

## CHANGE MASTERS DEGREE PROGRAM FORM

### 1. GENERAL INFORMATION

College:	Education	Department:	STEM Education	
Current Major Name:	Science, Technology, Engineering, and Mathematics Education	Proposed Major Name:		
Current Degree Title:	MS in STEM Education	Proposed Degree Title:		
Formal Option(s):		Proposed Formal Option(s):		
Specialty Fields w/in Formal Option:		Proposed Specialty Fields w/in Formal Options:		
Date of Contact with <a href="#">Institutional Effectives</a> <sup>1</sup> :				10/11/18
Bulletin (yr & pgs):		CIP Code <sup>1</sup> :	13.1399	Today's Date: 10/8/18
Accrediting Agency (if applicable):	N/A			
Requested Effective Date:	<input checked="" type="checkbox"/> Semester following approval.		OR	<input type="checkbox"/> Specific Date <sup>2</sup> :
Dept. Contact Person:	Molly Fisher	Phone:	859-257-1643	Email: molly.fisher@uky.edu

### 2. CHANGE(S) IN PROGRAM REQUIREMENTS

		<u>Current</u>	<u>Proposed</u>
1.	Number of transfer credits allowed (Maximum is Graduate School limit of 9 hours or 25% of course work)		
2.	Residence requirement (if applicable)		
3.	Language(s) and/or skill(s) required		
4.	Termination criteria		
5.	Plan A Degree Plan requirements <sup>3</sup> (thesis)		
6.	Plan B Degree Plan requirements <sup>3</sup> (non-thesis)		
7.	Distribution of course levels required (At least one-half must be at 600+ level & two-thirds must be in organized courses.)		
8.	Required courses (if applicable)	See Attached	<i>See Attached</i>
9.	Required distribution of courses within program (if applicable)		
10.	Final examination requirements		

<sup>1</sup> Prior to completing out this form, you MUST contact Institutional Effectiveness, which can provide you with the CIP ([OSPIE@l.uky.edu](mailto:OSPIE@l.uky.edu) or 257-1962).

<sup>2</sup> Program changes are typically made effective for the semester following approval. No changes will be made effective until all approvals are received.

<sup>3</sup> If there is only one plan for the degree, plans involving a thesis (or the equivalent in studio work, etc.) should be discussed under Plan A and those not involving a thesis should be discussed under Plan B.

### CHANGE MASTERS DEGREE PROGRAM FORM

11.	Explain whether the proposed changes to the program (as described in sections 1 to 10) involve courses offered by another department/program. <u>Routing Signature Log must include approval by faculty of additional department(s).</u>
	The proposed coursework changes involve changes affecting the following departments: EDL, EDP, and EPE. All departments were consulted on the changes and final approvals were granted by department vote.
12.	List any other requirements not covered above?
	N/A
13.	Please explain the rationale for changes. If the rationale involves accreditation requirements, please include specific references to those requirements.
	Curriculum contracts for the program have not been updated since the program began in 2011. Changes in course names, numbers, and topics occur over time and these updates should be reflected in program documents.

# CHANGE MASTERS DEGREE PROGRAM FORM

## Signature Routing Log

### General Information:

Proposal Name: MS in STEM Education

Proposal Contact Person Name: Molly Fisher Phone: 71643 Email: molly.fisher@uky.edu

### INSTRUCTIONS:

Identify the groups or individuals reviewing the proposal; note the date of approval; offer a contact person for each entry; and obtain signature of person authorized to report approval.

### Internal College Approvals and Course Cross-listing Approvals:

Reviewing Group	Date Approved	Contact Person (name/phone/email)	Signature
STEM	11/30/18	Jennifer Wilhelm (chair) / 71291 / jennifer.wilhelm@uky.edu	
EDL	1/23/19	John Nash (chair) / 77845 / john.nash@uky.edu	
COE C&C Committee	2/27/19	Jane Jensen/257-1929/jane.jensen@uky.edu	
College of Education	3/15/19	Melody Noland/323-7482/mnola01@email.uky.edu	
		/ /	

### External-to-College Approvals:

Council	Date Approved	Signature	Approval of Revision <sup>4</sup>
Undergraduate Council			
Graduate Council			
Health Care Colleges Council			
Senate Council Approval		University Senate Approval	

Comments:

<sup>4</sup> Councils use this space to indicate approval of revisions made subsequent to that council's approval, if deemed necessary by the revising council.

