**Principles of biomedical literature review (3 credits)**

**Spring 2025**

**Instructor:** Yuliya Dobrydneva, Ph.D.

Contact information: the best way to reach me is through email [ydobrydn@gmu.edu](mailto:ydobrydn@gmu.edu)

**Bulletin Description:**

The course is designed to enhance critical thinking and problem-solving skills. Principles of biomedical literature review are integrated into the development of a project proposal for the master’s research project that the student completes the following semester.

Number of Credit(s): 3

**Prerequisites:**  Program director’ approval

**Course logistics:**

* It is an asynchronous class via Blackboard. Please follow the weekly schedule.
* There are a total of 15 weeks in this course. Class material is presented in ‘weekly sessions”. New course modules are available each week.
* Week starts on Monday and ends on Sunday. All assessments and assignments are due on Sunday night, unless otherwise specified.
* Assignments will remain open until Sunday at 11:59 p.m EST to allow ample time to complete all required activities for each week. All weekly activities are outlined in the syllabus and course schedule as well as in the weekly sessions section, which can be found on the main menu of the course in Blackboard.
* Class communications, announcements etc are conducted via Bb, and show up as GMU emails in your outlook mailbox. Please be sure that you have constant access to GMU email. Inability to access GMU email or failure to forward school communications is not an excuse for lateness or a failing grade.

**Proposal development:** Each course participant will identify a research question and develop a proposal. You will carry out the project proposed in this course during the MS project that will be completed in the final semester of the program.

1. Sections of the proposal will be due on specific dates throughout the semester (see course schedule). NOTE: The proposal sections and final proposal will be put through SafeAssign, which is a plagiarism detection software program that is built into Blackboard.
2. Toward the end of the semester, you will present an overview of your proposed project to your classmates.
3. In order to appreciate the peer review process that is commonly used to review proposals submitted for funding, each student will review and score their classmate’s presentation. You will be graded both on your own presentation as well as your peer review of your classmate's presentations

**Overall Course Learning Objectives:**

By the end of the course, student will be able to:

1. Read and analyze scientific articles in current interest areas of biomedical sciences and medicine
2. Understand regulatory documentation that is required for different types of research projects.
3. Analyze case studies and propose evidence‐based solutions
4. Plan, design, and write a project proposal to study a research question or address a current management, ethical, or professional issue in biomedicine
5. Get a constructive project proposal review and peer feedback

**Components of the Final Grade:**

Assessments, weekly quizzes, discussions, project-related submissions are all weighted equally and add to 60%. Completed Proposal is worth 40% of the grade.

* All assessments are administered via Bb only! Please be sure that you are proficient in basic functionality of Bb
* Weekly sessions open on Monday and end on Sunday.
* Course announcements are the main way to communicate with the class. Please be sure that your email is set up to receive announcements from GMU Bb.
* All assessments are open book, open notes, open everything and untimed
* **An absolute requirement for passing this class is developing a proposal which satisfies the requirements for MS project. Failure to develop the proposal will result in a failing grade for the course even if other assessments are completed.**

**Grading:** Students will receive a letter grade based on a 100‐pointscale. An A+ is not awarded as a final grade. **No extra credit is allowed in this course!**

Letter grades for the course will be assigned based on an overall % for the course as follows:

>92 A

>90 A-

>87 B+

>84 B

>77 B-

> 60 C

F below 60

**Grades will not be rounded up. Therefore, if you receive a grade of 76.99, your grade will be C, not a B-.**

**Expectations:**

* Let Dr. Dobrydneva know of your needs and constraints as early as possible **prior** to the assignment due dates.
* Notify Dr. Dobrydneva during the first week of the semester regarding course schedule conflicts due to military obligations and/or religious observances.
* **Any notifications beyond the first week of classes or after the exam/quiz due date has passed may not be approved and grade of zero will be entered.**

**LATE POLICY: PLEASE READ CAREFULLY!**

* Students should make every effort to submit/complete assignments on time.
* **Any assignment that is not turned in on time, without prior arrangements with the instructor, will result in a zero grade for this assignment**
* Any arrangements to extend a deadline for an assignment must be made prior to the deadline.
* No extension will be granted after the deadline.
* Each student is allowed maximum of two (2) extensions per semester. Other requests may not be granted and grade of zero will be entered
* Any assignment/assessment that has not been completed by the end of the semester will receive a grade of zero.

