

COLLEGE OF MEDICINE TUCSON

Cellular & Molecular Medicine

MASTER'S & CERTIFICATE PROGRAMS

Graduate Handbook



INTRODUCTION

This handbook summarizes the graduate student requirements for the Master of Science degree in Cellular and Molecular Medicine (CMM) and the Graduate Certificate in Biomedical Sciences. It is meant to assist students in understanding and fulfilling CMM program requirements. However, it is not all-inclusive and does not serve as a contractual document. Students should also utilize resources made available by the [Graduate College](#). The Advisor and the Thesis Committee will serve as guides and mentors. The Graduate Studies Director and the Master’s Oversight Committee will also provide guidance and oversee student progress. It is important for students to realize that successful completion of a Master’s Degree or Certificate Program in CMM is their responsibility. Each student must be focused and self-motivated to reach his/her goals.

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MASTER OF SCIENCE (M.S.) PROGRAM

Objectives

The Master's Program in Cellular and Molecular Medicine is designed to educate students at the graduate level in biomedical sciences, with an emphasis on training in basic and translational research, and to provide students with an advanced understanding of human anatomy and functional histology and cell biology.

Administration

The CMM Graduate Certificate and Master's Advisory Committee, with the approval of the Department Head, administers all aspects of the graduate program including student recruitment, admissions, policy, student advising, approval of theses, and other matters relevant to graduate education. Dr. Lonnie Lybarger (lybarger@email.arizona.edu) is the Committee Chair and serves as the Director of Graduate Studies for the CMM-MS and Certificate programs. Administrative support is provided by Kathy Ben, Program Coordinator, Senior (kben@email.arizona.edu; 520-626-2713) and Becca Van Sickler, Program Coordinator, Senior (beccav@arizona.edu; 621-6643.)

Title	Name
Program Director	Lonnie Lybarger, Ph.D.
Interim Department Head	Cynthia Miranti, PhD
Master's Advisory Committee Members	David Bear, Ph.D.; Chris Pappas, Ph.D.; Lonnie Lybarger, Ph.D; Ritu Pandey; Ph.D; James Proffitt, Ph.D; Valerie Schaibley, Ph.D.; Yana Zavros, Ph.D., and Haley O'Brien, PhD
Graduate Program Coordinators	Kathy Ben Becca Van Sickler

Application Materials

Students interested in pursuing a M.S. in Cellular and Molecular Medicine must apply through GradApp, which is linked closely to the University of Arizona Graduate College. That website can be found [here](#). Students are encouraged to visit the [CMM website](#) prior to applying for more detailed information about the admissions process and program requirements.

The following items are required as part of the application process to the CMM-MS Program:

1. Transcripts of all college and university work.
2. Personal Statement (up to 500 words) - Explain your motivation for pursuing graduate school, including your career goals after completion of the degree. Explain why the CMM MS Program is a good match for you – specifically, explain what you expect to gain from and contribute to the program. You may address any weaknesses and/or challenges, and how these were overcome, within the personal statement.

3. Skills Statement (up to 200 words) - Describe the relevant skills, experiences, and/or accomplishments that demonstrate your readiness and potential for this graduate program.
4. CV/resume - upload a copy of your curriculum vitae/resume in PDF format.
5. The Department of Cellular & Molecular Medicine requires each applicant to have a minimum of 3 letters of recommendation submitted on their behalf. Ideally, these letters should be written by professors, research or professional supervisors, etc. that can speak about your academic and research ability. Potential letter writers will be contacted directly from the Graduate College with instructions on letter submission.
6. International applicants will be considered for admission. All applicants must meet the requirements of the Graduate College concerning proficiency in the English language. Information on English proficiency tests at the University of Arizona can be found at the UA Admissions site.
7. Test scores for the GRE, the MCAT, or the DAT are optional and are not required for admissions, but applicants can choose to upload test results if they like.

Additionally, per the UA Graduate College, all applicants must have a minimum GPA of 3.0 to be considered for entrance to the UA Graduate School. Information on how Admission GPA is calculated can be found [on the UA Graduate College's website](#).

Please note that admission to the CMM's Medical Science Track (otherwise known as P-MAP) is separate from the standard CMM Master's Program and requires application through a separate mechanism.

Prospective Students interested in applying for the P-MAP Program should contact the [Medical School Admissions Team](#).

