TEXAS TECH UNIVERSITY
HEALTH SCIENCES CENTER
Graduate School *of* Biomedical Sciences™

Guidelines and Requirements for Graduate Students Biomedical Sciences Program in Graduate Medical Education Sciences

I. Program of Study

The Graduate Medical Education Sciences (GMES) program offers a Master of Science (MS) degree. The GMES MS is a non-thesis degree designed to prepare students to be self-directed, life-long learners for medical or dental school or for teaching positions that emphasize anatomy, histology, biochemistry, cell biology, immunology and pathophysiology. Students complete the first three blocks of the School of Medicine curriculum (including Graduate Human Anatomy, Histology & Embryology, Introduction to Biochemistry, Cell Biology, Inflammation & Infection, and Introduction to Immunology, Hematology, and the Cardiovascular System) during the first year and then function as teaching assistants in these blocks during the second year. The Program Director will serve as the student's advisor during year one, and after an education project is selected a faculty mentor will serve as the student's advisor until graduation. An education project and participation in at least one Interprofessional Activity must be completed by the end of the second year in order to graduate.

All students are subject to the requirements listed in the Graduate School of Biomedical Sciences (GSBS) Catalog and Student Handbook of Texas Tech University Health Sciences Center published at the time of admission as well as program guidelines. (https://www.ttuhsc.edu/biomedical-sciences/catalogs.aspx) New students are admitted prior to each fall term. Students are required to have a personal laptop computer which meets the general recommendations for laptop computer configurations compatible with the TTUHSC network and the Sakai Learning Management System (LMS). More information regarding laptop configurations is available from the graduate coordinator.

A. Prerequisites for Admission

Applicants must have:

1. A bachelor's degree or the equivalent from an accredited college or university.

2. Adequate preparation for the proposed field of graduate study. Students may have an undergraduate degree in any field, but a strong science background is encouraged, including the completion of an undergraduate biochemistry course. Applicants must have completed or will complete the prerequisites for Texas Medical and Dental School Application Service (TMDSAS) medical school admission prior to matriculating into the program.

3. Results from either the Graduate Record Examination (General Test and, optional but recommended, the Subject Test in either Biology or Chemistry) or the Medical College Admissions Test (MCAT), with the scores forwarded directly to our institution for evaluation.

4. Two recent letters of recommendation (within 1 year), which must be from former faculty members, healthcare providers or administrators who are familiar with the scholastic abilities of the applicant.

5. An interview with the GMES Program committee.

    a. Other admissions application requirements and deadline information are available on the GSBS website: https://www.ttuhsc.edu/biomedical-sciences/academics/admissions.aspx

B. Graduate School Requirements – The GSBS requires a minimum of 36 hours of graduate-level course work before granting a Masters degree.

C. Program Mandates – Courses needed to fulfill the required number of hours are listed in Appendix 3.

D. Project – Students will design and carry out a medical education project (assessed using the rubric shown in Appendix 5) under the direction of an appropriate faculty advisor (Appendix 2). The project will be designed according to the needs of the program and matched to the interest of the student. Examples of a project might include self-directed learning units/sessions, curriculum assessment, or upgrading or creating educational materials to be presented online. The student must choose a project prior to the beginning of the second year. Students will be given a list of possible projects or may choose a project of their own after consultation with the Program Director and faculty advisor (Appendix 6). The project must be approved by the Program Director. After the project is selected, the program Student Affairs Advocate (SAA) and student will submit the Degree Plan and Admission to Candidacy to GSBS (Appendix 7).

   Subsequent alterations to the project for any reason will require approval of the Program Director.

   Second year students will present their project during Student Research Week and in a public seminar during the final Spring semester. The project and presentation will be evaluated by the program committee and faculty using Appendix 5**.** Successful completion of the project will be determined by the program committee. The project must be successfully completed to graduate.

E. Intent to Graduate – Each student is required to file the Statement of Intent to Graduate (Appendix 8) with the GSBS office in the same semester the student will graduate. Generally, this deadline is at the beginning of each semester. Students should check the GSBS website at: https://www.ttuhsc.edu/biomedical-sciences/student/default.aspx

II. Assessment of Graduate Student Progress (Appendix 1):

The graduate student checklist is the major tool for assessing graduate student progress through the degree program. It is the student's responsibility to ensure that all appropriate forms are signed and filed with the graduate coordinator according to deadlines. This checklist, Appendix 1, and the student's file will be reviewed every summer or as needed to ensure and assess student progress by the program committee. It is expected that the student will maintain above-average ratings in all required assessment tools (Appendix 1), while always exhibiting a high level of professionalism (see below). Failure to maintain these standards may result in the student being placed on academic probation or dismissed from the program.

