MBMB/MICR 403
Medical Microbiology
T, R 11:10 AM – 12:25 PM LSIII, Room 1059
Spring 2019 - Dr. Derek Fisher

COURSE DESCRIPTION:
A survey of the more common bacterial, viral, mycotic, and parasitic infections of humans with particular emphasis on the distinctive properties, pathogenic mechanisms, epidemiology, immunology, diagnosis and control of disease-causing microorganisms. Three hours lecture. Spring semester.

OBJECTIVES:
Students should develop a global view of infection including: 1) how organisms cause disease, 2) transmission of agents and agent reservoirs, 3) the immune response and host barriers to infection, 4) disease prevention, treatment, and monitoring and the role of the public health system in these processes, and 5) how disease has shaped human evolution and history. Students will also be introduced to the primary research that serves as the foundation for our knowledge of infectious diseases.

PREREQUISITE:
MICR 301 or consent of instructor.

RECOMMENDED TEXT:

Lecture slides/notes, reading material, and old exams/practice questions will be made available on D2L.

FISHER RESEARCH BACKGROUND:
http://micro.siu.edu/faculty-staff/faculty/fisher.php

CONTACT INFORMATION:
LSIII 1007 (office), LSIII 1026 and 1032 (labs)
618-453-5201 (office phone)
dfisher@siu.edu or fisher@micro.siu.edu

OFFICE HOURS:
1 PM - 3 PM on Tuesday or by appointment.
GRADING OVERVIEW:

SCALE:  
A ≥90% ≥558  
B 89-80% 557 – 496  
C 79-70% 495 – 434  
D 69-60% 433 – 372  
F <60% ≤371

1) Four exams, 100 points each:  
a) Lectures 1-7 100  
b) Lectures 8-14 100  
c) Lectures 15-20 100  
d) Lectures 21-27 (during Final testing period) 100

   Exam points: 400

2) Twelve, 10-point quizzes:  

2) Twelve, 10-point quizzes:  

3) Literature Assignments – packet grading 0/65/75/85/100

   Total 620

LITERATURE ASSIGNMENTS: Literature will be posted to D2L two weeks in advance of the scheduled due date. You must read the assigned literature and answer the three questions listed at the end of the: “How to read a scientific paper” PDF provided on D2L. Each assignment is due by the start of class on the scheduled discussion date. Assignments must be submitted as Word documents via the D2L assignment submission folder.

A detailed rubric with formatting guidelines will be provided on D2L – follow the rubric and formatting guidelines!

Each assignment will be graded as pass/fail using the provided rubric. Passing one assignment = 65/100, two = 75/100, three = 85/100, four = 100/100.

GENERAL COURSE TIMELINE:

Spring Semester 2019 Holidays (https://registrar.siu.edu/calendars/academic1819.php)  
Semester Begins Monday, January 14  
MLK Birthday Holiday Monday, January 21  
Spring Break March 9-17