**Required Equipment** –Since this is an online course and all assessments are complete through the computer, you need to have a computer with a **reliable** internet connection**.**

**Technology Requirements: *It is a student’s responsibility to ensure access to a reliable internet for quizzes, exams and lectures.***

* + **Hardware**:  You will need access to a Windows or Macintosh computer with at least 2GB of RAM and access to a fast and reliable broadband internet connection (e.g., cable, DSL).  A larger screen is recommended for better visibility of course material.  You will need speakers or headphones to hear recorded content and a headset with a microphone is recommended for the best experience.  For the amount of Hard Disk Space required, when taking a distance education course, consider and allow for:
    1. the storage amount needed to install any additional software and
    2. space to store work that you will do for the course.

If you consider the purchase of a new computer, please go to [Patriot](https://patriottech.gmu.edu/get-started/) Tech to see recommendations.

* + **Software**:  Course uses Blackboard as the learning management system (LMS).  You will need a browser and operating system that are listed compatible or certified with the Blackboard version available on the [myMason Portal](http://mymason.gmu.edu) .  See [supported browsers and operating systems](https://help.blackboard.com/en-us/Learn/9.1_SP_10_and_SP_11/Student/002_Browser_Support_SP_11).   Login to   [myMason](http://mymasonportal.gmu.edu/)  to access your registered courses.   Some courses may use other learning management systems.   Check the syllabus or contact the instruct for details.  Online courses typically use [Acrobat Reader](http://get.adobe.com/reader/), [Flash](http://get.adobe.com/flashplayer/), [Java](http://www.java.com/en/download/), and  [Windows Media Player](http://windows.microsoft.com/en-US/windows/products/windows-media-player), [QuickTime](http://support.apple.com/downloads/#quicktime) and/or [Real Media Player](http://www.real.com/realplayer/search).   Your computer should be capable of running current versions of those applications.  Also, make sure your computer is protected from viruses by downloading the latest version of Symantec Endpoint/Anti-Virus software for free [here](http://antivirus.gmu.edu/).
  + Students owning Macs or Linux should be aware that some courses may use software that only runs on Windows.  You can set up a mac computer with Boot Camp or virtualization software so Windows will also run on it.  Watch [this video](https://youtu.be/Hmm9Q-T0oTo) about using Windows on a Mac.  Computers running Linux can also be configured with virtualization software or configured to dual boot with Windows.   
    Note: If you are using an employer-provided computer or corporate office for class attendance, please verify with your systems administrators that you will be able to install the necessary applications and that system or corporate firewalls do not block access to any sites or media types.

**Principles of Biomedical literature review 2025**

**Schedule may be subject to change! Please stay tuned for the announcements.**

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| **Week** | **Dates** | **Assignment** |
| Week 1 | January 21 | Introduction. Review of sample/successful proposals and proposal guidelines.  Plagiarism essay. |
| Week 2 | January 28 | Title of the proposal and discussion with proposal mentor |
| Week 3 | February 4 | Assignment “How to read a scientific article”. PubMed search terms and keywords. |
| Week 4 | February 11 | Hot topic Bb discussion  **Literature list is due** |
| Week 5 | February 18 | **Introduction/Background section is due** |
| Week 6 | February 25 | IRB  How to formulate study hypothesis, approach, specific aims |
| Week 7 | March 4 | IACUC and IRB quiz  **Specific aims first draft is due** |
| **Spring break** | **March 10-16** | **No classes** |
| Week 8 | March 18 | Classification of human studies quiz  **Specific aims are due** |
| Week 9 | March 25 | **Relevance/significance section is due** |
| Week 10 | April 1 | Hot topic discussion |
| Week 11 | April 8 | **First draft of complete proposal due**  Hot topic paper discussion |
| Week 12 | April 15 | **Proposal abstract is due** work on abstract peer evaluation rubrics |
| Week 13 | April 22 | **Abstract Peer evaluation rubric is due**  Bb discussion/critique/ Q&A session |
| Week 14 | April 29 | **Final draft of a proposal is due** |
| Week 15  Finals week | May 7 | **Proposal documentation is due for faculty approval and signatures** |

