K-12 School-Based Online Master of Science in Mathematics Education or Science Education Handbook

Extended Campus (Ecampus)
College of Education
Oregon State University

February 2013
Table of Contents

Welcome .................................................................................................................. 2
Learning Outcomes ................................................................................................. 2
Course Delivery ........................................................................................................ 2
Registering for Courses ......................................................................................... 3
Course Materials ..................................................................................................... 3
Tuition and Fees ....................................................................................................... 3
Financial Aid ............................................................................................................ 3
Graduate School GPA Requirements ...................................................................... 3
Academic Honesty ................................................................................................... 4

Flow Chart for Successful Degree Completion ...................................................... 5
Major and Minor Fields of Study ............................................................................ 6
Course Requirement ............................................................................................... 6
  Required courses .................................................................................................. 6
  Recommended Elective courses ......................................................................... 6
  Education Elective courses ............................................................................... 6
  Example Schedule .............................................................................................. 7
Transfer Credits ...................................................................................................... 7
Capstone Project ...................................................................................................... 8
Final Oral Examination ......................................................................................... 8
Master’s Committee ............................................................................................... 8
Petition for Change of Program ........................................................................... 8
Timing of Program Completion ............................................................................. 8
Leave of Absence .................................................................................................... 8
Grades ..................................................................................................................... 9
Transcripts ............................................................................................................... 9
Applying for Graduation ....................................................................................... 9
Master’s Degree Graduation Deadlines ................................................................. 9
Choices for Receiving Your Diploma .................................................................... 10
  Commencement ................................................................................................ 10
  Pick-up from Office of the Registrar ................................................................ 10
  Mailing .............................................................................................................. 10

Master of Science Oral Exam Information ........................................................... 11
  Petition for Change in Program ..................................................................... 11
  Scheduling Your Master’s Degree Examination ........................................ 11
  Completing the Scheduling Form ................................................................. 12
  Preparing for the Master’s Degree Examination ........................................ 12
  Expectations Following the Master’s Degree Examination ....................... 13

Online Resources ................................................................................................. 14
Welcome

Oregon State University is located in the heart of the Willamette Valley in Corvallis, Oregon. The university has a rich history dating back to 1868 when Corvallis College was designated the Agricultural College of the state of Oregon. It was not until 1961 that the title Oregon State University was adopted. OSU is only one of two universities in the United States to have Land Grant, Sea Grant, Space Grant and Sun Grant designations. Nearly 25,000 students from across all 50 states and 100 countries make up the diverse student body at OSU.

OSU has made online course and program development a priority since 2002. OSU’s Extended Campus (Ecampus) is ranked No. 8 on SuperScholar’s annual list of the 25 best online colleges and universities in America. All online courses offered through the Ecampus carry similar requirements to courses offered on campus. The Northwest Commission on College and Universities regionally accredits OSU including Ecampus courses and programs. All Ecampus graduates receive the same diploma as on campus students.

The K-12 School-Based Online Master of Science in Mathematics Education or Science Education will expand your knowledge and help you grow as a teacher for the 21st century with an emphasis in the integration of technology in interdisciplinary science and mathematics contexts.

Besides developing your knowledge and skill communicating in an online learning environment, you will be learning to incorporate a variety of technologies in your classroom including dynamic spreadsheets, temperature probeware, web design software, video and screen capture, as well as Web 2.0 tools such as Jing and Google Drive.

If you are new to the online learning environment, it may take you some time to adjust. Please know that this timeline is normal. The faculty are here to help your experience be as successful as possible, and everyone is excited to be working with you.

Learning Outcomes

Teacher participants in the program will:

- Deepen their interdisciplinary content teaching knowledge and skills in mathematics and science with specific attention to the impact of appropriate technologies, thus improving their pedagogical content knowledge for teaching interdisciplinary mathematics, science and technology.
- Increase their knowledge, skills and abilities to integrate technologies that enhance their students’ mathematics and science learning thus increasing their technological pedagogical content knowledge for teaching with technologies.
- Become professional development leaders mathematics/science coaches/mentors in their schools and/or districts in integrating technology in ways that enhance science and mathematics teaching, learning and achievement.

