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**Graduate Programs**  
**in**  
**Biomedical Sciences**

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**Handbook**  
**2020-2021**

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Program Description  
Curriculum  
Faculty Information  
Degree Checklist

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# Graduate Programs

## 1. INTRODUCTION

The mission of the Department of Biomedical Sciences graduate programs is to provide excellent academic programs that educate and train the next generation of scientists, teachers, and health-related professionals through scholarship and research that fosters creativity, discovery and intellectual independence.

Study for the Ph.D. degree emphasizes independence in scientific pursuit, with a particular emphasis on research. Course work and independent research are designed to bring the student to a high level of competence in biomedical science with particular expertise in the area chosen for the dissertation. Students will be expected to demonstrate a high capacity for original and independent thought, and to combine these skills with knowledge of the scientific method to perform original research. While students will receive significant guidance from their Major Advisor at the beginning of the program, students will quickly become responsible for the direction and progress of their own research project. In this context, the Major Advisor will act as a guiding resource in a collaboration whose ultimate goal is the creation of a novel scientific contribution to the chosen discipline.

## 2. PROGRAM OBJECTIVES

Within the context of Creighton as a Jesuit, Catholic University, the Graduate School provides value-centered education for students to develop mastery of their chosen field of study. The Biomedical Sciences programs offer an environment ideal for fostering critical judgment, scholarly initiative, and disciplined inquiry. At the completion of the graduate program in Biomedical Sciences, students will:

1. Demonstrate advanced knowledge in molecular and cellular biology and in their field of specialization.
2. Demonstrate ability in independent analytical thinking, both within and beyond the scope of their thesis or dissertation project.
3. Demonstrate skill in critical analysis of published scientific literature including experimental design, proper use of controls, and interpretation of data.
4. Exhibit competence in the laboratory, including application of the scientific method and appropriate use of both basic, and state of the art, laboratory techniques.
5. Exhibit the oral communication skills necessary for active participation in scientific gatherings, both as a presenter and as a discriminating member of the audience.
6. Exhibit the written communication skills necessary for preparation of clear, concise abstracts, manuscripts and grant applications.
7. Comprehend the importance of professional ethics in all aspects of scientific communication and laboratory work.

8. Exhibit the scientific independence required to assume the next professional position.
9. Develop the necessary skills required to effectively educate and train others in the classroom, laboratory, and workplace.
10. Use your knowledge and skills in the service of others.

### 3. FINANCIAL AID

On entering either the M.S. or Ph.D. program, students will receive tuition remission and health insurance. Students entering the Ph.D. program will receive a stipend for living expenses. This stipend will come from either the Department or the Major Advisor's laboratory budget. Students receiving a stipend must devote **full time and effort** to their class work and research project. Continued Departmental support will be reviewed on an annual basis, and normally will not exceed four years. On the rare occasion that Departmental support must exceed four years, the Major Advisor of the student wishing to extend support needs to petition the Graduate Program Committee in writing stating the reason why an extension should be granted and a timeline to completion of degree requirements.

All students will be enrolled as full-time students with a minimum of 8 credit hours during both the fall and spring semesters, and 4 credit hours during each of the two summer terms. Exceptions can be made with the combined consent of the Major Advisor and the Graduate Program Committee.

**As implied in the previous paragraph, all students will be expected to perform research over the summer break and other academic-year breaks that are standard for undergraduate students.** It is during these times, when classes are not in session, that students can make significant progress on their research project. Vacations or personal days are still permitted (and encouraged) but must be coordinated with the Major Advisor to ensure that students do not miss important deadlines and research milestones.

### 4. DOCTORAL DEGREE CURRICULUM (*credit hours in parentheses*)

#### *Foundation Course*

BMS 622 Biochemistry, Molecular and Cell Biology (4)

#### *Tool Courses*

IDC 601 Responsible Conduct of Research (1)

IDC 625 Introduction to Biostatistics for the Biomedical Sciences (3)

IDC 627 Research Methods (3)

IDC 701 Research Writing (3)

#### *Repeating Courses*

BMS 791 Seminar (1)

BMS 792 Journal Club (1)

BMS 797 Directed Independent Research (3-6 per semester)

(a maximum of 45 credits of BMS 797 can be applied to the degree)

*Elective Courses – at least 2 courses, at least 6 credits*

See list of courses in section 20. Note that this list of courses may change during the course of the student's degree program.

*Degree Completion Course*

BMS 899 Doctoral Dissertation (3-6 per semester)  
(minimum of 3 credits; a maximum of 20 credits can be applied to the degree)

The Ph.D. degree requires a minimum of 90 credit hours.

## **5. MASTER'S DEGREE CURRICULUM** (*credit hours in parentheses*)

*Foundation Course*

BMS 622 Biochemistry, Molecular and Cell Biology (4)

*Tool Courses*

IDC 601 Responsible Conduct of Research (1)

*Repeating Courses*

BMS 791 Seminar (1)

BMS 792 Journal Club (1)

BMS 797 Directed Independent Research (3-6 per semester)

*Elective Courses – at least 2 courses, at least 6 credits*

In addition to the Elective Courses listed in section 20, "Tool Courses" listed under the Doctoral Degree Program may be used to fulfill part or all of this requirement provided that the student's advisory committee approves of the student's overall Program of Study.

*Degree Completion Course*

BMS 799 Master's Thesis (1-3 per semester)  
(a maximum of 6 credits can be applied to the degree)

The M.S. degree requires a minimum of 30 credit hours.

## 6. EXAMPLE PROGRAM FOR THE Ph.D. DEGREE

(Note: this timeline will vary depending on the courses taken, the parameters of the research project, and the student's rate of progress)

### 1<sup>st</sup> year

Fall	Biochemistry, Molecular and Cell Biology (4) Responsible Conduct of Research (1) Seminar (1) Journal Club (1) Directed Independent Research (3)
Spring	Research Methods (3) Elective 1 (3) Seminar (1) Journal Club (1) Directed Independent Research (4)
Summer	Introduction to Biostatistics for the Biomedical Sciences (3) Directed Independent Research (5)

### 2<sup>nd</sup> year

Fall	Elective 2 (3) Seminar (1) Journal Club (1) Directed Independent Research (6)
Spring	Research Writing (3) Seminar (1) Journal Club (1) Directed Independent Research (6)
Summer	Directed Independent Research (8)

### 3<sup>rd</sup> and 4<sup>th</sup> year (and additional semesters as needed)

Fall	Seminar (1) Journal Club (1) Directed Independent Research (6)
Spring	Seminar (1) Journal Club (1) Directed Independent Research (6)
Summer	Directed Independent Research (8)

### Final semester

	Seminar (1) Journal Club (1) Directed Independent Research (3) Doctoral Dissertation (3)
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## 7. MD/PhD PROGRAM

The MD/PhD program is administered by the School of Medicine under the direction of Mark Reisbig, M.D., Ph.D., Dept. of Anesthesiology. Students within this program follow a prescribed curriculum for the first two years and then transition into the Dept. of Biomedical Sciences to complete the research requirements for the Ph.D. degree.

The following courses are normally completed during the first two years in the program:

### *Foundation Course*

BMS 604 Fundamentals of Molecular and Cell Biology (3)  
listed as CIB 103 Foundational Science (5) in the SOM curriculum

### *Tool Courses*

IDC 601 Responsible Conduct of Research (1)  
IDC 625 Introduction to Biostatistics for the Biomedical Sciences (3)  
IDC 627 Research Methods (3)  
IDC 701 Research Writing (3)

The following courses are part of the first two years in the program and continue through the Ph.D. portion of the program:

### *Repeating Courses*

BMS 791 Seminar (1)  
BMS 792 Journal Club (1)  
BMS 797 Directed Independent Research (variable credit)  
(a maximum of 45 credits of BMS 797 can be applied to the degree)

The following collective course requirement is waived, pending successful completion of the first two years of medical school:

*Elective Courses – at least 2 courses, at least 6 credits*

However, individual Advisory Committees may require students to complete additional elective courses if it is felt that these courses would significantly benefit the student's educational experience.

The following course is required to complete the Ph.D. portion of the program:

### *Degree Completion Course*

BMS 899 Doctoral Dissertation (3-6 per semester)  
(minimum of 3 credits; a maximum of 20 credits can be applied to the degree)

In addition, students must complete the Advancement to Candidacy Exam (ACE) during their first year in the Ph.D. portion of their curriculum.



## 8. ACADEMIC REQUIREMENTS

**A minimum grade of "B" is required to earn graduate credits in "500-series" (advanced undergraduate) courses. In courses numbered 600 and above (open exclusively to graduate students) the minimum acceptable grade is "C". If you accumulate more than 6 credits of "C", or any grade less than "C", you will be dismissed from the program.**

Students dismissed from the Graduate School are allowed to appeal to the Graduate Board for reinstatement to the program. The Graduate Board also hears appeals for removal of probation, academic suspension, transfer of credits, or change in program. Procedures for submitting appeals are described in the Graduate Bulletin and should be executed in consultation with Graduate Dean's Office.

## 9. SELECTION OF MAJOR ADVISOR

Prior to the selection of a permanent Major Advisor, the Graduate Program Director will serve as each student's *ad hoc* advisor.

During the first semester in the program students are highly encouraged to experience the research environment in different faculty laboratories to gain exposure to faculty, other students, and various techniques. These experiences are referred to as "lab rotations". Each lab rotation will last approximately 4-6 weeks, thus providing the potential for having a research opportunity in 2 or 3 laboratories prior to making a decision on the selection of a Major Advisor.

Laboratory rotations are made available to incoming doctoral students based on:

1. The willingness of faculty members to accept students into their lab.
2. The availability of sufficient funds to support the student's research activities within the selected lab.

Students who wish to select a Major Advisor at matriculation without the benefit of lab rotations must, together with the Major Advisor, petition the Graduate Program Director, and the selection must be approved by the Graduate Program Committee.