International Applicants

International applicants born in a country where the native language is not English must demonstrate proficiency in both spoken and written English. The list of countries A number of English Proficiency Credentials are accepted at the University of Arizona, including:

- Test of English as a Foreign Language (TOEFL)
- International English Language Testing System (IELTS)
- Pearson PT Academic
- Common European Framework of Reference for Languages (CEFR)
- The Graduate English Language Endorsement from the U of A's Center for English as a Second Language
and
- CEPT Full Academic Test, also offered by the U of A Center for English as a Second Language

Tests must be dated within two years of a student's enrollment term to be considered valid. The minimum scores accepted for each of these tests can be found [here](#).

A foreign student whose native language is not English must, within two years after entering the program, pass an English proficiency test (SPEAK or TSE test) with a score of 50 or higher.

Financial Support

The Cellular and Molecular Medicine CMM Master’s Program does not provide financial aid. However, students may contact the [Financial Aid Office](#) for assistance. Students are responsible for all expenses related to completion of the degree requirements, including tuition, mandatory fees, program fees, and course fees where applicable. Here are two resources, which are a good jumping off point for researching financial aid opportunities:

- <https://financialaid.arizona.edu/scholarshipuniverse>
- <https://grad.arizona.edu/ofce/welcome>

The Graduate College offers a limited number of awards in the form of Grad Access Fellowships (GAF’s) - these are competitive, need-based awards for newly admitted students – learn more about the eligibility criteria here: <https://grad.arizona.edu/funding/opportunities/graduate-access-fellowship-and-tuition-awards>. Additionally, the Graduate College has limited Financial Hardship Funds available for domestic graduate degree-seeking students who are experiencing a catastrophic, exceptional and unexpected temporary financial difficulty or emergency that is impeding their degree completion in a timely manner. For more information:

<https://grad.arizona.edu/forms/application-graduate-college-financial-hardship-funds>.

Coursework for the CMM-M.S. track

The Master’s degree in Cellular and Molecular Medicine requires a minimum of 30 units of credit. Students must achieve a cumulative grade-point average of 3.0 or higher in their graduate career in order to meet the degree requirement:

Core Requirements	Term	CREDITS
<u>Anatomical or Cell & Molecular Emphasis: 4 units total</u> CMM 501 - Human Gross Anatomy (4 UNITS; Summer, in-person) <i>*This option is strongly recommended for students interested in pursuing a medical degree or those who wish to gain knowledge in human anatomy.</i> OR any combination of the following:	Summer 5W-1	4
CMM 503 – Human Molecular Genetics Basics (1unit, Fall 5W1, Spring 5W3, Summer Pre-session, online)	Fall, Spring, Summer	1
CMM 518 - Fundamental Genetic Mechanisms: from Molecules to Genomes (3 UNITS; Fall, in-person)	Fall	3
CMM 520 - Clinical Cancer Genetics (2 UNITS; Spring, in-person)	Spring	2
CMM 533 - Molecular Medicine (1 UNIT; Fall, 5W2, online - Pre-requisite: CMM 503)	Fall	1
CMM 534 - Genomic Medicine (1 UNIT; Spring, online - Pre-requisites: CMM 503 and CMM 533)	Spring	1