Updates to the MS in STEM Education (**Rank Change**) Program:

Change to be made in <b>required STEM Education Core:</b>	<b>Reason for change:</b>
Remove SEM 670, SEM 674, SEM 701	Courses no longer offered
Remove SEM 706	Offered only for PhD students
Require "Permission from Instructor" for SEM 770	Many SEM 770 courses are specialized courses and aren't open enrollment for all students
Change to be made in <b>Specialization in STEM Coursework:</b>	<b>Reason for change:</b>
Replace "outside the College of Education" with "outside the Department of STEM Education"	This is to allow students to complete ISD courses in the EDC department as Technology content coursework
Change to be made in <b>Elective Leadership Coursework:</b>	<b>Reason for change:</b>
Remove term offerings for leadership coursework	This allows more flexibility in scheduling
Remove ELS 624	Course name changed and is no longer an appropriate option
Remove ELS 612	Course no longer offered
Move EDL 662 from "Technology Leadership" to "Leadership in Learning". Update the name of EDL 662 to "Leading for Next Generation Learning"	More appropriate placement for this course; course has changed names
Update name of ELS 600 to "Leadership in Learning-Centered Schools"	Course has changed names
Update name of ELS 604 to "Leadership in Communities of Practice"	Course has changed names
Update name of ELS 620 to "Leading Action Research and Inquiry 1 (TL)"	Course has changed names
Update name of ELS 621 to "Leading Action Research and Inquiry 2 (TL)"	Course has changed names
Update name of EDL 663 to "Leadership for School Program Improvement" and move from "Leadership in Learning" to "Technology Leadership".	Course has changed names; more appropriate placement for this course
Add EDL 669	This is a new course appropriate for leadership coursework
Add EDL 638	This is a newly redeveloped course appropriate for leadership coursework
Remove ELS 616	No longer an appropriate option
Remove ELS 691	Only a one credit hour course and not an appropriate option
Remove ELS 608	No longer offered
Add EDL 628	This is a regularly offered course that is appropriate for leadership coursework

Updates to the MS in STEM Education (**No Certification**) Program:

Change to be made in <b>required STEM Education Core:</b>	Reason for change:
Remove SEM 670, SEM 674, SEM 701	Courses no longer offered
Remove SEM 706	Offered only for PhD students
Add SEM 610	This course is for rank change program, but is also suitable for non-certification program
Require "Permission from Instructor" for SEM 770	Many SEM 770 courses are specialized courses and aren't open enrollment for all students
Change to be made in <b>Specialization in STEM Coursework:</b>	
Replace "outside the College of Education" with "outside the Department of STEM Education"	This is to allow students to complete ISD courses in the EDC department as Technology content coursework



**Department of Science, Technology, Engineering, and Mathematics (STEM) Education  
Curriculum Contract – Master’s Verification**

**Option II - Master’s Degree- STEM Education – no certification option**

*STEM PLUS<sup>+</sup> – Producing +eacher Leaders for rUral/Urban Schools*

<b>Name</b>				
<b>Email</b>				
<b>Address</b>				
	<b>Street</b>		<b>City</b>	<b>State</b> <b>Zip</b>
<b>Phone</b>				<b>Semester of Admission to Master’s Program</b>
	<b>Home</b>	<b>Work</b>	<b>Cell/Other</b>	

**Professional Goals:** Briefly describe the professional growth goals you hope to meet in pursuing the Rank II Certification and STEM Education Master’s Degree.

**Program Goals:** In helping you develop your own professional goals, the STEM PLUS<sup>+</sup> Master’s degree program will also focus on helping you:

1. Connect theory and practice through reflection, teaching, scholarship, and STEM educational action research.
2. Use student achievement data to design authentic, innovative, project-based learning experiences that consider students of diverse backgrounds and perspectives.
3. Explore uses of appropriate assessments and technological tools to enhance STEM teaching, learning, student achievement, and College and Career Readiness.
4. Develop communication skills through multiple forms of discourse and written, oral, and on-line narratives.
5. Explore and implement innovative and engaging curricula, especially around the Kentucky Core Academic Standards and College and Career Readiness, geared towards increasing student achievement.

**Required STEM Education Core:** SEM 603 is required, then select 3 additional courses (Include courses addressing pedagogy, history, equity, and technology) (12 hours)

Course	Title	Term	Grade	Credits
SEM 603	Curriculum and Instruction in STEM Education			3
SEM 604	History of STEM Education			3
SEM 610	Teacher Leadership in STEM Education			3

SEM 613	Effective Use of Technology for Modeling-Based Inquiry in STEM Education			3
SEM 620	Equity in STEM Education			3
SEM 575	Mathematics Clinic			3
SEM 504	Designing Project-Enhanced Environments in STEM Education			3
SEM 708	Engineering in STEM Education			3
SEM 770	Special Topics in STEM Education (permission from instructor)			3

**Specialization STEM Coursework:** Choose 12 hours in STEM content area(s) outside the Department of STEM Education. See attached list for course suggestions. *(Recommended: 6 hours in your area of expertise and 6 hours outside of your area of expertise).* (12 hours)

Course	Title	Term	Grade	Credits
				3
				3
				3
				3
				3
				3

**Specialization Electives:** Choose 6 hours of coursework electives in research, STEM education, education, or other area (independent study permitted) to further develop expertise or thesis. (Suggested coursework, but not limited to: EDP/EPE 557, EDP/EPE 558, EPE 660, EDP 610, EDP 611, EDP 612)