By the end of the first semester, students are expected to select a Major Advisor along with a specific area of research interest. **Even if students enter the program having already identified a Major Advisor, laboratory rotations during the first semester are still encouraged.**

The student's Major Advisor will serve as the chair of their advisory committee and the advisory committee is expected to assist students in defining the direction of their research program. The Major Advisor will also be largely responsible for providing the resources necessary for completing the research project. However, students are required to apply for extramural funding as part of their education, in order to acquire the skills necessary for writing future grant applications.

For doctoral degree students, the Major Advisor must hold a primary or secondary appointment within the Department of Biomedical Sciences as

either a tenured or tenure-track faculty member. Students who select a Major Advisor with a secondary appointment, must have this appointment approved by the Graduate Program Committee and the student must have a Sponsoring Advisor with a primary appointment in the Department of Biomedical Science. The Sponsoring Advisor is responsible for making sure that the student satisfies the requirements of the program and remains on a reasonable timeline for completing the program.

For master's degree students, the Major Advisor must hold a primary appointment within the Department of Biomedical Sciences as either a tenure- or research-track faculty member. All appointments of Major Advisor for a master's degree student must be approved by the Graduate Program Committee

*Making a change of Major Advisor once a student's research project in underway is normally strongly discouraged. However, under unusual circumstances, students may petition the Graduate Program Director for a change of Major Advisor. This change must be approved by the Graduate Program Committee.*

## **10. THE ADVISORY COMMITTEE AND COMMITTEE MEETINGS**

Students are responsible for selecting an advisory committee in consultation with their Major Advisor. The advisory committee will consist of the Major Advisor and a minimum of three other graduate faculty members. (This requirement sets a minimum total of four members, but students are strongly encouraged to have five faculty members on their advisory committee.) At least three committee members must be tenured or tenure-track faculty who have primary appointments in the Department of Biomedical Sciences and at least one member must have a primary appointment outside the Department of Biomedical Sciences.

The first meeting of the advisory committee should be scheduled early in the second semester of the first year of the student's degree program. During this meeting, you will outline your planned coursework.

**Subsequent committee meetings are to be held at least once every fall and spring semester. Students will not be able to register for a succeeding semester or term until after that committee meeting has taken place.**

Students will be evaluated by their advisory committee following each meeting on the basis of their oral skills in the presentation, their ability to evaluate their data, their ability to answer committee member's questions and on the overall progress of the research project. These evaluations should be appropriate for the level of the student's developmental status within the program.

## **11. ADVANCEMENT TO CANDIDACY EXAM**

Doctoral students are required to pass an Advancement to Candidacy Exam (ACE) at after their second full academic year. The ACE is composed of a

combination of a proposed grant application, an oral presentation of the research project contained within the proposed grant application, and an oral defense of the research project to the student's advisory committee. Upon successful completion of the ACE, the student will be considered to have become a degree candidate.

Students must first write an abstract and specific aims page for the proposed research project, and have these two elements approved by their advisory committee, prior to writing the proposed grant application. The proposed grant application will be written in the format of an NIH F31 grant application and should be completed with only minimal guidance from the Major Advisor. This proposal must be distributed to the advisory committee at least three weeks before the student presents a research seminar to the department. During this seminar the student will present the elements of the proposal and answer questions from the general audience related to the seminar. Following a brief recess the student will then defend their proposal to the advisory committee. If, following the oral defense the proposal requires revision, the student will be provided the opportunity to make revisions and the Major Advisor will have responsibility for approving the revised version. These revisions should be completed within two months and the final document shall be deposited in the student's department file at that time.

Students are required to complete the ACE within the first semester of their third academic year. A proposed timeline for the exam is:

1. Abstract and specific aims page by August 1
2. Approval of the abstract and specific aims page by August 15
3. Submission of the completed proposal to the student's advisory committee by October 1
4. Defense and oral exam by November 15
5. Submission of the proposal to the NIH by the December 8 deadline

On the rare occasion that an exception is needed to complete the ACE within the first semester of the third year (e.g., student health or family issues), the Major Advisor of the student wishing to extend the deadline needs to petition the Graduate Program Committee in writing stating the reason why an extension should be granted and an alternative timeline for the ACE.

Students must pass the ACE to advance to the status of degree candidate. Failure of the ACE will require a re-take of the exam, which following to the guidelines of the Graduate School requires a 6-month waiting period before reexamination.

## **12. GRADUATE PROGRAM DIRECTOR**

The Graduate Program Director will serve as a liaison between graduate students and the faculty. The Graduate Program Director will:

1. serve as a temporary advisor for incoming students who have not yet selected a Major Advisor;
2. act as a liaison or ombudsman for graduate students seeking to resolve degree program-related problems;
3. oversee the program of each graduate student, review the progress of

- each student on a semi-annual basis, and ensure the maintenance of appropriate academic standards; and
4. report to the Graduate Program Committee on student progress.

#### *Grievances (Conflict Management)*

From time to time, the student-advisor relationship may experience minor discord. Such periods are frequently resolved over the course of a few days or weeks. In the rare case that the advisor-student relationship cannot be successfully resolved in a timely manner, the Graduate Program Director should be consulted. In coordination with the Graduate Program Director, the Graduate Program Committee will then decide whether termination of the relationship is appropriate. It is the responsibility of the student to then identify a new faculty member willing to assume the role of Major Advisor. Once the student and the new Major Advisor have agreed to work together, the Graduate Program Committee should be consulted so that any necessary arrangements can be made for the successful completion of the student's degree program.

#### *Academic Status*

If a student is on academic probation, he or she must see his or her advisor and the Graduate Program Director at the beginning of the semester and reassess the choice of courses that are to be taken that semester. The Graduate Program Director is authorized by the Program to require the student to take various remedial courses in conjunction with, or before enrolling in, specific courses administered by the Program.

### **13. THESIS/DISSERTATION RESEARCH AND DEFENSE**

Once a written draft of a master's thesis or doctoral dissertation has been completed, the student degree candidate must get approval from their major advisor before submitting it to members of their advisory committee. The student will then give a final seminar and oral defense (together referred to as the "Oral Defense") of their thesis or dissertation.

To ensure the timely completion of the degree, the Graduate Program Committee strongly recommends the following timeline:

Submission of the final draft of the thesis or dissertation to the student's advisory committee 8 weeks prior to the intended Hooding ceremony.

Public notice of the defense and oral examination of the thesis or dissertation 6 weeks prior to the intended Hooding ceremony.

Defense and oral examination of the thesis or dissertation 4 weeks prior to the intended Hooding ceremony.

Submission of the final version of the thesis or dissertation, signed by the Major Advisor and the Advisory Committee, to the Dean of the Graduate School 2 weeks prior to the intended Hooding ceremony.

Note: public notice of the defense and oral examination should include notification of the faculty of the Department of Biomedical Sciences, the Dean's Office of the Graduate School (see the appropriate form in the Appendix) and the appropriate administrator in the other basic science

departments along with prominent public display of the notice outside the department office.

During the final seminar portion of the Oral Defense, the student will present the elements of their thesis or dissertation research and answer questions from the general audience related to their scholarly activity. Following a brief recess, the student will then defend their thesis or dissertation to their advisory committee.

In general terms, the final seminar and oral defense of the thesis or dissertation will be used to evaluate the:

1. thesis or dissertation itself (i.e., quality and completeness of the research, appropriate selection and technical performance of the methods used, validity of conclusions, etc.);
2. capacity of the student for independent thought;
3. depth of the student's knowledge in areas related to the topic of the thesis; and,
4. depth of the student's knowledge of scientific areas fundamental to their chosen discipline.

Following the Oral Defense, the advisory committee may require revision of the thesis or dissertation prior to formal acceptance of the written document.

Successful completion of both the written thesis or dissertation and the Oral Defense will be determined by a majority opinion of the advisory committee, and the decision of the advisory committee is final.

Paper and digital copies of the final version of the thesis or dissertation must be provided to both the Department of Biomedical Sciences and the Dean of the Graduate School in accordance with the requirements of the Graduate School at the time of degree completion.

#### **14. LEAVE OF ABSENCE AND VACATION**

Requests for a Leave of Absence must be endorsed by the student's Major Advisor and the Graduate Program Director and then submitted to the Graduate School (see form in this Handbook). Leaves of absences are strongly discouraged but are permitted in unusual circumstances.

Resumption of financial support is not guaranteed upon re-entry to the graduate program.

#### **15. POLICY ON ACADEMIC HONESTY**

All Creighton University graduate students are subject to the standards of academic integrity required by the University and will be subject to possible penalties for violating these standards. In addition, students may also be subject to additional standards as announced in writing by faculty members responsible for specific courses.

Student academic misconduct includes, but is not limited to:

- a. Cheating: The deliberate or attempted use of unauthorized material in an academic exercise, including unauthorized collaboration with classmates.
- b. Improprieties of Authorship: Improper assignment of credit or

misrepresentation of material as original without properly referencing the original authors.

- c. Facilitating Academic Dishonesty: The deliberate assistance or attempted assistance of another student to commit an act of academic misconduct.
- d. Theft or destruction of library materials or other academic resources.
- e. Violation of codes of conduct described in the University's *Student Handbook*, program or department policies, or articulated by instructors either verbally or in writing.

In addition, graduate students in the program are participants in the act of scientific discovery and, as such, are required to adhere to the scientific community's standards of scientific conduct. Violation of these standards is referred to as scientific misconduct and is defined in University Policy 4.2.2 as including:

- f. Plagiarism: the appropriation of another person's ideas, processes, results, or words without giving appropriate credit.
- g. Falsification: the manipulation of research materials, equipment, or processes, or the changing or omission of data or results such that the research is not accurately represented in the research record.
- h. Fabrication: the making up of data or results, and the recording or reporting of them in the research record.

Further information regarding academic or scientific misconduct, and disciplinary procedures and sanctions regarding such misconduct, may be obtained by consulting the current edition of the Creighton University Graduate Bulletin.

## **16. ACCOMMODATIONS FOR QUALIFYING DISABILITIES**

Creighton University will provide reasonable accommodations for persons with documented qualifying disabilities. Students requiring special accommodations will need to acquire a letter documenting the specific disability from the University's Office of Disability Accommodations and present this letter to the course director at the beginning of the course so that any necessary accommodations can be arranged in a timely manner.