<p>CMM 535 - Genetic Medicine (1 UNIT; Fall, 5W3, online - Pre-requisites: CMM 503 and CMM 533)</p> <p>CMM 537 - Immunology Basics (1 unit, Spring7W1, online)</p> <p>CMM 550 - Inflammation and Immune Pathology (1 unit, Spring 7W2, online)</p> <p><i>*This option is recommended for students who desire a training emphasis in the cell and molecular underpinnings of health and disease.</i></p> <p><i>*Note: students could complete both options - one as a requirement and the other as an elective.</i></p>	<p>Fall</p> <p>Spring</p> <p>Spring</p>	<p>1</p> <p>1</p> <p>1</p>
<p>Histology: 3 units total</p> <p>CMM 510 - (Human Histology: an Introduction to Pathology)</p> <p>CMM 547 - (Histology Basics - 1 unit, online)</p> <p><i>* As of Fall, '22, these 2 one-unit courses will no longer be taught, but they will count towards the requirement:</i></p> <p>CMM 548 - (Histology of the Digestive and Respiratory Systems-1 unit, online)*</p> <p>CMM 549 - (Histology of the Urogenital and Endocrine Systems - 1 unit, online)*</p> <p><i>*Note: students can take either CMM 510 or CMM 547, 548, and 549, but not all of the courses for credit. It is OK to take both CMM 547 AND CMM 510 though.</i></p>	<p>Summer Pre-Session, Fall</p>	<p>3</p> <p>1</p> <p>1</p> <p>1</p>
<p>Microscopy: 1 unit total</p> <p>** As of Spring 2022, the requirement for microscopy is switching from '3 units' to 'at least 1 unit'... Students interested in research are encouraged to take CMM 565.</p> <p>The requirement can be met through these courses:</p> <p>CMM 565 - Fundamentals of Light Microscopy and Digital Imaging (3 units)</p> <p>CMM 566 - Microscopy Basics for Biomedical Research (1 unit, fall 5W3, spring 5W3)</p> <p><i>* As of Spring 2022, these 3 one-unit courses will no longer be taught, but they will count towards the requirement:</i></p> <p>CMM 541 - Bright-Field Microscopy</p> <p>CMM 542 - Fundamentals of Digital Imaging</p> <p>CMM 546 - Fluorescence Microscopy</p>	<p>Spring</p> <p>Fall 5W3</p>	<p>3</p> <p>1</p> <p>1</p> <p>1</p>
<p>Cell Biology: up to 4 units total</p> <p>CMM 504 - Cell Biology of Disease - 3 units, Summer 5W2*,in-person</p> <p><i>*Note: this option is recommended</i></p> <p>OR</p> <p>CMM 577 - Principles of Cell Biology - 4 units, Fall, in-person</p> <p><i>*Note: this course is recommended for advanced students who already possess a background in cell and molecular biology</i></p>	<p>Summer 5W-2</p> <p>Fall</p>	<p>3</p> <p>4</p>
<p>Scientific Communication: 3 units total</p> <p>CMM 597 - Getting the Word Out on Science: Scientific Communication</p> <p><i>* As of Spring 2024, this 2-unit course will no longer be taught, but it will count towards the requirement:</i></p> <p>CMM 603 - The Art of Scientific Communication - 2 units, Spring, in-person</p>	<p>Spring</p>	<p>3</p>

Thesis - 5 UNITS Total		5 units total
CMM 910 – Thesis - <i>Units may be taken any term; no more than 3 units/term</i>	All	
Human Disease and Pathology: 4 units total		
CHOOSE ONE:		
PATH 515 - Mechanisms of Human Disease - 4 units, Spring, in-person - students interested in taking PATH 515 should complete their Histology series before registration	Spring	4
CBIO 552 - Cancer Biology - 4 units, Fall, in-person	Fall	4
Electives: 6 (or 5) Units total:	All	5 or 6

**** Those taking only one unit of microscopy (CMM 566) will need two additional units of elective coursework (at least 7 or 8 total units).**

**** Those taking CMM 597 rather than CMM 603 for Scientific Communication will only need 5 units of elective coursework.**

All CMM-MS students are required to take (5) or 6 or more units of elective credit. The following courses are recommended, but other coursework in the biomedical sciences and/or medicine may be appropriate and will also be considered.

CMM 595H - **Problems in the Biology of Complex Diseases** - 2 units, Spring, in-person

CMM 605 - **Medical Immunology and Infectious Disease** - 4 units, Fall, in-person

BIOS 576A - **Biostatistics in Public Health** - 3 credits, Fall, in-person

Many of our online courses are also excellent choices for elective credit. **MS students will be required to complete elective units with a grade of C or higher to remain in good standing.** In accordance with the policies of the Graduate College, any student whose cumulative GPA falls below 3.0 will be placed on academic probation for the following semester. If the student's cumulative GPA is still below 3.0 at the end of their probationary semester, he/she will be dismissed from the program.

Advisor and Advisory Committee

Each student in the CMM – M.S. program will be assigned a member of the Master’s Oversight Committee as their primary academic advisor when they accept admission into our program. A student may change their primary advisor at any time while they are pursuing their degree.

The student's thesis committee will consist of a minimum of **three** faculty members: (1) an individual whose primary appointment is within CMM (often, their primary advisor although this is not necessary) and (2) at least two additional faculty members who have expertise related to the student's area(s) of interest. *These individuals do not need to be in CMM.* Additional committee members will be chosen jointly by the student and their primary advisor. A student's advisory committee should be chosen - and the committee should meet - as soon as possible after the student starts working on their thesis.