Drop Information (https://registrar.siu.edu/calendars/registration19sp.php)  
Last day to drop, eligible for a refund Sunday, January 27 (file on 25th)  
Last day to drop, NOT eligible for a refund Sunday, March 31 (file on 29th)
<table>
<thead>
<tr>
<th>Day / Date</th>
<th>Topic</th>
<th>Quiz and Literature</th>
<th>Book Chapter(s)</th>
<th>Lecture Number</th>
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</thead>
<tbody>
<tr>
<td>T Jan 15</td>
<td>Introduction to Medical Microbiology</td>
<td></td>
<td>1-3</td>
<td>1</td>
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<tr>
<td>R 17</td>
<td>General Immunology</td>
<td>Q1</td>
<td>7-8</td>
<td>2</td>
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<tr>
<td>T 22</td>
<td>Immunoglobulins and Histocompatibility</td>
<td></td>
<td>9-10</td>
<td>3</td>
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<tr>
<td>R 24</td>
<td>Humoral and Cell Mediated Immunity</td>
<td>Q2</td>
<td>9-10</td>
<td>4</td>
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<tr>
<td>T 29</td>
<td>Complement, Hypersensitivity, Immunological Defects</td>
<td>Literature 1</td>
<td>8-10</td>
<td>5</td>
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<tr>
<td>R 31</td>
<td>Vaccines</td>
<td>Q3</td>
<td>11</td>
<td>6</td>
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<tr>
<td>T Feb 5</td>
<td>Antimicrobial Chemotherapy</td>
<td></td>
<td>17</td>
<td>7</td>
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<tr>
<td>R 7</td>
<td>EXAM 1</td>
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<tr>
<td>T 12</td>
<td>Microbiome and Normal Flora</td>
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<td>2</td>
<td>8</td>
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<tr>
<td>R 14</td>
<td>Gram positive cocci</td>
<td>Q4</td>
<td>18-19</td>
<td>9</td>
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<tr>
<td>T 19</td>
<td>Gram positive Spore-formers and Anaerobic Infections</td>
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<td>20, 30, 31</td>
<td>10</td>
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<tr>
<td>R 21</td>
<td>Gram positive bacilli</td>
<td>Q5</td>
<td>21-22</td>
<td>11</td>
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<tr>
<td>T 26</td>
<td>Gram negative bacilli</td>
<td>Literature 2</td>
<td>25</td>
<td>12</td>
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<tr>
<td>R 28</td>
<td>Gram negative bacilli</td>
<td>Q6</td>
<td>27, 29</td>
<td>13</td>
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<tr>
<td>T Mar 5</td>
<td>Gram negative bacilli</td>
<td></td>
<td>26, 28</td>
<td>14</td>
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<tr>
<td>R 7</td>
<td>EXAM 2</td>
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<tr>
<td>T 12</td>
<td>Spring break</td>
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<tr>
<td>R 14</td>
<td>Spring break</td>
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<tr>
<td>T 19</td>
<td>Mycotic Infections – Recorded lecture</td>
<td>Q7</td>
<td>Section 6</td>
<td>15</td>
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<tr>
<td>R 21</td>
<td>Parasites – Recorded lecture</td>
<td>Literature 3</td>
<td>Section 7</td>
<td>16</td>
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<td>T 26</td>
<td>Gram negative bacilli</td>
<td>Q8</td>
<td>25, 29</td>
<td>17</td>
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<td>R 28</td>
<td>Fastidious Gram negative bacteria</td>
<td></td>
<td>23-24, 33</td>
<td>18</td>
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<tr>
<td>T Apr 2</td>
<td>Spirochetes</td>
<td>Q9</td>
<td>32</td>
<td>19</td>
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<tr>
<td>R 4</td>
<td>Obligate Intracellular bacteria</td>
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<td>34 and 35</td>
<td>20</td>
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T  9  EXAM 3
R  11  General Virology  36-38, 40  21
T  16  DNA Viruses  Q10  41, 43, 44  22
R  18  RNA Viruses  Literature 4  46, 55  23
T  23  RNA Viruses  Q11  50, 52  24
R  25  RNA Viruses  48-49  25
T  30  RNA Viruses, retro  Q12  54  26
R May 2  Public Health System  D2L  27
R   ?  EXAM 4  Final testing period – Time/date posted 3rd week of semester

*Lecture dates and material are tentative; exam, quiz, and literature dates are not. Students will only be responsible for material covered in class prior to the exam date.

ADDITIONAL INFORMATION

HINTS for SUCCESS:
1) Attend class.
2) Study often, not just the night before an exam.
3) Review lecture material the evening after a lecture. This will help you learn the material and will make studying for exams much easier.
4) Read the chapters cited next to each lecture prior to class. It will help you better comprehend the lecture material.
5) Ask questions!
6) Seek out academic help before it is too late – it is very difficult to recover from two failed exams.
7) LEARNING ASSISTANCE and DISABILITY SERVICES: http://tutoring.siu.edu/index.html and http://disabilityservices.siu.edu/

ATTENDANCE:
Attendance is not mandatory, but absences will negatively affect your grade as material covered exclusively in the classroom will appear on exams.

ACADEMIC COURTESY (modified from B. Stiles, Wilson College):
Please arrive to class on time and be prepared to discuss the material. Cell phones must be turned to silent or off during class. Ringing and buzzing cell phones bother others in the class (and the instructor) and detract from a fruitful educational environment. Sleeping, reading newspapers, talking to friends, texting, or other activities distracting the students and instructor are strictly forbidden.

EXAMS, ASSIGNMENTS, and QUIZZES:
Exams may only be rescheduled for extreme circumstances (death of an immediate family member, illness requiring hospitalization, etc.) or an absence due to a pre-approved academic/athletic conflict.
Proof may be required (for example, a doctor’s note) and permission to reschedule will be granted on a case by case basis at the discretion of the instructor. Failure to take an exam on the scheduled date without an approved absence will result in a 0 (F) for the exam. Make up quizzes will not be offered. Literature assignments will not be accepted after the due date.

ACADEMIC DISHONESTY POLICY (adapted from the College of Science policy http://www.science.siu.edu/_common/pdfs/oppaper):
Students may be subject to disciplinary proceedings resulting in an academic penalty or disciplinary penalty for academic dishonesty. Academic dishonesty includes, but is not limited to, cheating on a test, plagiarism, or collusion. Sanctions for academic dishonesty available to an instructor include: assigning a failing grade, or zero, for a paper or exam; assigning a failing grade for a course (the instructor shall assign an “incomplete” in lieu of a letter grade pending adjudication and final resolution of the complaint.); recommending that a student be dropped from a program; and recommending that a student be suspended from the University.

