

CSUDH

MASTERS IN SCIENCE HANDBOOK

[Admission Requirements](#)

[Admission Procedures](#)

[Financial Aid](#)

[Graduate Funding Opportunities](#)

[Office of Graduate Studies and Research](#)

[Checklist for the MS Program in Biology](#)

[Initial admission](#)

[Year 1](#)

[Year 2](#)

[Biology M.S. Roadmap](#)

[Policies](#)

[Potential Research Mentors for M.S. Biology Students](#)

[M.S. Thesis Research Proposal Guidelines](#)

[Checklist for your thesis proposal](#)

[Components of your thesis proposal](#)

[M.S. Thesis Guidelines](#)

[Deadlines for Graduation](#)

[Application for Graduation](#)

[Thesis Deadlines](#)

[Forms](#)

Dear Student in the M.S. Program:

Welcome to the M.S. Program in Biology at California State University, Dominguez Hills. We hope that your participation in the program will be intellectually rewarding and will help you further your educational and career goals.

This handbook is designed to help you navigate the often confusing procedures that you will follow as you complete this program. Strict adherence to the policies and procedures will decrease the amount of time you need to complete the program. You will be required to be advised every semester by either the Biology Department Graduate Coordinator or your research mentor (if that person is a member of the CSUDH faculty). The function of this mandatory advising is to monitor your progress through the program and to solve any problems that may arise. If you have any questions at any time during your participation in the program, please feel free to contact the Graduate Coordinator.

A note on the program. There are two major components to the M.S. Program in Biology, classroom work and research. The classroom component consists of a core of required courses plus one or more electives. The research component involves completion of a research project, under the direction of a faculty research mentor, and culminates in the preparation of a thesis. Up to nine units of academic credit may be earned for research participation and thesis preparation. It is possible, but not guaranteed, that you may obtain fellowship or stipend support for your research activities.

A note on admission status and progress. You were admitted in either Classified Status or Conditionally Classified Status. Classified Status means full, unconditional admittance to the program. If you were admitted in Conditionally Classified Status, the conditions for your admission and continuation in the program were detailed in your notice of admission. Once these conditions are satisfied, you will be promoted to Classified Status.

Again, welcome to the M.S. Program in Biology.

Biology Department Graduate Coordinator
Biology Graduate Program Committee

Admission Requirements

Requirements for admission as a classified graduate student

- a bachelor's degree in biology or a related field
- a minimum grade point average of 2.75 in upper division courses
- completion of the Graduation Writing Assessment Requirement (GWAR) at the graduate level
- a strong motivation to conduct original research
- and, completion of a course in each of the subject areas listed below

Subject Area

Cell Biology or Evolution or Ecology

Genetics

Upper Division Biology Experimental Laboratory

Physiology or Developmental Biology

Statistics or Calculus

Students who do not satisfy all these requirements may complete the requirements while enrolled through Extended Education. Students who meet all but one requirement may be admitted as a conditionally classified graduate student at the discretion of the Biology Graduate Committee. They must meet any conditions by the end of the first year as a conditional graduate student.

The Biology Graduate Committee makes all final decisions on graduate admissions.

Admission Procedures

All applicants are required to complete a Cal State Apply application. The following documents should be submitted in the 4th Quadrant at Cal State Apply:

1. CV/resume,
2. Unofficial transcripts (submit official transcripts to the Office of Admissions),
3. A personal statement, and
4. Three letters of recommendation.

Applicants with a baccalaureate degree from a non-English speaking university are also required to submit proof of English proficiency. Please visit the [Grad Program's English Proficiency Website](#) for details. Applicants should address in their personal statement why they are interested in the program and which research area(s) they wish to pursue. Applicants interested in ecology and/or evolutionary biology must contact the appropriate faculty member(s) in the Biology Department before submitting their Cal State Apply application. Applicants interested in cellular and molecular biology should indicate potential research mentors in their personal statement, and they are also encouraged to contact possible mentors. See [Potential Research Mentors \(Thesis Advisors\)](#) for contact information on research mentors.

