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Biomedical Sciences Graduate Program Handbook

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1. Introduction

The Biomedical Sciences Graduate Program Guidelines Handbook contains the rules, regulations and policies of the program. It is a repository of information for incoming and current graduate students. The Biomedical Sciences Graduate Program (BSGP) operates under the auspices of the Oklahoma State University Graduate College, which sets minimum standards. The BSGP may have policies and regulations that are more strict than those of the Graduate College.

Program Overview

The Biomedical Sciences Graduate Program at Oklahoma State University Center for Health Sciences (OSU-CHS) provides students with a foundation in biomedical science that is broadly applicable to many disciplines including anatomy, biochemistry, cell biology, microbiology, pathology, pharmacology, physiology, and vertebrate paleontology. M.S., Ph.D., D.O./M.S. and D.O./Ph.D. degree programs in Biomedical Sciences are offered.

The BSGP began offering Doctor of Philosophy and combined Doctor of Osteopathy/ Doctor of Philosophy degrees in 1997. The Master of Science degree and a combined D.O./M.S. degree were added later.

The BSGP is administered by the Biomedical Sciences Graduate Committee (BSGC). This committee is made up of faculty representatives from the Biomedical Sciences disciplines and has ex-officio members that include the BSGP Director and the Director of Graduate Studies.

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2. Admission Requirements, Application Procedure & Application Materials.

2.1 Minimum admission requirements: Listed below are the minimum admission requirements for the M.S., Ph.D., D.O./M.S. and D.O./Ph.D. degree programs. Under special circumstances, a student may be accepted into a program without meeting all of these requirements.

2.1.1 All degree programs: Prospective students must have earned a baccalaureate degree and completed coursework in general biology, general chemistry, organic chemistry and physics. Applicants are expected to have an undergraduate grade point average (GPA) of at least 3.0 on a 4.0 scale.

2.1.2 Additional requirements for M.S. and Ph.D. degree programs: Applicants to either the M.S. or Ph.D. program are expected to have earned a score of at least 150 for verbal and at least 150 for quantitative on the Graduate Record Examination (GRE), with a writing score of at least 4.

2.1.3 Additional requirements for D.O./M.S. degree program: Applicants to the D.O./M.S. program are expected to have earned a minimum score of 492 on the Medical College Admissions Test (MCAT). Taking the GRE is not required, but is desirable.

2.1.4 Additional requirements for D.O./Ph.D. degree program: Applicants to the D.O./Ph.D. program are not required to submit a GRE score if they have earned a score of 500 or greater on the MCAT. Applicants with a GRE score at least 160 for verbal and at least 160 for quantitative and an MCAT score greater than or equal to 492 also will be considered.

2.2 International student admission: International students for whom English is a second language are required to have earned a Test of English as a Foreign Language (TOEFL) score of at least 550 (213 computer based or 79 internet based) or to have earned an International English Language Test System (IELTS) minimum overall band score of 6.5. Either examination must have been taken within the last two years. The student must have an interview, via digital means such as conference call or Skype, with the BSGC to ensure their command of English is sufficient.

2.3 Application procedure: Initial inquiries and correspondence may be sent to the OSU-CHS Coordinator of Graduate Admissions, Oklahoma State University Center for Health Sciences, Office of Student Affairs, 1111 West 17th Street, Tulsa, Oklahoma 74107-1898.

2.4 Application materials for the Biomedical Sciences Graduate Program: Applicants submit their applications online. The application is found on the web at the OSU Graduate College (<https://www.applyweb.com/apply/oksugrad/>).

2.4.1 D.O./M.S. degree program: Applicants to the D.O./M.S. degree program typically apply to the Biomedical Sciences M.S. degree program and College of Osteopathic Medicine simultaneously as follows:

- an AACOMAS application submitted online (www.aacom.org). The deadline for submitting this application is February 1 and the application fee is \$155.00
- Apply to Biomedical Sciences M.S. program as described above (section 2).

A mandatory personal interview with the D.O. Applicant Interview Committee will be conducted on-campus, *by invitation only*.

The deadline for submitting all application materials is March 1.

2.4.2 D.O./Ph.D. degree program: Applicants to the D.O./Ph.D. degree program typically apply to the Biomedical Sciences Ph.D. degree program and College of Osteopathic Medicine simultaneously as follows:

- an AACOMAS application submitted online (www.aacom.org). The deadline for submitting this application is February 1 and the application fee is \$155.00
- Apply to Biomedical Sciences Ph.D. program as described above (section 2).

The deadline for submitting all application materials is March 1.

2.5 Application review process: All applications to the Biomedical Sciences graduate program will be reviewed as described below. The D.O. portion of the application for D.O./M.S. and D.O./Ph.D. degree programs will be evaluated in a separate review process (not described below) by the Student Selection Committee of OSU-College of Osteopathic Medicine.

1. The Coordinator of Graduate Admissions forwards all applications to the Director of the Biomedical Sciences Graduate Program.
2. The Director of the Biomedical Sciences Graduate Program distributes copies of each application to the members of the Biomedical Sciences Graduate Program (BSGC) and also makes the applications available to Biomedical Sciences graduate faculty for their review.
3. The BSGC formally reviews applications at a regular or special meeting of the BSGC. During this meeting, assessment of applications by other Biomedical Sciences graduate faculty will be considered. The BSGC will recommend acceptance or rejection of each applicant for admission into the Biomedical Sciences Graduate Program to the Director of the Biomedical Sciences Graduate Program, who will, in turn, inform the Vice Provost of Graduate Programs.
4. Applicants accepted into the Biomedical Sciences Graduate Program will receive an acceptance letter from the Coordinator of Graduate Admissions signed by the Dean of the Graduate College and the Provost of OSU-CHS.

3. Financial Aid and Health Insurance:

3.1 Tuition Waivers: Tuition waivers are granted for Ph.D. students enrolled in the Biomedical Sciences Graduate Program. Tuition waiver forms can be obtained from <http://gradcollege.okstate.edu/FormsPage>.

Please note that even though tuition may be waived, a student is still responsible for fees associated with each graduate course. At OSU, fees can range from 30 – 50% of the course tuition. This can be a substantial financial commitment.

3.2 Stipends at OSU-CHS: There are three categories of stipends available for students in the Biomedical Sciences Graduate Program: externally-funded Research Assistantships and Fellowships, Anatomy Teaching Assistantships (TA) and Graduate Research Assistantships (GRA).

3.2.1 Externally Funded Research Assistantships and Fellowships: The student and advisor are responsible for independently applying for the externally-funded Research Assistantships, Fellowships, and similar awards. Students whose external funding expires may apply for TAs or GRAs. These students will be placed in the pool of students renewing GRA stipends.

3.2.2 Anatomy Teaching Assistantships: The Anatomy Course TAs are selected and appointed by the Chair of the Department of Anatomy and Cell Biology. To apply, contact the Chair of this department. When an Anatomy TA comes off this stipend that student is placed in the pool of students, renewing GRA stipends. If their academic record and progress in program are satisfactory, they will likely receive a GRA. The maximum term of OSU-CHS support is a total of 5 years, which includes the time as Anatomy TA.