Per Graduate College policy, the committee must include a minimum of three members, including at least two members of the Graduate Faculty. A Special Member may serve as the third member of the committee. Each committee must have a chair. The chair of the committee must

be a member of the Graduate Faculty with endorsement to chair. If there are co-chairs of the committee, one must be a member of the Graduate Faculty with endorsement to chair, while the second can be either a member of the Graduate Faculty or Special Member. For more specific guidelines, please consult with the CMM Graduate Coordinator or with the Graduate College.

GradPath

GradPath is the system used by the UA Graduate College to track student milestones and progress over the course of their graduate career. For MS students, there are **three** forms that must be submitted by the student at various stages and milestones of their graduate career:

1. The Responsible Conduct of Research Statement
2. Plan of Study
3. Master's/Specialist Committee Appointment Form

The fourth form, the Master's/Specialist Completion Confirmation, is filled out and submitted by CMM's Graduate Coordinator upon successful completion and defense of a student's thesis.

GradPath forms are housed and designed to be completed online through UAccess Student. These forms can be accessed through the Student Center in UAccess by clicking the dropdown menu in the *Academics* section and scrolling to GradPath forms.

Please visit [the Graduate College Website](#) for more information on each form.

Thesis

Every CMM-Masters student, regardless of track, is required to complete a substantial research project and submit a written thesis that documents that research. Laboratory, non-laboratory, and hybrid projects will all be considered. A student's research project will be agreed upon by the student and the student's advisory committee (for information on a student's Advisory committee, see above).

As a guideline, a laboratory-based thesis should be in the format of a publishable manuscript for an appropriate journal. A non-laboratory-based thesis should be in the format of a *New England Journal of Medicine* review article and be 10,000-20,000 words in length (not including references). A student's Thesis Committee will guide her/him in the preparation of this document. Per Graduate College policy, the thesis must be archived on the University's open-access [website](#) prior to completion of their degree.

Students who will be working in a laboratory **must** complete the [University's Online RCR Training](#).

Students who will be working with patients or non-anonymized patient data must take the [University's HIPPA Training](#).

Instructions for Thesis Units

CMM requires each Master's student to earn a minimum of five thesis units (CMM 910) during their tenure in the program. The intention of these units is to award credit for the time students spend working on their thesis, and to help them stay on track to complete this milestone in a timely, efficient manner. The policies below describe the milestones that must be met to earn each thesis unit and are meant to guide students and their faculty mentors through the thesis process.

These guidelines require that students begin work on their theses well before the semester in which they intend to graduate. It is understood, however, that thesis work (especially laboratory-based research) does not always follow an expected schedule - under unusual circumstances, exceptions may be made to these policies with approval of the Director of the Master's Program.

First unit – the student will identify a thesis advisor and members to serve on their thesis committee. With their committee's input, the student will select a thesis topic (literature- or lab-based) and develop an outline for the thesis to be presented to the committee at the first meeting.

Second unit – the student will provide the advisor/committee with a draft of the introduction section of the thesis.

Third unit – the student will provide the advisor/committee with a draft of the results/synthesis section of the thesis. Students should include figures or placeholders for figures in the draft at this stage. This draft should include revisions of the introduction section of the thesis (should the committee have provided any). If there has not been a thesis committee meeting within this past year, a meeting should be convened with the committee to discuss progress and timetables for the project.

Fourth unit – the student will provide the advisor/committee with a full draft of their thesis (including any revisions provided by the committee). If there has not been a thesis committee meeting within this past year, , a meeting should be convened with the committee to discuss progress and timetables.

Fifth unit – Defend thesis, make any required revisions, and submit final document to the library for cataloging. If a student is not ready to defend, they should meet with their committee and make a plan to complete the thesis.

Important additional policies:

- No more than **three** thesis units may be taken in one term. Therefore, the thesis process will cover at least two terms.

For more information on CMM's thesis process or about the guidelines above, please seek out CMM's Graduate Coordinators and/or Director of Graduate Studies. There are additional documents to guide students, including a 'thesis handbook'.

CMM Department Program Fees – Program fees will be assessed every term a student is enrolled in the program, regardless of whether the student is enrolled in classes with the CMM prefix that term.

