BSC 595 01W, RESEARCH LITERATURE AND TECHNIQUES, CRN: 84450
Fall 2024

Instructor: **Dr. Hyun-Joo Nam**
Office: Science Bldg, STC 233
Phone: 903-468-8648
E-Mail: Hyun-joo.nam@tamuc.edu
eCompanion Site: D2L Brightspace @ MyLeo

Office Hours: Thu 2-3:20 PM in person or via Zoom
or by appointment, include BSC 595 Research Literature and Techniques in the subject line of E-mails. E-mails will be answered within 24 hrs except on weekends and holidays.

COURSE INFORMATION

Materials – Textbooks, Readings, Supplementary Readings

Textbook(s) Required: No textbook is required
Software Required: Please see technology requirements.
Other Materials: Peer-reviewed articles

Course Description

This course is designed for the non-thesis option students in the last semester of their MS in Biology program. Upon satisfactory completion of this course, the students are deemed to have met all the academic requirements for graduation. This course has three major components. The first component will consist of a weekly learning activity on the major aspects of scientific literature review related to a topic to be selected by each student from a range of broad topic areas provided by the instructor of record. The second one is the integration of the information obtained on the selected topic and the production of a scientific research paper. The third part will be a comprehensive exit examination that will contain questions from at least five graduate courses offered by the Department of Biological and Environment Sciences.

1. Research literature coursework
This coursework is designed to provide graduate students with fundamental knowledge and working experience in gathering scientific information and producing a systematic review from a variety of authentic sources in a selected area. In addition to independently writing and submitting assignments, students will also learn some major aspects of writing an insightful scientific review. One major purpose of this course is to improve written communication skills of the students. There will be short PowerPoint files on major areas in the process of preparing and writing a scientific review paper in a professional scientific format.

2. Production of a scientific research review paper
The first step will be the identification of a topic for the review. The topic will be selected in consultation with the instructor from the broad areas provided. Once the topic is finalized before the set deadline the student will start working on the review and will submit a complete draft for review to the instructor before the set deadline. The instructor will provide feedback or corrections as necessary. The student is expected to address all the concerns/corrections and will submit the final copy of the review before a set deadline. Check the course schedule for the deadlines.

3. Comprehensive exit examination
Students are expected to take a comprehensive exit exam as a part of the BSC 595 course and as a requirement for graduation. Questions for different courses will be prepared by the faculty teaching each graduate course. Each student will select at least five graduate courses related to their discipline within biology for this exam. Therefore, not all the students will have the same set of questions. Students are expected to dedicate time each week to reading, writing, and practicing the skills we cover in this course.

Student Learning Outcomes (Should be measurable; observable; use action verbs)
Upon completion of this course you should be able to:

1. Define literature review and understand the concept of systematic review.
2. Understand the differences between traditional reviews and systematic reviews.
3. Describe the main steps associated with the review process and understand the importance of setting a timeline.
4. Defining the scope of the review and write the review within that scope.
5. Understand the search concepts and practice data mining.
6. Identify the importance of assessing the relevance of the information gathered.
7. Describe the steps associated with the synthesis of collected information.
8. Understand the methods of analysis and integration of findings.
9. Describe the main elements required when writing and presenting the review.
10. Produce an insightful research review.

COURSE REQUIREMENTS

Minimal Technical Skills Needed

Standard skills necessary to use web browsers to access course materials is required. Students should also be able to submit their work as necessary. Students should be able to use Microsoft Word and PowerPoint.

Instructional Methods

This course is being offered as a "Web Based" course. All course materials will be posted in D2L. The course consists of a series of activities and assessments to assist you in achieving the outcomes for all instructional units in the course. In case of any difficulty in accessing or understanding any course material, contact me immediately via e-mail.

Student Responsibilities or Tips for Success in the Course

Submitting assignments before deadlines;
Studying previous course materials to take exit exams; Students are encouraged to take as many exams as possible rather than taking the minimum required number of exams.
Checking both course pages and emails for course-related announcements

Assessments

There will be three types of assessments that will contribute to the grade. These are:

1. Research literature coursework assignments: There will be six assignments.
2. Scientific literature review (essay)
3. Meeting deadlines

A passing grade (30/50 or 60%) in the Comprehensive exit exam is required for BSC 595 course completion and graduation. This score is also utilized as one of the assessment tools for the Institutional Effectiveness of the graduate program. **This score is not counted towards the course grade.**

Important information:

1. All assignments should be submitted before the deadlines**.**
2. **There will be no extra credit points for** offering to do additional work. A student's grade will be based exclusively on the points he/she earns in the categories listed above.

Requirements of Research Literature Review Paper Topic:

The topic of your literature review paper must meet the following two requirements.