Course Delivery

All courses are facilitated through the Blackboard educational platform. To access course materials, participate in class discussions and turn in assignments you must have an OSU Network ID (ONID) account. As a student of OSU, an ONID account can be set up via the following link:
ONID accounts are also necessary to register for courses. Once your ONID account has been activated you will be able to login to Blackboard at https://my.oregonstate.edu/webapps/portal/frameset.jsp. For an optimal experience, it is recommended that you use the browser Mozilla Firefox when using Blackboard. Mozilla Firefox can be downloaded for free at www.mozilla.org.

As an entirely online program, you are encouraged to use Skype for video and/or voice conferencing with not only faculty but also other students in the program. If you do not already use Skype please visit www.skype.com to set up your free account. You will also need to sign-up for a Google account if you do not already have one, so that you have access to all Google Applications, which will be used in various courses. To set up a Google account visit https://accounts.google.com/SignUp?continue=https%3A%2F%2Faccounts.google.com%2FManageAccount

Registering for Courses

All course registration is completed through Online Services using your ONID login information. Once you login select the Registration menu. You may now search for classes to add, register, or drop. For courses offering multiple sections, be sure to register for the course with the appropriate course registration number (CRN). The Ecampus schedule of classes is available at http://ecampus.oregonstate.edu/soc/. The complete general catalog and schedule of classes offered by OSU is available at http://catalog.oregonstate.edu.

Course Materials

Course textbooks and materials may be purchased online through the OSU Beaver Store at http://osubeaverstore.com/Academics/. Please note that only materials for the current term may be purchased. Of course, you can head to the general merchandise side of the OSU Beaver Store to stock up on your Beaver gear and proudly wear your Orange and Black http://osubeaverstore.com/.

Tuition & Fees

Information regarding tuition and fees for Ecampus courses is available at http://ecampus.oregonstate.edu/services/ tuition/

Financial Aid

For information regarding financial aid please refer to Ecampus at http://ecampus.oregonstate.edu/services/tuition/financial-aid.htm

If you are receiving financial aid of any kind, it is your responsibility to protect your eligibility to receive financial aid by meeting any necessary requirements. Typically, you must be registered for at least five credits (a minimum of half of full time graduate credits).

Graduate School GPA Requirements

A grade-point average of 3.00 (a B average) is required for:
- all courses taken as a degree-seeking graduate student
courses included in the graduate degree program of study. Grades below C (2.00) can not be used on a graduate program of study. A grade-point average of 3.00 is required before the final oral or written exam may be undertaken.

**Academic Honesty**

Distance education students are held to the same academic standards as on-campus students. All students are expected to be honest and ethical in their academic work. Oregon State University defines academic dishonesty as “an act of deception in which a student seeks to claim credit for the work or effort of another person, or uses unauthorized materials or fabricated information in any academic work or research, either through the student’s own efforts or the efforts of another.” Academic dishonesty includes cheating, fabrication, assisting, tampering, and plagiarism. For further information regarding academic honesty policies refer to [http://oregonstate.edu/studentconduct/regulations/index.php#acdis](http://oregonstate.edu/studentconduct/regulations/index.php#acdis).

Test your knowledge of academic honesty by taking an academic integrity quiz is available at [http://oregonstate.edu/studentconduct/student/quiz.php](http://oregonstate.edu/studentconduct/student/quiz.php).

Evidence of academic dishonesty in any OSU course may result in a grade of “F” on the assignment that involved cheating and/or an “F” in the course.
Flow Chart for Successful Master’s of Science in Science or Mathematics Education
Degree Completion at Oregon State University
adapted from http://oregonstate.edu/dept/grad_school/current/flowchart-Masters.pdf

Degree Requirements

Admission

Discuss your goals and expectations with your major professor

Take courses.
Determine eligibility of transfer credits, if any.

