket, they will receive an email indicating that they have been selected to receive that ticket. The student then has two days to claim the ticket online. Students should print the ticket and take that printed ticket as well as their student ID to the game to gain admission.

For football games, students are also currently allowed to purchase student guest tickets for \$15 each if extra tickets are available. Simply print these tickets as well and they will be scanned at the Student and Student Guest Gate on the north side of Byrd Stadium. Any extra information can be obtained at the above website.

## **Local Restaurants**

The University of Maryland website has a list of local restaurants at [www.inform.umd.edu/campusinfo/departments/guest/visitor/localdining.html](http://www.inform.umd.edu/campusinfo/departments/guest/visitor/localdining.html). Since this is an older list, the following are some newer local restaurants that are not included:

## **Accessing Tuition Remission Online**

Go to [www.ares.umd.edu](http://www.ares.umd.edu)

Login using the same PIN as Testudo

Click on Electronic Forms (on left column)

Click on Access My Forms (on left column)

Click on New Form (left hand corner)

Click on Tuition Remission Request

Click on Send To and enter Sheryl Grey ([sgrey@umd.edu](mailto:sgrey@umd.edu)) as addressee

Fill in form and then send to Sheryl Grey

## **Campus Recreation Services**

The fees a student pays each semester allows them full access to the Campus Recreation Services. Especially nice is the Campus Recreation Center (CRC) located on the Northwest Quad of campus near the Animal Science building. The Department of Campus Recreation Services (CRS) was established to provide varied programs and services that contribute to the health and well being of the University of Maryland community. CRS has everything a student needs to stay



fit, including state-of-the-art facilities and programs. Try a fitness class, learn to swim, get motivated with a personal training session, take a swim at the indoor pool, or grab some friends and try out the climbing wall. Students can work out at CRC, Ritchie Coliseum, or the Health and Human Performance (HHP) building. There are weight rooms, fitness centers, gymnasiums, martial arts rooms, pools, saunas, locker rooms, and much more. Go to [www.crs.umd.edu](http://www.crs.umd.edu) to find hours of operation, facility amenities, schedule of events, and more. The CRS member services number is 301-405-PLAY.

## Transportation Services

Getting to and around campus is quite easy. The University of Maryland Department of Transportation Services ([www.transportation.umd.edu](http://www.transportation.umd.edu)) operates transit commuter service connecting most places on campus and the surrounding area. This service is free for students, faculty, and staff. To ensure that only students, faculty, and staff ride Shuttle-UM buses, all passengers are required to show a valid University of Maryland, College Park or University of Maryland, University College identification (IDs). IDs are required for all routes except evening security routes, College Park Metro, and North and South Intra-Campus Loops. If students need to go further than the surrounding area, they can catch a Metrobus on most public streets or connect with the Metrorail system by taking a Shuttle-UM bus to one of the stations.

The Washington Metropolitan Area Transit Authority (WMATA) operates the Metrorail subway system and the Metrobus system. The Metrorail system (Metro) consists of 83 stations and 103 miles of track that extend to suburban Maryland and northern Virginia, with locations at or near almost every sightseeing attraction. There are five lines in operation—Red, Blue, Orange, Yellow, and Green—with extensions planned for the future. The lines connect at several points, making transfers easy. Metro stations are indicated by discreet brown columns bearing the station's name and topped by the letter M. Below the M is a colored stripe or stripes indicating the line or lines that stop there. When entering a Metro station for the first time, go to the kiosk and ask the station manager for a free "Metro System Pocket Guide." It contains a map of the system, explains how it works, and lists the closest Metro stops to points of interest. The station manager can also answer questions about routing or purchasing farecards.

To enter or exit a Metro station, you need a computerized farecard, available at vending machines near the entrance. The minimum fare to enter the system is \$1.20, which pays for rides to and from any point within seven miles of boarding during nonpeak hours; during peak hours (Monday-Friday from 7:00-10:00 a.m. and 3:00-7:00 p.m.), \$1.20 is good for only three miles. The machines take nickels, dimes, quarters, and bills from \$1 to \$20; they can return up to \$4.95 in change (coins only). Riders who take the subway regularly will want to get a SmarTrip card from Metro for \$5. This card works like a debit card and can be scanned quickly when entering or leaving stations. Any amount of money can be put on a SmarTrip card, which eliminates the need to constantly purchase farecards. Plus, money cannot be reimbursed for lost farecards, but the value of a lost SmarTrip card will be credited by Metro.

