Course Change Request

New Course Proposal

Date Submitted: 11/18/22 11:59 am

Viewing: BIOL 565 : Medical Microbiology

Last edit: 04/13/23 9:36 am

Changes proposed by: dstgerma

Are you completing this form on someone else's behalf?

Yes

Requestor:

In Workflow

1. **BIOL Graduate Representative**
2. **SC Curriculum Committee**
3. SC Associate Dean
4. Assoc Provost-Graduate
5. Registrar-Courses
6. Banner

Approval Path

1. 04/07/23 1:07 pm Iosif Vaisman (ivaisman): Approved for BIOL Graduate Representative
2. 05/02/23 3:05 pm Jennifer Bazaz Gettys (jbazaz): Rollback to BIOL Graduate Representative for SC Curriculum Committee
3. 03/22/24 11:37 am Iosif Vaisman (ivaisman): Approved for BIOL Graduate Representative

Name	Extension	Email
Donna Fox	3-8797	dfox1@gmu.edu

Effective Term: Spring 2023

Subject Code: BIOL - Biology

Course Number: 565

Bundled Courses:

Is this course replacing another course? No

Equivalent Courses:

Catalog Title: Medical Microbiology

Banner Title: Medical Microbiology

Will section titles vary by semester? No

Credits: 3

Schedule Type: Lecture

Hours of Lecture or Seminar per week: 3

Repeatable: May only be taken once for credit, limited to 2 attempts (N2)

Max Allowable Credits: 6

Default Grade Mode: Graduate Regular

Recommended Prerequisite(s):
None

Recommended Corequisite(s):
None

Required Prerequisite(s) / Corequisite(s) (Updates only):
None

Registrar's Office Use Only - Required Prerequisite(s)/Corequisite(s):

And/Or	(	Course/Test Code	Min Grade/Score	Academic Level	)	Concurrency?

Registration Restrictions (Updates only):

Registrar's Office Use Only - Registration Restrictions:

Field(s) of Study:

Class(es):

Level(s):

Degree(s):

School(s):

Catalog Description:

The course explores human diseases caused by medically important bacteria, fungi, parasites and viruses. The mechanisms of disease pathogenesis are discussed, as are their clinical manifestations, diagnosis and treatment.

Justification:

o What: Creating a new course.

o Why: The course has been offered as selected topics for several years and has been very successful. We have been asked by COS Academic Affairs Dean to create a unique course with its own number. The new course would be open to graduate students, and to undergraduate students with permission.

Does this course cover material which crosses into another department? No

Learning Outcomes:

The students are expected to gain a basic understanding of the biology and pathology of medically-important bacteria, fungi, parasites, viruses and prions. They are also expected to gain a basic understanding of treatment modalities for infectious diseases, including antibiotics, antivirals and vaccines.

Will this course be scheduled as a cross-level cross listed section?

Attach Syllabus

BIOL 565 Medical Micro Syllabus Andalabi.pdf

Additional Attachments

Staffing:

This course has been taught for approximately 8 years as BIOL506 (Selected Topics in Microbiology). Because of its success, the professor of record will continue teaching the course under its unique course number.

Relationship to Existing Programs:

This course is a required course for the Enlisted to Medical Degree Preparatory Program and has been taught for 8 years under the BIOL506 designation.

Relationship to Existing Courses:

COS has no pre-existing course that meets the requirements of this proposed course.

Additional Comments:

Reviewer Comments

Jennifer Bazaz Gettys (jbazaz) (05/02/23 3:05 pm): Rollback: Tabled per SSB request, sending back to SSB.

Key: 17926

BIOL 565 Medical Microbiology (3 credits)

Course Description:
Medical Microbiology is focused on the study of the biology of pathogenic bacteria, viruses and parasites. The human pathogens covered as part of the course are important causes of morbidity and mortality world-wide, and learning about the modalities used to prevent and treat the myriad diseases caused by these organisms is important to students interested in health-related careers.

Instructor: Ali Andalibi, Ph.D. Time: 1:30 – 2:45 pm every Wednesday and Friday.
Office hours are Monday and Wednesday 3:00-4:00.

Class meets in person (and when necessary online via zoom). Contact information: the best way to reach me is by email aandalib@gmu.edu

Students must use their Mason email account to receive important University information, including communications related to this class.

Number of Credit(s): 3
Prerequisites: Successful (minimum grade of B) completion of the undergraduate curriculum of Enlisted to Medical Degree Preparatory Program (EMDP2).