## **17. INDIVIDUAL DEVELOPMENT PLANS FOR GRADUATE STUDENTS**

The American Association for the Advancement of Science (AAAS) has developed a web-based tool that allows graduate students (and postdoctoral fellows) to identify their research and career goals. This tool helps students to generate Individual Development Plans (IDPs), which can be used for fostering professional development. A well-crafted IDP serves both as a planning and communication tool, allowing graduate students to identify their research and career goals and to communicate these goals to their mentor and advisory committee. By defining their career goals early on, graduate students are better able to identify and participate in professional development opportunities and target their training toward achieving their specific career objectives.

Specifically, the IDP is designed to assist with:

1. Identifying professional goals and objectives;
2. Assessing one's skill set relative to their career goals;
3. Developing a plan to acquire the skills and competencies needed to achieve short- and long-term career objectives.

Following completion of the web-based exercise, the site will provide:

1. Exercises to help students examine their skills, interests, and values.
2. A list of 20 scientific career paths with a prediction of which ones best fit the student's skills and interests.
3. A tool for setting strategic goals for the coming year, with optional reminders to keep students on track.
4. Articles and resources to guide students through the process. It also contains links to career resources and tools to help you develop concrete plans, attend workshops, develop networking skills, etc.

The myIDP website can be accessed at: "[myidp.sciencecareers.org](http://myidp.sciencecareers.org)". And further information about the tool can be found in an editorial published in Science, and available at: "[sciencemag.org/content/337/6099/1149.full](http://sciencemag.org/content/337/6099/1149.full)".

While the Dept. of Biomedical Sciences does not require the use of an IDP as part of its curriculum, it strongly encourages students to utilize this tool as part of their graduate education experience.

## 18. EXPECTATIONS OF A SUCCESSFUL GRADUATE STUDENT

Suggestions from the Graduate Program Committee include:

- Be proactive in reading/understanding all aspects of your project.
- Conduct experiments in a timely manner.
- Learn new techniques reliably and efficiently.
- Work at least 40-50 hours a week (studying for classes, reading the scientific literature; designing, performing and analyzing experiments, etc.) and be able to demonstrate continuous progress toward your goals.
- Keep a detailed, daily lab book. Major Advisors will review lab books regularly during one-on-one meetings.
- Be passionate about your research and demonstrate a high level of curiosity about your scientific discipline.
- Think critically and creatively when troubleshooting experiments and contemplating future directions.
- Constantly evaluate your strengths and weaknesses; and identify exercises to strengthen and improve your abilities.
- Offer to assist other members of your laboratory when they are experiencing difficulties.
- Be a respectful and inclusive member of the scientific community.
- Adhere to the ethical code of conduct as described both in the Creighton Graduate Student Bulletin and by the scientific community.
- Work to continuously improve your writing skills.
- Submit at least one manuscript to a peer-reviewed scientific journal during your graduate education.



## 19. DEPARTMENT ADMINISTRATION AND FACULTY

### Administration

Chairman: Jian Zuo, Ph.D.

Graduate Program Director: Garrett Soukup, Ph.D.

Graduate Program Committee members: Tejbeer Kaur, Ph.D.,  
and Brian North, Ph.D.

Senior Program Coordinator: Katy Pfeiffer

### Faculty

#### Primary:

Laura Bruce, Ph.D.

Laura Hansen, Ph.D.

David He, Ph.D.

Tejbeer Kaur, Ph.D.

Ken Kramer, Ph.D.

Sandor Lovas, Ph.D.

Brian North, Ph.D.

Tom Pisarri, Ph.D.

David Smith, Ph.D.

Garrett Soukup, Ph.D.

Peter Steyger, Ph.D.

Jian Zuo, Ph.D.

#### Secondary (primary appointment in parenthesis):

Dominic Cosgrove, Ph.D. (Boys Town National Research Hospital)

Joe Knezetic, Ph.D. (School of Medicine, Pathology)

Mike Nichols, Ph.D. (College of Arts and Sciences, Physics)

Sonia Rocha-Sanchez (School of Dentistry, Oral Biology)

Information about individual faculty and their research can be found on the Department of Biomedical Sciences website.

## 20. COURSE DESCRIPTIONS

**Key:** (N): number of credit hours

**F, Sp, Sum or OD:** semester offered (Fall, Spring, Summer or On Demand)

**P:** Pre-requisite course(s)

### FOUNDATION COURSE

**BMS 622 Biochemistry, Molecular and Cell Biology (4) F**

This course consists of lectures on the functional aspects of biochemistry, molecular and cell biology with an emphasis on eukaryotic cells.

### TOOL COURSES

**IDC 601 Responsible Conduct of Research (1) F**

This required course for students in the graduate programs at Creighton University School of Medicine is designed to introduce fundamental concepts, principles and guidelines regarding scientific integrity in biomedical research. Through readings, lectures, and case discussion students are given an opportunity to reflect on ways in which they can help foster and maintain responsible conduct in research. They also become acquainted with existing regulations, guidelines, ethical themes and on-line resources regarding the ethics of their profession.

**IDC 625 Introduction to Biostatistics for the Biomedical Sciences (3) Sum**

This course will provide instruction on the common statistical methods used in biomedical science and their correct application to the design and analysis of research study questions, in-class assignments will be given for each class session based specifically on the material covered during lecture. Students will be allowed to work together to complete assignments, but must complete and submit their own work for credit. One comprehensive final exam will be given to evaluate student learning throughout the semester.

**IDC 627 Research Methods (3) Sp**

Study of modern experimental methods, instrumentation, and bioinformatics tools and approaches used in biomedical research. Major course components include detection, analysis, and genetic manipulation of nucleic acids, antibody-based experimental techniques, generation, detection, and analysis of recombinant proteins, microscopy, and various experimental model systems. **P: BMS 604 or IC.**

**IDC 701 Research Writing (3) Sp**

This course will provide instruction on grant preparation and strategy, using the NIH R21 as a model. Content will consider alternative sources of grant funding and be relevant to all research grant applications. Emphasis will be placed on writing clear English. **P: IDC 627 or IC.**

### REPEATING COURSES

**BMS 791 Seminar (1) F, Sp**

This course consists of formal oral presentations and critical discussions of assigned subjects to familiarize students with the nature and extent of research literature, the analysis of research papers, and the collation and presentation of scientific information. This course is repeatable.

**BMS 792 Journal Club** (1) F, Sp  
This course consists of readings and presentations of current scientific literature, followed by group discussion involving students and faculty members. This course is repeatable.

**BMS 797 Directed Independent Research** (3-6) F, Sp, Sum  
This course consists of original investigation under supervision and guidance of individual staff members.

## ELECTIVE COURSES

### Suggestions for Cell and Molecular Biology – Cancer Research

**BMS 706 Advanced Cell and Molecular Biology** (3) Sp  
Detailed consideration of the functional aspects of cell and molecular biology with emphasis on eukaryotic cells. Topics include structure, function, and synthesis of DNA and RNA, gene expression regulation, signal transduction, transport and processing of secretory proteins, cell adhesions, cytoskeleton, and relevance for differentiation and cancer.

### Suggestions for Neuroscience – Hearing Research

**BMS 624 Human Neuroanatomy** (4) Sp  
This course covers fundamental concepts in neuroscience, including functional neuroanatomy, neurophysiology, and neuroembryology.

**BMS 630 Fundamentals of Hearing** (3) OD  
This is an advanced graduate level course focusing on the anatomy and physiology of the auditory system. The course will introduce students to the basics of normal human hearing with a focus on the peripheral auditory system, neural coding of sound, and the perception of simple sounds.

## DEGREE COMPLETION COURSE

**BMS 799 Master's Thesis** (1-3) F, Sp, Sum  
This course consists of review of the literature and research data and the writing of the thesis. Students must register for this course in any term when engaged in formal preparation of the Master's thesis; however, six credit hours are the maximum applicable toward the degree.

**BMS 899 Doctoral Dissertation** (3-6) F, Sp, Sum  
This course consists of review of the literature and research data and the writing of the dissertation. Students must register for this course in any term when engaged in formal preparation of the doctoral dissertation; however, twenty credit hours are the maximum applicable toward the degree.

## ADDITIONAL ELECTIVES – Available by Special Arrangement

- BMS 720**    **Advanced Topics in Molecular Structure/Function (3) OD**  
This course covers functional aspects of molecular structure, peptide chemistry, and molecular interactions. Topics will change with each iteration of the course, permitting students to enroll multiple times while covering different aspects of the discipline. The maximum number of credits from this course that can be applied toward the degree is six.
- BMS 730**    **Advanced Topics in Cell and Molecular Biology (3) OD**  
This course covers functional aspects of eukaryotic cells including gene regulation/expression, signal transduction, and cell-cell and cell-substrate interactions. Topics will change with each iteration of the course, permitting students to enroll multiple times while covering different aspects of the discipline. The maximum number of credits from this course that can be applied toward the degree is six.
- BMS 740**    **Advanced Topics in Physiology (3) OD**  
This course covers specific aspects of physiology and pathophysiology of whole organisms and organ systems as well as cellular physiology. Topics will change with each iteration of the course, permitting students to enroll multiple times while covering different aspects of the discipline. The maximum number of credits from this course that can be applied toward the degree is six.
- BMS 750**    **Advanced Topics in Morphology and Anatomy (3) OD**  
This course covers functional morphology ranging from cellular ultrastructure to gross anatomy and embryology. Topics will change with each iteration of the course, permitting students to enroll multiple times while covering different aspects of the discipline. The maximum number of credits from this course that can be applied toward the degree is six.
- BMS 760**    **Advanced Topics in Neuroscience (3) OD**  
This course integrates the areas of neuroanatomy, neurophysiology, neuropharmacology, and neuropathology at both the cellular and organismal level. Topics will change with each iteration of the course, permitting students to enroll multiple times while covering different aspects of the discipline. The maximum number of credits from this course that can be applied toward the degree is six.
- BMS 795**    **Directed Independent Study (2) OD**  
Each student, supervised by faculty members, will pursue in-depth reading and discussions on current research topics of interest to faculty and students. The purpose is to provide an environment whereby the student is introduced to scientific research methods and can improve critical thinking and reading skills as well as exchanging scientific information.