Before completing 18 credits of coursework:
Develop a Program of Study* with your major professor.
*This is your plan for completing your degree.

Continue taking classes
Through coursework develop Capstone

At least 15 weeks before your final oral examination:
1. Update your approved program of study to the Graduate School
2. Submit diploma application

At least 2 weeks prior to the oral examination:
Use the online form to schedule your final oral examination.

At least 1 week prior to the oral examination:
1. Distribute a defendable copy of your Capstone to your committee.
2. Work with your major professor in preparing an electronic presentation to be used when you present your Capstone in the examination

During the final term of your OSU coursework
1. Complete your final coursework
2. Complete your Oral Examination
3. Submit your final Capstone to your Major Professor

Graduation
Major and Minor Fields of Study

The student’s major will be either mathematics education or science education. The most common approved minors are mathematics education (K-8, middle or high school) and science education (K-8, middle or high school).

Program of Study

All graduate students are required to develop a Program of Study with your major professor prior to completing 18 credits of coursework. This program is your plan for completing your degree. Your Major Professor, Minor Professor and the Dean of the College of Education must sign your Program of Study prior to its submission to the Graduate School for approval. Your major professor will provide the official copy of your Program of Study, however, blank copies are available at http://oregonstate.edu/dept/grad_school/forms.php#program.

Course Requirements

The Master of Science in Mathematics Education or Science Education requires students to complete 45 credit hours of Graduate level course work. All coursework and degree requirements must be completed within the most current 7 years.

Required courses (all are 3 credit hours):

- SED 588/598 Mathematics/Science Curriculum
- SED 593/594 Advanced Instructional Strategies: Science/Mathematics
- SED 595 Assessment and Evaluation
- SED 597* Professional Development in Mathematics and Science Education
- SED 580* Research and Evaluation
- SED 581/592* Professional Development and Practicum in Mathematics/Science

*These three courses collectively meet the Graduate School Ethical Research Training requirement

Recommended elective courses (all are 3 credit hours):

- SED 520 Integrating Technology & Literacy in Learning Mathematics & Science
- SED 521 Teaching Mathematics/Science with Digital and Video Technologies
- SED 522 Dynamic Spreadsheets as Learning Tools in Science and Mathematics
- SED 564 Engineering & Science in Lives of Students
- SED 565 Inquiring into Science and Mathematics Learning and Teaching
- SED 566 Fostering Reflective Discourse in Science and Mathematics Contexts
- SED 568 Enhancing Literacy Learning in Science and Mathematics Contexts
- SED 589 Advanced Topics: Mathematics Education
- SED 599 Topics in Science Education

Education Elective courses (all are 3 credit hours):

- TCE 542 Teacher Leadership
- TCE 543 Politics, Policy, and Advocacy in Education
- TCE 545 Planning Curriculum Aligned to Standards
- TCE 549 Teaching in a Differentiated and Diverse Classroom
- TCE 553 Critical Issues in the Teaching and Learning of Mathematics
- TCE 562 Introduction to Research Methods in Education
- TCE 564 Advanced Instructional Strategies
Example Schedule

OSU is a quarter-based system. A typical rate of progress would be to enroll in one course each academic quarter and two courses during the summer for three years to complete the minimum 45 credits of graduate study for the Master’s degree. Work with your major professor to complete a formal program of study that is submitted to the Graduate School before completing 18 credits. Required courses are starred (*).

<table>
<thead>
<tr>
<th>Year</th>
<th>Summer</th>
<th>Fall</th>
<th>Winter</th>
<th>Spring</th>
<th>Add Elective</th>
</tr>
</thead>
</table>

Transfer Credits

Up to 15 graduate credits may be transferred towards a 45-credit master’s degree upon approval of the graduate committee and the Graduate School. Courses to be transferred must be graduate level (no professional development credits are accepted), taken after the completion of a four-year baccalaureate degree (or equivalent) and meet the following requirements:

- the work is appropriate to and will be placed on the student’s graduate degree program
- the transfer is approved by the student’s committee, by the major program, and by the Graduate School
- grades of “B” (3.00) or better have been earned

No transfer credit will be granted for courses that will be older than 7 years at the time of degree completion.

