

Mathematics and Science Education Ph.D. Program Bylaws
Washington State University
Administrative Home: Department of Teaching and Learning
Last Revised – by Faculty April 21, 2014, November 2014
Faculty Senate Approval Date: GSC Approved 2.17.2015

I. Objectives

- A. Degree offered: Ph.D.
- B. Discipline: Mathematics and Science Education is a general reference to the fields of teaching and learning in the subject areas of mathematics and science from pre-kindergarten to graduate school.
- C. Mission of the Program: The Ph.D. in Mathematics and Science Education develops scholars capable of making important contributions to the research base, professional context, and learning environments related to mathematics and science education.

II. Membership

- A. Graduate Faculty within the Mathematics and Science Education Ph.D. program may be WSU tenured and tenure track faculty, WSU non-tenure track faculty, or WSU adjunct faculty, subject to the limitations and definitions in this document. All Graduate Faculty must be “Initial Program Faculty” (listed in Section XI of this document) or subsequently approved as Graduate Faculty through the process outlined in section B below.

1. WSU Campus Participation

- a. The doctoral degree in Mathematics and Science Education is offered through the Pullman campus of Washington State University. The faculty and campuses at Vancouver, Spokane, and Tri-Cities contribute to and support this program; they are integral to the functioning of the program.
- b. Approved tenured and tenure track Mathematics and Science Education Graduate Faculty at all regional campuses may participate equally in the Mathematics and Science Education program as supporting site faculty with full program rights and responsibilities. As such they are entitled to act as chair, co-chair, or member of graduate student committees; teach graduate courses; supervise research; and act as a program director or committee member.

2. Graduate Faculty Participation
 - a. Graduate Faculty participation in the Mathematics and Science Education Ph.D. Program is independent and separate from academic department, school, or college affiliations.
 - b. All active members of the Graduate Faculty of the Mathematics and Science Education Ph.D. Program are eligible to vote on program issues.

3. Disciplinary Expertise

Graduate Faculty within the Mathematics and Science Education Ph.D. Program are expected to have a PhD or equivalent doctoral-level degree in a field related to mathematics and/or science education. In addition, they must have demonstrated disciplinary expertise in a field related to mathematics and/or science education, interest and experience in mentoring and teaching of graduate students in this field, and relevant professional accomplishments.

4. Active Research Appropriate to the Mathematics and Science Education Ph.D. Program

Mathematics and Science Education Ph.D. Program Graduate Faculty must be actively involved in research and graduate level teaching related to mathematics and/or science education as evidenced by continuing scholarly or creative work and evidence of substantial involvement in graduate education, including recent external grant or contract support, related peer-reviewed publications within the last 5 years, graduate student mentoring within the last 5 years, teaching of relevant graduate level courses, or other relevant professional accomplishments. New faculty without previous involvement in graduate student advising can satisfy this requirement by having a named mentor whose role is to help the faculty member advise and direct graduate students.

5. Non-Tenure Track Graduate Faculty
 - a. Internal to WSU

Non-tenure track Graduate Faculty internal to WSU include research, clinical, and affiliate faculty. If these non-tenure track faculty internal to WSU have a **history of active** Mathematics and Science Education Ph.D. Program Graduate Faculty participation and hold a Ph.D. or equivalent doctoral degree, they may be entitled to teach graduate courses in the program and act as members of graduate student committees, including chair or co-chair. On a case-by-case basis, the tenure-track Mathematics and Science Education Ph.D. Program Faculty will consider whether a non-tenure track Graduate Faculty member internal to WSU, with a history of active participation in the Mathematics and Science Education Ph.D, is eligible to undertake any or all of the above duties. Approval is subject to review of a signed

petition and review of the faculty's curriculum vita at a Mathematics and Science Education Ph.D. program meeting, and is subject to subsequent majority vote.

b. External to WSU

Professionals who are not WSU faculty may be granted Graduate Faculty participation within the Mathematics and Science Education Ph.D. Program if they hold a Ph.D. or equivalent doctoral degree and are first officially approved as adjunct faculty for WSU. Adjunct faculty who are approved as active Mathematics and Science Education Ph.D. Program Graduate Faculty are entitled to act as a member of graduate student committees; teach graduate courses; and supervise research. They may not serve as student committee chair or co-chair, or as a Mathematics and Science Education Ph.D. Program Committee member.

