

# MOLECULAR GENETICS AND GENOMICS AGRADE PROGRAM

The AGRADE-MGG program is hosted by the Center for Molecular Medicine and Genetics (CMMG) in the School of Medicine. This program is comprised of foundational (core) courses and additional concentration (elective) courses in molecular medicine, genetics and genomics. AGRADE-MGG students obtain academic and applied training in addition to capstone research experiences that integrate learning across their courses. In addition to coursework, this is a research-intensive track that includes research in CMMG faculty laboratories performing wet bench experiments and/or dry bench computational projects as a starting point for a thesis project in year 2 of the program, as well as additional electives. In contrast to regular MGG MS students, who can choose between Plans A and B, only Plan A is available for AGRADE-MGG students. The final thesis will be graded by a thesis committee, which will include an oral thesis defense to the committee.

## Eligibility

Before applying to the program, students should meet with their undergraduate academic advisor to determine if AGRADE-MGG would be a good fit. Student records will be reviewed to determine eligibility, and the academic advisor will assist students in declaring and in guiding their course of study. In general, undergraduate students with declared STEM majors will be eligible to apply for AGRADE-MGG status in the semester during which they expect to complete 90 credits. All AGRADE-MGG applications will be reviewed and prioritized for admission in the Fall semester of each year by the CMMG graduate recruitment committee. Acceptance to the AGRADE-MGG program will be competitive; thus, not all students who meet the minimum criteria will be admitted.

Eligibility criteria are:

Code	Title	Credits
MAT 2010	Calculus I	4
CHM 1100 & CHM 1130 or CHM 1125	General Chemistry I and General Chemistry I Laboratory General Chemistry I for Engineers	4
CHM 1150	General Chemistry II Laboratory	1
CHM 1240 or BME 4010	Organic Chemistry I Engineering Physiology Laboratory	4
BIO 3100 or BME 2050 or CHM 5600 or CHM 6620	Cellular Biochemistry Introduction to Anatomy and Physiology for Biomedical Engineers Survey of Biochemistry Metabolism: Pathways and Regulation	3

At least one of the following:

PHY 2130 & PHY 2131	Physics for the Life Sciences I and Physics for the Life Sciences Laboratory
PHY 2140 & PHY 2141	Physics for the Life Sciences II and Physics for the Life Sciences Laboratory
PHY 2170 & PHY 2171	University Physics I for Scientists and Engineers and University Physics I Experimental Laboratory
PHY 2175	University Physics for Engineers I
PHY 2180 & PHY 2181	University Physics II for Scientists and Engineers and University Physics II Experimental Laboratory
PHY 2185	University Physics for Engineers II

90 credits undergraduate coursework

Undergraduate GPA of 3.6 or higher in a STEM BS major

Cumulative GPA of 3.5 or higher (students with a GPA of 3.3 – 3.49 considered case-by-case)

Applications must include:

- personal statement detailing interest in the AGRADE-MGG program, career goals, specific motivations and potential mentoring faculty members;
- academic record and suitability to join the AGRADE-MGG track;
- two references from connected faculty detailing the student's capacity for graduate study.

## Requirements

Upon admission to this accelerated track, undergraduate students complete a minimum of 3 and a maximum of 16 (3-16) credits of approved AGRADE-MGG graduate level courses.

AGRADE-MGG graduate level courses can be used to complete baccalaureate degree requirements and fulfill the initial phase of study toward the MS-MGG degree, provided students perform well in these courses (B grade or higher) and apply to MS-MGG upon graduation with their baccalaureate degree. For courses in which both undergraduate and graduate students participate, AGRADE-MGG students will be held to the course standards required of graduate students.

Explicit in the path to an MS-MGG degree using the AGRADE-MGG mechanism is the requirement that students must complete a minimum of 34 credits of graduate level courses to earn an MS-MGG degree. Thus, courses listed on a student's undergraduate transcript at the time of application to the AGRADE-MGG program cannot be used for credit transfer into the AGRADE-MGG curriculum. Nonetheless, specified undergraduate courses will be considered (B grade or higher) for waiving the requirement to take mandated core AGRADE-MGG courses. In such cases, students must take approved AGRADE-MGG elective credits equivalent to the number of the waived graduate level credits. Further, specified undergraduate courses taken by AGRADE-MGG students can only stand in lieu of equivalent core MGG graduate courses (with a B or higher grade) if an equivalent number of AGRADE-MGG electives are taken.

Upon acceptance into the MS-MGG program, AGRADE-MGG courses will be treated as if they are graduate credits transferred from a graduate program at another university. The remaining graduate level credits required for a Masters degree (minimum of 34) will be earned in the usual manner within the MS-MGG program.

Only Plan A is available for AGRADE-MGG students.