Microbiology Masters of Science (professional) Program

Program Requirements

I. Description of Program

With the growth of biotechnology and the increase in technology and specialization in applied microbiological sciences, there is a significant regional and national need for additional educational opportunities for individuals wishing to pursue a career in these industries. In addition, many students wish to pursue additional post-baccalaureate studies due to a variety of interests. The MIP department previously did not offer a mechanism to meet these needs. Hence we have developed the MIP Masters of Science (professional) Program which is designed to be completed within a year.

The overall goal of the Program is to build upon a student’s undergraduate training in the life science to provide them with advanced knowledge – particularly in applied areas of the discipline – so that they achieve the skill set necessary to be competitive for future employment in the field or for admission to professional schools. This will be accomplished through:

1. A rigorous curriculum designed to provide cutting-edge knowledge in both theoretical and applied aspects of microbiology, virology, immunology and molecular biology
2. A strong emphasis in coursework on aspects of the discipline that will be useful in real world employment scenarios.
3. A well-rounded curriculum that includes the development of vital professional skills such as verbal and written communication, understanding policies/regulations in the discipline, and biosafety.
4. Active communication with regional and national representatives from the pharmaceutical, biotech, government and public health sectors to ensure that the program’s curriculum remains pertinent and effective.
5. Effective avenues have been developed to ensure a high level of communication in the program to facilitate active mentoring, networking and career discussions.
6. Taking full advantage of the cutting-edge facilities and expertise available in the Department.

An Overview of the MIP Masters of Science (professional) Program:

A. Administration:
This body will provide overall leadership, recruiting, planning and assessment for all aspects of the MIP Masters of Science (professional) Program in order to attain its objectives.

- Program Director: Dr. Jeffrey Wilusz
- Steering Committee: A subcommittee of the MIP Graduation Education Committee
- Admissions committee: The Steering Committee plus the Program Director

Administrative Philosophy/Guidance

A dedicated MIP Masters of Science (professional) Program Director will coordinate programmatic activities and provide academic and career guidance to students. Communication in the program will be maintained through weekly ‘MIP MS-B Topics” meetings run by the director that will provide both training as well as a forum to discuss a variety of programmatic issues with all trainees. The Program Director will also be responsible for contacting companies and extramural employers to establish connections for the program. These connections will provide both input as to skill sets required of our graduates as well as potential networking opportunities for students. Targeted companies will include Colorado based organizations such as Solix Biofuels, Inviragen, New Belgium and other FoCo breweries, Leprino Foods as well as national/international biotech and pharmaceutical corporations.

B. Recruitment Information

Our goal is to actively recruit a critical mass of highly qualified, motivated students

- **Class Size:** The current goal is to recruit ~50 students per year
- **Admission Policy:** Candidates are specifically offered acceptance to the MIP Masters of Science (professional) degree program. This is an independent graduate program not formally connected with other graduate programs within the department or college. Admission to the Program does not allow students to freely switch to other graduate programs – they must apply through normal routes
- **Financial Aspects:** Students are solely responsible for their full tuition and fees for the MIP Masters of Science (professional) Program. The MIP Department will not provide tuition assistance or stipend support.

II. Admission/Application Procedures
Application is made through the on-line application to the MIP Masters of Science (professional) Program as outlined on the CVMBS Masters Programs website. All applications are reviewed by the MIP Masters of Science (professional) Program Admissions Committee who will make the final decision regarding admission. It is anticipated that up to 50 students per year will be offered admission to the Program in order to maintain a critical mass.

III. Advisor and Graduate Committee
The Program Director and Program Steering Committee will respectively serve as advisor and graduate committee for students in the MIP Masters of Science (professional) Program.

IV. Laboratory Rotation Policy
Laboratory rotation research is not a specific component of the MIP Masters of Science (professional) Program.

V. Student Responsibilities & Scholastic Standing
The responsibilities of a student in the MIP Masters of Science (professional) Program include, but are not limited to, those outlined in the Graduate and Professional Bulletin under the section on “Student Rights and Responsibilities” as well as in the MIP Departmental Code. The progress of each student will be evaluated bi-annually by the Program Steering Committee. Substandard performance in course work is grounds for probation or dismissal from the Program in accordance with Graduate School Guidelines. Each student must maintain a cumulative grade-point average of 3.0 in all graduate course work taken at CSU. According to Graduate School procedures, the student will be subject to dismissal in second semester in which a 3.0 cumulative GPA is not maintained. Petitions for exceptions may be filed by the student to the Program Steering Committee.

VI. Evaluation of Graduate Student Progress
It is important that the MIP Masters of Science (professional) Program ensures that students are making adequate progress and to deal with any issues that arise in the
area of student performance expeditiously. Therefore the Program Director will prepare biannual Progress Reports on each student and make these available to the Steering Committee when requested.

VII. Stipend Policies
The MIP Department will not provide tuition or stipend assistance to students in the Masters of Science (professional) Program. Students are encouraged to pursue financial aid, or other grant/fellowship opportunities to assist them in their graduate education.

VIII. Graduation Requirements
All graduation requirements generally follow those outlined in the current Graduate and Professional Bulletin. It is the responsibility of each student to know and meet all of the requirements of the Graduate School.

A minimum of 30 semester credits (300 level or above) in coursework is required; 16 credits will be track-specific core courses 500 level or above. A scholarly paper will be required of each student as a requirement for the degree. The content and style of the paper will be determined by the Masters of Science (professional) Graduate Committee.

IX. Guidelines for the Scholarly Paper Associated with the MIP Masters of Science (professional) Degree

TBD

X. Student Appeals on Grading Decisions
Students have the right to appeal grading decisions as outlined in the Graduate Bulletin. Briefly, in all cases, the burden of proof rests with the student to clearly demonstrate that the grading decision was made on the basis of at least one of the following conditions:

- A grade was assigned on some basis other than performance (with the exception that grades given as a penalty for academic dishonesty)
- A grade was assigned on unique standards that did not apply to other students
- A grade was assigned based on a substantial unannounced departure from previously articulated grading standards

All appeals must be made in writing to the Steering Committee and must be received within 30 days of the start of the next regular semester. If no appeal is received within this prescribed time period, then the original grade will be considered final. Upon receipt of the appeal, the Steering Committee will render its decision in writing to all
parties involved. All decisions by the Steering Committee on these matters will be considered final.