For more information regarding the university application for admission, please visit the school [website](#).

Financial Aid

Graduate students may be eligible for financial aid. They are encouraged to meet with the CSUDH Financial Aid office to learn more about the loans, scholarships, and grants that may be available.

Financial Aid Office

Welch Hall (WH), Room B-250

1000 East Victoria Street

Carson, CA 90747

Website: <https://www.csudh.edu/financial-aid/>

Email: finaid@csudh.edu

Telephone: (310) 243-3691

Graduate Funding Opportunities

Please go to the [website](#) of Graduate Studies to find the most current information on funding.

Graduate Equity Fellowship (GEF)

Graduate Equity Fellowship (GEF) program at CSUDH seeks to increase the diversity of students completing graduate degree programs, encourage further study in doctoral programs, and promote consideration of university faculty careers.

The program is designed to do so by providing financial support to graduate students with strong academic records. Fellowships range from \$500 to \$4500 for the academic year. The maximum grant period for any student is two years.

Graduate Research Advancement & Development (GRAD)

Graduate Research Advancement & Development (GRAD) supports graduate students in their professional and academic development outside of the classroom in both research and creative activities.

The Chancellor's Doctoral Incentive Program (CDIP)

- The program is open to applicants who will be new or continuing full-time students in doctoral programs at regionally accredited universities anywhere within the United States.
- Each applicant is required to have a full-time tenure/tenure-track CSU faculty advisor who will provide professional mentoring and networking opportunities throughout the student's educational experience.

The goal of the California State University Chancellor's Doctoral Incentive Program (CDIP) is to increase the number of faculty with the qualifications, motivation, and skills needed to teach the diverse students of the CSU.

CDIP prepares promising doctoral students for CSU faculty positions by providing [financial support](#), [mentorship by CSU faculty](#) and [professional development and grant](#) resources. It is the largest program of its kind in the U.S.

Office of Graduate Studies and Research

The Office of Graduate Studies and Research [website](#) provides important information related to your graduate career at CSUDH.

Vanessa Cervantes (vmolina@csudh.edu) is the current Graduate Studies Coordinator.

[Graduate Studies Contact Information](#)

[Graduate Funding Opportunities](#)

[Thesis related information](#)

[Some forms you may need](#)

Checklist for the MS Program in Biology

This timeline is based on completion of the program in 2 years. A shorter or longer time may be required, depending on academic and research progress.

Initial admission

- Initial admission was Conditionally Classified Status.**
Conditionally Classified Status is a provisional admission to the program. It is reserved for students who are deficient in one admission requirement. Students admitted under this status are given one semester to one year (depending on the deficiency and circumstances such as class availability) to make up the deficiency. The conditions associated with admission under this status will be described in the acceptance letter.
 - Begin taking required and elective courses.
 - Begin to complete Conditions for Admission to Classified Status.
 - Change to Classified Status within one year.
- Initial admission was Classified Status.**
 - Begin taking required and elective courses