6. External Individual Committee Members

a. ***Individual Committee Member Internal to WSU:*** Individuals not officially participating as Graduate Faculty within the Mathematics and Science Education Ph.D. Program (for example, a faculty member from another WSU department or program) may serve on graduate committees as long as they hold a Ph.D. or equivalent doctoral degree and are a member of the Graduate Faculty in their own program or discipline and their committee appointment is approved by the Coordinator of the Mathematics and Science Education Ph.D. Program.

b. ***Individual Committee Member External to WSU:*** Individuals not officially participating as Graduate Faculty within any graduate program at WSU (for example, a faculty member from another university or research entity who holds a Ph.D. or equivalent doctoral degree) may be approved to serve as a dissertation committee member for an individual student on a case-by-case basis. The committee chair for that student should forward the name and a curriculum vitae of the desired committee member to the Mathematics and Science Education Ph.D. Program Coordinator. With approval of the Program Coordinator, the nomination (with accompanying CV or other documentation of expertise) is forwarded to the Chair of the Department of Teaching and Learning for approval, followed by forwarding to the Dean of the Graduate School for final approval.

B. Application for Membership

1. Initial Graduate Faculty within the Mathematics and Science Education Ph.D. Program are listed in Section XI of this document and have been approved by

the Mathematics and Science Education Ph.D. Program existing faculty, Mathematics and Science Education Ph.D. Program Coordinator, the Chair of the Department of Teaching and Learning, and Dean of the Graduate School.

2. Candidates for Graduate Faculty participation within the Mathematics and Science Education Ph.D. Program should be nominated by an existing Mathematics and Science Education Ph.D. Program Graduate Faculty member or may self-nominate. The nomination should include a letter of nomination, and a curriculum vitae for the nominee. The Program Coordinator will circulate application materials to all active Graduate Faculty prior to voting. Acceptance as Graduate Faculty requires a positive vote from a majority of faculty who respond to the vote.
3. In addition to a commitment to maintain the highest standards of mentoring for graduate students, anticipated contributions or qualifications for all successful Graduate Faculty applicants include history of regular attendance or, in the case of new faculty, participation in Mathematics and Science Education Ph.D. Program faculty meetings plus one or more of the following:
 - a. History or reasonable expectation of an active, funded research program that can plausibly be relied upon as the source of continuing support of a Mathematics and Science Education Ph.D. Program graduate student.
 - b. History of or willingness to participate as appropriate in administrative, teaching, and other functions of the Mathematics and Science Education Ph.D. graduate program. This may include serving on graduate program administrative committees; serving as a dissertation committee member or chair; or providing graduate level instruction.
 - c. History of publication of peer-reviewed manuscripts in a discipline related to Mathematics and Science Education.

C. Continuation of Active Membership

1. Graduate Faculty appointments to the Mathematics and Science Education Ph.D. Program will be reviewed for continuation of active membership by the Program Coordinator every 3 years with one-third of the membership reviewed each year. They will be evaluated for contributions to graduate instruction, research, and teaching. Contributions to the Mathematics and Science Education Ph.D. Program shall be a requirement for continued active membership. Contribution may take the form of:
 - a. Committee chair, co-chair or member for graduate students in the Mathematics and Science Education Ph.D. Program

- b. Teaching or co-teaching a graduate course in the Mathematics and Science Education Ph.D. Program
 - c. Supervising research for graduate students in the Mathematics and Science Education Ph.D. Program
 - d. Serving in the administrative and committee structure of the Mathematics and Science Education Ph.D. Program, including roles as Coordinator, Co-coordinator, or committee member
2. Faculty who do not make any of the contributions as stated in C.1 above to the Mathematics and Science Education Ph.D. Program for three consecutive years will be designated as inactive Graduate Faculty. Inactive Graduate Faculty do not have voting rights. Initiation of any of these activities described in C.1 above will result in eligibility for restoration of active Graduate Faculty designation, upon approval of the Mathematics and Science Education Ph.D. Program Graduate Faculty, as outlined in Section II.B.2.
- D. **Discontinuation of Membership**
 Upon request of an active or inactive Graduate Faculty member, that individual membership will be discontinued. They may reapply for Graduate Faculty participation at any time.
- E. **Membership Appeal Process**
 Faculty appeal of any membership decision in the Mathematics and Science Education Ph.D. Program must be made in writing to the Coordinator of the Mathematics and Science Education Ph.D. Program within 30 calendar days of the decision. The appeal is determined by a majority vote of all Mathematics and Science Education Ph.D. Program Graduate Faculty (see Section IX for definition of quorum). Final written appeal may be made to the Chair of the Department of Teaching and Learning and the Dean of the Graduate School within 30 calendar days of the Mathematics and Science Education Ph.D. Program Graduate Faculty vote.

