BSC 301 Biological Literature
Course Number: BSC 301; CRN: 20318

COURSE SYLLABUS: Spring 2018

INSTRUCTORS

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Dr. Lani Lyman-Henley
Office: Science 237

The syllabus/schedule are subject to change.
COURSE INFORMATION

Materials – Textbooks, Readings, Supplementary Readings

Textbook(s) Required
(Recommended but not Required)

Additional course resource:

This is a web enhanced course. Course materials may be accessed on the eCompanion site of the course in eCollege.

Software Required: Please see technology requirements.

Optional Texts and/or Materials: NA

Course Description
This course provides students with the fundamentals of scientific thinking and scientific writing. The course starts with a brief description of literature searches, then reading and writing scientific papers and writing lab reports. Then there is an overview of the history and philosophy of science as it pertains to biology. Students will learn about empiricism, parsimony, and how to apply the scientific method to developing and testing hypotheses. Students will be taught how to write in scientific style; naming conventions, how to cite scientific names, how to avoid obfuscatory scrivenry, establishing flow, organizing a scientific document, how to write an abstract, how to present scientific data and statistics, how to write figures and tables, how to cite scientific sources, and how to avoid plagiarism. The final part of this class deals with bioethics and the use of ethics in biological research.

Student Learning Outcomes
1. To practice scientific thinking and writing.

The syllabus/schedule are subject to change.
2. To understand literature searches, then reading and writing scientific papers and writing lab reports.
3. To develop communication skills and clarity to present ideas and explain them to the scientific community and in public.
4. To learn about empiricism, parsimony, and how to apply the scientific method to developing and testing hypotheses.
5. To learn to organize a scientific document, how to write an abstract, how to present scientific data and statistics, how to cite figures and tables, how to cite scientific sources, and how to avoid plagiarism.

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 upload their work as necessary.

Instructional Methods
This is a fully online course. All course materials will be posted in eCollege.

Student Responsibilities or Tips for Success in the Course
Dedicated weekly study time
Submitting assignments before deadlines
Special accommodations, if needed, be made notifying the instructor in advance
Checking both eCollege and emails for course related announcements

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

Homework assignments
Your grading is mainly based on homework assignments and attendance. You are required to submit all your assignments via Dropbox in eCollege. It’s your responsibility to find a matching Dropbox in eCollege for each assignment and upload your homework in a timely manner. Your assignment will not be graded if it is submitted in a wrong Dropbox. You also need to submit the assignments before the deadlines set by each instructor. Failure to meet these deadlines may result in zero points.

The syllabus/schedule are subject to change.
Submitted documents must be in .rtf, .doc or .docx format; therefore, Microsoft Office is needed.

Attendance and Absences:
You are expected to attend ALL scheduled lectures and turn in assignments as scheduled. Assignments will NOT be accepted late. You will be held responsible for all information covered in lecture. Sign-in sheets will be circulated; please sign your name clearly. Do not sign anyone’s name but your own! Signing in for someone else is a form of academic dishonesty and will not be tolerated. Excessive unexcused absences will result in loss of points from your grade. FOR EACH UNEXCUSED ABSENCE TWO (2) POINTS WILL BE SUBTRACTED FROM YOUR ATTENDANCE GRADE.

Grading Scheme and Assignments:

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attendance</td>
<td>20</td>
</tr>
<tr>
<td>Homework Assignment: Literature search</td>
<td>6</td>
</tr>
<tr>
<td>Homework Assignment: Writing an Abstract</td>
<td>6</td>
</tr>
<tr>
<td>Homework Assignment: Writing M &amp; M and Results</td>
<td>6</td>
</tr>
<tr>
<td>Essay: History and philosophy of science (4 pages)</td>
<td>10</td>
</tr>
<tr>
<td>Homework Assignment: Biological Nomenclature</td>
<td>6</td>
</tr>
<tr>
<td>Homework Assignment: Writing a Hypothesis</td>
<td>6</td>
</tr>
<tr>
<td>Homework Assignment: Editing a paper</td>
<td>6</td>
</tr>
<tr>
<td>Homework Assignment: Figures and Tables</td>
<td>6</td>
</tr>
<tr>
<td>Homework Assignment: Writing Discussion</td>
<td>6</td>
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<tr>
<td>Homework Assignment: Citations</td>
<td>6</td>
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<tr>
<td>Homework Assignment: Ethics Assignment</td>
<td>6</td>
</tr>
<tr>
<td>Class Debate: Presentation</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100</strong></td>
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</tbody>
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TECHNOLOGY REQUIREMENTS

This section is a comprehensive description. In most cases a good computer with MS Office, updated web browser and a secure internet connection is all what students will need.

- To fully participate in online courses you will need to use a current Flash enabled internet browser. For PC and Mac users the suggested browser is Mozilla Firefox.