The program committee has the responsibility for monitoring the progress of the graduate student and can recommend dismissal of the student to the GSBS should the student fail to demonstrate adequate development and/or progress through the degree program.

Professional behavior:

In addition to exhibiting courtesy, compassion and decorum in all aspects of this program (as well as those outlined in the section below), professional behavior also includes participation in all mandatory events described in the Block Descriptions for Each SOM block. Failure to complete these activities may negatively influence students' final grades. Lack of professional behaviour from GMES2 students may affect their standing with medical schools' Admissions Committees.

III. Program Requirements

A. Satisfactory Academic Standing - Every student enrolled is required to maintain a high level of performance and to comply fully with policies of the institution and the GMES graduate program. The GSBS reserves the right to place on probation or to dismiss any graduate student who does not maintain satisfactory academic standing or who fails to conform to the regulations of the university. Every student is expected to maintain a high level of commitment to professional development in a variety of areas. If any aspect of a student's professional development (for example, attention to teaching responsibilities, appropriate progress toward project goals, etc.) is considered to be unsatisfactory by either the program committee or the student's faculty advisor (if one has been appointed), the student shall be so informed in writing, along with a description of the recommended corrective action and the period of time allowed for the corrective action to be taken. If the student fails to correct the deficiency, the committee may recommend dismissal of the student from the program.

Students must attain a "B" or higher in all courses (Appendix 4). If the student either withdraws or attains a "C" in one of these courses, they will be required to retake the course the following year and attain at least a "B" grade. If the student makes less than a "C" in a course ("D" or "F") or less than a "B" in two or more courses, they will be dismissed from the program. To remain in good academic standing with the graduate school, students must maintain a GPA of 3.0 in each semester. If the student drops below a 3.0 for any semester, he or she will be placed on academic probation. If the student attains less than 3.0 in any subsequent semester, they will be dismissed from the program. Failure to meet appropriate deadlines outlined in the degree program checklist (Appendix 1) or unprofessional conduct by the student could result in the student being placed on GMES program probation.

In addition to program grade requirements, students will be further evaluated for progress by the course directors in GMDS 5001, GMDS 5020, GMDS 5021, GMDS 5022, GMDS 5023, and GMDS 5024 using Appendix 9. Course directors will review this appendix with each student. This appendix will also be reviewed by the Program Director (or Associate Director) and student.

B. Course Waiver Procedure – Students requesting a waiver for a program-required course should follow these steps:

1. The student will make a written request to the program advisor outlining the course(s) to be waived, the reasons why the waiver is requested, and which, if any, previous graduate level courses addressed the same material as the waived course. The student must provide the program advisor with the relevant course syllabus.
2. The program advisor will forward the request to the program committee for consideration and request a vote on the waiver request.
3. The student will be notified of the voting results by email.

C. Grievances and Appeals

Student Appeals Policy. This policy applies to specific grievances arising from matters affecting students' academic standing and performance such as disputes concerning projects and project presentations. Appeals may be made only when alleged prejudicial, arbitrary or capricious action is involved, or new evidence relevant to an adverse decision is discovered. The burden of proof of unfair influence or action rests with the student.

A student wishing to appeal a decision or action should first discuss the matter with the faculty member or members involved. If the student is not satisfied with the outcome of this discussion, the student should contact the Program Director. This contact, like that with the faculty members, normally is informal, and the Program Director may take whatever action he or she deems advisable in attempting to resolve the issue. All parties involved should make every effort to resolve the issue without going beyond this level. The program advisor may consult with either the program committee (excluding the Dean of the GSBS) or an *ad hoc* committee of graduate faculty from the program (when the appeal is of an action taken by the program committee or a substantial proportion of its elected members) for advice regarding actions in an appeal. If the student still is not satisfied following these meetings and discussions, the student may make a formal appeal to the Dean of the GSBS. The appeal shall be processed according to the rules of the GSBS in effect at the time it is filed with the Dean.

D. Leave of Absence

A Leave of Absence may be requested by submitting a written request to the program advisor at the beginning of the semester and must specify the reason for the request.