Overall Course Learning Objectives:
Course is divided into 4 units. The first unit focuses on medically important pathogenic bacteria, their diagnosis and treatment, and antibiotics. The second unit focuses on medically important fungi and fungal diseases, from diagnosis to treatment. The third focuses on medically important parasites and parasitic diseases, including diagnosis and treatment. The fourth focuses on medically important human viruses, including diagnosis and treatment.

Upon successful completion of the didactic portion this course, the learner will be able to:

1. Understand the pathogenesis of bacterial infections and the antibiotics used to treat them.
2. Understand the pathogenesis of fungal infections and the antifungals used to treat them.
3. Understand the pathogenesis of parasitic infections and the anti-parasitic drugs used to treat them.
4. Understand the pathogenesis of viral infections and the anti-virals used to treat some of them.

Components of the Final Grade:

Three exams, weighted evenly 25% and 5 student case presentations, weighted evenly at 5%

Exam I 25%
Exam II 25%
Exam III 25%
Student Case Presentations 5 total for 25%

- All exams and presentations are done in class, in person, unless Zoom is necessitated by extenuating circumstances.
- Course announcements are made in class.
- All exams and presentations are open book and worked on by teams
- The third exam will be given according to the university schedule during the finals week.
- Exams are not repeatable.

Grading: Students will receive a letter grade based on a 100-pointscale. No extra credit is allowed in this course.

Letter grades for the course will be assigned as follows:

Quality	Points	Based on AP.3.2 Graduate Grading Grade Graduate Courses
A+	4.00	Satisfactory/Passing
A	4.00	Satisfactory/Passing
A-	3.67	Satisfactory/Passing
B+	3.33	Satisfactory/Passing
B	3.00	Satisfactory/Passing
B-	2.67	Satisfactory (1)/Passing
C	2.00	Unsatisfactory/Passing
F	0.00	Unsatisfactory/Failing

Letter grades for the course will be based on an overall % for the course and assigned as follows:

Grades Scored Between				Will Equal
92	% and	100	%	A
90	% and Less Than	92%		A-
87	% and Less Than	90%		B+
84	% and Less Than	87%		B
77	% and Less Than	84%		B-
60	% and Less Than	77%		C
0	% and Less Than	60%		F

(1) Although a B is a satisfactory grade for a course, students must maintain a 3.30 average in their degree program and present a 3.30 GPA on the courses listed on the graduation application.

Expectations:

- Attend all classes and participate in discussions.
- Let Dr. Andalibi know if you need to be absent from class.

Equipment – Please make sure that you have a computer or other device in case unexpected circumstances arise and you need to use Zoom.

Mason Honor Code: Mason is an Honor Code university; please see the Office for Academic Integrity for a full description of the code and the honor committee process. The principle of academic integrity is taken very seriously and violations are treated gravely. What does academic integrity mean in this course? Essentially this: when you are responsible for a task, you will perform that task. When you rely on someone else's work in an aspect of the performance of that task, you will give full credit in the proper, accepted form. Another aspect of academic integrity is the free play of ideas. Vigorous discussion and debate are encouraged in this course, with the firm expectation that all aspects of the class will be conducted with civility and respect for differing ideas, perspectives, and traditions. When in doubt (of any kind) please ask for guidance and clarification.

Disability Services at George Mason University is committed to providing equitable access to learning opportunities for all students by upholding the laws that ensure equal treatment of people with disabilities. If you are seeking accommodations for this class, please first visit http://ds.gmu.edu/ for detailed information about the Disability Services registration process. Then please discuss your approved accommodations with me. Disability Services is located in Student Union Building I (SUB I), Suite 2500. Email:ods@gmu.edu | Phone: (703) 993-2474.

Covid-19 Note: Students who have a Covid-related disability should contact the Disability Services office; DS will contact faculty using standard protocols about any students who require accommodations. Faculty are not expected to create accommodations for students outside of the Disability Services official guidelines.

Diversity and Inclusion: As part of George Mason University, the School of Systems Biology is an intentionally inclusive community that promotes and maintains an equitable and just work and learning environment. In this class we welcome and value individuals and their differences including race, economic status, gender expression and identity, sex, sexual orientation, ethnicity, national origin, first language, religion, age, and disability.

