

Mission Statement

The Molecular, Cellular and Developmental Biology (MCDB) program at Iowa State University exists to provide advanced level training in the field of molecular, cellular and developmental biology and to foster research excellence in this area across the University.

The rationale for an MCDB graduate major reflects a broad recognition among biologists that the study of cells, the study of development, and the study of life at the molecular level are inseparable, and together constitute a distinct life-science discipline. Molecular techniques are used by all researchers of cellular and developmental biology, and the principles which govern the research and teaching in this area are largely the same whether the cells studied are microbial, fungal, plant, or animal. Because the understanding and study of life at the molecular and cellular levels are central to many of the more traditional life science areas, faculty with research interests and expertise in this area are found in many different departments at ISU. Thus, it is appropriate and necessary for the MCDB major to be offered on an interdepartmental basis.

MCDB Learning Goals

1. Demonstrate comprehensive understanding of scholarly literature in the area of study.
2. Form testable hypotheses and articulate research objectives that, when met, will lead to significant contributions to the field of study.
3. Conduct qualitative and/or quantitative research via appropriate acquisition, analysis, and reporting of data.
4. Interpret research results appropriately, integrating them into the existing knowledge in the discipline.
5. Clearly and accurately communicate research findings orally and in writing, and often through the use images (tables, figures, and other forms of imagery) and electronic or other forms of media.
6. Articulate how the graduate program, including coursework and creative scholarship, fits into life and career goals.
7. Conduct scholarship, in teams or with independence, in ways that consistently demonstrate ethical practice and professionalism.

Faculty

The MCDB faculty has overall responsibility for the quality and well-being of the program and major. Faculty members are drawn from across the university according to their interest and qualifications. New membership in the MCDB faculty is attained by vote of the existing membership.

Students

Students are the most important aspect of the MCDB major. Students are selected competitively according to procedures established by the MCDB faculty.

Administration

The MCDB major is the responsibility of the MCDB faculty and is administered by the Graduate College. The faculty elect a Chair from their membership. The Chair is the designated "Director of Graduate Education", or "DOGE", for the major and as such is the faculty member recognized by the Graduate College to be responsible for the day to day supervision of the major and the monitoring of student progress. The Chair signs for the major, appoints committees, and provides general leadership. The Chair is advised by an Executive Committee constituted by three additional members of the program faculty.

MCDB Policies and Procedures

1. Selection and Appointment of the Chair

The MCDB Program is the responsibility of the MCDB faculty and is administered by the Graduate College. The Graduate College will provide administrative staff support, and office equipment, furnishings and space. The MCDB faculty elect a Chair and Associate Chair from their membership.

□ Chair and Associate Chair

Duties of Chair and Associate Chair

1. All activities of the MCDB Program will be coordinated by a Chair.
2. The Chair is designated "director of graduate education", or DOGE, for the major and as such is the faculty member recognized by the Graduate College to be responsible for the day to day supervision of the major and the monitoring of student progress.
3. The Chair signs for the major, appoints committees other than the Executive Committee and provides general leadership.
4. The Chair's responsibilities include carrying out existing program policies, suggesting new policies, serving as a liaison with higher administration, coordinating the efforts of MCDB committees.
5. The Chair may also assign responsibilities to MCDB Committees, the Associate Chair, faculty or staff; in this instance, the Chair will assume responsibility for assuring that the tasks are performed satisfactorily.

6. The duties of the Associate Chair are to share in administrative duties, as assigned by the active Chair, sign documents in the Chair's absence, and serve on the Executive Committee. This will relieve the Chair of some duties, provide training for the Associate Chair, and provide administrative continuity in the program.
7. Serving as the Chair who is duly appointed by the Graduate College will automatically renew that person's membership in MCDB for a five-year period that begins on the date Chair-service is completed.
8. The Associate Chair will serve a three-year term prior to becoming chair.

□ **Selection of Chair and Associate Chair**

1. The MCDB Chair must be a tenured faculty member residing in any participating department. The MCDB Chair or Associate Chair may not simultaneously hold a departmental Chair position.
2. The terms of office for the Chair and Associate Chair will be three years. The Associate Chair will automatically assume the position of Chair when the active Chair's term expires.
3. Elections for Associate Chair (future Chair) will be held every three years and will be administered by the Executive Committee. Nominations will be solicited from the MCDB membership and nominees willing to serve will be voted upon by the membership.
4. Elections should be held in the Spring with the new Chair's term beginning on July 1.
5. Candidates for Associate Chair should be tenured members of the MCDB Faculty.