3.2.3 Graduate Research Assistantships: Applications for GRA stipends are reviewed by the BSGC, which makes recommendations to the Director of the Biomedical Sciences Graduate Program, who makes the final decision. GRA support for graduate students is limited and available on an annual competitive basis. Stipends are awarded for 12 months, from July 1 through June 30. Stipends may be awarded for full (\$21,180) or partial amounts. Requirements for receiving stipends are listed below. The graduate student must complete, sign and submit the stipend application form to the Director of the Biomedical Sciences Graduate Program (Dr. Davis, office E491) by **Feb. 15**. [link to application form](#)

Full OSU-CHS support will not be extended beyond a total of 5 years. However, there is no guarantee of stipend support for the full 5 years; except for stipend-awarded incoming students, who first re-apply in their second Spring semester, all students apply annually. Stipends are awarded on a competitive basis; successful progress in the degree program is required for re-award of a stipend.

M.S. and D.O./M.S. students are not eligible for OSU-CHS GRA stipends but may be supported by their advisor's financial support or by external funding.

For students without such stipend support, other forms of financial aid may be available from departments, faculty research grants or through the Office of Financial Aid.

3.3 Requirements for Receiving Anatomy TA and GRA Stipends

1. Only students working toward the doctorate degree are eligible for OSU-CHS institutional funding.
2. The student **must** be enrolled full-time for the entire year. Reduced Continuous Enrollment does qualify.
3. The student must maintain a GPA of at least 3.0 and good academic standing.
4. Students receiving stipends are expected to work full-time at CHS. Limited outside work that would enrich the graduate education, such as teaching a 3 credit hour course or its equivalent, can be allowed. However, this must be approved by the student's advisory committee. Working outside the program without approval will be an important consideration in re-awarding a stipend.
5. Students must apply for external funding during each year of stipend support.
6. Full OSU-CHS support will not be extended beyond a total of 5 years. However, there is no guarantee of stipend support for the full 5 years; students apply annually. Stipends are awarded

on a competitive basis; successful progress in the degree program is required for re-award of a stipend.

3.4 GRA Stipend Review Process: The number of stipends to be awarded varies from year to year; thus evaluations are made without advance information about how many stipends will be available.

1. The BSGC reviews all stipend applications, including new and renewal applications. Three main categories will be evaluated, depending on the student's stage in the program.
 - a. Academics: Course grades and good academic are important criteria.
 - b. Progress in the program (Meeting appropriate program milestones): Forming an advisory committee, meeting with the committee, creating a Plan of Study, submitting external funding applications, passing COMLEX 1 (for dual degree students), passing a qualifying exam, presenting a research proposal to your committee, becoming a Ph.D. candidate, and generating a dissertation draft etc.
 - c. Scholarly activity: presentations/posters at meetings, seminars given, peer reviewed manuscripts submitted/published, applying for external funding, etc.

Renewal applications: The BSGC identifies which, if any, of the students currently on GRA stipend have not met the above standards. The individual is discussed and voted on as first step in this process. If the committee determines that a student has failed to make appropriate progress they are omitted from further consideration. Students currently on GRA stipend who are making appropriate progress and have not had 5 years of support typically will be re-awarded a stipend.

New applications: The committee then discusses the strengths and weaknesses of all the students to be ranked for stipend consideration. This group consists of the newly admitted Ph.D. students and the students NOT currently on stipend who have applied for stipends. Factors to be considered in ranking differ for each group.

- a. Current students without stipends: the same categories listed above.
 - b. Newly admitted students: Course grades, MS in a related field, achievements in previous graduate work including awards, fellowships, and scholarly activity (presentations/posters at meetings, seminars given, peer review manuscripts published, grant applications, etc.).
2. Each committee member ranks the applications and a total score is computed.
 3. The top applications are discussed and each committee member re-ranks them.
 4. The application scores are summarized and a final ranking is computed.
 5. The BSGC sends a recommendation to the Director of the Biomedical Graduate Program with the ranking of stipend applicants.

3.5 GRA Stipends Appeal Process: The graduate stipend appeal process is for those graduate students who have their stipend terminated or not renewed. Termination of a stipend is a serious action, a *de facto* dismissal for international students, and a significant blow for any domestic student.

1. Students will be informed by the Director of the Biomedical Sciences Graduate Program of stipend termination or non-renewals for the upcoming July 1st – June 30th period after the BSGC review meeting in February.
2. The student will have ten working days to inform the Director of his or her intent to appeal, in writing.
3. Once a student has communicated their intent to appeal the Director will inform the OSU-CHS Vice Provost of Graduate Programs, Associate Dean of Biomedical Sciences who will assemble a GRA Appeals Board. Members of the board may include Chairmen from the Biomedical Sciences Departments, Directors of other Graduate Programs at OSU-CHS, representatives from the OSU Graduate College among others. Members of the BSGC will not be eligible to sit on the Board.
4. The GRA Appeals Board will meet with the student and other relevant parties and render a verdict by March 31st of that calendar year.

3.6 Teaching Assistantships: There are two Anatomy Teaching Assistantships and they are selected by the Chair of the Department of Anatomy and Cell Biology. Please see the Stipend section for more information.

3.7 Medical Insurance: Students who are employed at least 0.5 FTE as a GRA or Anatomy TA will have the single-person health insurance premium supplemented by OSU-CHS.

Health insurance is available for purchase for students who are NOT GRAs or Anatomy TAs, as well as for family members. The student must be enrolled a minimum of half-time (6 graduate semester credit hours) each semester or 2 graduate semester credit hours, if eligible for Continuous Reduced Enrollment.

4. Master of Science (M.S.) in Biomedical Sciences

Students in the M.S. degree program take required courses, as well as elective courses in a specific area of interest. Additionally, M.S. students conduct original research under the guidance of a Biomedical Sciences graduate faculty advisor. The M.S. degree program in Biomedical Sciences has a *thesis* option and a *non-thesis* option. Each option has different course work and research requirements that total 30 or 32 semester credit hours. Admission requirements are described in Admission Requirements, Application Procedure and Application Materials.

Thesis option – minimum of 24 hours of course work and six hours of research and thesis. Students pursuing this option will conduct original research, culminating in a written thesis that is presented as a seminar and publicly defended.

Non-thesis option – a minimum of 30 hours of course work and two hours of research. Students pursuing this option will conduct original research and present a written report based on the research project to their advisory committee. However, the non-thesis option does not require a public presentation or defense of the research project.

