
Biology Department, College of Arts & Sciences, Valdosta State University
FALL 2019---COURSE SYLLABUS*

BIOL 4900, Section B. Senior Seminar (CRN 82013) - 1 credit hour

Times: Wednesday 3:30-5:20 pm, 2022 Bailey Science Center
Tuesday 12:45-1:35 pm, 1023 Bailey Science Center
Additional seminars/presentations will be announced on BlazeView as soon as they are available.

Instructor: Dr. Jenifer Turco Email: jturco@valdosta.edu
Telephone: 229-249-4845 Office: **2091 Bailey Science Center**
Office Hours: Tues. & Thurs., 4:15-5:05 pm; or by appointment.

BIOL 4900. Senior Seminar. 1 Hour.

Pre- or Corequisite: Completion of all required courses in the senior curriculum for the biology major. Graded "Satisfactory" or "Unsatisfactory". The capstone course in biology. Students are required to attend outside lectures chosen by the instructor. This course assesses students' ability to research independently topics in biology, assimilate the information, and disseminate the information in an organized and understandable fashion in both written and oral forms. Besides demonstrating comprehension of their topic and competence in communication skills, students take the ETS Major Field test in biology and complete the departmental Senior Exit Questionnaire for successful course completion. (From VSU Undergraduate Catalog)

Required Items: (i) One CD or flash drive for the references, paper, and oral presentation (Email cannot be used to access your PowerPoint presentation); (ii) two thin, light-weight folder(s) for handing in assignments (Please do **not** use 3-ring binders for assignments); and (iii) paper clips or a stapler for organizing assignments

Special Notes to Students:

1. In order to respect the privacy of each student, grades will not be posted, given out by telephone, or sent to students by email.
2. Students should consult the VSU Student Handbook, Catalog, Semester Calendar, Schedule of Classes, & Registration Guide (all available online) for information about VSU policies and procedures regarding registration, drop/add, and withdrawal. October 10 is the official midterm, and the withdrawal deadline is October 17. Students are not permitted to withdraw after this deadline except in cases of hardship.
3. Students with disabilities who are experiencing barriers in this course may contact the Access Office for assistance in determining and implementing reasonable accommodations. The Access Office is located in Farbar Hall. The phone numbers are 229-245-2498 (V), 229-375-5871 (VP) and 229-219-1348 (TTY). For more information, please visit VSU's Access Office or email: access@valdosta.edu.
4. Valdosta State University (VSU) is committed to creating a diverse and inclusive work and learning environment free from discrimination and harassment. VSU is dedicated to creating an environment where all campus community members feel valued, respected, and included. Valdosta State University prohibits discrimination on the basis of race, color, ethnicity, national origin, sex (including pregnancy status, sexual harassment and sexual violence), sexual orientation, gender identity, religion, age, national origin, disability, genetic information, or veteran status, in the University's programs and activities as required by applicable laws and regulations such as Title IX. The individual designated with responsibility for coordination of compliance efforts and receipt of inquiries concerning nondiscrimination policies is the University's Title IX Coordinator: Maggie Viverette, Director of the Office of Social Equity, titleix@valdosta.edu, 1208 N. Patterson St., Valdosta State University, Valdosta, Georgia 31608, 229-333-5463.
5. Cell phones, music players, and other electronic devices may not be used at any time in class or during seminar presentations that are attended to satisfy requirements of this class.
6. Food is not permitted in the classroom.
7. No disruptive behavior will be tolerated. A student who engages in disruptive behavior will be asked to leave. If necessary, the campus police will be contacted.

(continued on next page.....)

***This is a tentative syllabus. Changes to this syllabus will be announced during class or posted on BlazeView.**

Special Notes to Students (continued from preceding page):

8. Students are expected to read and adhere to the following: (i) the VSU Student Code of Conduct as described in the VSU Student Handbook (<https://www.valdosta.edu/administration/student-affairs/student-conduct-office/student-handbook.php>) and (ii) the Biology Department policy on plagiarism (available online through the departmental Web site at <http://www.valdosta.edu/colleges/arts-sciences/biology/documents/resources/PlagiarismPolicy.pdf>). The instructor may use a variety of methods for detecting cheating and plagiarism. Cheating or plagiarism will result in a grade of “0” for the assignment and a grade of unsatisfactory (“U”) for the course. In addition, the instructor may complete a Report of Academic Dishonesty and submit it to the VSU Student Conduct Office.