III. Administration

Administration of the program and its activities is vested in the Coordinator with advice from members of the Mathematics and Science Education Ph.D. Program Committee.

IV. Program Coordinator

- A. The Coordinator of the Mathematics and Science Education Ph.D. Program will be elected in the Spring semester prior to the academic year of service. Candidates for the Coordinator position can be nominated or self-nominated at a meeting during that time. Only active Mathematics and Science Education Ph.D. Program Graduate Faculty are eligible for the position and to vote. In the case of more than

one candidate, the candidate receiving the highest vote total will be named Coordinator. Final approval of the Program Coordinator resides with the Chair of the Department of Teaching & Learning and the Dean of the College of Education.

- B. The Coordinator shall serve a term of 1 year and is eligible for re-election if nominated to continue in this position in accordance within the terms of the initial appointment and with final approval of the Chair of the Department of Teaching & Learning and the Dean of the College of Education as described in IV.A above. The Coordinator will also serve as the Assistant Coordinator the year before taking the Coordinator position.
- C. The duties of the Assistant Coordinator are to consult with the Coordinator on decisions for which the Coordinator would like a second opinion but for which the full committee does not need to be convened. The Assistant Coordinator may also run Program meetings if requested to do so by the Coordinator.
- D. The Coordinator may be removed from office by a majority vote of all active Mathematics and Science Education Ph.D. Program Graduate Faculty and with the approval of the Chair of the Department of Teaching & Learning and the Dean of the College of Education as described in IV.A above.
- E. Duties of the Coordinator
 1. Provide overall academic leadership for the Mathematics and Science Education Ph.D. Program.
 2. Consult the Assistant Coordinator as needed in regard to decisions about program, students, or faculty, especially in cases when the full program faculty cannot be included in decision-making.
 3. Develop and implement policies for the Mathematics and Science Education Ph.D. Program when needed.
 4. Represent the interests of the Mathematics and Science Education Ph.D. Program to the campus and University administrators.
 5. Call and preside at meetings of the Graduate Faculty of the Mathematics and Science Education Ph.D. Program.
 6. Be responsible for coordinating all the Mathematics and Science Education Ph.D. Program administrative matters within the Graduate School.
 7. Submit course or curriculum change or approval forms and ensure that faculty are aware of the need, have discussed, and approve of the change.
 8. Submit bylaws changes or approval forms.
 9. Be responsible for the accuracy of all publications related to the Mathematics and Science Education Ph.D. Program including student handbooks, recruitment materials, web pages, and catalog copy.
 10. Coordinate the Mathematics and Science Education Ph.D. Program graduate course teaching assignments and scheduling with relevant department chairs and campus academic directors.

11. Supervise the activities of the Mathematics and Science Education Ph.D. Program Academic Coordinators as they relate to the program.

V. Committees

- A. Faculty Committee
Advises and assists the Coordinator in administering the Mathematics and Science Education Ph.D. Program, and assists with recruitment, admission, and curriculum. All active Mathematics and Science Education Ph.D. Program Graduate Faculty comprise the Faculty Committee.

1. Areas in which the Faculty Committee shall assist and advise the Coordinator include:
 - a. Review, develop and update long-range goals for the Mathematics and Science Education Ph.D. Program and plans for their attainment. These ideas shall be reviewed annually.
 - b. Serve as a sounding board for new ideas, changes, etc., in academic or administrative issues.
 - c. Provide guidance on administration of the Program.
 - d. Nominate members for service on other committees.
 - e. Assist with the Mathematics and Science Education Ph.D. Program assessment process.
 - f. Develop an annual recruitment plan, set goals, implement and assess the plan.
 - g. Review all student applications and in conjunction with the Coordinator, decide the disposition of applications as to acceptance or rejection in a timely manner.
 - h. Make recommendations to the Coordinator regarding the financial support of graduate students for their first year.
 - i. Review the Mathematics and Science Education Ph.D. Program curriculum.
 - j. Make recommendations for curricular improvements/renewal.

2. Other Committees

Other ad hoc committees may be appointed by the Faculty Committee and Coordinator as needed. Addition of new, or changes to the existing, standing committees must be approved by amendment of bylaws.

VI. Graduate Student Committees

- A. The initial selection, or subsequent changes, of a graduate student's committee shall be determined jointly by the student and the student's advisor. In accordance with

the Policies and Procedures of the Graduate School at WSU, graduate students are not permitted to serve on the committees of other graduate students.