In addition, there is an Anatomy and Vertebrate Paleontology track M.S. degree program. Students pursuing this track are trained to teach human anatomy at the university, college or professional level,

and will gain experience in vertebrate paleontology research under the guidance of a Biomedical Sciences graduate faculty mentor. ***This track has no non-thesis option.***

4.1 M.S. Degree Program Requirements

Credit for Course Work: Students in the M.S. degree program will take both required (see Table 1) and elective courses to fulfill the degree requirements. All required courses must be taken at OSU-CHS. Note that course work requirements differ depending on the track (i.e., Biomedical Sciences or Anatomy and Vertebrate Paleontology) as indicated in Table 1, 2, and 3. A maximum of three hours of Special Topics course credits may count towards a student’s degree requirements.

Table 1. Required Courses: Biomedical Sciences

<u>Course #</u>	<u>Course Title</u>	<u>Semester Credit Hours</u>
BIOM 6922	Scientific Communication in the Biomedical Sciences	2
BIOM 6662	Research Ethics and Survival Skills for the Biomedical Sciences	2
Statistics	Statistics for Experimenters I (or equivalent)	3

Table 2. Required Courses: Anatomy and Vertebrate Paleontology Track

<u>Course #</u>	<u>Course Title</u>	<u>Semester Credit Hours</u>
BIOM 5116	Gross Anatomy	6
BIOM 6662	Research Ethics & Survival Skills for the Biomedical Sciences	2
Statistics	Statistics for Experimenters I (or equivalent)	3
Microanatomy	Development & Histology (or equivalent)	4
BIOM 5641	Cornerstones in Vertebrate Paleontology	1

Additional Expectations for the Anatomy and Vertebrate Paleontology Track: Students in the Anatomy and Vertebrate Paleontology track are expected to:

- Enroll in Gross Anatomy in the first semester.
- Write grant proposals, starting in the first semester, with the help of the researcher.
- Enroll in three credits of BIOM 6723, Geology and Vertebrate Paleontological Field Methods, in the first summer.
- Attend paleontological lab meetings every week during the Fall and Spring semesters.

Credit for Research: Students pursuing the *thesis* option are required to take a minimum of six semester credit hours of research and thesis, whereas students pursuing the *non-thesis* option are required to take a minimum of two semester credit hours of research.

Research Project:

Students pursuing the *thesis* option must conduct a research project under the guidance of their advisor. In addition, these students must write a thesis that describes their research, present a seminar based on the thesis research, and publically defend the thesis (see Research Thesis and Dissertation). The advisory committee must approve the thesis and defense.

Students pursuing the *non-thesis* option are required to complete a research project under the guidance of their advisor and advisory committee. This research typically will culminate in a written report that is presented to and must be approved by the advisory committee; however, a presentation given at a state, national, or international meeting based on the project also may be approved by the committee.

Transfer Hours: Students in the M.S. degree program may transfer a maximum of 9 hours of graduate credit from an accredited graduate program provided:

- 1) transfer credit is recommended by the major advisor and advisory committee through submission and approval of the Plan of Study;
- 2) transfer credit is approved by the BSGC and the Director of the Biomedical Sciences Graduate Program;
- 3) students transferring graduate credit must have been enrolled in a graduate program at another institution and the course or courses transferred must be recognized as graduate courses by that institution;
- 4) students must have earned a grade of “B” or better in all graduate courses transferred.

Time of Study and Residence Requirements: The minimum time for a student to complete the M.S. program, recognizing the sequence of required courses, is one and a half years. However, full-time students typically complete the M.S. degree program in two years. Students in the M.S. program are expected to enroll as full-time students (see Additional Requirements and Information (All Degree Programs, Enrollment Status)) in at least one semester and to complete the degree requirements within seven years.

Additional Requirements and Program Information: Additional requirements and information pertinent to the M.S. degree program are described in Additional Requirements and Information (All Degree Programs).

5. Doctor of Osteopathic Medicine and Master of Science (D.O./M.S.) Degree Program

Students in the D.O./M.S. program must complete requirements for both the D.O. medical and M.S. graduate degrees.

5.1 D.O./M.S. Degree Program Requirements

The requirements for the M.S. degree component of the D.O./M.S. degree are similar to those described in (Master of Science (M.S.) in Biomedical Sciences). However, as described below, some aspects are unique to the D.O./M.S. degree program.

Students in the D.O./M.S. degree program may do either the *thesis* or *non-thesis* option for the M.S.

degree. Students pursuing a D.O./M.S. degree with a *thesis* option typically will take 15 semester credit hours of course work in the first year of the program along with 6 research credit hours, whereas students pursuing the *non-thesis* option typically will take 21 semester credit hours of course work in the first year of the program along with 2 research credit hours.

At the end of their first year, students in good academic standing, defined as maintaining a GPA of 3.0 or greater, (see Additional Requirements and Information (All Degree Programs), Grades), will matriculate into the D.O. program as a first year student (MS I) for the following year. If good academic standing is not maintained, matriculation into the D.O. program may be delayed.

Table 3. Overview of D.O./M.S. Degree Programs

- Year 1: enroll in graduate courses and research to fulfill requirements for the M.S. degree program
- Year 2: enter first year of medical school as MS I and work toward completing all M.S. degree requirements (including coursework and research)
- Years 3 – 5: complete requirements for the D.O. degree.

Credit for Course Work: D.O./M.S. students may take up to three hours of special topics.

The student's major advisor and advisory committee (see Major Advisor, Advisory Committee and Plan of Study) will provide guidance for selecting elective course work, and ensuring that the course work fits each student's educational needs. The D.O./M.S. student must form an advisory committee by the end of the first semester. They are encouraged to meet with the BSGP Director prior to their initial enrollment.

Credit for Research: As described in Master of Science (M.S.) in Biomedical Sciences, students pursuing the *thesis* option are required to take a minimum of six semester credit hours of research and thesis, whereas students pursuing the *non-thesis* option are required to take a minimum of two semester credit hours of research.

Research Project:

As described in Master of Science (M.S.) in Biomedical Sciences, students pursuing the *thesis* option must conduct a research project under the guidance of their advisor and advisory committee, and write, present, and publicly defend a thesis.

As described in Master of Science (M.S.) in Biomedical Sciences, students pursuing the *non-thesis* option are required to complete a research project under the guidance of their advisor and advisory committee, and submit a written report to their advisory committee.

Transfer Hours: All required courses must be taken at OSU-CHS. Up to 9 semester credit hours may be transferred from the course work taken as an MS I student (i.e., year 2 of the D.O./M.S. degree program) and applied toward the M.S. degree, provided that students have earned a grade of "B" or better in transferred course work credits. Since up to 9 hours may be transferred from the medical school courses, D.O./M.S. students are typically not allowed to transfer graduate credit from other institutions.

Time of Study and Residence Requirements: D.O./M.S. students are encouraged to complete the

M.S. portion of the degree in two years (i.e., by the summer between MS I and MS II) and must complete the entire program within seven years. The M.S. degree is conferred when the graduate degree requirements are complete.

6. Doctor of Philosophy (Ph.D.) in Biomedical Sciences

Students in the Ph.D. program take required courses, as well as elective courses in a specific area of interest and research credits. Ph.D. students take a comprehensive qualifying examination, conduct original research under the guidance of a Biomedical Sciences graduate faculty advisor, present a research seminar, and write and publicly defend a dissertation. Admission requirements and materials for the Ph.D. degree program are described in Admission Requirements, Application Procedure and Application Materials.