Important items to note about CMM's program fees:

- These fees are *in addition* to tuition and student mandatory fees.
- The amount of program fees assessed is directly related to the number of units taken in each term.
- Program fees apply to *all* UA courses taken while a student is active in the program, not just courses bearing the CMM prefix.

Example: a CMM-MS student registers for 6 units of CMM courses, and an additional 4 unit ECON class. They will still be assessed CMM program fees on all 10 units.

For more information regarding CMM Department Program Fees, please refer to the document: *Statement of Acknowledgment Regarding CMM Program Fees*.

GRADUATE CERTIFICATE IN BIOMEDICAL SCIENCES

The Graduate Certificate in Biomedical Sciences is designed to provide students with an advanced understanding of human anatomy and functional histology and cell biology, with an emphasis on training in basic and translational clinical research.

A bachelor's degree is a prerequisite for entering the certificate program. Students may apply to the certificate program prior to receiving their bachelor's degree, but must have received the degree and be able to provide an official transcript before starting the certificate program. While it is expected that an applicant's undergraduate major normally be in the natural sciences, students with degrees in other fields who have sufficient coursework in the natural sciences will be considered for admission.

The Graduate Certificate requires a minimum of 12 units of credit to complete: 10+ units of required coursework, and 2+ units of electives. As of June, 2021, our program the Certificate is open for Fall, Spring and Summer admissions. Per UA Graduate College guidelines, up to 3 units may be transferred from another institution. Every student will be required to complete the following courses with a cumulative grade-point average of 3.0 or higher:

COURSES FOR GRADUATE CERTIFICATE IN BIOMEDICAL SCIENCES	Term	CREDITS
Required Coursework (10+ units)		
<u>Anatomical or Cell & Molecular Emphasis: 4 units total</u> CMM 501 - Human Gross Anatomy (4 UNITS; Summer, in-person) <i>*This option is strongly recommended for students interested in pursuing a medical degree or those who wish to gain knowledge in human anatomy.</i> OR any combination of the following:	Summer 5W-1	4

<p>CMM 503 – Human Molecular Genetics Basics (1unit, Fall 5W1, Spring 5W3, Summer Pre-session, online)</p> <p>CMM 518 - Fundamental Genetic Mechanisms: from Molecules to Genomes (3 UNITS; Fall, in-person)</p> <p>CMM 520 - Clinical Cancer Genetics (2 UNITS; Spring, in-person)</p> <p>CMM 533 - Molecular Medicine (1 UNIT; Fall, 5W2, online - Pre-requisite: CMM 503)</p> <p>CMM 534 - Genomic Medicine (1 UNIT; Spring, online - Pre-requisites: CMM 503 and CMM 533)</p> <p>CMM 535 - Genetic Medicine (1 UNIT; Fall, 5W3, online - Pre-requisites: CMM 503 and CMM 533)</p> <p>CMM 537 - Immunology Basics (1 unit, Spring7W1, online)</p> <p>CMM 550 - Inflammation and Immune Pathology (1 unit, Spring 7W2, online)</p> <p><i>*This option is recommended for students who desire a training emphasis in the cell and molecular underpinnings of health and disease.</i></p> <p><i>*Note: students could complete both options - one as a requirement and the other as an elective.</i></p>	<p>Fall, Spring, Summer</p> <p>Fall</p> <p>Spring</p> <p>Fall</p> <p>Spring</p> <p>Fall</p> <p>Spring</p> <p>Spring</p> <p>Spring</p>	<p>1</p> <p>3</p> <p>2</p> <p>1</p> <p>1</p> <p>1</p> <p>1</p> <p>1</p> <p>1</p>
<p>Histology: 3 units total</p> <p>CMM 510 - (Human Histology: an Introduction to Pathology)</p> <p><i>These 3 one-unit courses will also count towards the requirement:</i></p> <p>CMM 547 - (Histology Basics - 1 unit, online)</p> <p>CMM 548 - (Histology of the Digestive and Respiratory Systems-1 unit, online)*</p> <p>CMM 549 - (Histology of the Urogenital and Endocrine Systems - 1 unit, online)*</p> <p><i>*Note: all three online courses must be taken to fulfill this requirement and cannot be combined with CMM 510 for credit</i></p>	<p>Summer Pre-Session, Fall</p>	<p>3</p> <p>1</p> <p>1</p> <p>1</p>
<p>Microscopy: 1 unit total</p> <p><i>** As of Spring 2022, the requirement for microscopy is switching from '3 units' to 'at least 1 unit'... Students interested in research are encouraged to take CMM 565.</i></p> <p>The requirement can be met through these courses:</p> <p>CMM 565 - Fundamentals of Light Microscopy and Digital Imaging (3 units)</p> <p>CMM 566 - Microscopy Basics for Biomedical Research (1 unit, fall 5W3)</p> <p><i>* As of Spring 2022, these 3 one-unit courses will no longer be taught, but they will count towards the requirement:</i></p> <p>CMM 541 - Bright-Field Microscopy</p> <p>CMM 542 - Fundamentals of Digital Imaging</p> <p>CMM 546 - Fluorescence Microscopy</p>	<p>Spring</p> <p>Fall 5W3</p>	<p>3</p> <p>1</p> <p>1</p> <p>1</p>
<p>Electives: Must complete at least 2 units* (*Certificate requires a minimum of 12 total units) ** Those taking only one unit of microscopy (CMM 566) will need two additional units of elective coursework.</p> <p>Recommended (other courses may apply):</p>		

