

Term Information

Effective Term Spring 2024

General Information

Course Bulletin Listing/Subject Area Microbiology
Fiscal Unit/Academic Org Microbiology - D0350
College/Academic Group Arts and Sciences
Level/Career Graduate
Course Number/Catalog 6030
Course Title Scientific Grant Proposals
Transcript Abbreviation MicroSciGrantProp
Course Description Development of scientific proposals is an essential skill for scientific researchers. This course introduces students to the general structure and essential elements of research proposals. Students will develop a research proposal based on their potential dissertation work and receive individualized feedback. The course is only intended for students in Microbiology graduate programs.
Semester Credit Hours/Units Fixed: 1

Offering Information

Length Of Course 14 Week
Flexibly Scheduled Course Never
Does any section of this course have a distance education component? No
Grading Basis Satisfactory/Unsatisfactory
Repeatable No
Course Components Lecture
Grade Roster Component Lecture
Credit Available by Exam No
Admission Condition Course No
Off Campus Never
Campus of Offering Columbus

Prerequisites and Exclusions

Prerequisites/Corequisites Student must be in the Department of Microbiology Masters or PhD Program
Exclusions
Electronically Enforced Yes

Cross-Listings

Cross-Listings None.

Subject/CIP Code

Subject/CIP Code 26.0502
Subsidy Level Doctoral Course
Intended Rank Masters, Doctoral

Requirement/Elective Designation

The course is an elective (for this or other units) or is a service course for other units

Course Details

Course goals or learning objectives/outcomes

- Introduce students to the general structure of research proposals and development of each essential element of the proposal
- Gain practical experience by developing a research proposal based on their potential dissertation work

Content Topic List

- Anatomy of a Grant
- Grant Structure and Style
- Scientific Approach: Rationale
- Scientific Approach: Experimental Design
- Outcomes, Problems, Alternative Strategies
- Critique/Review: Scientific Approach
- Scientific Approach: Background & Preliminary Studies
- Critique/Review: Background
- Significance & Innovation
- Critique/Review: Significance
- Specific Aims
- Critique/Review: Specific Aims
- Candidacy Process & Proposal
- Critique/Review: Proposal

Sought Concurrence

Yes

Attachments

- Microbiology_6030_syllabus.pdf: Syllabus
(Syllabus. Owner: Kwiek, Jesse John)
- M6030_coverletter.pdf: Cover letter
(Cover Letter. Owner: Kwiek, Jesse John)
- BGSP_Request for Concurrence_M6030.pdf: BGSP_Concurrence
(Concurrence. Owner: Kwiek, Jesse John)
- KMF_Concurrence_Form_Micro6030_chemistry[37][65].pdf: Chemistry_Concurrence
(Concurrence. Owner: Kwiek, Jesse John)
- M6030_Mapping_to_Learning_Goals[8].docx: Mapping to PLG
(Other Supporting Documentation. Owner: Kwiek, Jesse John)

Comments

COURSE REQUEST
6030 - Status: PENDING

Last Updated: Vankeerbergen, Bernadette
Chantal
08/22/2023

Workflow Information

Status	User(s)	Date/Time	Step
Submitted	Kwiek, Jesse John	08/07/2023 10:26 AM	Submitted for Approval
Approved	Kwiek, Jesse John	08/07/2023 10:26 AM	Unit Approval
Approved	Vankeerbergen, Bernadette Chantal	08/22/2023 09:11 AM	College Approval
Pending Approval	Jenkins, Mary Ellen Bigler Hanlin, Deborah Kay Hilty, Michael Vankeerbergen, Bernadette Chantal Steele, Rachel Lea	08/22/2023 09:11 AM	ASCCAO Approval



7 August 2023

Dear Colleagues,

We propose a new graduate level course, MICRBIOL 6030, the purpose of which is to introduce students to the fundamentals of writing effective scientific research proposals. The course is particularly designed for pre-candidacy PhD students in the Microbiology program to provide them experience in (1) the development of an appropriate research approach, (2) knowledge of the fundamental structure of research proposals, and (3) hands-on experience in scientific written communication to potential funding agencies. The formation of this course was driven by student desires for practical scientific writing and faculty experiences on the need for students to develop research design and proposal development skills. An essential aspect of the course will be individualized feedback and critique to students from faculty experienced in successful grant writing.