An Anatomy and Vertebrate Paleontology track also is offered in the Ph.D. degree program. Students pursuing this track are trained to teach human anatomy at the university, college or professional level, and conduct original research in vertebrate paleontology under the guidance of a Biomedical Sciences graduate faculty advisor.

6.1 Ph.D. degree requirements

Credit for Course Work: Students in the Ph.D. degree program are required to take a minimum of 20 semester hours of course work. This includes required courses (see Table 4) which must be taken at OSU-CHS and elective courses to fulfill the degree requirements. Student’s major advisor and advisory committee (see Major Advisor, Advisory Committee and Plan of Study) will provide guidance for selecting elective course work to ensure that the Ph.D. program fits the student’s educational needs and career goals. Note that course work requirements differ depending on the track (i.e., Biomedical Sciences or Anatomy and Vertebrate Paleontology) as indicated in Tables 4 and 5.

Table 4. Required Courses: Biomedical Sciences

<u>Course #</u>	<u>Course Title</u>	<u>Semester Credit Hours</u>
BIOM 6922	Scientific Communication in the Biomedical Sciences	2
BIOM 6662	Research Ethics and Survival Skills for the Biomedical Sciences	2
Statistics	Statistics for Experimenters II (or equivalent)	3

Table 5. Required Courses: Anatomy and Vertebrate Paleontology Track

<u>Course #</u>	<u>Course Title</u>	<u>Semester Credit Hours</u>
BIOM 5116	Gross Anatomy	6
BIOM 6662	Research Ethics & Survival Skills for the Biomedical Sciences	2
Statistics	Statistics for Experimenters I (or equivalent)	3
Microanatomy	Development & Histology (or equivalent)	4
BIOM 5641	Cornerstones in Vertebrate Paleontology	1
BIOM 6943	Advanced Vertebrate Paleontology	3

Additional Expectations for the Anatomy and Vertebrate Paleontology Track: Students in the Anatomy and Vertebrate Paleontology track are expected to:

- Enroll in Gross Anatomy in the first semester.
- Write grant proposals, starting in the first semester, with the help of a researcher.
- Enroll in three credits of BIOM 6723, Geology and Vertebrate Paleontological Field Methods, in the first summer.
- Pass a course in phylogenetic systematics with an acceptable grade (i.e., B or better), or transfer credit if the student has passed such a course previously.
- Attend paleontological lab meetings every week during the Fall and Spring semesters.
- Act as a teaching assistant in the Gross Anatomy course in the third semester.

Transfer Hours: Ph.D. students possessing a Master's degree may transfer up to 9 hours of graduate credit from an accredited graduate program. Ph.D. students possessing a Bachelor's degree may transfer up to nine hours of graduate credit from an accredited institution if the graduate courses were taken in a program offering a M.S. degree, and may transfer more than nine hours if the graduate courses were taken in a graduate program offering a Ph.D. degree.

Graduate credit hours may be transferred providing:

- 1) transfer credit is recommended by the major advisor and advisory committee through submission and approval of the Plan of Study;
- 2) transfer credit is approved by the BSGC and the Director of the Biomedical Sciences Graduate Program;
- 3) students transferring graduate credit must have been enrolled in a graduate program at another institution and the course or courses transferred must be recognized as graduate courses by that institution;
- 4) students must have earned a grade of "B" or better in all graduate courses transferred.

Credit for Research and Dissertation: Ph.D. students are expected to conduct original research and must take a minimum of 20 hours of research and dissertation. In addition, these students must write a dissertation that describes their research, present a seminar based on the dissertation research, and publically defend the dissertation (see Research Thesis and Dissertation). The advisory committee must

approve the dissertation and defense.

Doctoral Candidacy: Admission to doctoral candidacy marks the transition into the research phase of a doctoral degree and documents that students have made satisfactory progress towards completing the program. To obtain candidacy, students must:

1. have an approved Plan of Study (see Major Advisor, Advisory Committee and Plan of Study)
2. have an approved research proposal (see below); and
3. pass their qualifying exam (see below)

Admission to candidacy must occur at least one full semester prior to the date the degree is conferred. Additionally, students must complete at least 2 hours of BIOM 6000 after admission to doctoral candidacy. The “Admission to Doctoral Candidacy” form must be completed and submitted to the Director of the Biomedical Sciences Graduate Program. This form can be obtained from the OSU Graduate College website at http://gradcollege.okstate.edu/download/pdf/Doc_candidacy_form.pdf.

Research Proposal: Students are required to write a research proposal detailing the research project that they are pursuing with their advisor which must be submitted to and approved by the advisory committee at least 12 months prior to graduation.

Qualifying Examination: A qualifying examination, consisting of both an oral and a written component, will be administered by the student’s advisory committee. Students will typically take the exam after completing the second year of their doctoral program and must pass both components of the exam. The exam is comprehensive and consists of questions that cover all completed course work and research.

For each component of the exam, each member of the advisory committee will cast either a passing or unsatisfactory vote. In order for a student to pass the exam, no more than one member of the advisory committee may vote unsatisfactory on the written and oral component. If the major advisor votes unsatisfactory on either the oral or written component, or if the student earns two or more unsatisfactory votes from committee members, the student earns an unsatisfactory grade on the examination. If the results are unsatisfactory, a second examination may be administered by the committee no earlier than four months after the date of the first exam. Students are dismissed from the Ph.D. degree program if an unsatisfactory result is obtained on the second exam.

Reduced Continuous Enrollment: Once a Ph.D. student advances to candidacy, he or she is eligible for reduced continuous enrollment (RCE). Under RCE a student is considered to be in full-time status if taking 2 or more credit hours. This applies to domestic and international students, and fulfills visa requirements for international students.

Minimum Number of Hours: The total number of graduate hours shall not be less than 60 beyond a Bachelor’s degree (see Transfer Hours, above). Note that 60 hours is the bare minimum requirement. Required courses, transfer credit and Advisory Committee requirements may result in a greater number of hours.

Time of Study and Residence Requirements: Full-time Ph.D. students may complete the requirements for a Ph.D. degree in four years. However, students must complete all Ph.D. degree requirements within nine years. Additionally, students must be enrolled as a full-time student in one of the last two years of their program of study (see Additional Requirements and Information (All Degree

Programs), Enrollment Status).

Teaching Experience: Ph.D. students interested in a career in academia are encouraged to seek opportunities to teach lectures at the undergraduate and graduate level. There may be teaching opportunities available at OSU-CHS or at Tulsa Community College (or a similar regional institution).

Additional Requirements and Program Information: Additional requirements and information pertinent to the Ph.D. degree program are described in Additional Requirements and Information (All Degree Programs).