## ADDITIONAL ELECTIVES – Other Programs and Departments

- DPN 631 Medical Pharmacology I (5) F**  
Human pharmacology and therapeutics. Lectures, conferences, and demonstrations.
- DPN 632 Medical Pharmacology II (5) Sp**  
A continuation of Medical Pharmacology I.
- DPN 650 Introduction to Neuropharmacology (3) Sp**  
This course is designed for graduate students with a background in biology, chemistry, biochemistry, psychology, pre-pharmacy and/or pre-medicine. Pharmacology is more than the study of the mode of action of drugs. It is a science which uses the basic concepts of biology and chemistry to determine how drugs affect the organism; it gives a unique perspective in understanding how cells, organ systems, and organisms function. Unlike other basic science fields, pharmacology is a special field in which one can systematically investigate the mechanism for a biological event--from the molecular level to the whole animal. Pharmacology also allows us to study how biological systems fail to function, providing information on the etiology of disease. Pharmacologic research is essential for the development, testing and clinical use of drugs to treat disease.
- DPN 711 Receptor and Molecular Pharmacology (3) Sp**  
Exhaustive treatment of receptor and molecular pharmacology that considers historical development of concepts, radioligand receptor binding, drug-receptor interactions, receptor characterization and isolation, and signal transduction.
- DPN 715 Advanced Pharmacology (3) F, Sp**  
Discussion of recent advances in the pharmacology of cardiovascular, autonomic and central nervous systems. Comprehensive review of drug classes including discussions on possible mechanisms by which drugs produce functional effects in these systems.
- MIC 541 Medical Microbiology and Immunology (3) Sp**  
Introductory course focusing on foundations of general bacteriology and virology, antibacterial therapy and mechanisms of antibacterial resistance, infectious diseases caused by bacteria, viruses, fungi, and parasites, and the host defenses against these microorganisms.
- MIC 721 Foundations of Microbiology (4) F**  
Lecture course that emphasizes (1) the foundations of general bacteriology and virology, (2) microorganisms of medical importance and the diseases, (3) antimicrobial, and (4) scientific logic for critical analysis of original research articles in the field.
- MIC 733 Advanced Microbial Pathogenesis (3) Sp**  
Lectures, seminars, literature review, and group discussion concerning mechanisms by which microorganisms cause disease.

- MIC 739 Bacterial Physiology (3) Sp**  
Study of molecular, cellular, and genetic processes in bacteria. Includes molecular structure and function, cell division, synthesis of macromolecules, and metabolism.
- MIC 740 Host Defense (3) Sp**  
The student will be provided with the information to have a clear understanding of various subject areas, including antigen recognition, development of B & T cells, constitutive host defenses, immunopathology, inflammation, transplantation, allergy, and tumor immunology.
- MMS 601 Human Physiology (2) F**  
This course examines basic concepts of cellular physiology and organ system physiology of the nervous, endocrine, muscle, cardiovascular, respiratory, gastrointestinal, and renal systems, as well as multisystem integration.
- MMS 602 Human Gross Anatomy (5) F**  
Detailed structure of the human body. Dissection of the cadaver combined with conferences, lectures, and assigned readings.
- MMS 603 Microscopic Anatomy (3) F**  
Course description not available.
- MMS 604 Clinical Embryology (2) F**  
This is a course in human anatomy designed to provide students with insight into the important correlation between human developmental anatomy and gross anatomy. The course will cover development of all of the systems of the body. The fetus, placentation, birth and delivery also will be dealt with. Major congenital malformations will be discussed in detail.

# BMS 791 Seminar Syllabus and Assessment Criteria

Student Name \_\_\_\_\_ Term (Fall, Spring)/Year \_\_\_\_\_

## Course Description

The purpose of the course is to expose you to a broad range of current research topics in biomedical sciences. All graduate students are encouraged to attend as many seminars as possible, not only in semester(s) during which you are registered. It is useful for you to attend even when the topic seems unrelated to your research - indeed, seminars provide the best way for you to round out your knowledge by exposing you to current research in areas that are not directly related to your own research. This course consists of seminars that will be presented roughly once a week. Generally, after the speaker is finished, there is a question and answer period where the audience can ask any questions they might have that were not answered during the seminar.

## Course Objectives

Upon successful completion of this course, students will:

- develop an overall understanding of the principles of oral communication in science including accepted presentation techniques, listening skills, critical analysis of scientific presentations, participation in scientific discussions and introduction of speakers and invited guests;
- demonstrate an ability to listen to a scientific presentation, critically evaluate the research presented, and ask pertinent questions regarding the material presented; and
- actively participate in a discussion of strengths and weaknesses of a speaker's presentation and/or the scientific merit of the research presented.

## Academic Honesty and Accommodations For Qualifying Disabilities

Students are required to follow the Creighton University policy on proper academic conduct, as detailed in the current Creighton University Graduate Student Bulletin. Creighton University will provide reasonable accommodations for persons with documented qualifying disabilities. Students requiring special accommodations need to get a letter documenting the specific disability from the Office of Disability Accommodations. This letter should be presented to the instructor at the beginning of the course, so the accommodation can be discussed.

## Assignments and Grading Criteria

To receive credit, students must attend all departmental seminars and prepare a short summary report for at least two departmental seminars presented by faculty, post-docs, or guest speakers during the term. An excused absence for a regularly scheduled departmental seminar must be arranged with the Course Director. Any unexcused absence will result in a failing grade for the course. The following criteria will be used to assess performance and assign an overall course grade. *Scale from (1) Does not meet expectations, (2) generally meets expectations, but with areas of concern, (3) meets expectations, and (4) exceeds expectations.*

Asked questions of the speaker.....	1	2	3	4
Actively participated in a discussion with the speaker or colleagues after the presentation.....	1	2	3	4
Two written summaries of departmental seminar speakers with terminal degrees (~400 words each)				
Described their opinion (positive and negative) about the research.....	1	2	3	4
Noted aspects strengths and weaknesses of the presentation.....	1	2	3	4
Identified items they particularly liked and those that could be improved (and how).....	1	2	3	4
Identified open issues related to the problem area but were not addressed in the presentation...	1	2	3	4
Presented their perspective and position on the topic of seminar.....	1	2	3	4
Other (write in here).....	1	2	3	4

Please provide specific comments regarding the strengths and weaknesses of the performance of this student during the current term.

# BMS 792 Journal Club Syllabus and Assessment Criteria

Student Name \_\_\_\_\_

Instructor Name \_\_\_\_\_

Term (Fall, Spring) \_\_\_\_\_

Meeting time and location \_\_\_\_\_

## Course Description and Objectives

Each student will pursue in-depth reading and discussions on current research topics of interest to faculty and students. The purpose is to provide an environment whereby the student is taught the elements that make for careful reading, good writing, and critical thinking of scientific papers and to be able to effectively present and discuss scientific information with others. Upon successful completion of this course, students will:

- be familiar with the scientific literature and with different styles of scientific writing;
- recognize the elements of a good abstract, introduction, methods, results, and discussion section of a paper;
- develop skills in critical reading and evaluation of scientific writing;
- become comfortable presenting, questioning, and discussing scientific information with others including the general public; and
- keep abreast of current research and new methodological approaches relevant to their field of study.

## Academic Honesty and Accommodations For Qualifying Disabilities

Students are required to follow the Creighton University policy on proper academic conduct, as detailed in the current Creighton University Graduate Student Bulletin. Creighton University will provide reasonable accommodations for persons with documented qualifying disabilities. Students requiring special accommodations need to get a letter documenting the specific disability from the Office of Disability Accommodations. This letter should be presented to the instructor at the beginning of the course, so the accommodation can be discussed.

## Grading Criteria

Using the following scale, indicate your assessment for this student during the current term using the following suggested criteria or by substituting your own. Use the scores and specific comments to determine the overall course grade. *Scale from (1) Does not meet expectations, (2) generally meets expectations, but with areas of concern, (3) meets expectations, and (4) exceeds expectations NA=not applicable.*

Attendance in journal club.....	1	2	3	4
Chose an appropriate article for presentation from the primary literature at the journal club. ....	1	2	3	4
Reviewed the article accurately. Demonstrated an understanding of key concepts in the paper.....	1	2	3	4
All parts of the article were appropriately critiqued, addressing strengths and weaknesses and impact of the study.....	1	2	3	4
Reported on new and developing technologies found within the article and was able to explain them. .	1	2	3	4
Presentation was clearly organized and made the paper easy to follow. ....	1	2	3	4
Presentation was enthusiastic and pace was well-suited for the content and time allotted.....	1	2	3	4
Involved the audience in the discussion; was able to answer audience questions effectively and completely.....	1	2	3	4
Presented their perspective and position on the topic of the paper. ....	1	2	3	4
As a participant, showed evidence that he/she thoroughly read the papers before the journal club meeting. ....	1	2	3	4
Contributed to discussions during the course and was able to apply the content of readings and personal knowledge to what he/she said. ....	1	2	3	4
Other .....	1	2	3	4

Please provide specific comments regarding the strengths and weaknesses of the performance of this student during the current term.



## BMS 795 Directed Independent Study Syllabus and Assessment Criteria

Student Name \_\_\_\_\_

Instructor Name \_\_\_\_\_

Term (Fall, Spring, Summer)/Year \_\_\_\_\_

### Course Description and Objectives

Each student, supervised by faculty members, will pursue in-depth reading and discussions on current research topics of interest to faculty and students. The purpose is to provide an environment whereby the student is introduced to scientific research methods and can improve critical thinking and reading skills as well as exchanging scientific information. Upon successful completion of this course, students will:

- effectively analyze, synthesize, and interpret biological data and critically evaluate scientific information;
- identify and suggest possible solutions to ethical dilemmas that occur in their field of study, and understand the importance of professional ethics in scientific communication and laboratory work;
- write effective research papers and reports; and
- be able to communicate their results through oral presentations.