CMM 504 - Cell Biology of Disease	Summer 5W2	3
CMM 527 - Pathophysiology Basics	ONLINE	1
CMM 528 - Pathophysiology Organ Systems A	ONLINE	1
CMM 529 - Pathophysiology Organ Systems B	ONLINE	1
CMM 543 - Embryology I	ONLINE	1
CMM 544 - Embryology II	ONLINE	1
CMM 550 - Inflammation and Immune Pathology	ONLINE	1
CMM 558 - Epithelial-to-Mesenchymal Transition	ONLINE	1
CMM 559 - Principles of Clinical Reasoning	ONLINE	1
CMM 560 - Clinical Reasoning: In Their Own Words	ONLINE	1
CMM 561 - Clinical Reasoning: Working Clinical Cases	ONLINE	1
CMM 577 - Principles of Cell Biology	FALL - (in-person)	4
CMM 595H - Problems in the Biology of Complex Diseases	SPRING - (in-person)	2
BIOS 576A - Biostatistics in Public Health	FALL (in-person)	3
EPID 651 - Bioethics, Regulations, and Repercussions on Research		2
PATH 515 - Mechanisms of Human Disease	Spring (in-person)	4
<i>*These courses are recommended, but other coursework in the biomedical sciences and medicine may be appropriate and will be considered as well. The student will be required to receive approval from his or her advisor for their final selection of courses.</i>		

It is now possible to complete the Certificate on-line by selecting all on-line options from the list of required and elective courses. In accordance with the policies set forth by the UA Graduate College, students must maintain an overall grade-point average (GPA) of 3.0 to remain in good standing with the program. Any student whose cumulative GPA falls below 3.0 will be placed on academic probation for the following semester. If the student's cumulative GPA is still below 3.0 at the end of the probationary semester, he/she will be dismissed from the program.

Admission to the Graduate Certificate Program

Students interested in pursuing the Graduate Certificate in Biomedical Sciences must apply through GradApp, which is linked closely to the University of Arizona Graduate College. The application process for the Certificate is the same as the MS. That information can be found on page 3 of this handbook.

Notes:

1. Concurrent enrollment in a degree program is permitted for Graduate Certificate students, **except** for in the Master's in Cellular and Molecular Medicine degree program. Courses that are counted toward the requirements of the Certificate Program may be counted toward the requirements of the Master's Degree program at the discretion of the degree program.
2. Up to 3 units of graduate credit may be transferred from other institutions and counted towards the Certificate, at the discretion of the Oversight Committee.

3. Student Advising. Students will receive advising throughout their time in the certificate program, including advice on courses for the certificate program, career choices, possible future use of the certificate, opportunities for advanced education or professional training, and employment possibilities. Each student will be assigned a member of the Oversight Committee as their primary advisor when he or she accepts admission into the certificate program.
4. Every Graduate Certificate student will be required to file a Program of Study form, as specified by the Graduate College. This form can be found in GradPath. Information on accessing the forms in GradPath can be found on page 6 of this handbook.
5. A student in the Biomedical Sciences Graduate Certificate Program may apply to the Master's in Cellular and Molecular Medicine degree program (or any other graduate programs) upon completion of their course of study. This requires completion of a graduate application, and admissions is not guaranteed. For the CMM M.S. Program, course credits that have been taken for the Certificate will, provided the student has remained in good standing academically, be counted towards the Master's. Decisions about transfer credit requests will be made on an individual basis by the Admissions Committees of the degree programs.

