

MA IN BIOLOGICAL SCIENCE (STEM CELL)



SACRAMENTO STATE

In Workflow

1. BIO Committee Chair (gilkinson@csus.edu)
2. BIO Chair (trpeavy@csus.edu)
3. NSM College Committee Chair (mikkel.jensen@csus.edu)
4. NSM Dean (datwyler@csus.edu)
5. Academic Services (catalog@csus.edu)
6. Senate Curriculum Subcommittee Chair (curriculum@csus.edu)
7. Faculty Senate Executive Committee Chair (kathy.honeychurch@csus.edu)
8. Faculty Senate Chair (kathy.honeychurch@csus.edu)
9. Dean of Undergraduate and Graduate (s.storms@csus.edu)
10. Provost (maguirem@csus.edu)
11. President (khtudor@csus.edu)
12. Chancellor's Office (s.storms@csus.edu)
13. Catalog Editor (catalog@csus.edu)
14. Graduate Studies (jdsml@csus.edu; mxiong@csus.edu)
15. Registrar's Office (k.mcfarland@csus.edu)

Approval Path

1. Mon, 13 Dec 2021 18:58:58 GMT
Jamie Kneitel (kneitel): Approved for BIO Committee Chair
2. Mon, 13 Dec 2021 18:59:39 GMT
Jamie Kneitel (kneitel): Approved for BIO Chair
3. Wed, 02 Feb 2022 23:57:51 GMT
Mikkel Jensen (mikkel.jensen): Approved for NSM College Committee Chair
4. Wed, 02 Feb 2022 23:58:20 GMT
Shannon Datwyler (datwyler): Approved for NSM Dean
5. Tue, 08 Mar 2022 23:27:19 GMT
Katie Dickson (katiedickson): Approved for Academic Services
6. Sat, 05 Oct 2024 00:05:42 GMT
Katherine Chalmers (chalmers): Rollback to Initiator
7. 2026-05-14T23:10:50Z
101014702: Rollback to Initiator
8. 2026-09-15T17:25:03Z
Jonathan Gilkerson (gilkerson): Approved for BIO Committee Chair
9. 2026-09-16T16:08:03Z
Thomas Peavy (trpeavy): Approved for BIO Chair
10. 2026-09-16T22:56:17Z
Mikkel Jensen (mikkel.jensen): Approved for NSM College Committee Chair
11. 2026-09-16T23:11:53Z
Chris Taylor (ctaylor): Approved for NSM Dean

History

1. Apr 30, 2018 by clmig-jwehrheim
2. Feb 20, 2019 by Kimberly Mulligan (kimberly.mulligan)

Program Discontinuation Proposal

Date Submitted: 2026-05-15T13:27:35Z

Viewing: MA in Biological Science (Stem Cell)**Last approved: Thu, 21 Feb 2019 00:20:46 GMT****Last edit: 2026-05-15T13:27:33Z**

Changes proposed by: Kimberly Mulligan (216222319)

Final Catalog

2022-2023 Catalog

Provide reasons for the program suspension.

The original degree track, MA in Biological Sciences (Stem Cell), was changed during the 2022–2023 academic year in response to Executive Order 1071. The track was first changed to the MA in Biotechnology and was then elevated from an MA to an MS because the program is, and has always been, a research-intensive degree-granting program. As a result, the MA designation was misaligned with the degree-required activities. This change went through the appropriate approval process, including Faculty Senate approval, and was signed by the Faculty Senate Chair and President. It was also approved by the CSU Chancellor's Office (see attached letter). Because the MA in Biological Sciences (Stem Cell) degree track no longer exists, I am requesting that it be formally recognized as discontinued and removed from the course catalog. Its continued presence in the catalog causes understandable confusion for applicants.

Indicate any programmatic or fiscal impact suspension of the program will have on other academic units' programs.

None.

Describe the consultation that has occurred with affected units.

N/A

Explain provisions to ensure currently enrollment students have a reasonable opportunity to complete the program.

At the time of discontinuation, enrolled students had the option to remain in the existing degree track or switch to the MS in Biotechnology, a more competitive degree in the STEM field.

Indicate what resources will be freed up or shifted to other programs as the result of the program suspension.