### Academic Honesty and Accommodations For Qualifying Disabilities

Students are required to follow the Creighton University policy on proper academic conduct, as detailed in the current Creighton University Graduate Student Bulletin. Creighton University will provide reasonable accommodations for persons with documented qualifying disabilities. Students requiring special accommodations need to get a letter documenting the specific disability from the Office of Disability Accommodations. This letter should be presented to the instructor at the beginning of the course, so the accommodation can be discussed.

### Grading Criteria

Using the following scale, indicate your assessment for this student during the current term using the following suggested criteria or by substituting your own. Use the scores and specific comments to determine the overall course grade. Meet multiple times with the student during the term to discuss his/her progress in meeting the criteria. Scale from (1) Does not meet expectations, (2) generally meets expectations, but with areas of concern, (3) meets expectations, and (4) exceeds expectations NA=not applicable.

Identified and read the latest literature in the topic area and was proactive in expanding literature review.

1	2	3	4	NA
---	---	---	---	----

Developed accurate and focused bibliography on a topic. Included relevant sources representing various points of view.

1	2	3	4	NA
---	---	---	---	----

Reported on new and developing technologies found in the literature being applied to the topic area.

1	2	3	4	NA
---	---	---	---	----

Organized evidence to reveal important patterns, differences, or similarities related to the topic.

1	2	3	4	NA
---	---	---	---	----

Used quantitative analysis of data as the basis for competent judgments, drawing reasonable and appropriately qualified conclusions from work in the literature.

1	2	3	4	NA
---	---	---	---	----

Exhibited the aptitude or improved ability to analyze and synthesize gaps in knowledge in the field.

1	2	3	4	NA
---	---	---	---	----

Completed written assignments that demonstrate clarity of thought and expression regarding the topic discussed.

1	2	3	4	NA
---	---	---	---	----

Presented own perspective and position on the topic studied.

1	2	3	4	NA
---	---	---	---	----

Other

1	2	3	4	NA
---	---	---	---	----

Other

1	2	3	4	NA
---	---	---	---	----

Please provide specific comments regarding the strengths and weaknesses of the performance of this student during the current term.

## BMS 797 Directed Independent Research Syllabus and Assessment Criteria

Student Name \_\_\_\_\_

Instructor Name \_\_\_\_\_

Term (Fall, Spring, Summer)/Year \_\_\_\_\_

### Course Description and Objectives

This course consists of original investigation under supervision and guidance of the instructor and individual staff members. Upon successful completion of this course, students will:

- acquire the skills necessary to perform experiments, assess, and interpret results;
- conduct research addressing specific scientific problems and place their results in the context of previous knowledge;
- demonstrate competence in the laboratory, including application of the scientific method and appropriate use of laboratory tools and techniques;
- effectively analyze, synthesize, and interpret biological data;
- improve their ability to communicate their results; and
- work collaboratively within groups.

### Academic Honesty and Accommodations For Qualifying Disabilities

Students are required to follow the Creighton University policy on proper academic conduct, as detailed in the current Creighton University Graduate Student Bulletin. Creighton University will provide reasonable accommodations for persons with documented qualifying disabilities. Students requiring special accommodations need to get a letter documenting the specific disability from the Office of Disability Accommodations. This letter should be presented to the instructor at the beginning of the course, so the accommodation can be discussed.

### Grading Criteria

Using the following scale, indicate your assessment for this student during the current term using the following suggested criteria or by substituting your own. Use the scores and specific comments to determine the overall course grade. Meet with the student multiple times during the term to discuss their progress in meeting the criteria. Scale from (1) Does not meet expectations, (2) generally meets expectations, but with areas of concern, (3) meets expectations, and (4) exceeds expectations NA=not applicable.

Read suggested literature and was proactive in expanding literature review as assessed by one-on-one meetings/conversations.

1	2	3	4	NA
---	---	---	---	----

Maintained accurate and complete laboratory records as assessed by regular review by instructor.

1	2	3	4	NA
---	---	---	---	----

Applied at least 40-50 hrs a week of effort reading, analyzing, designing, learning techniques, and conducting experiments.

1	2	3	4	NA
---	---	---	---	----

Learned existing techniques in the current laboratory efficiently

1	2	3	4	NA
---	---	---	---	----

Exhibited willingness and ability to troubleshoot to overcome technical obstacles.

1	2	3	4	NA
---	---	---	---	----

Identified, developed or brought new approaches or technology to the laboratory.

1	2	3	4	NA
---	---	---	---	----

Made expected progress on research topic; submitted summaries of ongoing and completed research on a regular basis to the Instructor

1	2	3	4	NA
---	---	---	---	----

Prepared manuscripts or presented research results when sufficient data was collected and experiments were completed.

1	2	3	4	NA
---	---	---	---	----

Displayed professionalism in collaboration by assisting others in the laboratory.

1	2	3	4	NA
---	---	---	---	----

Other

1	2	3	4	NA
---	---	---	---	----

Please provide specific comments regarding the strengths and weaknesses of the performance of this student during the current term.

**Degree Checklist**  
**Department of Biomedical Sciences**  
**Graduate Program**

**Date**

Selection of Major Advisor

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Selection of Advisory Committee. Submit completed Committee Member form to: Senior Graduate Program Coordinator.

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First Advisory Committee meeting to approve Plan of Study. Submit to: Senior Graduate Program Coordinator.

---

At least one meeting of the student's Advisory Committee shall be held each Fall and Spring semester. Reports of these meetings shall be submitted to the Senior Graduate Program Coordinator.

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Ph.D. Comprehensive Examination:

- Submission of research proposal to Advisory Committee by end of second year.
- Oral defense of proposal as a seminar, with approval of Advisory Committee.
- Oral examination of proposal and field of study by Advisory Committee immediately after seminar.
- Report result of exam to Graduate Program Director and Dean of Graduate School.

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File Application for Degree through NEST by October 15, February 15, or June 10 for graduation at the end of the Fall, Spring and Summer terms, respectively, with a copy to Graduate Program Director.

---

Submission of draft of thesis/dissertation to Advisory Committee 30 days prior to thesis/dissertation defense.

---

Application for Final Oral Examination (must be submitted 3 weeks prior to scheduled defense).

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Prepare notification brochure for defense seminar with help from Senior Graduate Program Coordinator (submitted 2 weeks prior to seminar).

---

Oral defense of theses/dissertation (and oral comprehensive examination for M.S. degree).

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Submission of thesis/dissertation to Dean of the Graduate School 30 days prior to graduation.

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Submission of Final Report to the Graduate Program Director of Biomedical Sciences.

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Submission of electronic copy of final signed thesis to the Creighton Digital Repository

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Submission of at least one research manuscript for peer-reviewed publication prior to graduation

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Note: All original forms submitted to the Graduate Program Officer will be forwarded to the Dean of the Graduate School.

**Advisory Committee  
Creighton University Graduate School**

**Department:** \_\_\_\_\_

\_\_\_\_\_  
(Name of Student)

\_\_\_\_\_  
(Degree)

**Major Advisor:**

\_\_\_\_\_  
(Printed Name)

\_\_\_\_\_  
(Signature/Date)

**Co-Advisor (if applicable):**

\_\_\_\_\_  
(Printed Name)

\_\_\_\_\_  
(Signature/Date)

**Committee Members:**

\_\_\_\_\_  
(Printed Name)

\_\_\_\_\_  
(Department)

\_\_\_\_\_  
(Signature/Date)

\_\_\_\_\_  
(Printed Name)

\_\_\_\_\_  
(Department)

\_\_\_\_\_  
(Signature/Date)

\_\_\_\_\_  
(Printed Name)

\_\_\_\_\_  
(Department)

\_\_\_\_\_  
(Signature/Date)

\_\_\_\_\_  
(Printed Name)

\_\_\_\_\_  
(Department)

\_\_\_\_\_  
(Signature/Date)

\_\_\_\_\_  
(Printed Name)

\_\_\_\_\_  
(Department)

\_\_\_\_\_  
(Signature/Date)

Original to: Department Graduate Program Director

Copy to: Graduate School Office

**Plan of Study  
Creighton University Graduate School**

**Department:** \_\_\_\_\_

\_\_\_\_\_  
(Name of Student)

\_\_\_\_\_  
(Degree)

\_\_\_\_\_  
(Major Advisor)

\_\_\_\_\_  
(Date of Selection)

\_\_\_\_\_  
(Co-Advisor, if applicable)

<b>Course Number</b>	<b>Title of Course</b>	<b>Semester &amp; Year</b>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

**Plan Approved:**

**Committee Member:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Committee Member:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Committee Member:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Committee Member:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Committee Member:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Student's Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Major Advisor's Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

Original to: Department Program Director

Copy to: Graduate School Office

# Progress Report

## Department of Biomedical Sciences Graduate Program

Reporting Period: \_\_\_\_\_  
(Fall or Spring Semester) (Year)

\_\_\_\_\_  
(Name of Student) (Degree) Year Admitted)

\_\_\_\_\_  
(Major Advisor) (Date of Last committee Meeting)

Title of course taken during reporting semester	Course Number	Title of course taken during reporting semester	Course Number
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

**Signatures:**

**Committee Members:**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Major Advisor: \_\_\_\_\_

Date: \_\_\_\_\_

Student: \_\_\_\_\_

Date: \_\_\_\_\_

**Permission to Register**  
**Creighton University Graduate School**

**Student:** \_\_\_\_\_ **Net ID:** \_\_\_\_\_

**Department:** \_\_\_\_\_

**Semester:** \_\_\_\_\_

Course Number	Course Title	Credit Hours

<b>Total Credit Hours</b>

**Signatures:**

\_\_\_\_\_  
**Student**

\_\_\_\_\_  
**Date**

\_\_\_\_\_  
**Major Advisor or Member of Graduate Student Coordination Committee**

\_\_\_\_\_  
**Date**

Warning: Registration for courses NOT authorized may result in dismissal from the graduate program.