The GSBS has a Leave of Absence policy (GSBS Catalog, Page 24), which states:
"Any student who fails to register for three consecutive semesters (12 months) and who does not have an official leave of absence from study is subject to review for readmission by the standards in effect at the time of reconsideration. Official leave of absence, which is granted by the GSBS Office upon recommendation of the Program Director, may be granted only in cases of serious medical conditions and other exceptional reasons. Normally, leaves of absence will not exceed one year. Leaves of absence do not extend the maximum time allowed for completion of the degree."

Students granted a Leave of Absence must submit written confirmation to the Program Director of their intent to return to the program one month prior to their intended return. A student who returns from a Leave of Absence must ensure that all obligations associated with their return, including timely registration for the appropriate semester, are met.

Requests to extend a Leave of Absence beyond one year must also be submitted in writing to the Program Director and will only be granted under unusual circumstances. In addition, the student must have been in good academic standing at the time of the original request. If a Leave of Absence request is denied and the student does not continue in the curriculum, the student will be considered to have withdrawn from the program. The student may reapply for admission to the program but will be subject to the same requirements and deadlines as other prospective students.

E. Course remediation and class standing

a. Any student who is required to re-take (for any reason) one or more of the required courses will not advance with their entering cohort or graduate with their incoming class, but will instead repeat the year; i.e., a GMES1 student who must remediate a course will remain a GMES1 student for the next academic year.

F. Additional Specific Information

1. Registration – A student must be registered for a minimum of 1 hour in the semester that he/she intends to graduate. Students will register for a minimum 9 hours for each long semester (fall and spring) and may register for up to 6 hours for the summer session.

2. There is no requirement for a foreign language or a minor.

3. Appendix 10 lists all courses offered by the GMES Program.

4. Degree plans are subject to change as the program guidelines are revised.

5. All students are required to complete (and show evidence for completion) at least one registered IPE (Interprofessional Education) event.

IV. Program Constitution and Policies

A. Program Committee Composition and Responsibilities

The program committee consists of nine members (the Dean of the GSBS, six other faculty members, and two student representatives). The six "core" faculty members serve at the pleasure of the Dean of the GSBS. The Dean of the GSBS serves as an ex officio member (voting only in the case of a tie). The chair of the committee is appointed by the Dean of the GSBS and acts as the Program Director. The Dean also appoints an Associate Program Director (Program Advisor) from the other five faculty committee members. The responsibilities of the Program Director and the Associate Program Director are listed in Appendices 11 and 12.

Specific functions of the program committee are to: 1) oversee the general governance of the program, 2) review and accept students into the program, 3) oversee content of the required courses, 4) ensure that course directors are providing the students with a syllabus that clearly outlines course contents and grading policies, 5) annually evaluate student progress, and 6) conduct the 5-year GSBS graduate faculty review. The program committee will serve as the entering students' advisory committees.

The Program Director will serve as one of the program's two representatives to the TTUHSC Graduate Council. The second representative to Graduate Council will be the Associate Program Director.

B. Student representatives to the program committee:

Two student representatives to the program committee will be selected by GMES students in the Spring of year 1. They will be expected to attend all program committee meetings during the academic year, where they will:

1. Relay questions and concerns from the GMES students to the committee,
2. Participate in discussions by the committee, except where such participation would represent a conflict of interest, and
3. Assist in the admissions process, as requested by the faculty of the program committee.

Students will not be considered to be voting members of the committee, except when asked by the Program Committee.

C. Proposing Changes to the Guidelines of the Program in GMES

The general governance of the program including changes to the guidelines is the primary responsibility of the program committee. However, any member of the GMES graduate faculty has the right to recommend a change in the GMES program by presenting a written document to the Program Director. The Program Director will then call together the program committee to discuss the proposed change. All changes must conform with the policies of the Graduate Bylaws of the GSBS (TTUHSC). The program committee must then make a recommendation (in favor of, or opposed to, the suggestion) to the Program Director for a final decision. The Program Director will then be responsible for formally revising the guidelines.