EMERGENCY PROCEDURES:
Southern Illinois University Carbondale is committed to providing a safe and healthy environment for study and work. Because some health and safety circumstances are beyond our control, we ask that you become familiar with the SIUC Emergency Response Plan and Building Emergency Response Team (BERT) program. Emergency response information is available on posters in buildings on campus, available on BERT’s website at http://emergency.siu.edu/, Department of Safety’s website http://www.dps.siu.edu/ (disaster drop down), and in the Emergency Response Guideline pamphlet. Know how to respond to each type of emergency.

Instructors will provide guidance to students in the classroom in the event of an emergency affecting your location. It is important that you follow these instructions and stay with your instructor during an evacuation or sheltering emergency. The Building Emergency Response Team will provide assistance to your instructor in evacuating the building or sheltering within the facility.

You will earn 10 bonus points for completing and turning in this form to the instructor (cut below the line). The signed form must be received no later than the end of class on January 31st, 2019 for credit.

I have read the syllabus:

__________________________________________________________  ______________________________
Name – Sign and Print                                           Date
| **Grading Rubric for Literature Assignments - You must pass all four sections to earn credit.** |
|----------------------------------|-------------------------------------------------|
| **Spelling/Grammar/Formatting**  | Word document, minimal spelling and grammatical  |
|                                  | errors, 12 point Arial font, ≤750 words but ≥300 words |
|                                  | total, 1 inch margins, less than 20% Turnitin score, |
|                                  | turned in on time                                  |
|                                  | Failure to meet guidelines                         |
| **Q1 Problem and Hypothesis**    | Problem(s) clearly identified and discussed including a |
|                                  | brief discussion of the research background. Tell me |
|                                  | why the research was performed. State the hypothesis - |
|                                  | you must include the word **hypothesis** for credit. |
| **PASS**                         | Problem not identified, research background not provided, |
|                                  | hypothesis not stated, hypothesis not written.     |
| **Q2 Main Conclusion(s)**        | Salient conclusions summarized. Provide **at least two** |
|                                  | conclusions directly supported by the research.    |
| **PASS**                         | At least two conclusions not provided.             |
| **Q6 Importance of Conclusion(s)** | Give the conclusions context = "big picture". How will |
|                                  | the direct conclusions impact future research, treatment, disease prevention, etc.? Do not restate |
|                                  | the main conclusions.                              |
| **PASS**                         | Failure to discuss broader impact of research results.|
| **OVERALL**                      |                                                   |

You must pass all four sections to earn credit.
MISSION STATEMENT FOR SOUTHERN ILLINOIS UNIVERSITY CARBONDALE

SIU embraces a unique tradition of access and opportunity, inclusive excellence, innovation in research and creativity, and outstanding teaching focused on nurturing student success. As a nationally ranked public research university and regional economic catalyst, we create and exchange knowledge to shape future leaders, improve our communities, and transform lives.

IMPORTANT DATES *

Semester Classes Begin .................................................. 01/14/2019
Last day to add full-term course (without Dean’s signature) ................................. 01/20/2019
Last day to withdraw from the University with a full refund ........................................ 01/25/2019
Last day to drop a full-term course for a credit/refund ................................................. 01/27/2019
Last day to drop a full-term course (W grade, no refund) .............................................. 03/31/2019
Final examinations: ........................................................................................................ 05/06—05/10/2019

Note: Please verify the above dates with the Registrar calendar and find more detailed information on deadlines at https://registrar.siu.edu/calendars. For add/drop dates that apply to shorter-than-full-term courses, please look at the Schedule of Classes search results at https://registrar.siu.edu/schedclass/index.php

SPRING SEMESTER HOLIDAYS

Dr. Martin Luther King, Jr. Birthday 01/21/2019
Spring Break 03/09—03/17/2019

DIVERSITY

Southern Illinois University Carbondale’s goal is to provide a welcoming campus where all of our students, faculty and staff can study and work in a respectful, positive environment free from racism and intimidation. For more information visit: https://diversity.siu.edu/

DISABILITY SUPPORT SERVICES

SIU Carbondale is committed to providing an inclusive and accessible experience for all students with disabilities. Disability Support Services coordinates the implementation of accommodations. If you think you may be eligible for accommodations but have not yet obtained approval please contact DSS immediately at 618-453-5738 or https://disabilityservices.siu.edu. You may request accommodations at any time, but timely requests help to ensure accommodations are in place when needed. Accommodations and services are determined through an interactive process with students and may involve consideration of specific course design and learning objectives in consultation with faculty.