Students who wish to transfer graduate credits from other schools must provide transcripts for courses already completed to the Graduate School prior to the submission of the Program of Study. A copy of the transfer credit request can be found at [http://oregonstate.edu/dept/grad_school/forms.php#transfer](http://oregonstate.edu/dept/grad_school/forms.php#transfer)
Capstone Project

For the K-12 online MS program the Capstone involves the development, implementation and evaluation of a professional development project in your school/district or surrounding educational area. SED 597 and SED 580 coursework provide the preparation of the proposal for the Capstone. SED 581/592 is the course for the implementation, evaluation and completing of the Capstone. The Capstone project should contribute to the practice of mathematics/science teaching with 21st century technologies. The project report must communicate effectively the findings and results to an audience of practitioners. The project must be well researched, relevant to its target audience, reliable and academically defensible.

Final Oral Examination

The Master of Science in Mathematics Education or Science Education requires a final oral examination conducted by the Master’s Committee. The examination includes a presentation and defense of your Capstone project to your Master’s Committee as well as examination of the program coursework. For more detailed information see the Master of Science Oral Exam section.

Master’s Committee

A student’s Master’s Committee to conduct the Masters Examination includes the major professor, minor professor and one other member. The student chooses the remaining member committee member with the help of the major professor. All committee members must be approved for the graduate faculty.

Petition for Change of Program

If changes are made to your Program of Study, a Petition to Change Program form or a revised Program of Study must be submitted to the Graduate School prior to the final oral exam. A copy of this form can be found at http://oregonstate.edu/dept/grad_school/forms.php#change.

Timing of Program Completion

All students are expected to progress through the program in a timely manner. In general this means that programs are to be filed, courses taken and other requirements met at the earliest opportunity. Since the major of our students are working fulltime, the suggested pacing is one course per term during the academic year and two courses during summer term. With the suggested pacing students can expect to finish the program in three years. However, all work toward this degree, including transfer courses, must be completed within 7 years.

Leave of Absence

To remain in good standing with the Graduate School, Oregon State University requires continuous enrollment of all graduate students by enrolling for a minimum of 3 graduate credits every term. In the event that you are unable to maintain continuous enrollment, you may apply for a Leave of Absence.

Master’s degree students may request a maximum of 3 academic terms of regular on-leave status. Summer term does not count towards this limit. All approved on-leave absence time will be included in the 7-year limit for completing all requirements to the master’s degree.
The Graduate School must receive all Leave of Absence forms at least 15 working days prior to the first day of the term of leave. A completed form, available at http://oregonstate.edu/dept/grad_school/forms.php#resume, must include both your Major Professor and the College of Education Dean’s signatures.

**Grades**

All unofficial grade reports, including a transfer credit summary, are available through Online Services at https://admininfo.ucsadm.oregonstate.edu/prod/twbkwbis.P_WWWLogin. Updated grade reports are available online the Wednesday after finals week. For a complete explanation of the grading system used at OSU go to http://catalog.oregonstate.edu/ChapterDetail.aspx?key=9#Section171.

**Transcripts**

The Office of the Registrar maintains all academic records. Unofficial transcripts are available through Online Services at https://admininfo.ucsadm.oregonstate.edu/prod/twbkwbis.P_WWWLogin. Official transcripts contain a summary of transfer credits and detailed course information for OSU credits. Official transcripts mailed to the student are enclosed in a sealed envelope. Official transcripts cannot be faxed. For complete information on ordering Official Transcripts refer to the Office of the Registrar at http://oregonstate.edu/registrar/transcripts/.

**Applying for Graduation**

Application for graduation must be submitted no later than the end of the second week of the term in which you plan to complete degree requirements.

To apply for graduation go to Online Services at https://admininfo.ucsadm.oregonstate.edu/prod/twbkwbis.P_WWWLogin. You will need your ONID login information to complete the application.