Appendix 1: Graduate Medical Education Sciences Checklist

Graduate Medical Education Sciences Program Student Checklist

GA Approval	Requirements	Appendix	Date Completed
	Introduction to Program Director and Graduate Coordinator to Receive Guidelines and Checklist	1	
	Reviewed Sample Curriculum with Program Director	3	
	Completed IPE Activity prior to Graduation		
	Fall Semester Year 1		
	GSBS 5000 Interprofessional Collaborative Practice		
	GMDS 5001 Graduate Human Anatomy, Histology & Embryology	10	
	GMDS 5021 Introduction to Biochemistry, Cell Biology, Inflammation and Infection	10	
	Spring Semester Year 1		
	GMDS 5020 Introduction to Immunology, Hematology, and the Cardiovascular System	10	
	Choose One: GMDS 5110 Surgical Gross Anatomy OR		
	GMDS 5006 Advanced Dissection Skills		
	Meet with Faculty Regarding Educational Project		
	Select an Educational Project:	6	
	Submit Degree Program to GSBS	7	
	Fall Semester Year 2		
	FERPA Training		
	GMDS 5023 Advanced Training in Anatomy, Histology & Embryology Education	10	
	GMDS 5024 Advanced Training in Biochemistry & Infectious Disease	10	
	GMDS 7000 Research (3 Hours) Begin Project	10	
	Spring Semester Year 2		
	Submit Intent to Graduate to GSBS	9	
	GMDS 5310 Educational Project in Biomedical Sciences (Complete Project)	5	
	GMDS 5022 Advanced Training in Immunology, Hematology, and the Cardiovascular System GMDS 5121 Pedagogical Concepts in Medical Education	1	
	GMDS 7000 (3 Hours) - Complete Project	10	
	GSBS 5101 Responsible Conduct of Research		
	See checklist for graduation deadlines from the GSBS website.		

Appendix 2: Graduate Faculty of the Program

Professors
Jannette Dufour, Ph.D.
Cheryl Erwin, J.D., Ph.D.
Betsy Jones, Ed.D.
John Pelley, Ph.D.
Fiona Prabhu, MD
Brandt Schneider, Ph.D.
Dan Webster, Ph.D.

Associate Professors
Gurvinder Kaur, Ph.D.
Keith Bishop, Ph.D.
Cassandra Kruczek, Ph.D.

Assistant Professors
Alice Villalobos, Ph.D.
Chip Shaw, Ed.D.

Faculty Associate
Anthony Hewetson, M.S.

Appendix 3: Required Graduate Medical Education Sciences Program Curriculum

Curriculum

Students will take courses in the anatomical and physiological sciences and in modern instructional methods and design, and will participate in the teaching mission of the medical school as teaching assistants. Elective courses are also listed in Appendix 10.

Sample Curriculum

YEAR 1

Prefix/Number	Course Title	SCH
Fall Term		
GSBS 5000	Interprofessional Collaborative Practice	0
GMDS 5001	Graduate Human Anatomy, Histology & Embryology	6
GMDS 5021	Introduction to Biochemistry, Cell Biology, Inflammation and Infection	6
		12
Spring Term		
GMDS 5020	Introduction to Immunology, Hematology, and the Cardiovascular	10
GMDS 5110	Surgical Gross Anatomy and/or	1 and/or
GMDS 5006	Advanced Dissection Skills	3
		11-14

YEAR 2

Prefix/Number	Course Title	SCH
Fall Term		
GMDS 5023	Advanced Training in Anatomy, Histology & Embryology Education	3
GMDS 5024	Advanced Training in Biochemistry & Infectious Disease	3
GMDS 7000	Research (*Begin project.*)	3
		9
Spring Term		
GMDS 5022	Adv. Training in Immunology, Hematology, and the Cardio. System	3
GMDS 5310	Educational Project in Biomedical Sciences	3
GMDS 5121	Pedagogical Concepts in Medical Education	1
GMDS 7000	Research (*Complete project*.)	3
GSBS 5101	Responsible Conduct of Research	1
		11
	PROGRAM TOTAL	**43-46**

Appendix 4: Grading Scale

Grading Scale for the following courses:

GMDS 5001 Graduate Human Anatomy, Histology & Embryology
GMDS 5021 Introduction to Biochemistry, Cell Biology, Inflammation and Infection
GMDS 5020 Introduction to Immunology, Hematology, and the Cardiovascular System

A, B, C, D, or F cumulative score as graded on the written and practical exams.

86.50 and Above = A
74.50 – 86.49 = B
69.50 – 74.49 = C
64.50 – 69.49 = D
64.49 and Below = F

Refer to syllabus for grading scale in all other courses.