9. At the end of the term, all students will be expected to complete an online Student Opinion of Instruction survey (SOI) that will be available through SmartEvals. Students will receive an email notification through their VSU email address when the SOI is available (generally at least one week before the end of the term). SOI responses are anonymous to instructors/administrators, and they will be able to access results only after they have submitted final grades. Before final grade submission, instructors will not be able to see any responses, but they can see the percentage of students who have or have not completed their SOIs. While instructors will not be able to see student names, an automated system will send a reminder email to those who have yet to complete their SOIs. Students who withdraw or drop a course will also be sent invitations to complete the Dropped Course Survey. Complete information about the SOIs, including how to access the survey, is available on the [SOI Procedures webpage](#).

Course Objectives

During successful completion of this course, you will:

- (1) Research the formal, peer-reviewed, scientific literature to obtain information (both review articles and primary sources) about a specific topic in biology. Based on your research, select a much more specific subtopic on which to focus your work.
- (2) Read and organize the information collected. Select 2 (or possibly 3) review articles that you will use in writing the background section of your paper plus 2 (or possibly 3, depending on the length) primary sources that you will thoroughly analyze and discuss in the remainder of the paper. Submit your review articles and primary sources to the instructor.
- (3) Demonstrate an understanding of the information collected by preparing an original, well-organized, and carefully-written paper on the topic.
- (4) Demonstrate an understanding of the information collected by giving a well-organized, detailed, oral presentation based on **one** of the primary scientific sources used in writing the paper. PowerPoint software must be used during the oral presentation, and the presentation should be 12 to 14 minutes long (with 3 additional minutes for questions).
- (5) Attend and prepare a brief summary of each presentation given as part of the Biology Department seminar series. Seminars take place on Tuesdays and are generally about 50 minutes in length.)
- (6) Take the ETS Major Field test in biology and score at least 140.
- (7) Complete the departmental Senior Exit Questionnaire.

Alignment of Course Objectives with Educational Outcomes:

The **VSU General Education Outcomes** are available online at <https://www.valdosta.edu/academics/academic-affairs/vsu-core-curriculum.php> ; in this syllabus they are referred to as VSUA1, VSUA2, VSUB, VSUC, VSUD, and VSUE. The **Biology Undergraduate Educational Outcomes** (numbered 1-5) are available in the VSU Undergraduate Catalog, which is available online at <http://catalog.valdosta.edu/> . In this syllabus the Biology Undergraduate Educational Outcomes are designated as B1-B5, and they are available at <http://catalog.valdosta.edu/undergraduate/academic-programs/sciences-mathematics/biology/>

This course addresses the following educational outcomes:
VSU General Education Outcomes VSUA1, VSUC, and VSUD
Biology Undergraduate Educational Outcome B1

Course Theme: *Bacteria That Cause Disease in Humans*

Pathogenic bacteria are interesting and the instructor hopes you will enjoy learning about them!

Possible pathogenic bacteria (topics) will include the following: *Staphylococcus aureus*, *Streptococcus pyogenes*, *Streptococcus pneumoniae*, *Streptococcus agalactiae*, *Streptococcus mutans*, *Clostridium botulinum*, *Clostridium tetani*, *Clostridium perfringens*, *Bacillus anthracis*, *Listeria monocytogenes*, *Mycobacterium leprae*, *Mycobacterium avium-intracellulare*, *Mycoplasma pneumoniae*, *Neisseria meningitidis*, *Treponema pallidum*, *Leptospira interrogans*, *Salmonella*, *Shigella*, *Vibrio cholerae*, *Bartonella henselae*, *Bordetella pertussis*, *Burkholderia pseudomallei*, *Haemophilus influenzae*, *Legionella pneumophila*, *Campylobacter jejuni*, *Vibrio vulnificus*, *Borrelia burgdorferi*, *Anaplasma phagocytophilum*, *Pseudomonas aeruginosa*, *Bacteroides fragilis*, *Chlamydia pneumoniae* (*Chlamydia pneumoniae*), *Aeromonas hydrophila*, *Acinetobacter baumannii*, *Klebsiella pneumoniae*, *Enterococcus faecium*, *Nocardia brasiliensis*, *Proteus mirabilis*, *Yersinia pestis*, enterohemorrhagic (Shiga-toxin producing) *Escherichia coli*