While scientific writing courses exists at OSU this course will be focused on Microbiology fields of study and appropriate funding agencies. We have identified two related courses at OSU (e.g., CHEM 6790 Scientific Writing and BSGP 7070 Fundamentals of Grant Writing). CHEM6790 is a general scientific writing course, but enrollment is limited with Microbiology graduate students having lower priority. MICRBIOL 6030 will differ due to its focus on developing a research strategy appropriate for a significant scientific question rather than general writing skills. Both BSGP 7070 and MICRBIOL 6030 will provide training to students in grant/proposal writing. However, MICRBIOL 6030 utilizes faculty-based review and critique instead of feedback from peers. Concurrence is provided from both BSGP7070 and CHEM6790.

We feel this new course will enhance the ability of Microbiology PhD students to successfully complete candidacy and to effectively compete for external funding.

Thank you for your consideration.

Jesse J. Kwiek, Ph.D.
Professor and Vice Chair for Teaching & Undergraduate Affairs
Department of Microbiology
Ohio State University
476 Biological Sciences Building
484 West 12th Avenue
Columbus, OH 43210
kwiek.2@osu.edu
Phone: 614-292-3256

MICRBIOL 6030: Scientific Grant Proposals

Weekly (Wednesdays 10:00am – 11:00am)

Location: TBD

1 Credit (S/U): 1 contact hour per week (lecture/recitation)

Instructor

Chad Rappleye
540 Biological Sciences
rappleye.1@osu.edu

Course description

Development/writing of scientific proposals is an essential skill for scientific researchers, especially when seeking external funding. This course will introduce students to the general structure of research proposals and development of each essential element of the proposal through lecture and analysis of sample proposals. Students will gain practical experience by developing a research proposal based on their potential dissertation work. Students will receive individualized feedback on their proposal sections through written review and one-on-one discussions. The course is intended for pre-candidacy students in the Microbiology Masters or PhD program.

Course materials

Sample grant examples used in the course are available at <https://www.niaid.nih.gov/grants-contracts/sample-applications> or provided by the instructor as needed.

Assessment

At the conclusion of each topic, students will draft a written component with information and data from their own dissertation research project. Assignments will be due at the end of the week. Student assignments will be critiqued by one faculty member and one post-candidacy student. Students will meet the following week with their reviewers for individualized feedback. Completion of 80% of assignments will be required for a satisfactory (passing) grade. Attendance at 80% of lectures is also required for a satisfactory (passing) grade.

Schedule of topics

Week	Topic / Discussion (Critique/Review)	Assignment
Week 1	Anatomy of a Grant	
Week 2	Grant Structure and Style	Reference Management
Week 3	Scientific Approach: Rationale	
Week 4	Scientific Approach: Experimental Design	
Week 5	Outcomes, Problems, Alternative Strategies	Approach
Week 6	Critique/Review: Scientific Approach	
Week 7	Scientific Approach: Background & Preliminary Studies	Background
Week 8	Critique/Review: Background	
Week 9	Significance & Innovation	Significance

Week 10	Critique/Review: Significance	
Week 11	Specific Aims	Specific Aims
Week 12	Critique/Review: Specific Aims	
Week 13	Candidacy Process & Proposal	Assemble Proposal
Week 14	Critique/Review: Proposal	

Academic Misconduct

It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term “academic misconduct” includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct <http://studentlife.osu.edu/csc/>.

Disability Services

The university strives to make all learning experiences as accessible as possible. In light of the current pandemic, students seeking to request COVID-related accommodations may do so through the university’s request process, managed by Student Life Disability Services. If you anticipate or experience academic barriers based on your disability (including mental health, chronic, or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. SLDS contact information: slds@osu.edu; 614-292-3307; slds.osu.edu; 098 Baker Hall, 113 W. 12th Avenue.

Mental Health

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student’s ability to participate in daily activities. The Ohio State University offers services to assist you with addressing these and other concerns you may be experiencing. If you or someone you know are suffering from any of the aforementioned conditions, you can learn more about the broad range of confidential mental health services available on campus via the Office of Student Life’s Counseling and Consultation Service (CCS) by visiting ccs.osu.edu or calling 614292-5766. CCS is located on the 4th floor of the Younkin Success Center and the 10th floor of Lincoln Tower. You can reach an on-call counselor when CCS is closed at 614-292-5766 and 24 hour emergency help is also available 24/7 by dialing 988 to reach the Suicide and Crisis Lifeline.

Diversity Statement

The Ohio State University affirms the importance and value of diversity in the student body. Our programs and

curricula reflect our multicultural society and global economy and seek to provide opportunities for students to learn more about persons who are different from them. We are committed to maintaining a community that recognizes and values the inherent worth and dignity of every person; fosters sensitivity, understanding, and mutual respect among each member of our community; and encourages each individual to strive to reach his or her own potential. Discrimination against any individual based upon protected status, which is defined as age, color, disability, gender identity or expression, national origin, race, religion, sex, sexual orientation, or veteran status, is prohibited.