- 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 more preferred
  - Broadband connection required courses are heavily video intensive
  - Video display capable of high-color 16-bit display 1024 x 768 or higher resolution

- You must have a:

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• 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:
  o Adobe Reader https://get.adobe.com/reader/
  o Adobe Flash Player (version 17 or later) https://get.adobe.com/flashplayer/
  o Adobe Shockwave Player https://get.adobe.com/shockwave/
  o 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.

• For additional information about system requirements, please see: System Requirements for LearningStudio https://secure.ecollege.com/tamuc/index.learn?action=technical

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ACCESS AND NAVIGATION

Pearson LearningStudio (eCollege) Access and Log in Information

This course will be facilitated using Pearson LearningStudio, the learning management system used by Texas A&M University-Commerce. To get started with the course, go to myLeo and from the top menu ribbon select eCollege. Then on the upper left side of the screen click on the My Courses tab.  [http://www.tamuc.edu/myleo.aspx](http://www.tamuc.edu/myleo.aspx)

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:** It is strongly recommended you perform a “Browser Test” prior to the start of your course. To launch a browser test login to Pearson LearningStudio, click on the My Courses tab, and then select the Browser Test link under Support Services.

Pearson LearningStudio Student Technical Support

Texas A&M University-Commerce provides students technical support for the use of Pearson LearningStudio.

Technical assistance is available 24/7 (24 hours, 7 days a week).

If you experience LearningStudio (eCollege) technical problems, contact the LearningStudio helpdesk at 1-866-656-5511 (toll free) or visit [Pearson 24/7 Customer Support Site](http://247support.custhelp.com/)

The student help desk may be reached in the following ways:

- **Chat Support:** Click on ‘Live Support’on the tool bar within your course to chat with a Pearson LearningStudio Representative.

- **Phone:** 1-866-656-5511 (Toll Free) to speak with Pearson LearningStudio Technical Support Representative.

**Accessing Help from within Your Course:** Click on the ‘Tech Support’ icon on the upper left side of the screen inside the course. Then you will be able to get assistance via online chat or by phone.

**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

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use of a computer at a friend's home, the local library, office service companies, Starbucks, a TAMUC campus open computer lab, etc.

**Policy for Reporting Problems with Pearson LearningStudio**

Should students encounter Pearson LearningStudio based problems while submitting assignments/discussions/comments/exams, the following procedure must be followed:

1. Students must report the problem to the help desk. You may reach the helpdesk at 1-866-656-5511.
2. Students must file their problem with the helpdesk and obtain a helpdesk ticket number.
3. Once a helpdesk ticket number is in your possession, students should email me to advise me of the problem and provide me with the helpdesk ticket number.
4. I will call the helpdesk to confirm your problem and follow up with you.

**PLEASE NOTE:** Your personal computer and internet access problems are not a legitimate excuses for filing a ticket with the Pearson LearningStudio Help Desk. Only Pearson LearningStudio based problems are legitimate reasons to contact the Help Desk.

You strongly are encouraged to check for your internet browser compatibility **BEFORE** the course begins and take the Pearson LearningStudio tutorial offered for students who may require some extra assistance in navigating the Pearson LearningStudio platform.

**myLeo Support**
Your myLeo email address is required to send and receive all student correspondence. Please email helpdesk@tamuc.edu or call us at 903-468-6000 with any questions about setting up your myLeo email account. You may also access information at myLeo. https://leo.tamuc.edu

**Learner Support**
The **One Stop Shop** was created to serve you by providing as many resources as possible in one location. http://www.tamuc.edu/admissions/onestopshop/

The **Academic Success Center** provides academic resources to help you achieve academic success. http://www.tamuc.edu/campusLife/campusServices/academicSuccessCenter/

**FREE Mobile Apps**

The Courses apps for phones have been adapted to support the tasks students can easily complete on a smaller device. Due to the smaller screen size course content is not presented.

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The Courses app is free of charge. The mobile Courses Apps are designed and adapted for different devices.

| App Title: | iPhone – Pearson LearningStudio Courses for iPhone  
| Operating System: | iPhone - OS 6 and above  
| Android – LearningStudio Courses - Phone | Android – Jelly Bean, Kitkat, and Lollipop OS  

Once downloaded, search for Texas A&M University-Commerce, and it should appear on the list. Then you will need to sign into the myLeo Mobile portal.

The Courses App for Android and iPhone contain the following feature set:

- View titles/code/Instructor of all Courses enrolled in online
- View and respond to all discussions in individual Courses
- View Instructor Announcements in individual Courses
- View Graded items, Grades and comments in individual Courses
- Grade to Date
- View Events (assignments) and Calendar in individual Courses
- View Activity Feed for all courses
- View course filters on activities
- View link to Privacy Policy
- Ability to Sign out
- Send Feedback

**LearningStudio Notifications**

Students can be alerted to course activities via text on their mobile phones or up to two email addresses.