While the Metrorail system is fairly simple, the Metrobus system is considerably more complex. Buses operate on all major D.C. arteries as well as in the Virginia and Maryland suburbs and are

indicated by red, white, and blue signs. However, the signs indicate only what buses pull into a given stop, not where they go. Furthermore, the bus schedules posted at bus stops are often out of date and usually can't be relied on. Instead, for routing information call WMATA at 202-637-7000. Calls are taken Monday through Friday from 6:00 a.m. to 10:30 p.m. and on weekends and holidays from 8:00 a.m. to 10:30 p.m. This is the same number to call to request a free map and time schedule, get information about parking in Metrobus fringe lots, and find locations and hours of places where bus tokens can be purchased. Also visit their website at **[www.wmata.com](http://www.wmata.com)**. Base fare is \$1.20; bus transfers are free and valid for two hours from boarding. Bus drivers are not equipped to make change, so be sure to carry exact change or tokens.

## **Health Care and Insurance**

The University Health Center (UHC) is located on Campus Drive across from the Stamp Student Union. It offers a wide variety of services to all registered students, including urgent care, a walk-in clinic, x-ray and laboratory services, a pharmacy, an allergy clinic, HIV testing, international travel clinic, physical therapy, women's health services, orthopedics, immunizations, health education, massage therapy, acupuncture, substance abuse programs and counseling, and mental health services. The UHC is staffed by physicians, physician assistants, and registered nurse practitioners. Check out [www.health.umd.edu](http://www.health.umd.edu) for more information and hours.

Students are strongly encouraged to have a health insurance plan while studying at UMD for needs that cannot be met by the UHC, such as serious illness or injury. Graduate assistants are provided health insurance through the university employee health program. For students without an assistantship, United Health Care Company provides health insurance at discounted rates for UMD students, their spouses and children. Students with United Health Care insurance can visit the UHC. Enrollment takes place at the beginning of each term or within 30 days of being removed from another policy. For further information and to enroll, check out United Health Care's website at [www.hillchesson.com](http://www.hillchesson.com).

## **Malls**

The website [www.ersys.com/usa/11/1150000/mall.htm](http://www.ersys.com/usa/11/1150000/mall.htm) ranks malls within 40 miles of D.C. on a four-star basis and gives a listing of common stores available at each mall. For the Baltimore area, the website is [www.ersys.com/usa/24/2404000/mall.htm](http://www.ersys.com/usa/24/2404000/mall.htm).

### **Arundel Mills Mall**

For nearby "outlet" shopping and specialty stores plus weekend entertainment.

Location: 7000 Arundel Mills Circle, Hanover, Maryland 21076

Directions: From I-95 take Route 100 E. to Exit 10A, Arundel Mills Blvd. From Rt. 295 (Baltimore-Washington Parkway), take Arundel Mills Blvd.

Hours of Operation: Monday-Saturday 10:00 a.m. - 9:30 p.m., Sunday 11:00 a.m. - 7:00 p.m.

[www.arundelmillsmall.com](http://www.arundelmillsmall.com)

### **Montgomery Mall**

7101 Democracy Blvd., Bethesda, Maryland 20817, 301-469-6000.

### **White Flint Mall**

11301 Rockville Pike, North Bethesda, Maryland 20895-1021, 301-468-5777

Directions from Baltimore: Take I-95 South to I-495 West (toward Silver Spring). Take Exit 34 (Rockville/Bethesda). Exit 34 merges into Rockville Pike/Route 355 (headed North).

White Flint is approximately 1-1/2 miles on the right.