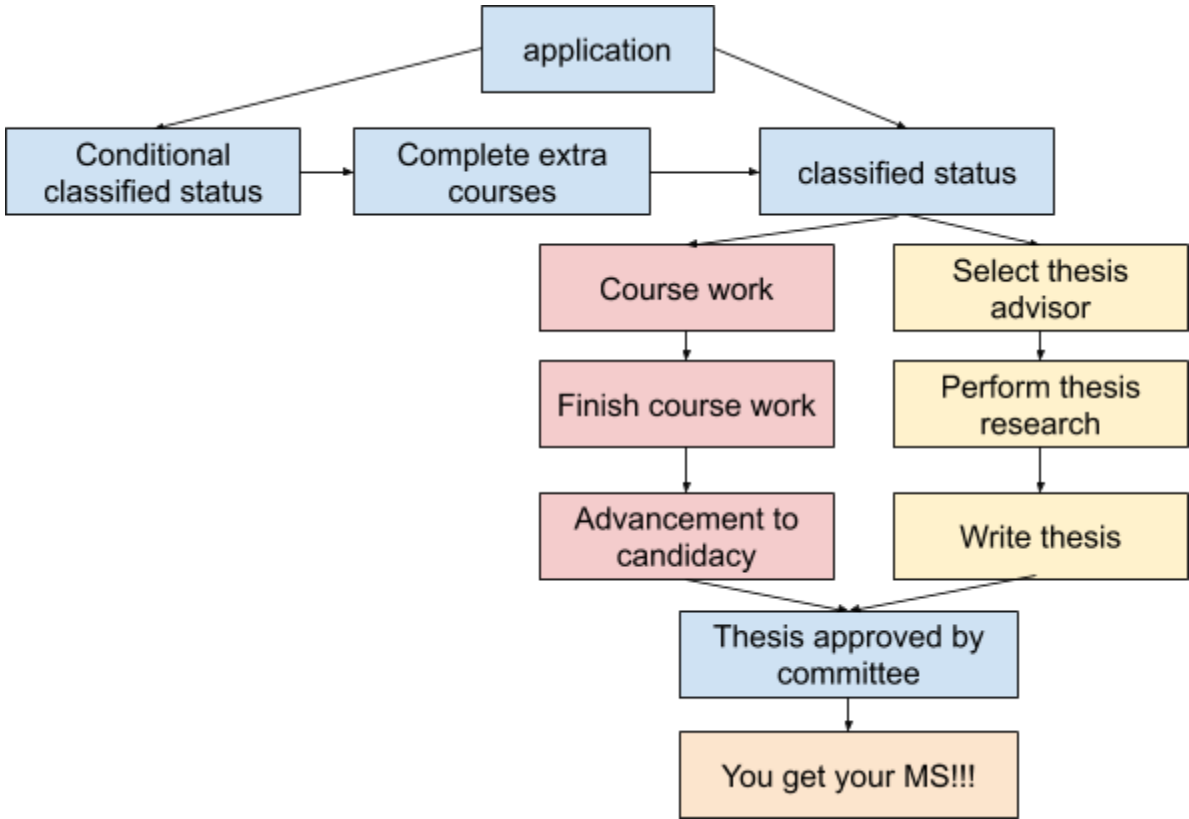
Year 1

- Identification of a research mentor (thesis advisor).
- Selection of at least two additional thesis committee members.
- Approval of thesis research project by research mentor.
- Completion of **M.S. Biology Thesis Research Proposal**.

Year 2

- Completion of all course work.
- Completion of all research outlined in Thesis Proposal.
- Preparation of thesis.
- Submit **Intent to submit a thesis/project form** to Graduate Coordinator.
- Application for Graduation** form submitted to Admissions and Records
- A thesis draft is first submitted to the research mentor for corrections. When these corrections have been made, a revised draft is submitted to other committee members. Allow at least 2 weeks for each review, but we recommend asking committee members for their preferred timeline. Some committee members might require more time.
- Oral presentation and defense of thesis**.
- Receive **thesis approvals** from all thesis committee members.
- Submission of thesis** to Graduate Studies office.

Biology M.S. Roadmap



Policies

Overview: The Master of Science Program in Biology requires students to complete a series of both core and elective courses and engage in independent scientific research that culminates in a thesis.

Advising: is a critical component of the Graduate Program in Biology. Students are required to meet with the Graduate Coordinator every semester. In addition, students should be advised by their research mentor regularly. How regularly you and your research mentor meet should be decided together, but we recommend at least meeting every week if not every two weeks.

Courses: The MS Degree in Biology requires completion of 30 units, at least 15 of which must be graduate (500-level) courses in biology. An overall "B" average is required in courses in the program and all courses must be passed with a grade of "B-" or above. Note that Full Time status for a graduate student consists of 8 units per semester.