A corrected Program of Study must be filed with the Graduate School prior to applying for graduation. If you apply under the incorrect Program of Study, you must cancel the application, file a new Program of Study or a Petition to Change Program form with the Graduate School, and then reapply for graduation. Applications can be canceled through Online Services.

For further information on applying for graduations refer to the Office of the Registrar at http://oregonstate.edu/registrar/apply-graduation.

**Master’s Degree Graduation Deadlines**

These deadlines occur usually before the actual oral examination:

Application for graduation must be submitted no later than the end of the second week of the term in which the student plans to complete degree requirements. Review this website http://oregonstate.edu/registrar/apply-graduation
If you are graduating spring term and want to participate in commencement, check these deadlines: http://oregonstate.edu/dept/grad_school/deadlines.php

**Choices for Receiving Your Diploma**

**Commencement**
The most exciting way to receive you diploma is to attend Oregon State University’s annual commencement in June. To participate you must R.S.V.P. via Online Services at https://admininfo.ucsadm.oregonstate.edu/prod/twbkwbis.P_WWWLogin. Once you have logged in, enter the Student Records menu, and select Commencement Attendance Confirmation. You will then have the option to select “I will be attending commencement.” In April, the Office of the Registrar will send detailed information regarding the commencement ceremony. All graduates are required to wear a cap and gown, which may be purchased from the OSU bookstore or by phone at 800-595-0357 beginning in mid-April. If you will be attending the commencement ceremony, do not pick-up your diploma in advance.

**Pick-up from the Office of the Registrar**
If you are unable to attend the commencement ceremony, your diploma will be available approximately two weeks after the posting of degrees, which is typically about six weeks after the end of the term. You may pick up your diploma in person from the Office of the Registrar by presenting picture identification. You may authorize another person to pick up your diploma on your behalf by completing the Diploma Release Request form, which can be obtained from the Office of the Registrar.

**Mailing**
You may also choose to have your diploma mailed by completing the Duplicate Diploma and Diploma Mailing Request from, which is available from the Office of the Registrar. The current fee for mailing diplomas in the United States is $25 and $40 for international mailing.
Master of Science (MS) Oral Examination Information

Master's Degree Final Examination Expectations

The Master of Science in Mathematics Education or Science Education requires a final oral examination. Typically, you take this examination during the last quarter of the program since you must be registered at OSU for at least 3 graduate credits during the term of this examination. You must have a minimum GPA of 3.00 on both your MS Program of Study and cumulative graduate transcript to schedule the final oral examination. All course work with a grade of Incomplete (I) appearing on the program of study must be completed prior to scheduling the final oral examination. You must schedule your examination with the Graduate School at least two weeks in advance to allow time for the Graduate School to audit your approved Program of Study. Therefore, your approved Program of Study must include any changes in your program.

Petition for Change in Program

Changes to the Program of Study must be filed prior to scheduling the final examination, either using a Petition for Change in Program form, or by submitting a revised Program of Study. Your major professor, perhaps your minor professor (if the course changes are in your minor), and the Dean of Education must approve this petition prior to submission to the Graduate School for approval.

Scheduling Your Master’s Degree Examination

Communicate with your major professor when you plan to schedule your Master’s degree examination. You may participate in this examination remotely via Skype or another form of communication that assures that you are participating with both video and audio connection. Members of the committee may also attend remotely if needed but only audio is a requirement for these members.

Once you and your major professor have identified who and where the examination might take place, you must contact members of the committee to arrange the specific data and time for the examination. Then, you must schedule the examination with the Graduate School not less than two weeks before the time using the Exam Scheduling Form found at http://oregonstate.edu/dept/grad_school/phpforms/event.php. The examination should be scheduled for two hours.