7. Doctor of Osteopathic Medicine and Doctor of Philosophy (D.O./Ph.D.) Degree Program

In general, students in the D.O./Ph.D. degree program begin by completing the first two years of the medical school curriculum. Students then pursue the requirements for a Ph.D. degree and, after completing these requirements, will continue on to the third and fourth years of the medical school curriculum.

7.1 D.O./Ph.D. degree requirements

The requirements for the Ph.D. degree component of the D.O./Ph.D. degree are similar to those described in Doctor of Philosophy (Ph.D.) in Biomedical Sciences. However, some requirements are unique to the D.O./Ph.D. degree program and are described below.

Credit for Course Work: D.O./Ph.D. students are required to complete all of the medical school MSI and MSII courses offered in the first and second year of the medical school curriculum; these courses account for up to 20 semester hours of credit toward the Ph.D. degree. During the first year of the Ph.D. degree component, D.O./Ph.D. students must take remaining required graduate courses (see Table 4), as well as elective graduate courses appropriate to the student's educational needs.

An advisory committee (see Major Advisor, Advisory Committee and Plan of Study) will provide guidance for selecting elective course work.

Transfer Hours: D.O./Ph.D. students receive up to 20 hours of graduate credit for the medical school courses taken in the first two years of the medical school curriculum. Therefore, D.O./Ph.D. students are typically not allowed to transfer graduate credit from other institutions. However, under specific circumstances, additional transfer credit may be endorsed by the advisory committee. Under these rare circumstances, the transfer credit must comply with the transfer guidelines as stated for the Ph.D. program, be endorsed by the student's advisory committee, and then approved by the Biomedical Sciences Graduate Committee as part of the student's Plan of Study, and by the Director of the Biomedical Sciences Graduate Program.

Credit for Research and Dissertation: As described in Ph.D. degree requirements, D.O./Ph.D. students are expected to conduct original research and must take a minimum of 20 hours of research and dissertation. The research conducted will culminate in a written dissertation that must be approved by the advisory committee and publicly defended. Admission to Doctoral Candidacy, Research Proposal,

and Qualifying Examination also will follow guidelines as described Ph.D. degree requirements. In addition, D.O./Ph.D. students must prepare a draft of their dissertation and submit it to the advisory committee before entering the third year of medical school.

Minimum Number of Hours: The total number of graduate hours shall not be less than 60. Note that 60 hours is the bare minimum requirement. Required courses and Advisory Committee requirements may result in a greater number of hours.

Time of Study: The Ph.D. portion of the D.O./Ph.D. program, which includes graduate courses, comprehensive qualifying examination, research and a dissertation, will take approximately three years. Thus, the time for completion of the D.O./Ph.D. degree program is approximately seven years. All D.O./Ph.D. program requirements must be completed within nine years.

8. Selection of Thesis or Dissertation Research Advisor

It is strongly advised that the student identify an advisor as early as possible in the program. An advisor must be identified by the end of the M.S. student's first term and the Ph.D. student's second term. The Advisor's primary responsibility is as a mentor. See 9.1.1 for a detailed description of the Advisor's role.

8.1 Student-Advisor Relationship: When it is determined that a graduate student and Advisor can no longer work together, and all efforts for conflict resolution within the program have been exhausted, the student will be informed by the Program Director. It is the responsibility of the student to identify a new Advisor or change to another degree option or program. The Graduate Program Director can assist with this process, but Oklahoma State University is under no obligation to provide the student a new Advisor. If a new Advisor cannot be identified in 30 calendar days, the student will no longer be eligible to continue in the graduate program.

8.2 Student's Research Advisor Leaves the Institution: Should a student's Research Advisor leave OSU before the student completes his/her degree, the following steps may be taken after consultation with the Research Advisor and Graduate Program Director:

For a master's student or doctoral candidate who need only complete their research project to finish the degree, the student may complete the research project under the direction of the original Research Advisor. If the Advisor is also the Chair of the student's Advisory Committee, a new Chair would be appointed. The original Research Advisor can continue as a member of OSU's Graduate Faculty, participate in the student's thesis/dissertation defense, and fulfill his/her obligations to the student. For a master's or doctoral student (defined as not having met the requirements for doctoral candidacy) who is in the early stages of their program and research project, he/she may choose a new Advisor and start a new research project.

A student may also choose to transfer to the advisor's new educational institution.

If a student is unable to secure a new Advisor within 30 calendar days of the advisor's departure, there is no obligation on the part of the program, Graduate College or Oklahoma State University to provide a new one. Without an Advisor the student will not be eligible to continue in the graduate program.

Important Links:

- Graduate Faculty Database:
<https://gradcollege.okstate.edu/faculty-and-staff-resources>
- Oklahoma State University Guidelines for Best Practices in Graduate Education
<https://gradcollege.okstate.edu/best-practices>
- Best Practices: Advisory Committees and Defenses
<https://gradcollege.okstate.edu/best-practices>
- Selecting a Graduate Research Advisor
[Link to be added]

9. The Advisory Committee: Selection and Role

The Advisory Committee actively participates in the education and training of graduate students. This includes sharing responsibility for reviewing the student's progress and guiding the student toward completion of their program requirements.

9.1 Advisory Committee Selection Recommendation of the Advisory Committee members should be a collaborative activity between the graduate student and their Advisor and/or Committee Chair. Although the student has the ultimate responsibility for recommending his/her Advisory Committee membership, his or her Advisor is a valued resource that can provide insight that will help the student make informed decisions. The student should meet with potential Advisory Committee members prior to recommending them to better understand their experience, availability, mentoring style and willingness to serve as an Advisory Committee member.

9.1.1 Advisor: The Advisor's primary responsibility is as a mentor. As a result, it is expected that the Advisor establish the closest working relationship with the student. The Advisor is typically the primary resource for the graduate student in identifying potential committee members for the student's Advisory Committee. The Advisor must hold an appropriate OSU Graduate Faculty appointment (Associate, Full or Emeritus Member) and must be an OSU-CHS faculty member. The Advisor guides and counsels the student in the research or scholarly effort, ensuring compliance with applicable research regulations, such as Responsible Conduct of Research training and Institutional Review Board (IRB) requirements for research involving human subjects. The Advisor is responsible for reporting to the Advisory Committee on the student's progress. It is the Advisor's responsibility to mentor the student toward a research, scholarly or creative project that is original and worthy of the degree sought. The Advisor is typically involved in the preparation of scientific or creative presentations, manuscripts for publication, etc. which may be a degree requirement in some graduate programs.

9.1.2 Chair: The Advisor, if he or she is a Full Member of the OSU Graduate Faculty, may also serve as the Chair but is not required to. The Chair must be a member of the Biomedical Sciences Graduate Faculty. The Chair must have strong familiarity with the academic requirements of the graduate degree sought. The Chair's duties include convening meetings of the Advisory Committee, as appropriate; ensuring compliance with University and Graduate College policies, procedures and requirements; overseeing the Plan of Study and research document submission processes; and ensuring that the

research topic undertaken is appropriate to satisfy degree requirements with the results openly accessible. The Chair serves as the representative of the Graduate College and ensures a high level of integrity in the processes that the Advisory Committee uses to review and evaluate the student throughout the graduate program. If the Chair is not also the Advisor, the Chair should serve as a liaison with the Advisor with regard to progress of research in fulfillment of degree requirements.