Based on their preferences, students can automatically receive a push notification with every new: course announcement, threaded discussion post, grade, and/or assignment without having to login to the course. Enrolled students will automatically receive email notifications for announcements and can opt out of this feature. To receive text notifications, students must opt in.

To begin setting up notifications, go into your course in LearningStudio and click on the bell-shaped Notifications icon on the main menu ribbon.

By default the student’s university email address will appear. This cannot be changed in LearningStudio. Additional email addresses may be added by clicking the Add

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button. After all of the other selections are completed be sure to click the Save and Finish button.

COMMUNICATION AND SUPPORT

*Interaction with Instructor Statement*
Response time to any questions sent by email regarding the course will be within 72 hours. However, students are encouraged to interact with the instructor directly during the class time and office hours, if necessary. Exceptions such as widespread internet outage apply.

COURSE AND UNIVERSITY PROCEDURES/POLICIES

*Course Specific Procedures/Policies*
You are expected to check your TAMUC email and eCollege every day to check for announcements.

*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](http://www.tamuc.edu/admissions/registrar/documents/studentGuidebook.pdf).

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](http://www.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx) webpage and [Procedure 13.99.99.R0.01](http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/academic/13.99.99.R0.01.pdf).

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**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**


**Graduate Student Academic Dishonesty 13.99.99.R0.10**

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

**Campus Concealed Carry Statement**

The syllabus/schedule are subject to change.
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.

COURSE OUTLINE / CALENDAR

Weeks 1-2 (Jan. 16-26) – Dr. Parameshwaran
1. Developing a Literature Search Strategy (Dr. Parameshwaran)
   - Database and Search Engines for Scientific Literature
   - Comparison of databases
   - Database Search Strategies
   - Evaluating Search Results
   - Managing References (Citations)
   (Homework: Literature search)

2. Reading and Writing Scientific Papers (Dr. Parameshwaran)
   a. Types and Hallmarks of Scientific Writing
   b. Format
   c. Documenting References
   d. Strategies for Reading Journal Articles
   e. Plagiarism
   f. Benefits
   (Homework: Re-write the abstract in your own words)

3. Preparing a Laboratory Report (Dr. Parameshwaran)

   The syllabus/schedule are subject to change.
a. Timetable
b. Getting Started
c. Starting with Materials and Methods Section
d. Results Section
e. Make Correction
f. Documenting Sources

(Homework: Re-write the materials and methods as well as ONE set of matching results)

Weeks 3 - 5 (Jan. 29-Feb. 16) – Dr. Slovak
History and Philosophy of Science with Emphasis on Biology –
An Introduction to Logic and Scientific Thinking

(Homework: Four Pages Essay on the History and Philosophy of Science)

Weeks 6 & 7 (Feb. 19-March 2) – Dr. Kopachena
1. Biological Nomenclature
   a. Classification – what is a species? How do you use the word species
   b. Binomial nomenclature
      i. Authorship, synonyms
      ii. Capitalization, italic vs underline
   c. Conventions in names of biologically relevant chemicals
   d. Latin roots (singular vs plurals)

   (Homework: Biological Nomenclature)

2. Scientific Writing Styles and Editing Scientific Papers
   a. Fonts, paragraphs, spacing
   b. Simple grammatical rules: split infinitives, dangling participles, prepositions, passive vs. active voice
   c. Sentence: run-ons and fragments
   d. Obfuscatory scrivenry and jargon
   e. Establishing flow (creating an outline)
   f. Prioritizing information (move from general to specific)
   g. Headings
   h. Citing instruments and materials used in experiments

The syllabus/schedule are subject to change.
(Homework: Editing a paper)

Weeks 8 & 9 (March 5 – March 23) – Dr. Cheriyath
(March 12 - 16 Spring break)
1. Hypothesis Testing – Principle of Parsimony (Occam’s Razor)
   (Homework: Write a Hypothesis)

2. How to Present Data
   a. Figures and tables from published sources
   b. Data management and spreadsheets
   c. Figures and tables from original sources
   (Homework: Write Results)

3. How to Write a Discussion – Not Just a Restatement of Results (Homework: Write Discussion).

Weeks 10 & 11 (March 26-Apr 6) – Dr. Khan
1. Literature Search
   a. What is primary source of literature?
   b. What are good sources of scientific information
   c. How to search databases and internet
   d. Citation management tools, e.g. Endnote

2. How to Cite References (Citation-Sequence and Name-Year Systems)
   a. Avoiding plagiarism by using citations
   b. Avoid using quotes
   c. Avoid citing papers based solely on citation by others
   (Homework: Citations)

Weeks 12 & 13 (Apr 9 – Apr 20) – Lani Lyman-Henley
1. Presentations

2. Bioethics and Ethics in Research
   (Homework: Ethics Assignment)

The syllabus/schedule are subject to change.
Weeks 14 & 15 (Apr 23 – May 4) – All
3. Bioethics Debates
   (Homework: Class Debate presentation)

All dates and assignments are tentative and may be subject to change.