Directions from Washington: Take Wisconsin Avenue North. It becomes Rockville Pike. White Flint is approximately 1-1/2 miles after you cross under-I-495 beltway on Rockville Pike.  
[www.shopwhiteflint.com](http://www.shopwhiteflint.com)

## **Movie Theaters**

**AMC Academy 6** (6 screens)

**AMC Academy 8** (8 screens)

Beltway Plaza on Greenbelt Road, Center Court, Greenbelt, MD 20770, 703-998-4AMC,  
[www.amctheatres.com](http://www.amctheatres.com)

\*Handicapped Accessible, Hearing Impaired

Notes: Don't be confused—these two theaters are actually both located in the Beltway Plaza shopping center (same place as Giant on Greenbelt Rd.) but have separate theater entrances. They often have different movie listings, so be sure to know which theater to go to. This isn't a great area to be walking around alone at night, so traveling in groups for evening shows is recommended. During the day (before 6:00 p.m.) they offer "twilight matinee" prices, which are a real bargain and easy to make after work!

**P & G Old Greenbelt** (1 screen)

129 Centerway, Greenbelt, MD 20770, 301-474-9744, [www.pgtheatres.com](http://www.pgtheatres.com)

\*Handicapped Accessible, Hearing Impaired

Notes: This old theater is an historic landmark. A blast from the past, it has real character, but don't expect surround sound and stadium seating! It plays mainly independent films and has limited showings, but go in the afternoon to catch matinee prices.

**Loews Centerpark** (8 screens)

4001 Powder Mill Road, Beltsville, MD 20705, 301-937-0742

\*Handicapped Accessible, Hearing Impaired

Notes: This theater is relatively close to the University. Traveling on I-95, it's right at the exit for Route 212/Powder Mill Rd. It's one of the nicer theaters close to campus. Matinee prices are available before 5:00 p.m.

**AMC City Place 10** (10 screens)

Colesville Road at Fenton Street, Silver Spring, MD 20910, 703-998-4AMC,  
[www.amctheatres.com](http://www.amctheatres.com)

\*Handicapped Accessible, Hearing Impaired

Notes: Colesville Road is the same as Route 29, so this theater is right down the street from the Silver Spring Metro Station.

**AFI Silver Theater Cultural Center** (1 theater)

8633 Colesville Road, Silver Spring, MD 20910, 301-495-6700, [www.afi.com/silver/theatre](http://www.afi.com/silver/theatre)

Notes: This theater looks great from the outside—old style. It often shows older movies.

**AMC Mazza Gallerie (7 screens)**

5300 Wisconsin Avenue, NW, Washington, DC 20015, 202-537-9553, [www.amctheatres.com](http://www.amctheatres.com)

\*Handicapped Accessible, Hearing Impaired

Notes: This theater has all the modern conveniences: stadium seating, large screens, digital THX sound. The “Club Cinema” is restricted to adults 21 and older and will serve alcohol and beer during the movie. It is accessible by Metro (Friendship Heights) and offers matinee prices before 6:00 p.m.

**American City Movie Diner (1 screen)**

5532 Connecticut Avenue, NW, Washington, DC 20015, 202-244-1949,

[members.aol.com/moviediner](http://members.aol.com/moviediner)

Notes: This diner/movie theater offers limited diner cuisine, with the added bonus of being able to watch a movie on their outdoor patio (heated in winter). Also accessible by Metro (Friendship Heights).

**CO White Flint 5 (5 screens)**

White Flint Mall, 11301 Rockville Pike, Kensington, MD 20895, 202-333-FILM 785

\*Handicapped Accessible

Notes: Matinee prices before 6:00 p.m. White Flint Mall is also home to Dave and Busters.

**Loews Wheaton Plaza (12 screens)**

Wheaton Plaza, Wheaton, MD 20902, 301-949-9200

Notes: Matinee prices before 6:00 p.m.

**UA Snowden Square Stadium 14 (14 screens)**

Snowden Square Shopping Center, 9161 Commerce Center Drive, Columbia, MD 21046, 800-326-3264 570

\*Handicapped Accessible, Hearing Impaired

Notes: Offers stadium seating and matinee prices before 5:00 p.m.