9.1.3 Outside Member: Ph.D. advisory committees must include an Outside Member; M.S. advisory committees do not require an outside member. The Outside Member serves as the representative of the Graduate College and ensures a high level of integrity in the processes that the Advisory Committee uses to review and evaluate the student throughout the graduate program. The Outside Member must not have a primary appointment in Biomedical Sciences. The Outside Member must be a member of the OSU faculty and a Full Member of the Graduate Faculty. The Outside Member ensures that appropriate academic standards are applied in evaluating the student, and that the student is dealt with in a fair manner consistent with OSU policies. The Outside member also provides expert advice when appropriate to the student in the conduct of research and writing of the dissertation.

9.1.4 Expert Committee Member(s): The Advisory Committee must include at least one Expert Member whose expertise and counsel serve the graduate student in attaining the research, scholarly, creative or professional preparation goal that is worthy of the degree sought. Expert Members must hold an appropriate OSU Graduate Faculty appointment. Typically, such individuals are faculty members in the student's graduate program. An Expert Member's responsibilities include guiding the research, scholarly or creative activities throughout the process, approving the Plan of Study, reviewing draft documents, attending regular meetings of the Advisory Committee, and interacting regularly with Advisory Committee members to facilitate and monitor degree completion progress.

9.2 M.S. degree advisory committee: The advisory committee is chosen by the student in consultation with the major advisor. The committee must be selected and must meet to approve the plan of study at or before the beginning of the second semester. Members of the advisory committee must be graduate faculty. The committee must be approved by the Biomedical Sciences Graduate Committee (BSGC). Advisory committees are required to meet at least once a year. M.S. degree advisory committees shall consist of a minimum of three members of the Biomedical Sciences faculty. M.S. advisory committees do not require an Outside Member

9.3 Ph.D. degree advisory committee: The advisory committee is chosen by the student in consultation with the major advisor. The committee must be selected and must meet to approve the plan of study before the end of the third semester. Members of the advisory committee must be graduate faculty. The committee must be approved by the Biomedical Sciences Graduate Committee (BSGC). Advisory committees are required to meet at least once a year. Ph.D. degree advisory committees shall consist of at least three members of the Biomedical Sciences Graduate Faculty and one outside member. The outside member must have a primary appointment outside the Biomedical Sciences Graduate Program and be a member of the OSU Graduate Faculty with an OSU appointment.

10. Program Milestones

10.1 Enrollment Status:

After acceptance into the Biomedical Sciences Graduate Program, students matriculate with their first

enrollment. Continuous enrollment is required thereafter until all degree requirements are completed. If the degree requirements are not completed (to include completing course requirements, sitting for comprehensive exams, research leading to a thesis or dissertation, writing and defending a thesis or dissertation, revising a thesis or dissertation, etc.) by the end of the second year of the M.S. program, the fourth year of the Ph.D. program, or the seventh year of the D.O./Ph.D. program, the student must enroll in Research and Thesis or Research and Dissertation for two hours per semester until the degree requirements are completed.

Full time status – To be considered full time in a fall or spring semester, domestic graduate students must enroll in at least nine graduate credit hours; full time enrollment during the summer semester requires at least two graduate credit hours. Domestic graduate students holding a 0.5 FTE (full time employee) or greater assistantship must enroll in at least six graduate credit hours in a fall or spring semester to be considered full time. Generally, a domestic graduate student must enroll in a minimum of four graduate credit hours to qualify for federal student loans and must enroll in at least nine graduate credit hours to qualify for the full amount of federal financial aid (students should contact the Scholarship and Financial Aid office for complete details). M.S. students must spend at least one semester and Ph.D. students must spend at least one year as a full-time student.

Part-time status - M.S. or Ph.D. students may enroll in the programs on a part-time basis (i.e., 1-9 graduate credit hours for fall or spring semester; 1 graduate credit hour for the summer semester) for coursework but not for research.

In addition to the above requirements for domestic students, international students on an F-1 or J-1 nonimmigrant visa are required to be enrolled full time in each fall and spring semester to maintain their immigration status, as recorded on the SEVIS system. International students need not to be considered full-time in their final semester. Students should verify final semester status by completing the “Final Semester Verification” form. Note that this form, which requires approval of the advisor, Director of the Biomedical Sciences Graduate Program, and Vice Provost of Graduate Programs, must be completed before the end of the second week of the final semester; otherwise the full-time requirement will apply.

10.1.1 Reduced Continuous Enrollment (RCE): Once a Ph.D. student advances to candidacy, he or she is eligible for reduced continuous enrollment (RCE). Under RCE a student is considered to be in full-time status if taking 2 or more credit hours. This applies to domestic and international students, and fulfills visa requirements for international students.

10.2 Plan of Study: The Plan of Study, which lists course work and research, is developed by the student in consultation with the major advisor and advisory committee. The Plan of Study must be submitted to and approved by the BSGC prior to the end of the 1st semester (excluding summer sessions) of enrollment for the M.S. degree and prior to the end of the 3rd semester (excluding summer sessions) of enrollment for the Ph.D. degree.

10.3 Ph.D. Candidacy: Admission to doctoral candidacy marks the transition into the research phase of a doctoral degree and documents that students have made satisfactory progress towards completing the program. See Section 6.1 that describes the process in more detail.

10.4 Annual Graduate Student Review: The BSGC conducts a formal review of each graduate student at the end of the spring semester each year, in concordance with Graduate College policy. The goals of this review are:

- 1) To assess the progress of students through the Biomedical Sciences Graduate Program;
- 2) To give graduate students an opportunity to evaluate whether individual goals are being met;
- 3) To give graduate students an opportunity to plan for the next academic year; and
- 4) To receive graduate student feedback on program policies and components.

11. The Thesis or Dissertation Defense

A research thesis is required for students pursuing a thesis option M.S. degree and a research dissertation is required for students pursuing a Ph.D. degree. The format of the thesis/dissertation should adhere to the *Graduate College Style Manual*, available online at <http://gradcollege.okstate.edu/student/thesis/default.html>.

A public defense of the thesis or dissertation is required, along with a seminar based on the thesis or dissertation research. A notice indicating the date, location and time of the thesis or dissertation defense must be posted at least 10 working days prior to the defense. Additionally, a final draft copy of the thesis or dissertation must be available on the day that the advertisement for the defense is posted. The format of the defense is up to the major advisor but must include an opportunity for the audience to ask questions. The advisory committee must approve the thesis/dissertation defense.

The student must submit to the Graduate College the completed "Thesis/Dissertation Oral Defense Results" form. Electronic submission of the final version of the thesis/dissertation must follow the rules of the College of Graduate Studies. <https://gradcollege.okstate.edu/tdg> The student must submit a digital copy of the final version of the thesis/dissertation to the Center for Health Sciences, Office of Biomedical Sciences.