**Student Responsibilities**1. Mason Email: Students are responsible for the content of university communications sent to their George Mason University email account and are required to activate their account and check it regularly. All communication from the university, college, school, and program will be sent to students solely through their Mason email account.

2. Students with disabilities: Students with disabilities who seek accommodations in a course must be registered with the George Mason University Disability Services and inform their instructor, in writing, at the beginning of the semester [See Disability Services website: https://ds.gmu.edu/].

3. Academic integrity: Students must be responsible for their own work, and students and faculty must take on the responsibility of dealing explicitly with violations. The tenet must be a foundation of our university culture [See Academic Integrity website: https://oai.gmu.edu/]. Honor Code and Virtual Classroom Conduct: Students must adhere to the guidelines of the George Mason University Honor Code [See Honor Code website: https://oai.gmu.edu/mason-honor-code/full-honor-code-document/].

4. Academic Honesty Policy of the course: Students are expected to follow the Honor Code. Academic dishonesty will not be tolerated in this class. Exams, projects, and homework must reflect individual work. If you have difficulty with the assignments, discuss it with the instructor. University policies: Students must follow the university policies [See University Policy website: https://universitypolicy.gmu.edu].

5. Responsible use of computing: Students must follow the university policy for Responsible Use of Computing [See University Policy website: https://universitypolicy.gmu.edu/policies/responsible-use-of-computing].

6. University calendar: Students should consult the current Academic Calendar [See University Calendar website: https://www2.gmu.edu/academics/academic-calendar]. University catalog: Students should use the current university catalog [See University Catalog website: <https://catalog.gmu.edu>].

7. Student Services Writing center: The George Mason University Writing Center staff provides a variety of resources and services (e.g., tutoring, workshops, writing guides, handbooks) intended to support students as they work to construct and share knowledge through writing. (See Writing Center website: https://writingcenter.gmu.edu). ESL Help: The program was designed specifically for students whose first language is not English who feel they might benefit from additional, targeted support over the course of an entire semester.

8. University libraries: University Libraries provide resources for distance learning students [See Library website: http://library.gmu.edu/for/online].

9. Counseling and Psychological Services: The George Mason University Counseling and Psychological Services (CAPS) staff consists of professional counseling and clinical psychologists, social workers, and counselors who offer a wide range of services (e.g., individual and group counseling, workshops and outreach programs) to enhance students' personal experience and academic performance [See Counseling and Psychological Services website: https://caps.gmu.edu].

10. Family Educational Rights and Privacy Act (FERPA): The Family Educational Rights and Privacy Act of 1974 (FERPA), also known as the "Buckley Amendment," is a federal law that gives protection to student educational records and provides students with certain rights [See Registrar’s Office website: https://registrar.gmu.edu/ferpa/].

11. Course Materials and Student Privacy: Video recordings of class meetings that are shared only with the instructors and students officially enrolled in a class do not violate FERPA or any other privacy expectation. Video recordings that only include the instructor (no student names, images, voices, or identifiable texts) may be shared without violating FERPA (but see University Policies: Privacy, for some qualifications and recommendations). All course materials posted to Blackboard or other course site are private to this class; by federal law, any materials that identify specific students (via their name, voice, or image) must not be shared with anyone not enrolled in this class. Video conferencing or recordings: Video recordings whether made by instructors or students of class meetings that include audio, visual, or textual information from other students are private and must not be shared outside the class meetings (e.g., Collaborate Ultra Live video conference) that include audio, textual, or visual information from other students must be viewed privately and not shared with others in your household or recorded and shared outside the class.