Please keep in mind that some bacteria may be opportunistic pathogens.

Please note that if you are currently taking BIOL 3100, you must select a different topic for your oral presentation in that class.

Specific Course Requirements/Assignments:

1. Students are expected to attend all scheduled class meetings. Any student who cannot attend one or more sessions should discuss this matter with the instructor prior to the absence. It is expected that all members of the class will participate in a brief discussion after each student oral presentation is given. Therefore, please be prepared to ask meaningful questions, critique the quality of the material presented, and raise meaningful issues related to the topic discussed.
2. Students will read the information on academic integrity (see item #8 in Special Notes to Students on page 2 of this syllabus). A copy of Appendix A of the VSU Student Code of Conduct and a copy of the Biology Department policy on plagiarism will be provided in class. Each student will sign an acknowledgement form indicating that these policies have been read and understood.
3. Each student will attend and summarize the presentations given as part of the Biology Department seminar series. The schedule for these presentations (as well as any updates) will be announced in BlazeView as soon as it is available. The Biology Department seminar generally takes place on Tuesdays from 12:45-1:35 pm in Room 1023, Bailey Science Center. This time period is part of the BIOL 4900 class schedule. You are expected to attend all of these seminars, and to be on time.
In each instance, you must complete a presentation summary on the form provided, and submit it to the instructor. The summary must include the following: date, time, and location of the presentation; the full name of the speaker; the title of the presentation; a few sentences about the material that was presented, and at least 1 question about the content of the presentation. If time permits, students are encouraged to ask questions after the presentations. The instructor (or her representative) will give you a dated copy of the presentation summary form as you enter the seminar room. You must complete this dated form during the seminar and give it to the instructor (or her representative) immediately after the seminar. Please note that none of these dated forms will be handed out once the seminar has started.

4. Each student will select a general topic from the list and a specific focus for the research to be conducted. These must be submitted to the instructor on the indicated dates. Once a topic has been chosen it may not be changed.

5. Each student will hand in complete, readable, paper and electronic copies of the **references** to be used for the paper (including all tables and figures). These are due on Sept. 11.

The references must include 2 (or possibly 3, depending on the length) peer-reviewed, formal scientific articles that are **primary sources**; these primary sources must deal with the specific focus that you chose for your research. They must list references at the end and the references must be cited within the text of the articles. Each primary source must be 4 or more pages in length. In addition, each primary source must also contain 3 or more tables and/or figures per source. Primary sources must have been published between 2011 and 2019.

The submitted references must also include 2 (or possibly 3) peer-reviewed, formal scientific articles that are **review articles**. In some instances, authoritative books and book chapters by experts on the topic may be used in addition to (or instead of) the review articles, but they are not required. These sources must list references at the end and the references must be cited within the text of the article, book, or chapter. Undergraduate textbooks may not be used as sources. It is strongly suggested that the student make his/her best effort to locate recently-published review articles/book chapters.

You may use interlibrary loan; however, this process may take additional time. Please note that textbooks, Web sites, informal Internet articles or fact sheets, newspaper articles, magazine articles, book reviews, and letters to the editor are generally **not** acceptable sources. The copies of the references submitted will be returned to the student; however, the references must be given to the instructor again when the paper is submitted. Please be certain that you read the references before you initially submit them. You must use your submitted references in your paper, so please choose them carefully.