12. Academic Achievement Requirements

12.1 Courses: Courses are graded A, B, C, D or F on a 4.0 scale, unless specified as SR/UR. Graduate students are expected to make a "B" or better in all courses on the Plan of Study and to maintain a cumulative GPA of 3.0 or higher. Students must also meet the minimum requirements of the Graduate College as specified in the University Catalog.

12.2 Thesis (5000) and Dissertation (6000): A grade of "SR," indicating satisfactory research progress, or "UR," indicating unsatisfactory progress will be assigned to thesis (5000) and dissertation (6000) courses at the end of the semester in which the hours are taken. These grades are permanent and have no impact on a student's grade point average. Graduate students are expected to make a grade of "SR" for all thesis or dissertation hours; only hours for which "SR" is earned may be used toward minimum degree requirements on the Plan of Study.

12.3 Academic probation and dismissal: One of the following actions may be taken for students failing to meet the academic criteria detailed above:

Written Notice – The /Director of the Biomedical Sciences graduate Program will notify, in writing, the advisor of students who earn a “C” grade or lower and will counsel students on the consequences of continued substandard performance.

Academic Probation – Students will be placed on academic probation if their cumulative GPA drops below 3.0, if one or more “C” grades are earned two semesters in a row, or if a UR grade is given. Once placed on academic probation, students are expected to raise their cumulative GPA to 3.0 or higher by the end of next semester.

No Further Enrollment Without Department Consent (NFEWDC) – Students may be placed on NFEWDC if they do not raise their cumulative GPA to a 3.0 or higher while on academic probation, or if 2 consecutive “UR” grades are earned. Once placed on NFEWDC, an enrollment hold is placed on the student. To be reinstated into the program, the student must petition the Director of the Biomedical Sciences graduate program by submitting a plan for improvement and a guarantee of minimal performance. This plan must be submitted within one semester of being placed on NFEWDC and the Director of the Biomedical Sciences graduate program and BSGC must approve the plan. Failure to submit this plan or receive approval from the BSGC and the Director of the Biomedical Sciences graduate program will result in dismissal.

Dismissal/No Further Enrollment (NFE) – Students may be dismissed from the Biomedical Sciences Graduate Program if they do not meet the goals agreed upon in their improvement plan (see NFEWDC). The student’s advisory committee will recommend dismissal to the BSGC as soon as it learns that the student has not met the goals of their improvement plan. The BSGC will then review the student’s entire academic record, consult with student’s advisory committee, and then conduct a personal interview with the student. The BSGC will then consider the information collected and make a recommendation as to whether the student should be dismissed to the Director of the Biomedical Sciences Graduate Program. If the BSGC recommends dismissal, the Director of the Biomedical Sciences Graduate Program will forward the recommendation to the Vice Provost of Graduate Programs. If any members of the advisory committee or BSGC disagree with the majority decision to recommend dismissal, they may submit their concerns in writing to the Vice Provost of Graduate Programs. The Vice Provost of Graduate Programs will use the recommendation, and any submitted concerns, in making the final decision.

12.4 Academic appeals: The student can appeal academic penalties or dismissal through the OSU Graduate College. <https://gradcollege.okstate.edu/content/appeals-policy>

13. Integrity in Research Activities

As an institution dedicated to excellence in education, research and outreach, Oklahoma State University places a high value on research integrity and academic freedom. Objectivity in the conduct of research, the freedom to disseminate ideas through publication of research results, the protection of the rights and interests of research participants, maintenance of public trust, and the ability to ensure that our responsibility to our students and trainees is not compromised are critical to these institutional values. <https://compliance.okstate.edu/rcr/rcr-index> and <https://compliance.okstate.edu/rcr/training>

Students in the Biomedical Sciences Graduate Program are required to take a 2 credit hour ethics course as well as training in the responsible conduct of research. Violations of Research Integrity are reported to the Research Integrity Officer in the Office of University Research Compliance at OSU Stillwater. Reporting, investigation and possible sanctions are handled by this unit under the supervision of the Vice President for Research.

13.1 Student Integrity in Research Appeals: The student may appeal any decision or penalty for research misconduct to the Office of University Research Compliance at OSU Stillwater.

14. Student Conduct and Conflict Resolution

Oklahoma State University (OSU) is committed to creating and maintaining a productive living and learning community that fosters the intellectual, personal, cultural, and ethical development of its students. Self-discipline and valuing the rights of others are essential to the educational process and to good citizenship. Attending Oklahoma State University is a privilege and students are expected to meet or exceed the university's standards of conduct both on and off campus.

For more information see the Student Conduct Education and Administration site.

<https://studentconduct.okstate.edu/code>

The current Student Code of Conduct is available at

<https://studentconduct.okstate.edu/sites/default/files/Student%20Code%20of%20Conduct%202017.pdf>

Reporting an incident, the conduct process, investigation and sanctions are facilitated by the Office of Student Conduct Education and Administration on the OSU Stillwater campus.

14.1 Student Conduct Appeals: Students may appeal decisions or sanctions based on a conduct investigation. The procedure for filing an appeal is described in the Student Code of Conduct and handled by the Office of Student Conduct Education and Administration on the OSU Stillwater campus.

15. Outstanding Biomedical Sciences Graduate Student Award

Each year, the Graduate Faculty will present awards to the “Outstanding Graduate Students of the Year” to an M.S. student and to a Ph.D. student at the annual spring awards luncheon.

- Eligibility – All Biomedical Sciences graduate students pursuing an M.S., Ph.D., D.O./M.S. or D.O./Ph.D. degree will be considered for this award. Typically, the award will be given to a more senior graduate student who has shown outstanding achievement in the areas listed below during the academic year; however, all students are eligible.
- Nominations – Nominations addressing the criteria listed below are required and should be submitted to the Chair of the BSGC in writing or via email no later than the third Friday of March each year.
- Criteria – Graduate students nominated for this award will be assessed on the following criteria:
 - Academic Achievement – as demonstrated by their GPA and the difficulty of their curriculum.

- Achievement in Research – as established by published manuscripts, published abstracts, research presentations (poster or oral) at local, statewide, national or international meetings.
- Achievement in service to the University and/or Community – as demonstrated by leadership and/or participation in a student or professional organization; leadership and/or participation in outreach activities; collegiality; etc.
- Other noteworthy or outstanding characteristics - including recognition/awards from a University, professional, or scientific organization; funded grants (e.g., travel grants, dissertation or thesis support, fellowships, etc); a significant accomplishment in the laboratory that may not yet be published; etc.
- Selection – the BSGC will receive nominations and circulate them to the Graduate Faculty for a vote. The student receiving the most votes will be the award winner.
- Presenter – the Chair of the BSGC will present the awards to the recipients at an annual spring awards banquet.”