A. Required Courses (16 units):

BIO 501	Biological Literature	3
BIO 502	Biostatistics	3
BIO 504	Research Techniques in Biology	3
BIO 510	Urban Environmental Science	3
OR		
BIO 520	Advances in Cell and Molecular Biology	3
BIO 590	Graduate Seminar	2 (take twice)

B. Electives (14 units):

Select from the following:

Other graduate (500 level) courses in biology. A required course indicated as being repeatable may be used both as a required course and as an elective.

Upper division (400 level) courses in biology.

BIO 597	Directed Reading	1-3
BIO 598	Directed Research	1-3
BIO 599	Thesis	1-4

NOTE: Students may count a maximum of nine units of BIO 597, BIO 598 and BIO 599 combined. However, no more than six units of BIO 599 may be applied to the degree.

Any of the following courses:

CHE 450	Biochemistry I	4
CHE 451	Biochemistry I Lab	1
CHE 452	Biochemistry II	4
CHE 453	Biochemistry Laboratory II	2 units

Students doing research in ecology field can also take the following courses:

GEO 408	Remote Sensing and Image Processing	3
GEO 415	Geographic Information Systems	3

Students might also take 400 or 500 level courses from other departments if approved by the research mentor and the Biology Graduate Program coordinator.

Revalidation of Outdated Course Work: All course work taken in the master's degree program must be completed within the five years immediately preceding the date of graduation. If approved by the Biology Graduate Coordinator and the Dean of Graduate Studies, a limited number of courses may be revalidated. However, under no circumstances can a course taken more than seven years before graduation be revalidated and counted in the program.

Revalidation of outdated course work may be requested from the University Graduate Studies Office through the Biology Graduate Coordinator. The request must be accompanied by approvals from the instructors that verifies that the student has done one of the following (at the discretion of the Biology Graduate Committee):

1. Taken the exam again and earned a grade of "B" or better;
2. Completed additional relevant additional course work, or
3. Shown other evidence for competence in the course subject matter

All revalidations of outdated courses should be submitted during the semester the students wish to graduate.

Grades: An overall "B" average is required in courses in the student's program and all courses must be passed with a grade of "B-" or above.

Graduate Committee: Each student must select a research mentor (thesis advisor) to guide their research. The student and research mentor will work together to select at least two additional members for the student's Graduate Committee. At least two members of the committee, including the chair, must be full-time CSUDH biology

faculty. The research mentor (thesis advisor) may be a faculty member from another department or academic institution.

Continuing Student Status: Students must maintain continuous enrollment throughout their time in the graduate program, including the semester they graduate. Students who miss a semester will have to reapply to the university and to the program. Students who have completed all course work may enroll in BIO 600 Graduate Continuation Course (0 units) to maintain continuous attendance.

Planned Graduate Student Leave: It is a university requirement that graduate students maintain continuous attendance throughout the course of their study for the master's degree. Any graduate student in good academic standing may request a Planned Graduate Student Leave (maximal one year) for either professional or personal reasons. You can find the [application form at the website of Graduate Studies](#).

Administrative-Academic Probation: A graduate student may be placed on administrative-academic probation by action of appropriate campus officials for any of the following reasons:

1. withdrawal from all or a substantial portion of a program of study in two successive terms or in any three terms.
2. repeated failure to progress toward the stated degree objective or other program objective (when such failure appears to be due to circumstances within the control of the student).
3. failure to comply, after due notice, with an academic requirement or regulation, which is routine for all students or for a defined group of students.

When such action is taken, the student shall be notified in writing and shall be provided with the conditions for removal from probation and the circumstances that would lead to disqualification, should probation not be removed.

Administrative-Academic Disqualification: A student who has been placed on administrative-academic probation may be disqualified from further attendance if:

1. the conditions for lifting the administrative-academic probation are not met within the period specified.
2. the student becomes subject to academic probation while on administrative-academic probation.
3. the student becomes subject to administrative-academic probation for the same or similar reason for which he/she has been placed on administrative-academic probation previously, although not currently in such status.

When such action is taken, the student shall receive written notification including an explanation of the basis for the action.