Monday, August 7, 2023 at 09:41:36 Eastern Daylight Time

Subject: Re: Request for Concurrence
Date: Monday, August 7, 2023 at 9:41:19 AM Eastern Daylight Time
From: Freitas, Michael
To: Kwiek, Jesse, Parvin, Jeffrey, Freitas, Mike
CC: Ruiz, Natividad, Rappleye, Chad, Casado, Ana
Jesse,

Yes, this satisfies our concerns and we support the submission.

Mike

--

Michael A. Freitas, Ph.D.
The Ohio State University Wexner Medical Center
Professor, Cancer Biology and Genetics
Director OSUCCC Proteomics Shared Resource
Director OSU Biomedical Science Graduate Program
460 West 12th Ave.
Room BRT 906
Columbus, OH 43210
freitas.5@osu.edu
614-688-8432

From: Kwiek, Jesse <kwiek.2@osu.edu>
Date: Friday, August 4, 2023 at 3:37 PM
To: Freitas, Michael <Michael.Freitas@osumc.edu>, Parvin, Jeffrey <Jeffrey.Parvin@osumc.edu>, Freitas, Mike <freitas.5@osu.edu>
Cc: Ruiz, Natividad (OSU) <ruiz.82@osu.edu>, Rappleye, Chad (OSU) <rappleye.1@osu.edu>
Subject: Re: Request for Concurrence

Hi Mike and Jeff,
Here is the final syllabus and a copy of the course request form that will be submitted to the Arts and Sciences Curriculum committee for review.

Could you reply to this email and let me know if we have satisfied your concerns and you support its submission?

Thank you,
Jesse

Jesse J. Kwiek, Ph.D. (he/him/his)
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Department of Microbiology
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Columbus, OH 43210
kwiek.2@osu.edu
Phone: 614-292-3256

From: Kwiek, Jesse <kwiek.2@osu.edu>
Date: Thursday, July 20, 2023 at 8:29 AM
To: Freitas, Michael <Michael.Freitas@osumc.edu>, Parvin, Jeffrey <Jeffrey.Parvin@osumc.edu>, Freitas, Mike <freitas.5@osu.edu>
Cc: Ruiz, Natividad <ruiz.82@osu.edu>, Rappleye, Chad <rappleye.1@osu.edu>
Subject: Re: Request for Concurrence

Hi Mike,

Thanks for the follow up. Microbiology 6030 will only be offered to microbiology graduate students, and this will be written into the curriculum proposal that we submit for review. As you mentioned below, we agree that BGSP students who work in the lab of a microbiology faculty will not be permitted to take the class, and we will be sure that all Micro faculty know of and adhere to this restriction. Assuming that this satisfies your concerns, could you state that BGSP concurs with this course proposal, either as a response to this email or on the attached form. I would be glad to chat more if you have any additional concerns.

Jesse

Jesse J. Kwiek, Ph.D. (he/him/his)
Professor and Vice Chair for Teaching & Undergraduate Affairs
Department of Microbiology
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From: Freitas, Michael <Michael.Freitas@osumc.edu>
Date: Wednesday, July 19, 2023 at 12:47 PM
To: Kwiek, Jesse <kwiek.2@osu.edu>, Parvin, Jeffrey <Jeffrey.Parvin@osumc.edu>, Freitas, Mike <freitas.5@osu.edu>
Cc: Ruiz, Natividad <ruiz.82@osu.edu>, Rappleye, Chad <rappleye.1@osu.edu>
Subject: Re: Request for Concurrence

Jesse,

Following up, Jeff and I discussed and are ok moving forward given that the course will be restricted to 2nd year Microbiology graduate students. Our primary concern is the confusion

the course may cause with BSGP graduate students that have joined labs where a PI may hold a joint appointment in Micro. The BSGP students are required to take the BSGP course and not an alternative. If the restriction is in place, then BSGP students will only be able to enroll in the BSGP 7070.

Mike

--

Michael A. Freitas, Ph.D.

The Ohio State University Wexner Medical Center

Professor, Cancer Biology and Genetics

Director OSUCCC Proteomics Shared Resource

Director OSU Biomedical Science Graduate Program

460 West 12th Ave.

Room BRT 906

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freitas.5@osu.edu

614-688-8432

From: Kwiek, Jesse <kwiek.2@osu.edu>

Date: Wednesday, July 19, 2023 at 10:31 AM

To: Parvin, Jeffrey <Jeffrey.Parvin@osumc.edu>, Freitas, Mike <freitas.5@osu.edu>

Cc: Ruiz, Natividad (OSU) <ruiz.82@osu.edu>, Rappleye, Chad (OSU)

<rappleye.1@osu.edu>

Subject: Re: Request for Concurrence

Hi Jeff,

Thanks for the feedback; Mike, we welcome your thoughts as well, although we only need one concurrence form from BGSP.