6. In consultation with the instructor, each student will select the primary source that will be the focus of his/her oral presentation. When you turn in your references on Sept. 11, you will mark one of your primary sources as the one you would like to use in your oral presentation. When the references are returned, the instructor will indicate whether the chosen primary source is acceptable. Once the primary source to be used for the oral presentation has been chosen, it cannot be changed.

7. Each student will hand in an original, well-organized, and carefully-written paper on the topic. The paper must be in review format. The paper must include the following: (i) the Title and Author, (ii) a Summary; (iii) the main body of the paper; and (iv) the Literature Cited section. You must bring two copies of a complete draft of your paper to class on October 2. You will give one copy to the instructor (who will check the draft for completeness) and you will give the other copy to a classmate, who will read it and provide helpful feedback. Please see the course schedule for additional details. Be sure to proof-read your paper and make corrections before your final submission to the instructor. After the final submission of your paper on October 9, you will not have an opportunity to revise your paper for any reason, so please do your best work!

Your paper must be at least 6 pages, but must not exceed 8 pages in length, excluding the Literature Cited section. (Aim for 7 pages, excluding the Literature Cited section.) The first page must include the Title and Author, plus a Summary of your paper (approximately 300 words). The paper must be typed in 12-point font, double-spaced, with margins set at 1 inch on all sides of the pages. Please carefully check your word processing program to be sure that additional space is not inserted below each line. All pages must be numbered at the bottom of the page. A printed copy of the paper, as well as an electronic copy, must be submitted to the instructor.

About one-third (2 pages) of the main body of your paper must be devoted to general background information on the pathogen, its properties and transmission, the diseases it causes in humans, major signs and symptoms of these diseases; major virulence factors of the pathogen; treatment of and prevention of these diseases; and whether or not a vaccine is available. The remaining two-thirds (4 pages) of the main body of the paper must be devoted to a more specific aspect of the topic. In this section you will cover and discuss your

primary sources. Examples of more specific aspects of your topic might include: antibiotic resistance in the particular pathogen; properties/research on a particular virulence factor of the pathogen; progress in development of a vaccine for prevention of diseases due to the pathogen; progress in developing better treatments for a specific disease(s) caused by the pathogen; or recent outbreaks of disease due to the pathogen. There are, of course, many other possibilities.

Papers may not include any direct quotations or any figures or tables from the references. A paper that is constructed from direct quotations does not convey an understanding of the material. **Please take care to avoid plagiarism.**

For citing sources in the body of the paper, and for preparing the Literature Cited section, students should follow the Council of Science Editors (CSE) Name-Year Documentation guidelines, which are available online at <https://writing.wisc.edu/handbook/documentation/doccse/nameyear/>

This resource is part of the University of Wisconsin-Madison Writer's Handbook, which is located on the Web site of The Writing Center @ The University of Wisconsin – Madison (<https://writing.wisc.edu/>)

8. Your oral presentation must be focused on a single primary source selected by you and your instructor from the references in your paper. The presentation must use PowerPoint software and include: (i) brief, general background on the pathogen; (ii) background specific to the primary source; (iii) the questions that the authors of the primary source addressed; (iv) brief consideration of the methods that the authors used to answer the questions; (v) the results of the experiments; and (vi) interpretation and discussion of the results.

To obtain a satisfactory grade on the presentation, you must (i) look at all of the data and walk the audience through the data; do not merely accept the authors' interpretations without critical analysis; (ii) include appropriate figures and/or tables (note information in next paragraph); (iii) use appropriate text fonts on the PowerPoint slides; (iv) explain your presentation in a way that is understandable to your classmates; and (v) submit a readable, printed copy of the PowerPoint slides to the instructor immediately after the presentation. In addition, you must not read your presentation, although you may use index cards as aids during your talk. Reading of your presentation does not demonstrate understanding. **There will be no make-ups for the oral presentations except in the event of a documented, serious emergency.**

Please be aware that you may not be able to present all of the figures and tables from a lengthy primary source due to the time limit for the presentation. In this case, you should present the most important ones and be prepared to answer questions on the others. You may summarize the results shown in the figures and tables that you are unable to present. Be sure that you allow enough time in your talk to clearly present each figure or table that you use.