I. The topic should focus on one of the following areas of biology:
- Cell and Molecular Biology
- Classical and Molecular Genetics
- Ecology
- Physiology including human, animal, and microbial physiology

II. The topic should challenge the existing scientific paradigm(s) and practices to formulate a breakthrough hypothesis for future research.

Formatting Guidelines: *

Assignments: paper size – letter; margins – 1" all sides; font size – 12; font types – Times New Roman, Arial or Calibri only; line spacing – single; page limits – one page only; file format – MS Word (Don't convert your file to a PDF).

Review paper/essay: paper size – letter; margins – 1" all sides; font size – 12; font types – Times New Roman, Arial or Calibri only; line spacing – double; page limits – minimum 20, maximum 30, excluding form pages, figures and table, and bibliography/list of references; **file format – MS Word only (not PDF).**

*Submissions not conforming to these guidelines will not be accepted and graded.

Grading:

Assignments: 60%
Meeting deadlines: 10%
Review paper/Essay: 30%
Comprehensive exit exam: 0% (Not counted towards the course grade)

1. If a student submits all the assignments before the deadline, he/she will get 10%. For each late submission 2% will be deducted. Therefore, consistent late submission of the assignments may result in a deduction of up to one letter grade.
2. There will be six assignments and each one will contribute 10% to the final grade in the course.

<u>Assignment grading plan:</u>

Presentation of a clear purpose	2%
Main idea	2%
Organization	2%

Style and conclusions	2%
Grammar	2%

Final GRADING

Final grades in this course will be based on the following scale:

A = 90%-100%
B = 80%-89%
C = 70%-79%
D = 60%-69%
F = 59% or Below

COURSE OUTLINE / CALENDAR

ALL DATES AND Units COVERED ARE TENTATIVE AND SUBJECT TO CHANGE.

Unit 1, Aug 26–Aug 30	Unit 1: Scientific process Introduction to literature review; importance of review in scientific research; how to review a scientific paper. Identify and finalize the topic for Research Literature Review **Assignment 1 Deadline:** Submit your selected topic for BSC 595 Research Literature & Review for instructor's approval 09/05/2024; 11:59 PM, CST
Unit 1, Sept 4–Sept 15	Continuation of Unit 1 Critical elements of a proposal abstract **Assignment 2 Deadline:** A) Identify key parts of an abstract and critique. B) Formulate a directional hypothesis 09/19/2024, 11:59 PM
Unit 2, Sept 18–Sept 22	Unit 2: Literature review approaches Identify various types of research; analyze the structure and limitations of a research article. **Assignment 3 Deadline:** Peer-review the article posted in D2L and submit the report by 09/26/2024, 11:59 PM, CST.
Unit 2, Sept 25–Sept 29	Continuation of Unit 2 **Assignment 4 Deadline:** Submit a working outline of your BSC 595 review paper by 10/3/2024, 11:59 PM CST.
Unit 3, Oct 02–Oct 6	Unit 3: Planning and preparation of literature review; avoiding plagiarism.

Unit 4, Oct 09–Oct 13	Unit 4: Literature search methods and the use of the citation software. **Comprehensive Exit Exam Deadline: 10/14/2024 by 11:59 PM CST).**
Unit 5, Oct 16–Oct 20	Unit 5: Identifying and defining the significance/scope of the review. **Assignment 5 Deadline:** Submit complete Introduction of your BSC 595 paper 10/24/2024, 11:59 PM CST.
Unit 6, Oct 23-Oct 27	Unit 6: Assessment of scientific evidence and findings **Assignment 6 Deadline:** Submit a complete abstract of the BSC 595 research review paper by 10/31/2024, 11:59 PM CST.
Unit 7, Oct 30–Nov 03	Unit 7: Analysis of information
Unit 7, Nov 06–Nov 10	Unit 7 Continued
Unit 8, Nov 13–Nov 17	Unit 8: Synthesis of included research literature; referencing styles; structure of abstracts; credits for other sources Review paper draft deadline: Submit the final complete draft of the research review paper by 11/21/2024, 11:59 PM CST.
Unit 9, Nov 20–Dec 01	Unit 9: Writing up and presenting data
Unit 10, Dec 04–Dec 08	**Deadline:** Submission of final copy of the review paper by 12/05/2024, 11.59 PM CST

TECHNOLOGY REQUIREMENTS

Browser support

D2L is committed to performing key application testing when new browser versions are released. New and updated functionality is also tested against the latest version of supported browsers. However, due to the frequency of some browser releases, D2L cannot guarantee that each browser version will perform as expected. If you encounter any issues with any of the browser versions listed in the tables below, contact D2L Support, who will determine the best course of action for resolution. Reported issues are prioritized by supported browsers and then maintenance browsers.