Original to: Department Graduate Program Director

## Student Committee Evaluation Form

### Graduate School

<b>Student:</b>	<b>Date of evaluation:</b>
<b>Department:</b>	

Please rate the above student according to the following scale:  
(Mark an "X" in the appropriate box)

1 = Unsatisfactory   2 = Needs Improvement   3 = Competent/Solid   4 = Excellent   5 = Superior/Exceptional  
(A mark of 1, 2, or 5 REQUIRES COMMENTS)  
(Leave blank if not applicable)

<b>Knowledge/Interpretation</b>	1	2	3	4	5	<b>Critical Thinking &amp; Problem Solving Skills</b>	1	2	3	4	5	<b>Affective Skills</b>	1	2	3	4	5
General Knowledge						Quality of Presentation						Oral Speaking Skills					
Knowledge of Basic Science						Accuracy of Data Collections						Interpersonal Skills with Faculty, Staff, and Students					
Interpretation of Data and Development of Experiments						Quality of Written Records and Reports						Enthusiasm, Amount of Effort, Participation & Responsibility					
Preparation for Meeting – Handouts, Figures, etc.						Critical Reasoning and Judgment						Takes Initiative					
Responses to Questions						Research Progress						Reliability and Dependability					
						Ability to Identify Problem(s)						Progress in Coursework					

**Overall progress in research project:**

- SATISFACTORY:** Adequate level of knowledge. Able to correctly demonstrate and apply knowledge in relevant situations.
- INADEQUATE:** Inadequate knowledge in the discipline. Unable to relate learning to research situations. Distant and/or showed little interest.

COMMENTS: STRENGTHS/WEAKNESSES (A mark of 1, 2, or 5 REQUIRES COMMENTS)

Continue on Back

EVALUATOR NAME: \_\_\_\_\_ Signature of EVALUATOR: \_\_\_\_\_ Original to:  
Department Graduate Program Director



## Advancement to Candidacy (Part 2) Rubric: Grant Proposal and Oral Exam

Students should be able to:

- Demonstrate sufficient knowledge of the subject matter to become a PhD Candidate.
- Demonstrate knowledge of and the ability to analyze, synthesize and taxonomize previous research on a specific problem through a written and oral qualifying exam.
- Define and justify a hypothesis and set of original research objectives in a formal research proposal.
- Define and defend a set of research methods and analyses that will achieve the research objectives in an ethical and responsible manner.
- Demonstrate the ability and/or aptitude for thinking clearly and solving problems through a written and oral preliminary exam.

### Successful

### Unsuccessful

Written Proposal	Successful	Unsuccessful
	Provided an adequate analysis and synthesis of literature.	Misread or misused the literature and displayed a narrow understanding of the field.
	Adequately identified gaps in the existing literature meriting study.	Failed to identify gaps in knowledge meriting study. Missed required content, had poor design, and exhibited an overall poor quality necessitating major revisions or a complete rewrite of the proposal.
	Extensively used primary literature as a source.	Use of primary scientific literature lacking. Contained sections teetering on plagiarism or would be considered plagiarism.
	Adequately formed a hypothesis that was clearly stated accompanied by appropriate specific aims.	Did not state or provide sufficient background for a hypothesis to be deduced. Lacked appropriate or relevant specific aims.
	Provided a well-organized and well-reasoned overview of the subject matter. Created a logical argument for the need and significance of the proposed research.	Failed to make a coherent argument. Had a weak, inconsistent, unconvincing, or invalid argument. Lacked organization and did not support a reasoned argument for doing the study.
	Followed appropriate convention for academic written English and communicated essential information with clarity, precision, and coherence.	Did not consistently follow academic writing convention. Transitions and logical flow were poorly developed and prevented the reader from following the argument.
	Used a solid approach applying appropriate theory, methods, and techniques.	Showed a poor understanding of laboratory methods as evident from the proposed experimental design. Used inappropriate or incorrect methods.
	Recognized pitfalls and shortcomings/limitation of the proposed experimental design and methods.	Failed to identify potential pitfalls and shortcomings/limitation of the proposed experimental designs and methods.
	Provided alternative hypotheses should the results not turn out as expected. Proposed approaches to address the alternatives.	Did not provide alternative hypotheses should results not turn out as expected.
<b>Comments Regarding Written Portion:</b>		

<b>Successful</b>		<b>Unsuccessful</b>
<b>Oral Presentation and Exam</b>	Conveyed the important and relevant background for formation of the hypothesis that was suitable for the audience in the time assigned.	Was sloppy, confusing, and did not communicate what would be done or why. Extremely hard to follow, lacked organization, overran time, and appeared to have been hurriedly assembled.
	Visual aids and distributed materials complemented the oral presentation.	Visual aids and distributed materials were of poor quality, distracted from the oral presentation or were inappropriate.
	Provided an effective delivery, spoke clearly and loudly enough for the audience to hear. Used scholarly terms correctly and language was appropriate for the audience.	Delivery was inappropriate for this level of work.
	Presentation and responses to questions were adequately supported by the existing literature presented and/or preliminary studies. Showed evidence of developing a knowledge base across multiple areas of discipline.	Presentation and responses to questions were inadequately supported by literature, preliminary data, and showed poor knowledge regarding the subject area.
	Adequately discussed many of the major implications of the position(s) taken or hypothesis proposed.	Did not discuss many of the major implications of the position(s) taken or hypothesis proposed.
	Thoroughly articulated responses clearly, effectively, and fluently. Answered questions succinctly, accurately, and effectively, reflecting solid knowledge of the research topic.	Questions were answered superficially or inaccurately and did not reflect appropriate knowledge of the research topic. Questions were not answered even when prodded by the audience or advisory committee.
	Demonstrated potential for critical thinking regarding the scientific method. Had the ability to analyze, critique, and evaluate a problem using appropriate research literature and working knowledge.	Lacked or showed weakness in the ability to analyze, critique, and evaluate a problem using research literature and working knowledge.
<b>Comments Regarding Oral Portion:</b>		

	Successful	Unsuccessful
<b>Aptitude</b>	Demonstrated an ability to integrate what was learned in coursework and apply it toward developing a proposal and to answer questions	Did not integrate basic knowledge from coursework in developing a proposal or answering questions.
	Demonstrated a capability for independent research in the area of study and potential ability for identifying and solving scientific problems.	Did not provide evidence for the ability to identify a problem, recognize shortcomings and limitations, or solve a simple hypothetical problem.
	Showed the ability to discuss and communicate in a clear and well-organized manner.	Gave confusing explanations and did not provide evidence for the ability to synthesize and integrate information.
	Provided evidence of creative organization and synthesis of information in the structure and breadth of the proposal content and in response to questions.	Provided responses that were short sighted and did not demonstrate an ability to integrate information, suggest solutions, or answer questions.
	Showed an aptitude for identifying important components of a scientific problem and critically assessing and analyzing the validity of the published literature.	Showed little or no potential for an ability to identify and develop possible approaches to address scientific problems.
<b>Overall Comments:</b>		

**After considering the criteria above, please indicate your recommendation regarding this portion of the Advancement to Candidacy exam.**

- Based on the proposal, presentation, and oral examination, this student is not prepared for successfully completing work at the PhD level at this point; candidacy deferred.
- Based on the proposal, presentation, and oral examination, this student is minimally prepared for successfully completing work at the next level. This student may struggle with the tasks necessary for successfully completing work at the next level. For example, a student at this level may have a difficult time stating research questions, identifying an appropriate research design, analyzing data, or interpreting the results without serious assistance from an advisor. *Recommended for candidacy but with closer supervision and more guidance.*
- Based on the proposal, presentation, and oral examination, this student is satisfactorily prepared for successfully completing work at the next level. A student at this level will have little difficulty producing quality work at the next level. However, some areas of improvement are recommended. *Recommended for candidacy.*

**Advancement to Candidacy  
Creighton University Graduate School**

**Department:** \_\_\_\_\_

\_\_\_\_\_ has submitted his/her research proposal  
(Student's Name)  
and/or comprehensive examination for advancement to candidacy for the Ph.D. degree.

After review, the committee recommends: \_\_\_\_\_ approval \_\_\_\_\_ disapproval

**Committee Members:**

**Date:**

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**Major Advisor:**

**Date:**

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Original to: Graduate Program Director/Department Chair

Copy to: Graduate School Office

**INSTRUCTIONS**

Submit this completed form to the Graduate School office at least three weeks **before** the final oral examination; or if the exam is waived, three weeks before the final thesis is due in the Graduate School office. *All information must be typed.*

**STUDENT AND PROGRAM INFORMATION**

Full Name \_\_\_\_\_ CU Net ID \_\_\_\_\_  
Mailing Address \_\_\_\_\_  
Degree  MS  MA  
Major \_\_\_\_\_  
Dissertation Title \_\_\_\_\_  
\_\_\_\_\_

**APPROVAL BY COMMITTEE CHAIR AND PROGRAM DIRECTOR**

Final Oral Examination: \_\_\_\_\_  
*Time Date Location*

\_\_\_\_\_  
*Signature, Committee Chair Date*

\_\_\_\_\_  
*Signature, Program Director Date*

**GRADUATE SCHOOL ACTION**

Approved by Dean of Graduate School:

\_\_\_\_\_  
*Signature Date*

Original to: Graduate School Office

Copy to: Department Graduate Program Director

# Application for Final Oral Examination

For the Doctoral Degree | Graduate School



## INSTRUCTIONS

Submit this completed form to the Graduate School office at least three weeks before the final oral examination; or if the exam is waived, three weeks before the final dissertation is due in the Graduate School office. *All information must be typed.*

## STUDENT AND PROGRAM INFORMATION

Full Name \_\_\_\_\_ CU Net ID \_\_\_\_\_  
Mailing Address \_\_\_\_\_  
Degree  Ph.D.  Ed.D.  
Major \_\_\_\_\_  
Dissertation Title \_\_\_\_\_  
\_\_\_\_\_

## APPROVAL BY COMMITTEE CHAIR AND PROGRAM DIRECTOR

Final Oral Examination: \_\_\_\_\_  
*Time Date Location*

\_\_\_\_\_  
*Signature, Committee Chair Date*

\_\_\_\_\_  
*Signature, Program Director Date*

## GRADUATE SCHOOL ACTION

Approved by Dean of Graduate School:

\_\_\_\_\_  
*Signature Date*

Original to: Graduate School Office

Copy to: Department Graduate Program Director

# Syllabus and Assessment Criteria for BMS 799 Masters Thesis and Defense

Student Name \_\_\_\_\_ Major Advisor \_\_\_\_\_ Final Grade \_\_\_\_\_

## Course Description and Objectives

This course consists of original investigation under close supervision and guidance of the major advisor and advisory committee. Upon successful completion of this course, students will:

- Demonstrate basic scientific knowledge fundamental to the research area investigated.
- Be able to assess the scientific literature and formulate possible research questions and hypotheses.
- Be able to suggest possible methods to address a research question and draw reasonable conclusions from experimental results.
- Demonstrate competency in basic scientific laboratory procedures using advanced technologies and laboratory instruments.
- Be able to place their experimental results into the larger context of their field of study.
- Be able to communicate their work with clarity and completeness both orally and in writing.