9. You must contact the VSU Testing Office, which is now located in the University Center Room 4167 (accessible through entrance #5) to schedule a day and time to take the Major Field test. Arrangements can be made online at www.valdosta.edu/testing. A score of at least 140 is required to achieve a grade of Satisfactory. You are required to take the Major Field test by no later than mid-term (Thursday, Oct. 10, 2019). If you score less than 140, you must continue to re-take the test until you reach 140. The Biology Department will pay for your initial test; you are responsible for all fees associated with retaking the test. **No scores on the Major Field test will be accepted after NOON on Monday, Dec. 9, 2019.** If the instructor has not received a score of 140 or more for you by that time, you will receive an Unsatisfactory grade (U) for the course.

Tentative Class Schedule (Subject to Change)

Please remember that you must take the Major Field Test by midterm (October 10)

Tues. Aug. 20	Course Information; possible topics; academic integrity policies Lottery to determine order of selection of topics
<u>Wed. Aug. 21</u>	Course Information; possible topics; academic integrity policies Lottery to determine order of selection of topics

Tues. Aug. 27
Wed. Aug. 28

Biology Dept. Seminar: Dr. Jenifer Turco
Selection of Topics (Once a topic is selected, it cannot be changed.)
Determining a specific aspect of your topic on which to focus your research
References: Primary sources and review articles

Tues. Sept. 3
Wed. Sept. 4

There will be no seminar on this day. Please work on your assignments.
Discussion, questions, etc.
Hand in the specific aspect of your topic on which you will focus.

Tues. Sept. 10
Wed. Sept. 11

There will be no seminar on this day. Please work on your assignments.
References are due. (You must use the references that you submit, so please choose them carefully!)
Label which one of the primary sources you would like to use for your oral presentation. (In choosing this reference, please consider the figures and other data in the study and whether they will be easy to present to the class.)

Tues. Sept. 17
Wed. Sept. 18

Biology Dept. Seminar: Dr. Jake Price, Lowndes County Cooperative Extension Service
Discussion, questions, etc. References will be returned to students. The instructor will indicate whether or not the primary source you selected for your oral presentation is acceptable. Once the primary source to be used for the oral presentation is chosen, it cannot be changed.

Tues. Sept. 24
Wed. Sept. 25

Biology Dept. Seminar: Dr. Edward Shaw, Philadelphia College of Osteopathic Medicine, South Georgia
Determination of the primary source for the oral presentation (if necessary)
Once the primary source to be used for the oral presentation is chosen, it cannot be changed.
Discussion, questions, common problems with references, etc.

Please work on a complete draft of your paper that includes all sections (including the Literature Cited) and all citations for the references within the text. Check your draft according to the following list and make revisions as needed.

- (i) Is the paper organized, clear, and logical?
- (ii) Does the paper demonstrate your knowledge and understanding of the topic?
- (iii) Does the paper cover the required content?
- (iv) Are there any signs of plagiarism in the paper?
- (v) Do the format and length of the paper correspond to the guidelines provided?
- (vi) Are there any direct quotations in the paper?
- (vii) Does the paper have errors in spelling and grammar?
- (viii) Are the references cited in the correct format?
- (ix) Did you cite the correct reference in each instance?
- (x) Does the format of the "Literature Cited" section follow the guidelines?
- (xi) Compare the "Literature Cited" section with the references that you cited in the body of paper. Did you cite any references in your paper that are not listed in the "Literature Cited" section?
- (xii) Did you list any references in the "Literature Cited" section that you did not actually use and cite in your paper?
- (xiii) You must cite only those references that you actually read and used. Copies of all of these references must be given to the instructor when you turn in your paper.

(xiv) A primary source is cited for the contributions of the authors. It should not be cited for background information that the authors mentioned in their introduction.

(xv) When you are using a review article that cites the work and contributions of many other authors/researchers, it is important to clarify this point in your writing.

Tues. Oct. 1
Wed. Oct. 2

To be announced

Discussion, questions, peer review, etc.