- B. The graduate committee of each student shall have a minimum of three members for all College of Education graduate degrees.
 - 1. The committee chair requires tenure track and Mathematics and Science Education Ph.D. Program Graduate Contributing Faculty, with the exception that the Graduate Faculty can approve a clinical faculty member as chair on a case by case basis, as described in Section II.A.5. In all cases, at least two of the committee members must be active Mathematics and Science Education Ph.D. Program Graduate Faculty members and at least two of these members must hold permanent WSU tenure-track status. All committee members must hold a graduate doctoral degree comparable to the degree sought by the candidate.
 - 2. Fourth committee member: For any non-WSU member, or for any non-tenured/non-tenure track WSU faculty outside the Graduate Program, please attach a vitae and include a rationale in the Program of Study to be reviewed for approval by the Dean of the Graduate School.
 - 3. The Chair of the Department of Teaching and Learning must approve the committee composition.
- C. As specified in the Graduate School's Policies and Procedures, the performance of each graduate student shall be reviewed annually.

VII. Student Representatives

At the discretion of the Mathematics and Science Education Ph.D. Program Coordinator and Faculty, student representation may be added or deleted from any committee structure. In accordance with the Policies and Procedures of the Graduate School at WSU, graduate students are not permitted to serve on the committees of other graduate students.

VIII. Graduate Faculty Meetings

- A. The Mathematics and Science Education Ph.D. Program Coordinator shall call Mathematics and Science Education Ph.D. Program Graduate Faculty meetings as needed but at least once per academic year. All attempts will be made to provide a written agenda in advance.
- B. Other meetings may be called at the discretion of the Coordinator or the Faculty Committee.
- C. A special meeting of the Mathematics and Science Education Ph.D. Program Graduate Faculty may be called by petition of 3 or more Graduate Faculty members.

- D. Efforts will be made to communicate items of interest, including notification of a faculty meeting, to the faculty via e-mail. Mathematics and Science Education Ph.D. Program Graduate Faculty Meetings shall be called with a minimum of 1 week's notice.

IX. Quorum

- A. For all general graduate faculty meetings and votes unless otherwise indicated, a quorum shall be defined as a minimum of 50 percent of the Program membership.
- B. For programmatic committees to conduct a business meeting, a quorum shall be defined as a minimum of 50 percent of the committee membership.
- C. Unless otherwise indicated, a simple majority of the total number of ballots cast are required to pass a motion.
- D. In the event of a tie vote in which the entire graduate faculty is eligible to vote, the Program Director will decide the outcome of the vote. For tie votes that occur within programmatic committees, the committee chair will decide the outcome of the vote.

X. Amendments to Program Bylaws

- A. The Program Bylaws document shall be reviewed every fifth year by the Faculty Committee and annually by the Coordinator.
- B. Amendments to the Bylaws may originate from any eligible Mathematics and Science Education Ph.D. Program Graduate Faculty member. Proposed amendments must be forwarded to the Mathematics and Science Education Ph.D. Program Faculty Committee and Program Coordinator. After discussion, amendments shall be forwarded to the Mathematics and Science Education Ph.D. Program Graduate Faculty electronically at least 2 weeks prior to the faculty meeting at which the amendments will be discussed. After discussion, a minimum 2-week period will follow the faculty meeting prior to vote. Votes on amendments may occur at a faculty meeting or electronically. Amendments to the Mathematics and Science Education Ph.D. Program Bylaws require a positive vote from the majority of all active Mathematics and Science Education Ph.D. Program Graduate Faculty.
- C. All amendments and revisions must be submitted to the Department of Teaching and Learning, the Graduate Studies Committee and Faculty Senate for review and final approval.

XI. List of Initial Graduate Faculty Participants

A. List of initial Mathematics and Science Education Ph.D. Program Contributing Faculty

Participants:

Kathy Baldwin

Andy Cavagnetto

Jo Clay

Jonah Firestone

Janet Hart Frost

Richard Lamb

Kristin Lesseig

Amy Roth McDuffie

Judy Morrison

Tamara Holmlund Nelson

David Slavit

- B. The Coordinator of the Mathematics and Science Education Ph.D. Program is responsible for submitting an updated list of active and inactive Mathematics and Science Education Ph.D. Program Graduate Faculty participants to the Chair of the Department of Teaching and Learning and the Dean of the Graduate School for approval annually.