We'd like you to reconsider concurrence for this course for the following reasons:

1. This course will be restricted to 2nd year Microbiology graduate students (it will NOT be open to students from other programs)
2. This course differs from the BGSP course in the following ways:
 - a. Smaller class size to facilitate personal faculty review instead of graduate student (peer) review
 - b. It focuses on Microbiology topics and sources of funding for Microbiology research
 - c. Its content is adaptable to challenges specific to the Microbiology candidacy exam, which has a different format than the BGSP candidacy exam

Thanks again for your feedback.

Jesse

From: Parvin, Jeffrey <Jeffrey.Parvin@osumc.edu>

Date: Tuesday, July 18, 2023 at 4:24 PM

To: Kwiek, Jesse <kwiek.2@osu.edu>, Freitas, Mike <freitas.5@osu.edu>

Cc: Ruiz, Natividad <ruiz.82@osu.edu>, Rappleye, Chad <rappleye.1@osu.edu>
Subject: Re: Request for Concurrence

Jesse,

I have completed the concurrence form, and perhaps Mike Freitas, who co-directs the grant writing course we offer, wants to complete his own form. Right now, there is no compelling reason given why a new course should be offered when our course handles so many students (about 90 a year) and is open to students from any college/program at OSU. I am willing to reconsider my support if I understand why this new course should be started.

Jeff

Jeffrey D. Parvin, MD, PhD

Louis Levy Professor for Cancer

Associate Dean for Graduate Studies, Director of the Biomedical Sciences Graduate Program

The Ohio State University

Department of Biomedical Informatics

904 Biomedical Research Tower, 460 W. 12th Avenue, Columbus, OH 43210

614-292-0523 Office

email: Jeffrey.Parvin@osumc.edu website: <http://u.osu.edu/parvinlab/>

From: Kwiek, Jesse <kwiek.2@osu.edu>

Date: Monday, July 17, 2023 at 3:57 PM

To: Parvin, Jeffrey <Jeffrey.Parvin@osumc.edu>, Freitas, Mike <freitas.5@osu.edu>

Cc: Ruiz, Natividad (OSU) <ruiz.82@osu.edu>, Rappleye, Chad (OSU) <rappleye.1@osu.edu>

Subject: Request for Concurrence

Dear Jeff & Mike

I'm writing to ask for concurrence on a new graduate level course proposed by The Department of Microbiology, MICRBIOL 6030, the purpose of which is to introduce students to the fundamentals of writing effective scientific research proposals. The course is designed for pre-candidacy PhD students to provide them experience in (1) the development of an appropriate research approach, (2) knowledge of the fundamental structure of research proposals, and (3) hands-on experience in scientific written communication to potential funding agencies. The formation of this course was driven by student desires for practical scientific writing and faculty experiences on the need for students to develop research design and proposal development skills. An essential aspect of the course will be individualized feedback and critique to students from faculty experienced in successful grant writing. We feel this new course will enhance the ability of Microbiology PhD students to

successfully complete candidacy and to effectively compete for external funding.

Could you please look over the syllabus and complete out the attached concurrence form?

Thank you,
Jesse

Jesse J. Kwiek, Ph.D. (he/him/his)
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Mapping Microbiology 6030 to Ph.D. Degree Program Learning Goals

Microbiology Ph.D. Degree Program Learning Goals (PLGs)

PhD graduates of Microbiology should be able to:

1. Demonstrate a broad base of knowledge in several areas, including microbial physiology, genetics, biochemistry, and pathogenesis.
2. Demonstrate in-depth knowledge in an area of interest.
3. Make an original and substantial contribution to the field, as indicated by at least one first-author publication.
4. Effectively communicate science through oral and written presentations to both scientific and general audiences.

Microbiology 6030 Learning Outcomes Mapped to Ph.D. Degree Program Learning Goals

- Identify essential components of scientific proposals and their relationship to execution of scientific research and experimental process (PLG 4: Intermediate)
- Develop and implement written communication skills applicable to scientific fields (PLG 4: Advanced)
- Develop scientific project with high significance and supported by strong rationale (PLG 3: Advanced)
- Understand the process of proposal evaluation and critique (PLG 4: Intermediate)