MILITARY COMMUNITY

There are complexities of being a member of the military community and also a student, and military and veteran related developments can complicate academic life. If you are a member of the military community and in need of accommodations please visit Veterans Services at https://veterans.siu.edu/

STUDENT MULTICULTURAL RESOURCE CENTER

The Student Multicultural Resource Center serves as a catalyst for inclusion, diversity and innovation. As the Center continues its work, we are here to ensure that you think, grow and succeed. We encourage you to stop by the Center, located in the Student Services Building Room 140, to see the resources available and discover ways you can get involved on the campus. Visit us at https://smrc.siu.edu/

SALUKI CARES

The purpose of Saluki Cares is to develop, facilitate and coordinate a university-wide program of care and support for students in any type of distress—physical, emotional, financial, or personal. By working closely with faculty, staff, students and their families, SIU will continue to display a culture of care and demonstrate to our students and their families that they are an important part of the community. For information on Saluki Cares: call (618) 453-2461, email siucares@siu.edu, or https://salukicare.siu.edu/

SAFETY AWARENESS FACTS AND EDUCATION

Title IX makes it clear that violence and harassment based on sex and gender is a Civil Rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, etc. If you or someone you know has been harassed or assaulted, you can find the appropriate resources here: https://safe.siu.edu

MORRIS LIBRARY HOURS: https://libguides.lib.siu.edu/hours

ADVISEMENT: https://advisement.siu.edu/

SIU ONLINE: https://online.siu.edu/

WITHDRAWAL POLICY -- Undergraduate only

Students who officially register for a session must officially withdraw from that registration in a timely manner to avoid being charged as well as receiving a failing grade for those classes. An official withdrawal must be initiated by the student, or on behalf of the student through the academic unit, and be processed by the Registrar’s office. For the proper procedures to follow when dropping courses and when withdrawing from SIU visit: https://registrar.siu.edu/students/withdrawal.php

INCOMPLETE POLICY -- Undergraduate only

An INC grade may be assigned when, for reasons beyond their control, students engaged in passing work are unable to complete all class assignments for the course. An INC must be changed to a completed grade within one full semester (undergraduates), and one full year (graduate students), from the close of the term in which the course was taken or graduation, whichever occurs first. Should the student fail to complete the remaining course requirements within the time period designated, the incomplete will be converted to a grade of F and such grade will be computed in the student’s grade point average. For more information visit: https://registrar.siu.edu/grades/incomplete.php

REPEAT POLICY

An undergraduate student may, for the purpose of raising a grade, enroll in a course for credit more than once. For students receiving a letter grade of A, B, C, D, or F, the course repetition must occur at Southern Illinois University Carbondale. Effective for courses taken Summer 2013 or later, only the most recent (last) grade will be calculated in the overall GPA and count toward hours earned. This policy will be applied to all transferrable credit in that only the last grade will be used to calculate grade point average. Only those courses taken at the same institution are considered repeats under this policy. See full policy at https://registrar.siu.edu/students/repeatclasses.php

SIU’S EARLY WARNING INTERVENTION PROGRAM (EWIP)

Students enrolled in courses participating in SIU’s Early Warning Intervention Program might be contacted by University staff during a semester. More information can be found at the Core Curriculum’s Overview webpage: https://corecurriculum.siu.edu/program-overview/

EMERGENCY PROCEDURES

We ask that you become familiar with Emergency Preparedness @ SIU. Emergency response information is available on posters in buildings on campus, on the Emergency Preparedness @ SIU website, and through text and email alerts. To register for alerts visit: https://emergency.siu.edu/

CENTER FOR LEARNING AND SUPPORT SERVICES

Help is within reach. Learning support services offers free tutoring on campus and math labs. To find more information please visit the Center for Learning and Support Services website:

Tutoring: https://clss.siu.edu/tutoring/
Math Labs: https://math.siu.edu/courses/course-help.php

WRITING CENTER

The Writing Center offers free tutoring services to all SIU students and faculty. To find a Center or Schedule an appointment please visit: https://write.siu.edu/

GRADUATE POLICIES

Graduate policies often vary from Undergraduate policies. To view the applicable policies for graduate students, please refer to the graduate catalog at https://gradschool.siu.edu/about-us/grad-catalog/

Need help with an issue? Please visit SALUKI SOLUTION FINDER at https://solutionfinder.siu.edu/

PLAGIARISM

See the Student Conduct Code https://srr.siu.edu/student-conduct-code/