**Muvico Egyptian 24 (24 screens)**

7000 Arundel Mills Circle, C-1, Hanover, MD 21076, 443-755-8992, [www.muvico.com](http://www.muvico.com)

\*Handicapped Accessible, Hearing Impaired

Notes: Offers stadium seating and matinee prices before 6:00 p.m. But students should bring their IDs, because student prices apply even for evening shows. This theater is part of the Arundel Mills Mall, which is also home to Gillian’s (similar to Dave and Buster’s).

**Regal Rockville Center 13 (13 screens)**

199 East H. E. Montgomery Avenue, Rockville, MD 20850, 800-326-3264 248

\*Handicapped Accessible, Hearing Impaired

Notes: Offers matinee prices before 6:00 p.m.

**UA Bethesda (10 screens)**

7272 Wisconsin Avenue, Bethesda, MD 20814, 800-326-3264 569

\*Handicapped Accessible, Hearing Impaired

Notes: Offers matinee prices before 6:00 p.m.

Some Good Links:

**[www.fandango.com](http://www.fandango.com)** (for advanced ticket purchase and movie times)

**[www.movietickets.com](http://www.movietickets.com)** (for advanced ticket purchase and movie times)

**[www.thehoya.com/eg/movies/movietheaters.cfm](http://www.thehoya.com/eg/movies/movietheaters.cfm)** (describes some local theaters)

**[movies.yahoo.com](http://movies.yahoo.com)** (for movie times and listings)

# **Appendix A**

## **Forms**

## Timeline of Paperwork and Forms

<b>By the end of the 1<sup>st</sup> semester:</b>
<ul style="list-style-type: none"> <li>• Submit an Advisory Chair and Committee Members Form</li> <li>• If one of your committee members is not a current member of our graduate faculty you will need to submit a Nomination to the Graduate Faculty Form and info form</li> </ul>
<b>By the end of the 2<sup>nd</sup> semester:</b>
<ul style="list-style-type: none"> <li>• Plan of Study</li> <li>• MS Research Proposal and Coversheet Form</li> </ul>
<b>By the end of the 3<sup>rd</sup> semester:</b>
<ul style="list-style-type: none"> <li>• PhD Research Proposal and Coversheet Form</li> </ul>
<b>After Every Advisory Committee Meeting:</b>
<ul style="list-style-type: none"> <li>• The committee must submit a Report of Advisory Committee Meeting</li> </ul>
<b>Mid-April, Annually:</b>
<ul style="list-style-type: none"> <li>• Every year students will be evaluated by the Graduate Education Committee. They will need to submit the following forms by mid-April: <ul style="list-style-type: none"> <li>○ CV</li> <li>○ Unofficial Transcript</li> <li>○ Student's Progress Report</li> <li>○ Advisor's Report</li> </ul> </li> </ul>
<b>May/June, Annually:</b>
<ul style="list-style-type: none"> <li>• The GEC will meet with each student and send them a report detailing their evaluation</li> <li>• Every student must present at the ANSC Annual Symposium</li> </ul>
<b>Preliminaries: (PhD only)</b>
<ul style="list-style-type: none"> <li>• Before the prelims students must meet with their committee and complete a GOA Expectations Form</li> <li>• After the prelims their committee must submit the GOA Assessment Forms</li> <li>• If successful the student must submit an Application for Admission to Candidacy Form</li> </ul>
<b>Defense:</b>
<ul style="list-style-type: none"> <li>• At least six weeks before the oral exam a Nomination of Thesis or Dissertation Committee Form must be submitted</li> <li>• After the defense, the committee must submit the GOA Assessment Forms</li> </ul>
<b>Before Graduation:</b>
<ul style="list-style-type: none"> <li>• Apply for Graduation</li> <li>• Submit Teaching Requirement Form (PhD only)</li> <li>• Masters Students must submit an Approved Program Form (MS only)</li> <li>• When your thesis or dissertation is finished you must complete a Electronic Publication Form</li> <li>• After the dissertation is published, students must take the required surveys (PhD only)</li> </ul>

All forms can be submitted to the Graduate Office, 1415A Animal Sciences Center. Other forms can be found here:

[http://www.gradschool.umd.edu/current\\_students/general\\_forms\\_for\\_graduate\\_students.html](http://www.gradschool.umd.edu/current_students/general_forms_for_graduate_students.html)