2. The Executive Committee

The MCDB Executive Committee is chaired by the program Chairperson and is responsible for reviewing all aspects of the program. The Committee consists of two members plus the Chair and the Associate Chair, and is advisory to the Chair. Members other than the Chair and Associate Chair are appointed from the MCDB faculty for three-year terms and the Executive Committee will identify candidates for vacated Committee positions. The Executive Committee will attempt to maintain as wide a range of representation of the faculty as possible. Terms run from July 1 to June 30.

3. Admission of New MCDB Faculty

Membership in the MCDB faculty is granted through election by the existing MCDB faculty. The term of membership is for five years and is renewable. All faculty terms will end on the June 30 following the end of five years from the first appointment date (if not August 1).

a) Eligibility

Membership in the MCDB faculty is restricted to those with graduate faculty status at ISU.

b) Criteria

In considering a faculty member for membership in MCDB, each applicant's activities in the following areas will be examined:

- The applicant must exhibit a dedication to graduate education, show evidence of graduate education activity, and be judged to maintain high standards in graduate education.
- The applicant must be committed to the concept of interdisciplinary training and be willing to participate actively in the affairs of the MCDB program.
- The applicant must have an active, high quality, research program involving fundamental questions in MCDB.

The quality and appropriateness of the research program will be judged on the basis of the application packet materials submitted electronically that will include:

- A complete curriculum vita;
- A statement of research interests that clearly details aspects related to MCDB;
- The ability to obtain, or the prospects of obtaining, competitively awarded research support in the area of MCDB.

c) Procedure

The MCDB Executive Committee, will review the credentials of the applicant. The committee will submit a recommendation to either approve or not approve the application, along with the complete application packet for vote by the MCDB. Voting will take place electronically and each individual receiving a majority of the votes cast will be granted MCDB faculty membership. The MCDB Chairperson will inform the applicant and the Chairperson of his/her department of the decision of the MCDB faculty. Election will be for a term of five years.

4. Renewal of MCDB Faculty Membership

Faculty terms will only be renewed after review by the MCDB Chair and the Membership Committee and may in some cases require a majority vote by the faculty. Terms are for five years, from July 1 to June 30.

a) Criteria

While the primary point for exercising faculty quality control is at the time of admission to the MCDB faculty, continued membership in the program requires evidence of continued research productivity, activity in graduate student training, and active participation in the MCDB program. Criteria for retention of membership are, therefore, the same as those for admission to the program plus evidence of active participation in the affairs of the MCDB program during the previous five years.

b) Procedure

Faculty whose membership in MCDB will expire during the upcoming summer will be notified by the MCDB Chairperson and asked to submit by email (MS-Word or PDF only) an application for renewal that includes:

- a 1-page cover letter
- an abbreviated 2-page maximum CV that addresses MCDB-related research, graduate student training, and program activities for the past 5 years.

Within these documents will be included details about:

Grants, MCDB-related publications, MCDB-student training activities (including names and dates), MCDB students advised as PI or co-PI, MCDB students advised as POS committee member, MCDB rotation students mentored, MCDB-related courses taught (including course number and date), MCDB-program participation (e.g., organizational or administrative committees served on and associated dates).

If the Chair, in consultation with the Membership Committee, finds that the faculty has demonstrated adequate research productivity, activity in graduate student training, and participation in the MCDB affairs, then program membership will be automatically renewed for a five-year period.

Faculty whose membership is not automatically renewed will be so advised and given the opportunity to either withdraw the renewal application or to submit by email a 1-page statement in support of their continued membership. This statement, together with their other renewal application materials, will be distributed to all MCDB faculty, and a faculty vote will be taken on the renewal request. All MCDB faculty members, even those being considered for renewal, will be eligible to vote by secret ballot. A majority of those voting is required for membership continuation.

6. Student Termination

Students in good standing will have a major professor (after the first year), maintain a grade point average above 3.0, and be making satisfactory progress in their research and MCDB requirements.

Students not in good standing will be notified by the Chair and counseled about program expectations.

After the first year (10.5 months) students who have not been able to find a major professor as well as students who no longer have a major professor will be clearly informed that they cannot remain as an MCDB student for more than one additional term. The program will assist such students to transfer to another major at ISU or to identify other opportunities.

Grievances will be handled according to standard University procedures.

7. Amending this document.

Amendment of this document requires a simple majority of the votes cast by the MCDB faculty members; voting will take place electronically and be administered with oversight by the Executive Committee.