ANGELO STATE UNIVERSITY

BSN

NUR 2411
Microbiology for Healthcare Professionals
Spring 2019

Jacqueline Brown, M.S., PhD, RN
Course Title: Elementary Microbiology (3-0-1)

Course Number: NUR 2411

Prerequisite: Anatomy and/or Physiology

Course Description:
This course focuses on building knowledge in infectious microbiology for the nursing student. It includes lecture and laboratory formatted instruction designed to educate in core concepts in microbiology and application in a clinical setting.

Course Methods:
A variety of learning modalities will be employed in the course, including those involving individual as well as group efforts. Specifically, these learning modalities will include individual reading and contribution to discussion within the context of case studies, journal articles and current topics in infectious diseases.

Course Objectives: Upon completion of the course, the student will be able to:

1. To demonstrate knowledge in discerning signs and symptoms of medically relevant infections due to viruses, protozoa, bacteria and fungi in order to apply knowledge in clinical settings
2. To develop individualized care plans for diseases resulting from infectious processes including pathogenesis, diagnosis, signs and symptoms, transmission, treatment modalities including antibiotic resistance issues, patient education
3. To demonstrate understanding of the methods of infectious transmission and the means by which these are controlled, including those related to hospital settings (nosocomial)
4. To demonstrate knowledge of the nature of antimicrobial resistance and to incorporate this knowledge within the context of providing appropriate healthcare
5. To demonstrate knowledge in administering quality care in the context of safe handling of infectious materials/patients in order to minimize risk of transmission

IDEA Objectives

- Gaining a basic understanding of the subject (e.g., factual knowledge, methods, principles, generalizations, theories)
- learning to apply course material (to improve thinking, problem solving and decision)
- learning how to find, evaluate and use resources to explore a topic in depth
Topical Outline:

Week one (January 14, 16)
Chapter 1 (Introduction)-select items
Chapter 2 (Biochemistry)-select items
*Chapter 3 (Introduction to Prokaryotes)

January 21/Holiday/Martin Luther King Jr Birthday

Week two (January 23)
*Chapter 3 (continued)
*Chapter 4 (Introduction to Eukaryotes)

Week three (January 28, 30)
Chapter 5 (Genetics)-select items
*Chapter 6 (viruses/prions)

Exam One (February 4)-covers chapters 1, 2, 3, 4 and 5

Week four (February 6)
Chapter 7 (Fundamentals of microbial growth)

Week five (February 11, 13)
Exam One Review
Chapter 8 (Microbial Metabolism)
*Chapter 9 (principles of infectious disease/epidemiology/pathogenesis)

Week six (February 18, 20)
*Chapter 9 continued
*Chapter 10 (host-microbe interactions)

Week seven (February 25, 27)
Exam Two (February 25)-covers chapters 6-10
*Chapter 11 (Innate Immunity)
Chapter 12 (Adaptive Immunity)

Week eight (March 4, 6)
Review exam two
*Chapter 12 –continued
*Chapter thirteen (Immune System Disorders)

Spring Break (March 11-15)
Week nine (March 18, 20)
*Chapter fourteen (Vaccines/biotechnology based DX/therapeutics)
*Chapter fifteen (Antimicrobial drugs)

Week ten (March 25, 27)
Exam three (March 25)-covers chapters 11-14
Chapter 15-continued
*Chapter 16 (respiratory infections)

Week Eleven (April 1, 3)
Review exam three
Chapter 16- continued
*Chapter 17 (skin /eye infections)

Week Twelve (April 8, 10)
Chapter 17- continued
*Chapter 19 (Digestive system infections)

Week Thirteen (April 15, 17)
Chapter 19 continued
*Chapter 20 (urinary and reproductive system infections)

Week Fourteen (April 22, 24)
Chapter 20 continued
*Chapter 18 (Nervous System infections)

Week Fifteen (April 29, May 1)
Chapter 18 continued
*Chapter 21 (cardiovascular and lymphatic infections)

Final /not comprehensive (May 6; 8-10 AM)

LAB Schedule
01Z first session
  February 15, 16
01Z second session
  March 22, 23
02Z first session
  February 22, 23
02Z second session
  March 29, 30
03Z first session
  March 1, 2
O3Z second session
April 5, 6

Teaching Methods/ Strategies:

This course will be taught utilizing a classroom format. Laboratories are mandatory for both lecture and on line formatted versions of this course and require campus attendance.