Supported browsers are the latest or most recent browser versions that are tested against new versions of D2L products. Customers can report problems and receive support for issues. For an optimal experience, D2L recommends using supported browsers with D2L products.

Maintenance browsers are older browser versions that are not tested extensively against new versions of D2L products. Customers can still report problems and receive support for critical issues; however, D2L does not guarantee all issues will be addressed. A maintenance browser becomes officially unsupported after one year.

Note the following:

- Ensure that your browser has JavaScript and Cookies enabled.
- For desktop systems, you must have Adobe Flash Player 10.1 or greater.
- The Brightspace Support features are now optimized for production environments when using the Google Chrome browser, Apple Safari browser, Microsoft Edge browser, Microsoft Internet Explorer browser, and Mozilla Firefox browsers.

Desktop Support

Browser	Supported Browser Version(s)	Maintenance Browser Version(s)
Microsoft® Edge	Latest	N/A
Microsoft® Internet Explorer®	N/A	11
Mozilla® Firefox®	Latest, ESR	N/A
Google® Chrome™	Latest	N/A
Apple® Safari®	Latest	N/A

Tablet and Mobile Support

Device	Operating System	Browser	Supported Browser Version(s)
Android™	Android 4.4+	Chrome	Latest
Apple	iOS®	Safari, Chrome	The current major version of iOS (the latest minor or **point** release of that major version) and the previous major version of iOS (the latest minor or **point** release of that major version). For example, as of June 7, 2017, D2Lsupports iOS 10.3.2 and iOS 9.3.5, but not iOS 10.2.1, 9.0.2, or any other version. Chrome: Latest version for the iOS browser.
Windows	Windows 10	Edge, Chrome, Firefox	Latest of all browsers, and Firefox ESR.

- You will need regular access to a computer with a broadband Internet connection. The minimum computer requirements are:
    - 512 MB of RAM, 1 GB or morepreferred
    - Broadband connection required courses are heavily video intensive
    - Video display capable of high-color 16-bit display 1024 x 768 or higher resolution

- **For YouSeeU Sync Meeting sessions *8 Mbps* is required.** Additional system requirements found here: https://support.youseeu.com/hc/en-us/articles/115007031107-Basic-System-Requirements

- You must have a:
    - Sound card, which is usually integrated into your desktop or laptop computer
    - Speakers or headphones.
    - *For courses utilizing video-conferencing tools and/or an online proctoring solution, a webcam and microphone are required.

- Both versions of Java (32 bit and 64 bit) must be installed and up to date on your machine. At a minimum Java 7, update 51, is required to support the learning management system. The most current version of Java can be downloaded at: JAVA web site http://www.java.com/en/download/manual.jsp

- Current anti-virus software must be installed and kept up to date.

Running the browser check will ensure your internet browser is supported.
Pop-ups are allowed.
JavaScript is enabled.
Cookies are enabled.

- You will need some additional free software (plug-ins) for enhanced web browsing. Ensure that you download the free versions of the following software:
    - Adobe Reader https://get.adobe.com/reader/
    - Adobe Flash Player *(version 17 or later)* https://get.adobe.com/flashplayer/
    - Adobe Shockwave Player https://get.adobe.com/shockwave/
    - Apple Quick Time http://www.apple.com/quicktime/download/

- At a minimum, you must have Microsoft Office 2013, 2010, 2007 or Open Office. Microsoft Office is the standard office productivity software utilized by faculty, students, and staff. Microsoft Word is the standard word processing software, Microsoft Excel is the standard spreadsheet software, and Microsoft PowerPoint is the standard presentation software. Copying and pasting, along with attaching/uploading documents for assignment submission, will also be required. If you do not have Microsoft Office, you can check with the bookstore to see if they have any student copies.

ACCESS AND NAVIGATION

You will need your campus-wide ID (CWID) and password to log into the course. If you do not know your CWID or have forgotten your password, contact the Center for IT Excellence (CITE) at 903.468.6000 or helpdesk@tamuc.edu**.**

Note: Personal computer and internet connection problems do not excuse the requirement to complete all course work in a timely and satisfactory manner. Each student needs to have a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home or work, the temporary use of a computer at a friend's home, the local library, office service companies, Starbucks, a TAMUC campus open computer lab, etc.

COMMUNICATION AND SUPPORT

Brightspace Support

Need Help?

Student Support

If you have any questions or are having difficulties with the course material, please contact your Instructor.

Technical Support

If you are having technical difficulty with any part of Brightspace, please contact Brightspace Technical Support at 1-877-325-7778 or click on **Chat** or click on the words "click here" to submit an issue via email.

the **Live**

System Maintenance

D2L runs monthly updates during the last week of the month, usually on Wednesday. The system should remain up during this time unless otherwise specified in an announcement. You may experience minimal impacts to performance and/or look and feel of the environment.