All resources previously associated with the MA in Biological Sciences (Stem Cell) track have already been shifted to support the MS in Biotechnology program. As a result, the formal discontinuation of the MA track will not free up additional resources; rather, it will accurately reflect the current allocation of faculty, curriculum, advising, and programmatic support.

Suspend: enrollment is suspended for up to three years and program remains in the catalog with a note. Discontinue: enrollment is permanently ended and program is removed from the catalog.

Academic Group: (College)

Natural Sciences & Mathematics

Academic Organization: (Department)

Biological Sciences

Catalog Year Effective:

2022-2023 Catalog

Individual(s) primarily responsible for drafting the proposed degree major program:

Name (First Last)	Email	Phone 999-999-9999
Kelly McDonald	mcdonald@csus.edu	916-278-3558

Program Snapshot**Type of Program:**

Major

Program Change Type:

Non-Substantive

Title of the Program:

MA in Biological Science (Stem Cell)

Designation: (degree terminology)

Master of Arts

Please see the CSU/CIP Code Crosswalk: https://www.calstate.edu/csu-system/administration/academic-affairs/academic-programs-innovation-and-faculty-development/Documents/CSU_Codes_to_CIP_2020.pdf

TMC Templates: <https://c-idsystem.org/transfer-efforts/>

Establishment of a master's degree program should be preceded by a national professional accreditation of the corresponding bachelor's degree major program.

Provide a clear, concise overview of the program proposal (new or change) and provide a justification. For NEW programs describe the purpose and focus of the program, identify the target student population(s), and highlight key strengths and distinguishing features of the program.

In order to meet the requirements for compliance under Executive Order 1071, we have revised the Stem Cell MA curricula such that over 50% of core requirements are consistent with the General MA in Biological Sciences.

University Learning Goals**Graduate (Masters) Learning Goals:**

Critical thinking/analysis
Communication
Information literacy
Disciplinary knowledge
Professionalism
Research (optional)

Will this program be required as part of a teaching credential program, a single subject, or multiple subject waiver program (e.g., Liberal Studies, Biology) or other school personnel preparation program (e.g., School of Nursing)?

No

Curriculum Alignment and Assessment**Program Learning Outcomes**

Provide measurable, program-specific learning outcomes that reflect the most important competencies students will demonstrate upon completion of the program. Programs are expected to assess and use PLOs for continuous improvement.

Catalog Description (catalog copy):

Units required for MA: 30 includes units required in areas of concentration.

Program Description

The graduate programs in Biological Sciences lead to either a Master of Arts (MA) or a Master of Science (MS) degree and provides an opportunity for students to receive advanced training and to pursue independent investigations in particular fields of biology. It allows students to upgrade their qualifications for educational advancement to doctoral programs or for professional advancement in teaching, laboratory work, or fieldwork. The MA degree requires the completion of a project which is a Grant Proposal, unless the student is in the Stem Cell Concentration which requires an Internship Project Report. The MS degree requires completion of a thesis which has concentrations in Ecology, Evolution and Conservation and in Molecular and Cellular Biology so as to provide advanced training and research experience in these fields.

All students are required to complete a project or thesis involving field, laboratory, or literature research. The project or thesis research may be conducted on campus with a biology faculty member or at an off-campus location. In either case, the student's research must make a new contribution to the field of biology. If the research is conducted off campus, a biology faculty member must be identified as the student's graduate advisor. Following admission to the program, students are advised by a temporary graduate advisor or by the faculty member who has agreed to supervise the student in their project/thesis research. Students should plan their academic programs in consultation with a graduate advisor as early as possible, preferably prior to enrollment in the program.

For additional information regarding the Biological Sciences Graduate Program, students may contact the Biological Sciences Department Office, Biological Sciences website (<http://www.csus.edu/bios/>), or consult the Biological Sciences Graduate Program Handbook, available through the Department's Web site.

Admission and Continuation Requirements (catalog copy): minimum GPA and prerequisites (if applicable), required coursework or preparation, portfolio, test scores, and/or letters of recommendation. For graduate programs: expectations for a relevant bachelor's degree (required or preferred disciplines, prerequisite knowledge, or equivalent experience), include evidence that program

requirements conform to the minimum requirements for the culminating experience, as specified in Title 5 Section 40510 The Master's Degree and Section 40511 The Doctoral Degree.