Note that students must complete the forms to finalize the Certificate prior to entering the MS Program, or they will incur program fees from both programs on each unit of coursework taken.

ACADEMIC INTEGRITY

The University of Arizona Student Code of Conduct and other policies apply to students in all CMM programs, and can be found [here](#).

Principle: *(from the above website)* Integrity is expected of every student in all academic work. The guiding principle of academic integrity is that a student's submitted work must be the student's own. This principle is furthered by the student Code of Conduct and disciplinary procedures established by ABOR Policies 5-308 - 5-403, all provisions of which apply to all University of Arizona students. This Code of Academic Integrity (hereinafter "the Code") is intended to fulfill the requirement imposed by ABOR Policy 5-403.A.4 and otherwise to supplement the student Code of Conduct as permitted by ABOR Policy 5-308.C.1.

The most common issues for graduate students involve giving credit for ideas in writing. When answering a question about a paper, students need to paraphrase the language in their own words. It is not appropriate to lift phrases or sentences directly from the paper. Cutting-and-pasting anything from a document or the internet without attribution is considered plagiarism (Defined [here](#) & [here](#)). The penalties for plagiarism can be very severe; it is advised that all students be sure that they understand the rules, policies, and procedures for Academic Integrity violations, which can be found at:

- <http://deanofstudents.arizona.edu/policies-and-codes/code-academic-integrity>
- <http://deanofstudents.arizona.edu/academic-integrity/students/academic-integrity>

ADDITIONAL INFORMATION

Student Roles in Program Governance

Student input and feedback are invaluable to building and maintaining strong training programs. Multiple mechanisms are available for students to shape the direction of the M.S. and Certificate Programs.

First, students are contacted annually by the Chair of the Master's Oversight Committee to keep in contact and to offer meetings, as the students request.

Second, students are encouraged *at any time* to meet with members of the Master's Oversight Committee if they have concerns or ideas regarding the program.

Student Resources

The CMM Department is committed to assisting all students as they participate in its programs. The Programs are designed for flexibility and CMM strives to be as accommodating as possible with respect to personal situations and considerations. Links to information on academic, professional, and personal resources available to graduate students can be found [here](#). This includes information on Academic Services, Policies, and Procedures, Funding, Professional

Development Resources, Child Care Subsidies and Family-Friendly Information, and Health, Wellness and Safety information.

Satisfactory Academic Progress and Student Appeals

Academic Progress. Students are required to demonstrate satisfactory academic progress toward degree completion. Beyond maintaining a minimum 3.0 grade-point average, students are assessed for their progress in many ways. In addition to informal feedback from the student's Advisor, course instructors, and advisory committee, students will be formally evaluated using assessment tools that are applied for specific activities during program courses.

Failure to make satisfactory academic progress is grounds for dismissal by the Dean of the Graduate College. The Graduate College will apply the CMM M.S. criteria for satisfactory progress if the program requests a student disqualification. Should the student's Advisor and/or the Master's Oversight Committee determine that the student is not making satisfactory progress, the student will be notified in writing, with a copy also sent to the Graduate College. This written notification will include steps for remediation and a timetable in which to complete the steps; these will be determined by the Advisor in consultation with the Master's Oversight Committee.

Incomplete Policy. If a grade of "incomplete" is assigned to a student in any course, it is the student's responsibility, in conjunction with the Director for that course, to complete this [Report of Incomplete Grade](#). Instructions can be found on the form and they include the development of a plan for timely completion of the requirements for the course. Failure to complete the requirements as stated on the form may constitute a failure to make satisfactory academic progress. In this event, the steps outlined above will be followed.

Student Appeals. Students may appeal or rebut program decisions regarding satisfactory progress. Students should respond to the notification of unsatisfactory progress in writing, through a letter to the Master's Oversight Committee. This will be followed by a meeting with the Committee. The student may also appeal to the Graduate College to determine whether the program followed the established program policies. Graduate College policies for how to appeal program decisions can be found [here](#), along with information on how to deal with other types of potential grievances by graduate students.