**Academic Honesty:** Students are required to follow the Creighton University policy on proper academic conduct, as detailed in the current Creighton University Graduate Student Bulletin.

**Grading Criteria:** Using these guidelines, indicate your assessment for this student's thesis and presentation. Not all criteria may apply and not all have to be met within a category to assign a grade.

Outstanding (A)	Very Good (B)	Conditional (C)	Unacceptable (F)
<b>Written Thesis Introduction</b>			
<input type="checkbox"/> Asked a new question addressing a significant gap in knowledge.	<input type="checkbox"/> The question or problem addressed was logical or validated previous work.	<input type="checkbox"/> Question or problem was very limited in scope and of minor importance.	<input type="checkbox"/> Looked at a question or problem that was, weak or already solved.
<input type="checkbox"/> Exhibited critical thinking and displayed a very good understanding of the literature surrounding the problem.	<input type="checkbox"/> Contained original and astute observations. Showed clear understanding of the subject matter.	<input type="checkbox"/> Displayed a narrow understanding of the field. Missed relevant literature.	<input type="checkbox"/> Did not show an understanding of basic concepts or conventions of the discipline. Sources were misread or misused.
<input type="checkbox"/> Proposed a well developed hypothesis with appropriate specific aims.	<input type="checkbox"/> A hypothesis was stated and accompanied by appropriate specific aims.	<input type="checkbox"/> A hypothesis could be inferred but was not stated. Some aims did not directly test the hypothesis.	<input type="checkbox"/> Did not state or provide sufficient background for a hypothesis to be deduced. Lacked an understanding of what constitutes a hypothesis.
<b>Methods and Techniques</b>			
<input type="checkbox"/> Had a clever and effective research design.	<input type="checkbox"/> Included a well-executed research design.	<input type="checkbox"/> Research design had weaknesses throwing into question interpretation of some results.	<input type="checkbox"/> Research design had major faults, negating validity of most results.
<input type="checkbox"/> Used or tested new tools, methods, and/or types of analyses.	<input type="checkbox"/> Used appropriate and traditional methods and laboratory techniques.	<input type="checkbox"/> Missing some appropriate controls. Alternative methods should have been used.	<input type="checkbox"/> Used inappropriate or incorrect methods. Poor execution of methods was evident from the results.
<b>Results</b>			
<input type="checkbox"/> Results tested the stated hypothesis leading to either its further refinement or to an alternative hypothesis.	<input type="checkbox"/> Obtained solid, reliable results that tested the hypothesis.	<input type="checkbox"/> Results were not relevant toward testing the hypothesis.	<input type="checkbox"/> Had data that was flawed, false, or misinterpreted. Included results already well known.
<input type="checkbox"/> Analysis was comprehensive, complete, and convincing. Utilized proper statistical methods throughout.	<input type="checkbox"/> Analysis was adequate and valid.	<input type="checkbox"/> Had an unsophisticated analysis—did not explore possibilities and missed connections. Failed to utilize proper statistics.	<input type="checkbox"/> Had wrong, inappropriate, incoherent, or confused analysis.
<input type="checkbox"/> Showed skill and ability to use advanced technologies and instruments. Understood principles behind the technologies and obtained reliable and repeatable results.	<input type="checkbox"/> Exhibited competency in laboratory techniques and reliability in the data and results obtained.	<input type="checkbox"/> Some difficulty in acquiring repeatable results. Exhibited limited understanding of the principles behind the techniques used in the study.	<input type="checkbox"/> Laboratory competency woefully inadequate. Not confident in the accuracy of the data collected. Often failed to follow appropriate technical procedures.

<input type="checkbox"/> Effort and productivity exceeded expectations for a student at this degree level resulting in both presentations and publications.	<input type="checkbox"/> Effort and productivity met expectations for a student at this degree level. Results are publishable.	<input type="checkbox"/> Effort and productivity was just adequate. Independent of technical hurdles, research progress was protracted.	<input type="checkbox"/> Effort and productivity was poor and completion of the thesis required contributions by others.
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### Discussion and Conclusions

<input type="checkbox"/> Had a point of view presented with a confident and authoritative voice.	<input type="checkbox"/> Applied known literature to the problem studied.	<input type="checkbox"/> Presented the literature but was not critical of it.	<input type="checkbox"/> Showed poor understanding of the literature. Showed a lack of basic knowledge or careful thought. Did not explain or interpret results.
<input type="checkbox"/> Conclusion tied the thesis together. Was well written and organized.	<input type="checkbox"/> Identified what observations were important. Was well organized.	<input type="checkbox"/> Did not discuss what was important. Had a weak structure and organization.	<input type="checkbox"/> Had unsupported or exaggerated interpretation. Contained errors or mistakes.
<input type="checkbox"/> Showed a better understanding of theory than would be expected at this degree level.	<input type="checkbox"/> Explored interesting connections but missed some opportunities.	<input type="checkbox"/> Displayed little creativity, imagination, or insight.	<input type="checkbox"/> Did not handle theory well, or the theory was missing or blatantly wrong.

### Writing, Figures, Tables, Legends, and Citations

<input type="checkbox"/> Document was well organized. Figures, graphs, tables, and illustration effectively communicated the results and conveyed complicated ideas.	<input type="checkbox"/> Writing, figures, graphs and tables appropriately conveyed information and results.	<input type="checkbox"/> Format and writing needed significant revision. Figures, graphs and tables were rarely used when they could have effectively communicated results and ideas.	<input type="checkbox"/> Figures, graphs, and tables were inappropriate, misrepresented the results, and/or contained errors. Was poorly written and had numerous spelling and grammatical errors.
<input type="checkbox"/> Citations covered the topic well, were unbiased, and included a historical and up-to-date documentation of primary literature.	<input type="checkbox"/> Appropriate citations were used to document the thesis.	<input type="checkbox"/> Citations tended to be superficial in their coverage of the topic.	<input type="checkbox"/> Inappropriate and unrelated citations were used or were inappropriately applied. Little if any primary literature was cited.

### Oral Presentation and Defense

<input type="checkbox"/> Effectively illustrated key points and captivated the audience.	<input type="checkbox"/> Conveyed the major findings of the work and was suitable for the audience.	<input type="checkbox"/> Was just adequate in conveying what was done often requiring audience to ask for clarification.	<input type="checkbox"/> Was sloppy, confusing, and did not communicate what was done or why.
<input type="checkbox"/> Structure and flow was fluid, easily followed, and effectively conveyed the work and it's significance.	<input type="checkbox"/> Presented in a logical manner to the audience.	<input type="checkbox"/> "Jumped around some" but still communicated what was needed.	<input type="checkbox"/> Extremely hard to followed, lacked organization, and appeared to have been hurriedly assembled.
<input type="checkbox"/> Media used was effective and creative.	<input type="checkbox"/> Media conveyed what was done and why.	<input type="checkbox"/> The media used was just adequate.	<input type="checkbox"/> Media used was inappropriate and failed to communicate the work.
<input type="checkbox"/> Questions were answered directly and succinctly.	<input type="checkbox"/> Most questions were answered satisfactorily and handled appropriately.	<input type="checkbox"/> Questions were answered if provided guidance by the audience or advisory committee.	<input type="checkbox"/> Questions were not answered even when prodded by the audience or advisory committee.

Comments:



# Syllabus and Assessment Criteria for BMS 899 Doctoral Dissertation and Defense

Student Name \_\_\_\_\_ Major Advisor \_\_\_\_\_ Final Grade \_\_\_\_\_

## Course Description and Objectives

This course consists of original investigation under supervision and guidance of the major advisor and advisory committee. Upon successful completion of this course, students will:

- Demonstrate a depth of knowledge in all areas fundamental to the general research area.
- Be able to resolve scientific problems independently, critically assess the scientific literature, and formulate clear research questions.
- Be able to test and examine the research question experimentally, process the results using adequate empirical methods, and draw proper conclusions from the study.
- Be able to communicate their work with precision, accuracy, clarity, and completeness both orally and in writing.
- Be able to demonstrate critical and independent thought.

**Academic Honesty:** Students are required to follow the Creighton University policy on proper academic conduct, as detailed in the current Creighton University Graduate Student Bulletin.

**Grading Criteria:** Using these guidelines, indicate your assessment for this student's thesis and presentation. Not all criteria may apply and not all have to be met within a category to assign a grade. Criteria listed are modified from "How to Grade a Dissertation: The Characteristics of Dissertations, 2005" by the American Association of University Professors.