Appendix 5: Project Presentation Evaluation

Graduate Medical Education Sciences Project/Presentation Evaluation Form

Date: _____ **Evaluator:** _____

Student: _____

(The scale (5-1) corresponds to letter grades of A-F. An overall average of 4/5 is required to achieve a "B" for the presentation.)

Mark the appropriate box for each statement. (50 points possible)

The Project	**Outstanding 5**	**Above Average 4**	**Average 3**	**Below Average 2**	**Inadequate 1**	**Not Applicable**
The project represented a meaningful contribution to the educational goals of the program.						
The educational issue that this project addressed was made clear.						
The methods were appropriate and presented clearly.						
Data were presented clearly and were analyzed and interpreted properly, using statistics where appropriate.						
The discussion included possible alternatives and study limitations.						
The significance of the project was stated clearly.						
The Presentation						
The slides were readable, illustrating concepts and data, and in logical order.						
The student was engaging, spoke clearly and provided smooth transitions from slide to slide.						
Questions were answered in a confident and knowledgeable fashion.						
The student was able to respond to criticism and suggestions readily, and was able to defend their presentation appropriately.						

Comments:	

Appendix 6: Graduate Medical Education Sciences Project Advisor Agreement

To: The Program Director of Graduate Medical Education Sciences

From: The Graduate Student _____

Subject: Selection of the MS Graduate Medical Education Sciences Project Advisor

Date: _____

The two parties who have signed below mutually agree to begin a formal Graduate Student-Major Advisor relationship directed toward the goal of earning a MS degree for the student.

Student's Signature _____

Project Advisor (Please Print) _____

Project Advisor's Signature _____

Project Name _____

_____

Program Approval:

_____

Program Advisor's Signature _____

Appendix 7: Master's Degree Plan

The degree plan will be completed with the student and the student affairs advocate.

Appendix 8: Intent to Graduate

The statement of intent to graduate will be completed in the semester of graduation. The form can be found on the GSBS website.

Appendix 9: Course Directors Evaluation of Student Progress – Graduate Medical Education Sciences

Date: _____
Student: _____
Course: _____
Evaluator: _____

Mark the appropriate box for each statement. (The scale (5-1) corresponds to letter grades of A-F. An overall average of 4/5 is required to achieve a "B" in the course.)

	Outstanding 5	Above Average 4	Average 3	Below Average 2	Inadequate 1	Not Applicable
Preparedness for Lecture/Lab/Prelab Sessions						
Active Engagement						
General Communication Skills						
General Comprehension of the Material						
Extra Items: Study Sessions, Generation of Practice Exams, etc. (as applicable)						
Overall Student Progress (Overall progress score is an overall reflection of the subscores but not necessarily a numerical average of the subscores.)						

Comments:

Date Reviewed by Program Advisor _____

Appendix 10: GMDS Course Descriptions

5001 **Graduate Human Anatomy, Histology & Embryology.** This course comprises a highly integrated study of human macroscopic and microscopic anatomy (including human dissection and both light and electron microscopy) which begins with the normal structure and function of the developing embryo as well as the mature body and then describes changes in both that are associated with various clinical conditions. Finally, learners will be exposed to educational approaches to the study of the human body that are essential for future success in the field of health care. Enrollment is limited to students admitted to the Graduate Medical Education Sciences M.S. program.

5021 **Introduction to Biochemistry, Cell Biology, Inflammation and Infection.** This course is designed to provide students with fundamental information concerning the traditional areas of biochemistry, genetics, cell biology, pharmacology, pathology and microbiology. The principles presented in this course will proceed from molecules to cells and then to tissues and organs, integrating structure and function in a way that will impart a deeper understanding that will allow students to achieve future success as either teachers or healthcare workers. Enrollment is limited to students admitted to the Graduate Medical Education Sciences M.S. program.

5020 **Introduction to Immunology, Hematology, and the Cardiovascular System.** This course is designed to provide students with fundamental information concerning the immune, hematopoietic and cardiovascular system. Normal function (histology and physiology) will be covered followed by disorders and pathophysiology, including infections, affecting each system. This will impart a deeper understanding that will allow students to achieve future success as either teachers or healthcare workers. Enrollment limited to students admitted to the Graduate Medical Education Sciences M.S. program.