Admission Requirements

Admission as a classified graduate student to the MA or MS program in Biological Sciences requires:

- a baccalaureate degree;
- completion of a major in biological sciences or closely related field; or completion of 24 units of upper division biological sciences courses or courses in closely related fields, each of which must be passed with a "C-" or better;
- a minimum GPA of 2.75 in all biology courses and a minimum GPA of 3.0 in upper division biology courses;
- GRE General Test scores (*note: the GRE is not required for the Stem Cell Program*);
- a faculty member who has agreed to serve as their graduate advisor;
- two letters of recommendation from persons qualified to judge the applicant's potential for successful graduate study; and
- a statement of purpose.

It is important to note that meeting all admission requirements does not guarantee acceptance into the graduate program. Students who have deficiencies in admission requirements that can be removed by specified additional preparation, or who have not been accepted by a graduate advisor, may be admitted with conditionally classified graduate status. Admission as a conditionally classified graduate student does not guarantee fully classified status. Fully classified graduate status is conferred when all deficiencies identified at the time of admission are removed and a biology faculty member has agreed to serve as their thesis advisor. Any deficiencies in admissions requirements will be noted on a written response to the admission application.

Admission Procedures

Applicants must complete a university application by the posted application deadline date for the term applying. :

- an online application for admission; and
- two sets of **official** transcripts from **all** colleges and universities attended, *other than Sacramento State*.

For more admissions information and application deadlines, please visit <http://www.csus.edu/gradstudies/>

In addition, all prospective graduate students must submit the following application materials directly to the Department of Biological Sciences:

- an online departmental application for admission;
- one set of **unofficial** transcripts from **all** colleges and universities attended, *other than Sacramento State*;
- GRE General Test scores (**NOTE:** GRE General Test scores will be accepted after the application deadline but only if the test **was taken prior to the deadline; GRE scores are not needed for the MA Stem Cell Program**);
- two letters of recommendation; and
- a statement of purpose.

Departmental applications for admission are due February 1. There is currently **no general call for admission for students to begin in the spring semester**. However a student may **petition** the department to begin the **spring**. Please contact your potential graduate advisor (i.e., a faculty member in your area of interest) to discuss this option. Approximately eight to ten weeks after receipt of all items listed above, a decision regarding admission will be mailed to the applicant.

No units from the following are acceptable toward the master's degree:

Code	Title	Units
BIO 106	Genetics: From Mendel to Molecules	3
BIO 194	Biology-Related Work Experience	6 - 12
BIO 195	Biological Internship	1 - 2
BIO 197A	Laboratory Teaching Assistant	1 - 2
BIO 197B	Laboratory Techniques	1 - 2
BIO 197C	Co-curricular Activities in Biology	1 - 2
BIO 198A	Honors Proseminar and Research	2
BIO 198B	Honors Research and Seminar	2
BIO 199A	Introductory Undergraduate Research	1 - 2
BIO 199B	Directed Readings	1 - 2

Minimum Units and Grade Requirement for the Degree

Units required for MA: 30 (includes units required in areas of concentration).

Minimum Cumulative GPA: 3.0

Advancement to Candidacy

The Advancement to Candidacy process serves to ensure that a student is qualified for and making good progress toward successfully completing the Master's degree. Each classified graduate student must file an application for Advancement to Candidacy, indicating a proposed program of graduate study. This procedure should begin as soon as the classified graduate student has:

- removed any deficiencies in admission requirements;
- completed at least 12 units in the graduate program with a minimum 3.0 GPA, including at least one course at the 200-level;
- begun a preliminary study for the thesis or project; and
- taken the Writing Placement for Graduate Students (WPG) or taken a Graduate Writing Intensive (GWI) course in their discipline within the first two semesters of coursework at California State University, Sacramento or secured approval for a WPG waiver.

An Application for Advancement to Candidacy forms are available on the Office of Graduate Studies Web site and the Department of Biological Sciences Web site. The student fills out the form after planning a degree program in consultation with his/her Biological Sciences graduate advisor. After approval by the Biological Sciences Graduate Committee and the student's thesis committee, the completed form is returned to the Office of Graduate Studies for approval.