You must bring two copies of a complete draft of your paper to class today. The complete draft must include all sections (including the Literature Cited section) as well as all citations for the references within the text. You will submit one copy of the draft to the instructor, who will check it for completeness. Another member of the class will read the other copy of your paper and provide feedback. It is suggested that the provided list of questions (see Sept. 25) be used as part of this peer-review process.

This assignment is due on Oct. 2, except in the event of a documented, serious emergency.

Tues. Oct. 8
Wed. Oct. 9

Fall Break

Papers are due (both printed & electronic versions must be submitted)

You will not have an opportunity to revise your paper for any reason, so please do your best writing!!

Tues. Oct. 15
Wed. Oct. 16

To be announced

Oral Presentations

Senior Exit Questionnaire

Tues. Oct. 22
Wed. Oct. 23

To be announced

Oral Presentations

Tues. Oct. 29
Wed. Oct. 30

To be announced

Oral Presentations

Tues. Nov. 5
Wed. Nov. 6

To be announced

Oral Presentations

Tues. Nov. 12
Wed. Nov. 13

To be announced

Oral Presentations

Tues. Nov. 19
Wed. Nov. 20

To be announced

Oral Presentations

Return assignments, etc.

Also, possible make-up oral presentation(s) (only in the event of a documented, serious emergency)

Tues. Nov. 26
Wed. Nov. 27

To be announced

Thanksgiving Break

Tues. Dec. 3
Wed. Dec. 4

To be announced

Return assignments, etc.

Also, possible make-up oral presentation(s) (only in the event of a documented, serious emergency)

Grading – This course is graded Satisfactory (S) or Unsatisfactory (U).

*Selection of general topic (W, Aug. 28)	10 points
*Selection of specific focus of research (W, Sept. 4)	15 points
*Submission of references (W, Sept. 11)	35 points
*Selection of primary source for oral presentation in consultation with instructor (W, Sept. 11) -(Sept. 18 & 25 only if necessary)	15 points
**Complete draft of written paper (2 copies)-due in class for peer review (W, Oct. 2)	55 points
**This assignment is due on Oct. 2 except in the event of a documented, serious emergency.	
*Written paper due (W, Oct. 9)	380 points
Oral PowerPoint presentation on primary source (Schedule starting W Oct. 16 to be determined)	360 points
*Submission of printed PowerPoint slides immediately after scheduled presentation.	20 points
Attendance at seminars on Tuesdays	20 points
*Timely submission of summaries of Tuesday seminars.....	25 points
Taking the ETS Major Field test in biology and scoring at least 140 (see p. 5 for deadlines)	20 points
Completion of departmental Senior Exit Questionnaire (W, Oct. 16)	20 points
Attendance at scheduled classes & participation in class discussions	25 points
Total	1000 points

Please see additional requirements and information below.

There are 4 requirements to obtain a Satisfactory (S) grade in the course:

1. Satisfactory completion of **all** requirements & assignments **on time** (see above list)
2. Scoring at least 266 points on the written paper
3. Scoring at least 252 points on the oral presentation & 14 points on the printed PowerPoint slides
4. Obtaining a total of at least 700 points in the course.

The grade is Unsatisfactory (U) for a student who fails to meet one or more of the above requirements. In addition, as previously noted, cheating or plagiarism will result in a grade of “0” for the assignment and a grade of unsatisfactory (“U”) for the course.

Deductions to grade and additional policies:

--Each absence from class or seminar after the fourth absence will result in the loss of 50 points.

--For any assignment marked with a * in the **Grading** list, a late submission will result in the loss of 20 points per day. All assignments marked with a * are due on a specific Wednesday. **In order to be accepted, a late assignment (marked with a *) must be submitted by 3 pm on the Friday immediately after the specific Wednesday when the assignment was due.** Late assignments will not be accepted after this firm deadline.

--**The assignment for Oct. 2 is due on that date, except in the event of a documented, serious emergency.

--There will be no make-ups for the oral presentations except in the event of a documented, serious emergency.

--Please note the firm deadline for taking the Major Field test and scoring 140. (See page 5.)

--The Senior Exit Questionnaire must be completed according to the schedule, except in the event of a documented, serious emergency.