University requirements: In addition to the program requirements, students must meet all university requirements for the master's degree. Students should consult the catalog

of the year when they enter the program. For example, if you enter the graduate program in Fall 2020, you can find the university requirements [here](#).

Potential Research Mentors for M.S. Biology Students

Students in the M.S. Program in Biology can select research mentors from research faculty members in Biology Department at CSUDH:

[Karin Kram, Ph.D.](#)

Associate Professor
Microbiology
kkram@csudh.edu

[Samantha Leigh](#)

Assistant Professor
Animal physiology
sleigh@csudh.edu

[Charlene McCord, Ph.D.](#)

Assistant Professor
Marine Biology
cmccord@csudh.edu

[Terry McGlynn](#)

Professor
Tropical ecology, behavioral ecology
tmcglynn@csudh.edu

[Sonal Singhal](#)

Assistant Professor
Computational Biology
ssinghal@csudh.edu

[Kathryn Theiss, Ph.D.](#)

Assistant Professor
Plant Biology
ktheiss@csudh.edu

[Justin Valliere](#)

Assistant Professor
Ecology
jvalliere@csudh.edu

[Fang Wang, Ph.D.](#)

Associate Professor
Developmental Biology
fwang@csudh.edu

In addition, a number of research labs in other Departments at CSUDH (e.g. Psychology or Chemistry Department), and other institutes, such as The Lundquist Institute (formally LA BioMed), Charles Drew University of Medicine & Science, and UCLA, have hosted CSUDH students in the past. A list of potential research mentors outside of Biology Department may be obtained from the Biology Department Graduate Coordinator. Research mentors at other institutions may be used with approval of the Biology Department Graduate Program Committee.

M.S. Thesis Research Proposal Guidelines

Checklist for your thesis proposal

- The M.S. thesis research proposal should be a well thought-out, hypothesis driven proposal. It should include background, references and give the reasoning for the proposed research.
- The proposal should be developed in close communication with the research mentor/advisor, but should be written solely by the student.
- The scope of the research proposed should be reasonable to be accomplished in two years or less.
- It is expected the proposals will be between 2 and 5 single-spaced pages in length, excluding references, although there is no minimum or maximum length.
- Proposals should be given to Committee members for approval at least two weeks prior to the deadline.
- Committee members are encouraged to closely examine the proposal and only sign the thesis proposal approval form if the above guidelines are met.
- The Thesis Research Proposal form should be approved/signed by each committee member and returned to the Graduate Program Coordinator at the end of your first year.
- Failure to submit the approved thesis proposal by the deadline might result in delayed graduation or removal from the program.

Components of your thesis proposal

You should discuss with your research mentors to confirm their expectations. The purpose of a proposal is to inform your thesis committee what you will investigate, why it's important, how you will do the research, and when it will be completed.

- I. Abstract
 - A. A trailer for your thesis (~200 words)
 - B. Brief intro to the problem/key issue, make the key statement of your thesis, give a summary of how you want to address the key issue/solve the problem, include the possible implications of your work
- II. Introduction and literature review
 - A. Existing knowledge/context of prior research in your field
 - B. Significance of the aforementioned field of research
 - C. Thesis project statement
 1. Outline what problem you are trying to solve and highlight your research questions (state your thesis/hypothesis/objective)
- III. Specific aims (think of these as the chapters of your thesis)
 - A. Aim
 1. What will this part of your thesis accomplish?

2. WHY is this part of your thesis critical to addressing your overarching research question?
 - B. Methods
 1. How will you do it?
 - C. Expected outcomes
 1. What results do you anticipate?
 2. Why do you expect these results?
 - D. If you have preliminary results for any of your specific aims, be sure to include it!
- IV. Bibliography/literature cited
- A. Make sure you provide a curated list of all cited works in the proper format (CSE is the recommended format)
- V. Timeline
- A. When will you accomplish each of your specific aims?
 - B. Be sure to acknowledge which semester you think you will be ready to defend your thesis

Exemplar thesis proposals can be requested from the Graduate Program Coordinator. We encourage students to visit the [CSUDH Writing Center](#) to receive additional support in crafting this proposal.