Outstanding (A)	Very Good (B)	Conditional (C)	Unacceptable (F)
<b>Written Thesis</b>			
<b>Introduction</b>			
<input type="checkbox"/> Asked a new question or addressed an important problem leading to new avenues of research.	<input type="checkbox"/> The question or problem addressed was logical and traditional.	<input type="checkbox"/> Question or problem was highly derived from the advisor's work.	<input type="checkbox"/> Looked at a question or problem that was trivial, weak, unoriginal, or already solved.
<input type="checkbox"/> Exhibited mature, independent thinking.	<input type="checkbox"/> Had some original ideas, insights, and observations.	<input type="checkbox"/> Displayed a narrow understanding of the field.	<input type="checkbox"/> Did not show an understanding of basic concepts or conventions of the discipline.
<input type="checkbox"/> Displayed a deep understanding of complicated literature.	<input type="checkbox"/> Showed understanding and mastery of the subject matter.	<input type="checkbox"/> Demonstrated understanding at a simple level.	<input type="checkbox"/> Missed relevant literature; sources were misread or misused.
<input type="checkbox"/> Argument was focused, logical, thoroughly researched, and sustained.	<input type="checkbox"/> Made a strong, comprehensive, and coherent argument.	<input type="checkbox"/> Could sustain an argument, but the argument was not imaginative or convincing.	<input type="checkbox"/> Had a weak, inconsistent, unconvincing, or invalid argument.
<input type="checkbox"/> Using well-developed rational, an intriguing hypothesis with clever specific aims was proposed.	<input type="checkbox"/> A hypothesis was clearly stated accompanied by appropriate specific aims.	<input type="checkbox"/> A hypothesis could be inferred but was not stated; some of the aims did not test the hypothesis.	<input type="checkbox"/> Did not state or provide sufficient background for a hypothesis to be deduced.
<b>Methods and Techniques</b>			
<input type="checkbox"/> Had a research design with the potential to change the experimental approaches others use to resolve their questions.	<input type="checkbox"/> Included well-executed research using a solid approach.	<input type="checkbox"/> Showed the ability to do research and demonstrated technical competence.	<input type="checkbox"/> Poor execution of laboratory methods was evident from the document and results.
<input type="checkbox"/> Used or developed new tools, methods, or types of analyses.	<input type="checkbox"/> Used appropriate theory, methods, and techniques.	<input type="checkbox"/> Missing some appropriate controls.	<input type="checkbox"/> Used inappropriate or incorrect methods..
<b>Results</b>			
<input type="checkbox"/> Results were highly important, interesting, and relevant to the hypothesis.	<input type="checkbox"/> Obtained solid, expected results that addressed the hypothesis.	<input type="checkbox"/> Results were not noteworthy or relevant to the hypothesis.	<input type="checkbox"/> Had data that was flawed, false, or misinterpreted. Included results already known.
<input type="checkbox"/> Analysis was comprehensive, complete, sophisticated, and convincing.	<input type="checkbox"/> Analysis was adequate and valid.	<input type="checkbox"/> Had an unsophisticated analysis—did not explore all possibilities and missed connections.	<input type="checkbox"/> Had wrong, inappropriate, incoherent, or confused analysis.
<input type="checkbox"/> Pushed the discipline's boundaries and opens new areas for research.	<input type="checkbox"/> Made a modest contribution to the field but did not open it up.	<input type="checkbox"/> Made a small contribution that was narrow in scope.	<input type="checkbox"/> Did not make a contribution.

<input type="checkbox"/> Effort and productivity exceeded expectations resulting in peer reviewed publications and presentations.	<input type="checkbox"/> Effort and productivity met expectations resulting in published abstracts and presentations.	<input type="checkbox"/> Effort and productivity was only adequate. Independent of technical hurdles, research progress was protracted.	<input type="checkbox"/> Effort and productivity was poor and completion of the thesis required contributions by others.
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### Discussion and Conclusions

<input type="checkbox"/> Exhibited command and authority over the material. Had a point of view presented with a confident, independent, and authoritative voice.	<input type="checkbox"/> Applied known literature to the problem studied.	<input type="checkbox"/> Presented the literature but was not critical of it.	<input type="checkbox"/> Showed a poor understanding of the literature; showed a lack of basic knowledge or careful thought; did not explain or interpret results.
<input type="checkbox"/> Conclusion tied the whole thesis together and was extremely well written.	<input type="checkbox"/> Identified what observations were important and was well organized.	<input type="checkbox"/> Had a weak structure and organization and did not discuss what was important.	<input type="checkbox"/> Had unsupported or exaggerated interpretation. Contained errors or mistakes.
<input type="checkbox"/> Showed a deep understanding of theory.	<input type="checkbox"/> Explored interesting connections but missed some opportunities.	<input type="checkbox"/> Displayed little creativity, imagination, or insight.	<input type="checkbox"/> Did not handle theory well, or the theory was missing or wrong.

### Writing, Figures, Tables, Legends, and Citations

<input type="checkbox"/> Document was very well organized and the quality of writing outstanding. Figures, graphs, tables, and illustration effectively communicated the results and effectively conveyed complicated ideas to the reader.	<input type="checkbox"/> Writing, figures, graphs and tables appropriately conveyed information and results.	<input type="checkbox"/> Format and writing needed significant revision. Figures, graphs and tables were rarely used when they could have effectively communicated results and ideas.	<input type="checkbox"/> Figures, graphs, and tables were inappropriate, misrepresented the results, and/or contained errors. It was poorly written and had numerous spelling and grammatical errors.
<input type="checkbox"/> Citations covered the topic very well, were unbiased, and included a historical and up-to-date documentation of pertinent literature.	<input type="checkbox"/> Appropriate citations were used to document the thesis.	<input type="checkbox"/> Citations tended to be superficial in their coverage of the topic.	<input type="checkbox"/> Inappropriate and unrelated citations were used or were inappropriately applied.

### Oral Presentation and Defense

<input type="checkbox"/> Effectively illustrated key points and captivated the audience.	<input type="checkbox"/> Conveyed the major findings of the work and was suitable for the audience.	<input type="checkbox"/> Was adequate in conveying what was done.	<input type="checkbox"/> Was sloppy, confusing, and did not communicate what was done or why.
<input type="checkbox"/> Structure and flow was fluid, easily followed, and effectively conveyed the work and it's significance.	<input type="checkbox"/> Presented in a logical manner and provided a "take-home message" for the audience.	<input type="checkbox"/> "Jumped around some" but still communicated what was needed.	<input type="checkbox"/> Extremely hard to followed, lacked organization, and appeared to have been hurriedly assembled.
<input type="checkbox"/> Media used was extremely effective and creative.	<input type="checkbox"/> Quality of the media conveyed what was done and why.	<input type="checkbox"/> The media used was just adequate.	<input type="checkbox"/> Media used was inappropriate and failed to communicate the work.
<input type="checkbox"/> Questions were answered directly, succinctly, and in an authoritative voice and manner that could change the way people think.	<input type="checkbox"/> Most questions were answered satisfactorily and handled appropriately.	<input type="checkbox"/> Questions were answered if provided guidance by the audience or advisory committee.	<input type="checkbox"/> Questions were not answered even when prodded by the audience or advisory committee.

Comments:

CREIGHTON UNIVERSITY  
GRADUATE SCHOOL

FINAL REPORT ON CANDIDATE FOR GRADUATE DEGREE

Name of Candidate \_\_\_\_\_  
(Last) (First) (Middle) (Degree)

**To the Dean of the Graduate School and the members of the Board of Graduate Studies:**

The Department of \_\_\_\_\_, in which this candidate has completed his/her degree requirement, reports upon the oral examination as follows:

Passed _____	Failed _____
_____	_____
_____	_____
_____	_____
_____	_____

Thesis/Dissertation Title: \_\_\_\_\_  
\_\_\_\_\_

The Committee, therefore, recommends that the degree (be, be not) \_\_\_\_\_ conferred on the above named candidate.

Date \_\_\_\_\_  
\_\_\_\_\_ Chair of the Committee

\*\*\*\*\*

**To the President and Board of Directors:**

The Board of Graduate Studies recommends that the degree of \_\_\_\_\_  
\_\_\_\_\_ be conferred on the above named candidate.

Date \_\_\_\_\_  
\_\_\_\_\_ (Dean of the Graduate School, and Chair of  
The Board of Graduate Studies

LEAVE OF ABSENCE REQUEST FORM

Requests for a Leave of Absence must be endorsed by the student's major advisor (if applicable) and the graduate program director, and then submitted to the Graduate School.

Student: \_\_\_\_\_ Mailing Address: \_\_\_\_\_

Department: \_\_\_\_\_

Net ID: \_\_\_\_\_

Requesting leave of absence for the following term(s): \_\_\_\_\_

Reason for Leave of Absence (required):

\_\_\_\_\_  
\_\_\_\_\_

**Note: 1)** A leave of absence can be granted only to students who are in good academic standing. This includes the requirement of a zero balance on your Business Office account. **2)** A leave of absence may not exceed one year. **3)** Time limitations which pertain to the various degrees and the completion of courses in which a grade of "I" (Incomplete) was earned are not waived. **4)** Students are not eligible for financial support (including fellowships or assistantships) during the Leave of Absence. Resumption of financial support is not guaranteed upon re-entry to the graduate program.

*Please be sure to notify your major advisor (if applicable), your graduate program director, and the Graduate School, in writing, of your intention to return. Failure to do so at least 30 days in advance of the start of classes may result in your withdrawal from the Graduate School.*

Signature of student: \_\_\_\_\_

Signature of Major advisor: \_\_\_\_\_

Signature of Program Director: \_\_\_\_\_

This request has been  approved  denied.

\_\_\_\_\_  
Dean, Graduate School

# Creighton

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## UNIVERSITY

Graduate School

### Request for Transfer Credit

**Student Name** \_\_\_\_\_ **Student Net ID** \_\_\_\_\_

A graduate student who has taken a graduate-level course at another accredited institution that the student believes will substitute for a required or elective course in the graduate program at Creighton University may request transfer credit for the course. Only courses in which the student earned a grade of A or B may be considered for transfer credit. Ordinarily, not more than six (6) transfer credits can be applied toward a master's program.

Creighton University Course for Which Credit is Requested	Course Completed	Institution	Credit Hours

**Please attach a copy of the syllabus for each course for which transfer credit is accepted, along with an official transcript showing the grade and credit hours earned. Submit all items to the graduate program director.** Transfer credit that is approved will be reflected on the student's transcript; however, the credits will not be calculated in the student's grade point average.

Creighton University Only	
<input type="checkbox"/> Request for transfer credit <b>approved</b>	<input type="checkbox"/> Request for transfer credit <b>denied</b>
_____ Program Director	_____ Date
_____ Graduate Dean	_____ Date