Classroom:

Individual and group learning modalities which may include any of the following:
Case Studies
Combination of student directed learning vs instructor directed learning
Written assignments
Laboratory
Journal Article Review (emerging infections/antimicrobial resistance)
Development of concept maps/care plan maps relating infectious disease processes to clinical application
Pop quizzes
Examinations

Evaluation: Course grades will be dependent upon meeting the learning objectives and completing activities of the course as follows:

Classroom:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Examinations (4)</td>
<td>80%</td>
</tr>
<tr>
<td>Assignments/case studies</td>
<td>10%</td>
</tr>
<tr>
<td>Laboratory</td>
<td>10%</td>
</tr>
</tbody>
</table>

A = 90-100%
B = 80-90%
C = 70-79%
Anything below 70 is failing grade

Required Textbooks:

Lourdes Norman-McKay
Microbiology/basic and clinical principles
Microbiology Laboratories for the Nursing Student (Symbiosis-the Pearson custom library for the biological sciences)

Cowan, Microbe Files-case studies in microbiology

Testing:
Evaluation of student learning in this course may take a variety of forms, including in classroom testing or individual/group mini projects. Cell phones must be left at the front of the classroom as well as all other personal belongings.

No student will be allowed out of the room for a bathroom break unless a cell phone is provided to the instructor first. Therefore, students must bring their cell phones to class on exam date, leave it in designated area and if a trip to the bathroom is necessary, the cell phone must be retrieved from designated area and given to instructor. Only one student per gender will be allowed a trip to the bathroom at any given time.

I will make available early start times for students who wish to have more time on exams. Officially all exams start at 8 AM and early testers will begin at 7:00. No one will be admitted to the classroom after 7:00 for early testers and anyone who is a late arrival to an 8 AM start time will have points deducted from the earned exam grade. It is important to arrive on time so that there are no disruptions to students who are working on their exams. 10 points will be deducted if a student is not in their seat ready to start by 8 AM. One additional point will be deducted for every 5 minutes thereafter for late arrival.

Make up exams are difficult to schedule. If you must be absent from an exam due to illness, personal emergency etc, you must notify me before test start time. Any make up exam that is deemed appropriate to administer can take an alternate format. It is strongly encouraged that students make every attempt to take the exam on the date it is scheduled. Again, communication with me is essential and this communication cannot take place at a time after the exam has already taken place. When an exam is allowed for makeup purpose, it will be scheduled at the instructor’s convenience. The instructor will make every attempt to reschedule a time that works well for the student. However if there are more than one student in this situation, both students will be scheduled at the same time/date.

Note: there may be an instance where an exam will be administered online. Students should be aware of the information posted in the blackboard course section tabbed “respondus monitor help”. The information provides the student specific instructions regarding lockdown browser and respondus monitor. Please ensure you have read that information.

Laboratories:
All laboratories are mandatory. Lab manuals are required for this course.
Each student is required to attend two 2-day weekend labs, for a total of 4 days. **They cannot be made up.** If there is an issue in attending a lab session for which you have signed up, you must arrange a trade with another student and you must notify me via email.

- Failure to make arrangements with another student, ie trade lab days, will generate a 0 for the lab.
- Failure to bring the lab manual to the lab sessions will generate a 0 for the entire lab.
- Failure to attend both days of a lab will generate a 0 for the lab.

**General Policies Related to the Course:**
All students are required to follow the policies and procedures presented in the following documents:
- Angelo State 2011-2012 Student Handbook located on the ASU website
- ASU Graduate Catalog located on the ASU website
  [https://www.angelo.edu/catalogs/](https://www.angelo.edu/catalogs/)
- University *Undergraduate Nursing Handbook*, located on the Nursing website:
  [http://www.angelo.edu/content/files/19304-undergraduatestudenthandbook20132014pdf](http://www.angelo.edu/content/files/19304-undergraduatestudenthandbook20132014pdf)

**STUDENT RESPONSIBILITY & ATTENDANCE**
In order to complete this course successfully, you do have to participate in all course activities, including assignments, discussions in class, quizzes, exams and projects. Students are expected to engage in course activities and submit work by due dates and times.

**Homework policy:** All work must be turned in on the specified due date. Most of the time the homework will be submitted to assignment links in blackboard. I will announce through blackboard any deviation from this practice. Homework is assigned well in advance of a due date. Since most of the assignments are submitted through blackboard there should be very few reasons that justify late submissions.

**Late homework policy:** For every class day that an assignment is late, 20 points will be deducted from earned grade. If I receive an email from you prior to missing class, and an assignment was due to be turned into class as opposed to submission to blackboard, you will be allowed the next class date or Friday of the week you missed class to get the assignment turned in.