M.S. Thesis Guidelines

- ❑ After completion of the research outlined in the proposal, the student will write a thesis.
- ❑ For general guideline, see the [University Thesis and Project Guide](#).
- ❑ For field specific requirements, discuss with your research mentor
- ❑ For thesis/project formatting assistance, please contact:
Brigette Brown
Thesis & Grant Review Coordinator
Office of Graduate Studies and Research
thesis@csudh.edu
(310) 243-2457
- ❑ Submit [Intent to Submit a Thesis/Project form](#) to Graduate Coordinator before [the University deadline](#).
- ❑ The thesis will be submitted first to the research mentor for approval. Several revisions may be required before approval. Failure to allow enough time for revisions may result in a delay of graduation.
- ❑ After approval by research mentor, the thesis will be submitted to the other members of the Thesis Committee for approval. Please allow several weeks for the committee members to read the thesis.
- ❑ The student and thesis advisor will arrange an oral defense of the thesis, in the form of a public seminar to which faculty, students and the public are invited to attend, before [the University deadline of Committee Member Approvals](#).
- ❑ After a successful defense and receiving approvals from all Thesis Committee members, students are required to submit the thesis before [the University deadline](#).

Deadlines for Graduation

Application for Graduation

Please go to the Graduate Studies [website](#) to find the most current information. The Electronic Application for Graduation must be submitted in accordance with the following schedule. The fees for applying to graduate are due 48 hours after you submit your online application. Failure to apply in accordance with the schedule below could delay your degree past your intended graduation date. Also, there will be additional fees assessed for submitting the graduation application and/or fees after the regular deadline.

Degree Conferral Term	Apply for Graduation	Apply for Graduation with Late Fee
Fall Semester	January 1 - July 1	July 2 - September 15
Spring Semester	June 1 - October 1	October 2 - Last day of fall semester
Summer Session	November 1 - February 1	February 2 - April 15

Please note that if the above dates fall on a weekend or holiday, the deadline will be the following business day.

Thesis Deadlines

Please go to the Graduate Studies [website](#) to find the most current information. The deadlines for submission to the Office of Graduate Studies and Research for final approval are as follows:

Intent to Submit a Thesis/Project Form

	All Students
FALL	September 10
SPRING	February 10
SUMMER	May 20

Committee Member Approvals

	External Degree Programs	On-Campus Programs
FALL	October 3	October 25
SPRING	March 3	March 25
SUMMER	June 3	June 3

Thesis/Project Submission

	External Degree Programs	On-Campus Programs
FALL	October 10	November 1
SPRING	March 10	April 1
SUMMER	June 10	June 10

Note: If a deadline falls on a weekend or campus holiday (including Spring Break), the deadline shall be the first business day following the deadline. **LATE SUBMISSIONS WILL NOT BE ACCEPTED, NO EXCEPTIONS WILL BE MADE.**

Forms

Two forms are included in this handbook.

MS Biology Thesis Research Proposal: This [form](#) is to be filled out with your chosen research mentor, submitted for approval to the other members of your Thesis Committee, and finally submitted to the Biology Department Graduate Coordinator. This should be completed by the end of the first year after you have entered the program.

Independent Study Contract: This form must be submitted for every Directed Reading (Bio 597), Directed Research (Bio 598) and Thesis (Bio 599) course that you take. The forms should be filled out with your research mentor, and should detail what you intend to accomplish during the semester. The form should be submitted to the Graduate Coordinator prior to the third week of the semester to obtain course permission numbers. Your grade will be based on how well you complete the described work. The form can be found [here](#).

BIO 597 Directed Reading: Literature research on a specific subject in biology. Topic for study to be approved and directed by a research mentor.

BIO 598 Directed Research: Research on a specific subject in biology. Topic of research to be approved and directed by a research mentor.

BIO 599 Thesis: Research and/or writing of thesis for the master's degree. Topic of research to be approved by a research mentor.

Additional forms can be found at the [website](#) of Graduate Studies.