All requirements for the Master of Arts degree must be completed within seven (7) years starting from the time the first course is used to meet the master's degree requirements.

Program Requirements (catalog copy):

Program Requirements¹

Concentration in Stem Cell (30 units)

Code	Title	Units
Required Core Courses (15 Units)		
BIO 220	Introduction to Scientific Inquiry 	2
BIO 221A	Cell and Molecular Methods and Techniques	2
BIO 225	Stem Cell Biology and Manufacturing Practices	1
BIO 227	Development and Regenerative Medicine	3
BIO 293	Research Conference	2
BIO 294A	Seminar in Molecular and Cellular Biology	1
BIO 299	Problems in Biological Sciences	4
Culminating Requirement (2 Units)		
BIO 502	Master's Project ²	2
Additional Requirements (13 Units)		
Select four of the following:		13
BIO 222	Molecular Biology	
BIO 223	Human Molecular Genetics	
BIO 224	Genomics, Proteomics, and Bioinformatics	
BIO 245	Host/Pathogen Interactions	
BIO 247	Contemporary Topics in Immunology	
BIO 282	Evolution	
BIO 299	Problems in Biological Sciences	
CHEM 230	Separation Methods in Chemistry	
CHEM 145/245	Applications of Computational Chemistry	
CHEM 260	Protein Biochemistry	
CHEM 261	Nucleic Acid Chemistry	
Total Units		30

¹ The 30 units must include a minimum of 18 units of 200-level courses.

² No more than 2 units of BIO 502 may be applied toward the 30 unit requirement.

Each student who receives a Master of Arts degree from the Department of Biological Sciences must submit a written project based on a research problem in biology under the supervision of a graduate advisor. A project can be based on either of the following:

- Grant Proposal: a research proposal in the format required by a state or federal granting agency (e.g., National Science Foundation, National Institutes of Health) based on a novel hypothesis that addresses a biological problem; **OR**
- Internship Project Report: a project report on the student's internship experience.

Fiscal Impact to Change an Existing Program

Indicate programmatic or fiscal impact which this change will have on other academic units' programs, and describe the consultation that has occurred with affected units:

This does not impact any other academic units.

Provide a fiscal analysis of the proposed changes:

This program is grant-supported for five years.

How will the above changes be accommodated within the department/College existing fiscal resources?

There is overlap between the MA General and MA Stem Cell programs, so there is no impact from this change.

Will the proposed changes require additional resources?

No

What additional space, equipment, operating expenses, library, computer, or media resources, clerical/technical support, or other resources will be needed?

None

Estimate the cost and indicate how these resource needs will be accommodated:

N/A

Reviewer Comments:

Katherine Chalmers (chalmers) (Sat, 05 Oct 2024 00:05:42 GMT): Rollback: Per email sent 9/10/24: Given the Subcommittee initially reviewed this proposal during the 2021-2022 academic year and duly contacted the proposer with the subcommittee or Faculty Senate Executive Committee's comments without receiving a response, the Subcommittee has decided to roll back this proposal to the proposer so that it can go through the curriculum review process again. Given the length of time that has passed since its initial review, we feel that it should be viewed as a new proposal and undergo all layers of curriculum review as policy has changed in the intervening time period.

Kimberly Mulligan (kimberly.mulligan) (Thu, 14 May 2026 22:16:18 GMT): The contact person should be changed from Kelly McDonald to Kimberly Mulligan: kimberly.mulligan@csus.edu

101014702 (Thu, 14 May 2026 23:10:50 GMT): Rollback: Kim requested it be rolled back so that she can edit the "Individual primarily responsible" section which I cannot edit for her.

Kimberly Mulligan (kimberly.mulligan) (Fri, 15 May 2026 13:31:40 GMT): I was unable to change the contact person information in Workflow. I revised the request to provide additional context and attached the Chancellor's Office approval letter as supporting evidence. I will reach out to Kelly McDonald and ask her to forward any Workflow-related inquiries to me. Alternatively, interested parties may CC me at kimberly.mulligan@csus.edu. Thank you.

Key: 300