Notice of mandatory reporting of sexual or interpersonal misconduct: *As a faculty member, I am designated as a "Non-Confidential Employee," and must report all disclosures of sexual assault, sexual harassment, interpersonal violence, stalking, sexual exploitation, complicity, and retaliation to Mason's Title IX Coordinator per University Policy 1202. If you wish to speak with someone confidentially, please contact one of Mason's confidential resources, such as Student Support and Advocacy Center (SSAC) at 703-993-3686 or Counseling and Psychological Services (CAPS) at 703-993-2380. You may also seek assistance or support measures from Mason's Title IX Coordinator by calling 703-993-8730, or emailing titleix@gmu.edu.*

Schedule Fall 2022 Medical Microbiology BIOL 506

Day	Date		Lecture	Instructor
Wednesday	24-Aug	1	Introduction to Microbiology	Andalibi
Friday	26-Aug	2	Bacterial Classification and Genetics	Andalibi
Wednesday	31-Aug	3	Staphylococcus	Andalibi
Friday	2-Sep	4	Streptococcus	Andalibi
Wednesday	7-Sep	5	Clostridium, Bacillus, Corynebacterium and Listeria	Andalibi
Friday	9-Sep	6	The Enterics, Yersinia, Helicobacter, Campylobacter, Helicobacter and Bacteroidaceae	Andalibi
Wednesday	14-Sep	7	Neisseria, Chlamydia, Rickettsia, Bartonella, Coxiella and Ehrlichia	Andalibi
Friday	16-Sep		**Student Case Presentations (Bacterial Diseases 1)**	
Wednesday	21-Sep	8	Francisella, Brucella, Pasteurella and Spirochaetales	Andalibi
Friday	23-Sep	9	Mycoplasma and Mycobacterium	Andalibi
Wednesday	28-Sep	10	Hospital-Acquired Infections Haemophilus, Burkholderia Moraxella, Kingella, Gardnerella, Bordetella, Legionella Nocardia and Acytinomyces	Andalibi
Friday	30-Sep	11	Antibiotics 1	Andalibi
Wednesday	5-Oct	12	Antibiotics 2	Andalibi
Friday	7-Oct		**Student Case Presentations (Bacterial Diseases 2)**	
Wednesday	12-Oct		***Exam 1 (Bacterial Diseases)***	
Friday	14-Oct	13	Introduction to Fungi, Trichosporon, Exophiala, Malassezia, Piedraia, Trichophyton, Epidermophyton, Microsporum, Sporothrix, Phialophora, Fonsecaea, Cladosporium, Madurella, Acremonium, Pseudallescheria, Exophiala, Leptosphaeria, Curvularia, Fusarium, Aspergillus, Mucorales, Basidiobolus, Conidiobolus	Andalibi
Wednesday	19-Oct	14	Candida, Cryptococcus, Aspergillus, Penicillium, Pseudallescheria, Pneumocystis, Histoplasma, Blastomyces, Coccidioides, Paracoccidioides, Antifungals	Andalibi
Friday	21-Oct		**Student Case Presentations (Fungal Diseases)**	
Wednesday	26-Oct	15	Parasitology 1: Entamoeba, Giardia, Balantidium, Cryptosporidium, Trichomonas, Naegleria, Acanthamoeba, Trypanosomes, Leishmania	Andalibi
Friday	28-Oct	16	Parasitology 2: Plasmodium, Babesia, Toxoplasma, Ascaris, Necator, Ancylostoma, Strongyloides, Trichinella, Trichuris, Enterobius	Andalibi
Wednesday	2-Nov	17	Parasitology 3: Onchocerca, Wuchereria, Dracunculus, Schistosoma, Paragonimus, Fasciola, Opisthorchis, Taenia, Diphyllobothrium, Echinococcus	Andalibi
Friday	4-Nov		**Student Case Presentations (Parasitic Diseases)**	
Wednesday	9-Nov		***Exam 2 (Fungal and Parasitic Diseases)***	
Friday	11-Nov	18	Virology 1: Orthomyxoviridae, Paramyxoviridae, Hepatitis Viruses, Poxviridae	Andalibi

Wednesday	16-Nov	19	Virology 2: Herpesviridae, Papillomaviridae, Polyomaviridae Adenoviridae, Parvoviridae, Reoviridae, Calciviridae, Astroviridae, Arenaviridae. Picornaviridae, Coronaviridae, Bunyaviridae	Andalibi
Friday	18-Nov	20	Virology 3: Rhabdoviridae, Togaviridae, Arboviruses, Flaviviridae, Filoviridae	Andalibi
Wednesday	23-Nov		***Thanksgiving***	
Friday	25-Nov		***Thanksgiving***	
Wednesday	30-Nov	21	Virology 4: Retroviridae and Prions	Andalibi
Friday	2-Dec	22	**Student Case Presentations (Viral Diseases)**	
Wednesday	7-Dec		***Exam 3 (Viral Diseases)***	