5023 **Advanced Training in Anatomy, Histology & Embryology.** Students will participate in the gross anatomy and histology laboratories as teaching assistants, attend all pre-laboratory meetings, present at select pre-laboratory meetings, oversee prosection presentations during scheduled lab hours, attend all lectures in preparation for the laboratory sessions, assist in the preparation of practical exams, proctor exams, ultrasound sessions and STS sessions as needed, and schedule, organize, and conduct review sessions. Prerequisites include successful completion of the first-year course work in Graduate Med-Ed Sciences. Enrollment limited to students admitted to the Graduate Medical Education Sciences M.S. program.

5024 **Advanced Training in Biochemistry & Infectious Disease.** Students will lead and participate in designated small-group review sessions, team-based learning sessions for the medical school class, attend all lectures and designated laboratory sessions as teaching assistants, and participate in all pre-laboratory meetings in preparation for the laboratory sessions. Students will also proctor both the unit exams and the NBME final exam, as needed. Prerequisites include successful completion of the first-year course work in Graduate Med-Ed Sciences. Enrollment limited to students admitted to the Graduate Medical Education Sciences M.S. program.

5006 **Advanced Dissection Skills.** Students will review and conduct specialized dissections in the Anatomy Laboratory. The student will learn and practice advanced dissections skills designed to prepare specific teaching materials to demonstrate anatomical structures in different body regions. Prerequisites include successful completion of the first-year course work in Graduate Med-Ed Sciences.

5007 **Advanced Training in Ultrasound.** The overall goal is to show how to utilize ultrasound imaging to visualize and teach advanced topics in anatomy and physiology. Prerequisites: successful completion of GMDS 5001 and GMDS 5023.

5022 **Advanced Training in Immunology, Hematology, and the Cardiovascular System.** Students will lead and participate in designated small-group review sessions, team-based learning sessions, simulations, and laboratory sessions for the medical school class, attend all lectures and designated laboratory sessions as teaching assistants, and participate in all pre-laboratory meetings in preparation for the laboratory sessions. Students will also proctor both the unit exams and the NBME final exam, as needed. Prerequisites include successful completion of the first-year course work in Graduate Med-Ed Sciences. Enrollment limited to students admitted to the Graduate Medical Education Sciences M.S. program.

5099 **Topics in Graduate Med-Ed Sciences.** Specific areas in Graduate Med-Ed Sciences or related areas not normally included in other courses. May be repeated for credit with change of content.

5110 **Surgical Gross Anatomy.** Introduction and overview to surgical approaches to different regions of the human body from a clinical perspective. Students will observe and assist surgeons with surgical dissections of cadavers. The experience in surgical anatomy will provide students with a relevant correlation of anatomy to applied surgical procedures. Enrollment limited to students admitted to Graduate Med-Ed Sciences M.S. program and successful completion of GMDS 5001 Gross Anatomy course.

5115 **Introduction to Functional Neuroanatomy.** Students will learn to identify external and internal structures of the central nervous system (CNS: brain and spinal cord) and associated vasculature. They will be able to describe the symptoms due to lesions in specific brain and spinal cord lesions. Prerequisites: good academic standing, GMDS 5001.

5120 **How People Learn: Theory and Practice.** The overall goal is to show how maximize learning skill in the health sciences with an emphasis on medical education. Individual differences in learning style will be used as examples of the application of Deliberate Practice to increase cognitive skills. Concepts such as the Growth Mindset and memory consolidation will provide

a basis for understanding the universal application of concept mapping and question analysis as methods that maximize return on investment of learning time.

5121 **Pedagogical Concepts in Medical Education.** This course is intended to provide a graduate-level foundation for understanding important concepts that guide current medical education pedagogy. Students will evaluate papers from the Med-Ed literature, learn to write an effective abstract and present an effective poster, create vignette-style questions and an outline of their project for a possible manuscript.

5310 **Educational Project in Biomedical Sciences.** Students will design and carry out an educational project related to topics in GMDS 5001 or GMDS 5021. The project will be designed according to the needs of these courses and matched to the interest of the student. Projects might include self-directed learning units/sessions, or upgrading or creation of educational materials as presented on Sakai. Enrollment limited to students admitted to the Graduate Med-Ed Sciences M.S. program.

6101 **Seminar**

7000 **Research**

GSBS Interdisciplinary Course(s):

5000 **Interprofessional Collaborative**

5101 **Responsible Conduct of Research**. This course will address the regulatory and ethical environment of today's biomedical research as well as such topics as authorship and data management. The class format is lectures and case discussions. Course is required for all GSBS students.