Interaction with Instructor Statement

Students are encouraged to interact with the instructor during active classroom learning sessions. Response time for Response time to any questions sent by email regarding the course will be within 72 hours. Weekends and holidays are excluded. Students need to use the office hours indicated in this syllabus.

COURSE AND UNIVERSITY PROCEDURES/POLICIES

Course Specific Procedures/Policies

Students are expected to attend ALL scheduled lectures and take the exams/quizzes as scheduled. There will be a 6 point credit for attendance. Excused absences as defined in the Student Handbook of the university will be accepted. Students are expected to come to class in time. There are no extra credits and late submissions or missed exams/quiz will result in lower than expected grade.

Syllabus Change Policy

The syllabus is a guide. Circumstances and events, such as student progress, may make it necessary for the instructor to modify the syllabus during the semester. Any changes made to the syllabus will be announced in advance.

University Specific Procedures

Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. The Code of Student Conduct is described in detail in the Student Guidebook.

The *syllabus/schedule are subject to change.*

http://www.tamuc.edu/Admissions/oneStopShop/undergraduateAdmissions/studentGuidebook.aspx

Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum: Netiquette http://www.albion.com/netiquette/corerules.html

TAMUC Attendance

For more information about the attendance policy please visit the Attendance webpage and Procedure 13.99.99.R0.01.
http://www.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx

http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/academic/13.99.99.R0.01.pdf

Academic Integrity

Students at Texas A&M University-Commerce are expected to maintain high standards of integrity and honesty in all of their scholastic work. For more details and the definition of academic dishonesty see the following procedures:

Undergraduate Academic Dishonesty 13.99.99.R0.03

http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/undergraduates/13.99.99.R0.03UndergraduateAcademicDishonesty.pdf

Graduate Student Academic Dishonesty 13.99.99.R0.10

http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/graduate/13.99.99.R0.10GraduateStudentAcademicDishonesty.pdf

Use of Artificial Intelligence, Open AI, Chat GPT, Chat Bot Software Statement

Texas A&M University-Commerce acknowledges that there are legitimate uses of Artificial Intelligence, ChatBots, or other software that has the capacity to generate text, or suggest replacements for text beyond individual words, as determined by the instructor of the course.

Any use of such software must be documented. Any undocumented use of such software constitutes an instance of academic dishonesty (plagiarism).

Individual instructors may disallow entirely the use of such software for individual assignments or for the entire course. Students should be aware of such requirements and follow their instructors' guidelines. **If no instructions are provided the student should assume that the use of such software is disallowed.**

In any case, students are fully responsible for the content of any assignment they submit, regardless of whether they used an AI, in any way. This specifically includes cases in which the AI plagiarized another text or misrepresented sources.

13.99.99.R0.03 Undergraduate Academic Dishonesty

https://inside.tamuc.edu/aboutus/policiesproceduresstandardsstatements/rulesprocedures/13students/undergraduates/13.99.99.R0.03UndergraduateAcademicDishonesty.pdf

13.99.99.R0.10 Graduate Student Academic Dishonesty

https://inside.tamuc.edu/aboutus/policiesproceduresstandardsstatements/rulesprocedures/13students/graduate/13.99.99.R0.10.pdf

ADA Statement

Students with Disabilities

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services

Texas A&M University-Commerce
Gee Library- Room 162
Phone (903) 886-5150 or (903) 886-5835
Fax (903) 468-8148
Email: studentdisabilityservices@tamuc.edu
Website: Office of Student Disability Resources and Services
http://www.tamuc.edu/campusLife/campusServices/studentDisabilityResourcesAndServices/

Nondiscrimination Notice

Texas A&M University-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

University's Pandemic Response

"A&M-Commerce requires the use of face-coverings in all instructional and research classrooms/laboratories. Exceptions may be made by faculty where warranted. Faculty have management over their classrooms. Students not using face-coverings can be required to leave class. Repetitive refusal to comply can be reported to the Office of Students' Rights and Responsibilities as a violation of the student Code of Conduct."

"Students should not attend class when ill or after exposure to anyone with a communicable illness. Communicate such instances directly with your instructor. Faculty will work to support the student getting access to missed content or completing missed assignments."

Campus Concealed Carry Statement

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in Texas A&M University-Commerce buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and A&M-Commerce Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations.

For a list of locations, please refer to the Carrying Concealed Handguns On Campus document and/or consult your event organizer.

Web url: http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf

Pursuant to PC 46.035, the open carrying of handguns is prohibited on all A&M-Commerce campuses. Report violations to the University Police Department at 903-**886-5868 or 9-1-1.**