You are responsible for:
- Informing the Graduate School of the date, time, and place of the examination
- Confirming the committee membership
- Notifying and reminding the committee members of the examination date, time, and place
- Providing an electronic copy of your Capstone to your committee members at least one (1) week in advance of the examination. If your Capstone project is not yet complete, provide a progress report that includes as much of the Capstone as possible. (The Capstone project must be completed before the Master’s degree can be conferred. If the grade in SED 581 or SED 592 is an incomplete, the Master’s degree cannot be conferred until removal of the incomplete even if you have successfully passed the Master’s Examination.)
- Preparing a 30-minute presentation of your Capstone project.
Completing the Scheduling Form:

**Preferred Mailing Address**
- Select Science and Mathematics Education for the primary OSU department.

**Description of Program**
- Choose Final oral examination (Master’s)
- Choose non-thesis option
- Choose Master of Science (MS)
- Choose Mathematics Education or Science Education for Primary Major
- If applicable, identify correct selection for your Minor

**When and Where:**
- Date:
- Time:
- Building: (check with your Major Professor for this location)
- Room: (check with your Major Professor for this location)
- Day of the Week:

**Committee Members**
- Major Professor:
- Minor Professor (or committee member if no declared minor):
- Committee Member:
- The department for all committee members: Science and Mathematics Education
- **Remote participation:** This form is no longer required, however, you should read the information about remote participation found at: [http://oregonstate.edu/dept/grad_school/forms.php#remote](http://oregonstate.edu/dept/grad_school/forms.php#remote)
  If you are participating remotely, you must be able to Skype with video and audio capabilities. You should arrange to test this capability with your major professor before the date of the oral examination.

**Preparing for the Master’s Degree Examination**

A week prior to the oral examination, you must send these two electronic documents to your committee members:
- An electronic version (preferably Word) of the Capstone document you complete in SED 581 or SED 592.
- Your Capstone presentation material (typically a PowerPoint) you will be using during the examination to all committee members.

If you have not completed your capstone project, you need to submit as completed a version as possible to the committee members. A final completed version must be submitted to the Major Professor after completion after the Master’s Examination.
Expectations Following the Master’s Degree Examination

The following examination signatures are critical. You must sign and return these documents:

- **Examination Signatures**: If you participate in the examination from a remote location, your major professor will send you a scanned copy of the **Report of the Final Examination for Advanced Degree** after all members of the examination committee have signed. You are to sign this form indicating that you have been informed of and understand the committee’s recommendation concerning the results of the examination. Then scan this form and return it to your major professor for processing to the Graduate School indicating the completion of the final examination.

- **Capstone Signature Page**: Upon completion of your examination, your committee members will sign the signature page for your Capstone. This page is sent to you for your signature upon your final completion of the Capstone (may be at the time of the examination or may be upon the removal of the incomplete in SED 581 or SED 592). You are expected to sign and return this page **with** your final Capstone document to your major professor. Your major professor will submit the completed Capstone containing the signed signature page to the College of Education’s archival person who collects the completed programs.
Onlne Resources

To help you have a successful experience here are some helpful links:

Graduate Students Guide to Success:
http://oregonstate.edu/dept/grad_school/success.php

Ecampus Getting Started, which includes information on registering for courses:
http://ecampus.oregonstate.edu/about/learn-more/getting-started.htm

Ecampus orientation:
http://ecampus.oregonstate.edu/orientation/undergraduate/

For help with Ecampus technical difficulties:
http://ecampus.oregonstate.edu/services/technical-help.htm

Computer Help Documents:
http://oregonstate.edu/helpdocs/

Computer Helpdesk:
http://oregonstate.edu/is/tss/och/helpdesk

OSU Academic Calendar:
http://catalog.oregonstate.edu/ChapterDetail.aspx?key=148

Ecampus Library Access:
http://osulibrary.oregonstate.edu/ecampus

Online Writing Lab, offers assistance with organizing, developing and revising work:
http://cwl.oregonstate.edu/owl.php

Access to ONID E-mail:
https://webmail.oregonstate.edu/imp/login.php

If you would like a student ID card, see the section for Distance Education Students at:
http://oregonstate.edu/fa/businessaffairs/idcenter/get-id-card