16. Biomedical Sciences Program Handbook Updates

Updates to this handbook will be made on a regular basis to reflect changes in Graduate College and Biomedical Sciences Program policies. Substantive changes, such as changes in course requirements must be approved by the Biomedical Sciences Graduate Faculty at an appropriately organized meeting.

Updates to this handbook that correct typographical or formatting errors, fix links, reflect changes in administrative or committee titles, application due dates or similar changes can be made on a semester by semester basis without the approval of the Biomedical Sciences Graduate Faculty.

Note: Oklahoma State University and the Biomedical Sciences Graduate Program reserve the right to make changes in policies. However, within the time limitation of the degree, the student is allowed to graduate under the degree program in effect at the time the student first enters the program as long as continuous enrollment has been maintained.

Appendix A Important OSU Graduate College Links

Graduate College: <http://gradcollege.okstate.edu/>

OSU Catalog: <https://registrar.okstate.edu/University-Catalog>

Academic Calendar: <https://gradcollege.okstate.edu/graduate-college-academic-calendar>

Graduate OSU Guidelines for Best Practices in Graduate Education: <http://gradcollege.okstate.edu/bestpractices>

Degree/Certificate Programs: <http://gradcollege.okstate.edu/degree>

Graduate College Round-Up website link for the Plan of Study:

<http://gradcollege.okstate.edu/planofstudy>

Plan of Study Portal: <http://gradcollege.okstate.edu/planofstudy>

Graduate Faculty Database: <https://gradcollege.okstate.edu/faculty-and-staff-resources>

Best Practices: Advisory Committees and Defenses: <https://gradcollege.okstate.edu/best-practices>

Thesis/Dissertation Templates: <http://gradcollege.okstate.edu/content/thesis-and-dissertation-templates>

Graduate Student Appeals: <https://gradcollege.okstate.edu/content/appeals-policy>

Leave of Absence Policy: <https://gradcollege.okstate.edu/leave-of-absence-policy>

Student Code of Conduct: <https://studentconduct.okstate.edu/code>

Graduate Student Appeals Policy: http://gradcollege.okstate.edu/sites/default/files/appeals_policy.pdf

Grade Appeals Policy: <https://academicaffairs.okstate.edu/content/grade-appeals-board-policies-procedures>

Academic Integrity Policy: <http://academicintegrity.okstate.edu/>

Student Health Insurance: <http://uhs.okstate.edu/student-health-insurance-plan>

Tuition Waiver Forms: <http://gradcollege.okstate.edu/FormsPage>

3 Minute Thesis: <https://gradcollege.okstate.edu/content/2016-osu-3mt%C2%AE-college-competition-schedule>

Grant Writing Courses, Seminars and Workshops: <http://ucpd.okstate.edu/resources/writing>

Graduate and Professional Student Government Association (GPSGA): <http://temp-gpsga.okstate.edu/content/resources>

Graduation Checklist (Doctoral Degree): <http://gradcollege.okstate.edu/doctoral-checklist>

Graduation Checklist (Master's Degree): <http://gradcollege.okstate.edu/masters-checklist>

Appendix B Important Biomedical Sciences and Center for Health Sciences Links

Biomedical Sciences Graduate Student Association:

OSU-CHS Wellness Center and Programs: <http://www.healthsciences.okstate.edu/wellness/>

Appendix C Important Oklahoma State University (Stillwater) Links

Career Services: <http://www.hireosugrads.com/StudentsAlumni/>

Edmon Low Library: <http://www.library.okstate.edu/>

Family Resource Center: <http://www.reslife.okstate.edu/frc/>

Health Insurance (Student): <http://uhs.okstate.edu/student-health-insurance-plan>

Information Technology: <http://www.it.okstate.edu/>

Institute for Teaching and Learning Excellence: <http://itle.okstate.edu/>

International Student and Scholars Office: <http://iss.okstate.edu/>

International Students Arrival and Orientation: <http://iss.okstate.edu/arrival-orientation>
Office of Multicultural Affairs: <http://icae.okstate.edu/>
OSU High Performance Computing Center: <http://hpc.it.okstate.edu/>
OSU Writing Center: <http://osuwritingcenter.okstate.edu/>
Responsible Conduct Research Training: <http://compliance.okstate.edu/rcr/training>
OSU Research Compliance:
Appropriate Use of Human Subjects in Research: <http://compliance.okstate.edu/irb/irb-index>
Appropriate Use of Animals in Research: <http://compliance.okstate.edu/iacuc/iacuc-index>
Biosafety Program: <http://compliance.okstate.edu/ibc/ibc-index>
Radiation Safety Program: <http://compliance.okstate.edu/rso/rso-index>
Laser Safety Program: <http://compliance.okstate.edu/lso/lso-index>
Seretean Wellness Center: <http://wellness.okstate.edu/>
Services for Students with Disabilities: <http://sds.okstate.edu/>
OSU Student Affairs: <https://studentaffairs.okstate.edu/>
Student Code of Conduct: <https://studentconduct.okstate.edu/code>
The OSU Student Union: <http://union.okstate.edu/>

Appendix D State, regional and national professional organizations Links

American Society for Microbiology (ASM): <https://www.asm.org/>
ASM Conference for Undergraduate Educators: <https://www.asm.org/index.php/asmcuc>
Missouri Valley Branch of the American Society for Microbiology: <https://mvasm.unl.edu/>
Oklahoma Academy of Sciences (OAS): <http://www.oklahomaacademyofscience.org/>
Oklahoma Microscopy Society (OMS): <http://www.ou.edu/research/electron/oms/>
The Society of Vertebrate Paleontology: <http://www.vertpaleo.org>
The American Association of Anatomists: <http://www.anatomy.org>
The Geological Society of America: <http://www.geosociety.org>
The Society of Integrative and Comparative Biology: <http://www.sicb.org>

Appendix E Survival Skills for Graduate Students Links

UCLA Graduate School Survival Guide: <https://grad.ucla.edu/asis/library/survivalguide.pdf>
PhDs.org Succeeding in Graduate School: How to Succeed in Graduate School: A Guide for Students and Advisors <http://www.csee.umbc.edu/~mariedj/papers/advice.pdf>
What Predicts Graduate School Success: <http://www.apa.org/gradpsych/2012/09/cover-success.aspx>
Ten Simple Rules for Graduate Students: <http://chem.virginia.edu/graduate-studies/test-links-pg/how-to-succeed-as-a-graduate-student/>
Your First Year in a Ph.D. Program: <http://chronicle.com/article/Your-First-Year-in-a-PhD/142953/>
Graduate School Survival Guide: <https://grad.ucla.edu/asis/library/survivalguide.pdf>
The Successful Graduate Student: A Review of the Factors for Success:
<http://www.aabri.com/manuscripts/10569.pdf>
A Brief Survival Guide for New Graduate Teaching Assistants at UNC Charlotte:
<http://teaching.uncc.edu/learning-resources/articles-books/best-practice/teaching-research-assistants/survival-guide-new-tas>