**Missing assignments due to absence:**
If you must miss class, please email instructor in advance of class that will be missed. If email is received, any work that was missed can be made up. However it is the
student’s responsibility to stay on top of missed work, not the instructor. Additionally, for planning purposes, this class will probably require a minimum of 5-6 study hours per week on average.

COMMUNICATION

Faculty will respond to email and/or telephone messages within 24 hours during working hours Monday through Friday. Weekend messages may not be returned until Monday although reasonable attempt will be made to accommodate learning during this time.

Written communication via email: All private communication will be done exclusively through your ASU email address. Check frequently for announcements and policy changes.

Instructor communicates exclusively through blackboard email and announcements outside of face to face classroom communication. Instructor also follows up in announcement format to all students reminders of due dates, assignments, etc.

Instructor office hours include:
Monday through Thursday 9:30 to 11:00. Email notification of intent for conference or visit is preferable to ensure responsible scheduling.

Jacqueline.brown@angelo.edu
Instructor office: Archer College 318N
Instructor office phone number: 325-486-6864

ACADEMIC INTEGRITY

Academic honesty is expected on all work. Students are expected to maintain complete honesty and integrity in their educational experiences. Any student found guilty of any form of dishonesty in academic work is subject of disciplinary action and possible expulsion from ASU. All codes and policies are set forth in the University Student Handbook of Angelo State University [http://www.angelo.edu/student-handbook/] as well as the Department of Nursing Undergraduate Student Handbook [http://www.angelo.edu/dept/nursing/handbook/index.html].

PLAGIARISM
Plagiarism at ASU is a serious topic. The Angelo State University’s Honor Code gives specific details on plagiarism and what it encompasses. Plagiarism is the
action or practice of taking someone else's work, idea, etc., and passing it off as one's own. Plagiarism is literary theft.

In your discussions and/or your papers, it is unacceptable to copy word for word without quotation marks and the source of the quotation. We use the *APA Style Manual of the American Psychological Association* as a guide for all writing assignments. Quotes should be used sparingly. It is expected that you will summarize or paraphrase ideas giving appropriate credit to the source both in the body of your paper and the reference list. Papers are subject to be evaluated for originality via Bb Safe Assignment or Turnitin. Resources to help you understand this policy better are available at the ASU Writing Center

**STUDENTS WITH DISABILITIES**

1. “Angelo State University is committed to the principle that no qualified individual with a disability shall, on the basis of disability, be excluded from participation in or be denied the benefits of the services, programs, or activities of the university, or be subjected to discrimination by the university, as provided by the Americans with Disabilities Act of 1990 (ADA), the Americans with Disabilities Act Amendments Act of 2008 (ADAAA), and subsequent legislation.”

2. “Student Contact: The Student Life Office is the designated campus department charged with the responsibility of reviewing and authorizing requests for reasonable accommodations based on a disability, and it is the student’s responsibility to initiate such a request by contacting the Student Life Office, Room 112 University Center, at (325) 942-2191 or (325) 942-2126 (TDD/FAX) or by email at Student.Life@angelo.edu to begin the process.”

Reasonable accommodations will be made for students determined to be disabled or who have documented disabilities.

**INCOMPLETE GRADE POLICY** *(OP 10.11 Grading Procedures)*

It is policy that incomplete grades be reserved for student illness or personal misfortune. Please contact faculty if you have serious illness or a personal misfortune that would keep you from completing course work. Documentation may be required.

**STUDENT ABSENCE FOR OBSERVANCE OF RELIGIOUS HOLY DAYS**

1. “A student who intends to observe a religious holy day should make that intention known in writing to the instructor prior to the absence.” Please see ASU Operating Policy 10.19.

**COPYRIGHT POLICY**

Students officially enrolled in this course should make only one printed copy of the given articles and/or chapters. You are expressly prohibited from distributing or
reproducing any portion of course readings in printed or electronic form without written permission from the copyright holders or publishers.

SYLLABUS CHANGES
The faculty member reserves the option to make changes as necessary to this syllabus and the course content. If changes become necessary during this course, the faculty will notify students of such changes by email, course announcements and/or via a discussion board announcement. It is the student’s responsibility to look for such communications about the course on a daily basis.

COURSE EVALUATION
Students are provided the opportunity, and are strongly encouraged to participate in a course evaluation at the end of the semester. Areas on the IDEA evaluation include:

- gaining factual knowledge
- learning to apply course material (to improve thinking, problem solving and decision)
- acquiring an interest in learning more by asking questions and seeking answers
- learning how to find and use resources for answering questions and solving problems
- developing skill in expressing oneself orally and in writing
- learning to analyze and critically evaluate ideas, arguments and points of view