Course	Title	Term	Grade	Credits
<b>Total Credit Hours</b>				

*Minimum 30 credit hours required for graduation and Rank II certification*

**Master's Committee Coursework Approval:**

Member	Department
, Chair	

Student Signature

Date

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Advisory Signature

Date

Proposed Updates





**Department of Science, Technology, Engineering, and Mathematics (STEM) Education**  
**Curriculum Contract – Master’s Verification**  
**Option I – Master’s Degree with Rank II Certification – STEM Education**  
*STEM PLUS<sup>+</sup> – Producing +eacher Leaders for rUral/Urban Schools*

<b>Name</b>				
<b>Email</b>				
<b>Address</b>				
	<b>Street</b>		<b>City</b>	<b>State</b> <b>Zip</b>
<b>Phone</b>				<b>Semester of Admission to Master’s Program</b>
	<b>Home</b>	<b>Work</b>	<b>Cell/Other</b>	

**Professional Goals:** Briefly describe the professional growth goals you hope to meet in pursuing the Rank II Certification and STEM Education Master’s Degree.

**Program Goals:** In helping you develop your own professional goals, the STEM PLUS<sup>+</sup> Master’s degree program will also focus on helping you:

1. Connect theory and practice through reflection, teaching, scholarship, and STEM educational action research.
2. Use student achievement data to design authentic, innovative, project-based learning experiences that consider students of diverse backgrounds and perspectives.
3. Explore uses of appropriate assessments and technological tools to enhance STEM teaching, learning, student achievement, and College and Career Readiness.
4. Develop communication skills through multiple forms of discourse and written, oral, and on-line narratives.
5. Explore and implement innovative and engaging curricula, especially around the Kentucky Core Academic Standards and College and Career Readiness, geared towards increasing student achievement.

**Required STEM Education Core:** SEM 610 required; choose 3 additional courses (Include courses addressing pedagogy, history, equity, and technology) (12 hours)

Course	Title	Term	Grade	Credits
SEM 603	Curriculum and Instruction in STEM Education			3
SEM 604	History of STEM Education			3
SEM 610	Teacher Leadership in STEM Education (required)			3

SEM 613	Effective Use of Technology for Modeling-Based Inquiry in STEM Education			3
SEM 620	Equity in STEM Education			3
SEM 575	Mathematics Clinic			3
SEM 504	Designing Project-Enhanced Environments in STEM Education			3
SEM 708	Engineering in STEM Education			3
SEM 770	Special Topics in STEM Education (permission from instructor)			3

**Specialization STEM Coursework:** Choose 12 hours in STEM content area(s) outside the Department of STEM Education *(Recommended: 6 hours in your area of expertise and 6 hours outside of your area of expertise).* (12 hours)

Course	Title	Term	Grade	Credits
				3
				3
				3
				3
				3
				3

**Elective Leadership Coursework:** Choose from the following (6 hours)

Course	Title	Term	Grade	Credits
<b>Assessment Leadership</b>				
EDC/EPE/EDP 522	Educational Assessment			3
EDL 664	Assessment Leadership			3
<b>Technology Leadership</b>				
EDC 548	Instructional Technology Leadership			3
EDL 661	School Technology Leadership			3
EDL 663	Leadership for School Program Improvement			3
EDL 665	School Technology Leadership for Digital Citizenship			3
<b>Leadership in Curriculum Design</b>				
EDC 732	Curriculum Design for Learning and Leading			3
EDC 733	Leadership in Curriculum & Instruction: Strategies for Analytic Practice			3
<b>Leadership in Learning</b>				
EDL 662	Leading for Next Generation Learning			3
ELS 600	Leadership in Learning-Centered Schools			3
ELS 604	Leadership in Communities of Practice			3
ELS 620	Leading Action Research and Inquiry 1 (TL)			3
ELS 621	Leading Action Research and Inquiry 2 (TL)			3
EDL 638	Instructional Coaching and Mentoring			3
EDL 669	Leadership for Creative Problem Solving			3
<b>Leadership in School Law</b>				
EDL 628	School Law and Ethics (TL)			3

**Total Credit Hours**

*Minimum 30 credit hours required for graduation and Rank II certification*

**Master's Committee Approval of Coursework:**

Member	Signature
, Chair	

Student Signature

Date

Advisory Signature

Date

Proposed Updates

**Subject:** Substantive Change Decision

**Date:** Thursday, October 11, 2018 at 6:06:45 PM Eastern Daylight Time

**From:** noreply@qualtrics-survey.com

**To:** Fisher, Molly

Dear Molly Fisher,

Thank you for your email regarding the proposed program change(s) to **MS in STEM Education, Master's (13.1399)**.

My email will serve 2 purposes: 1.) Next steps for SACSCOC, and 2.) Verification and notification that you have contacted OSPIE—a Senate requirement for proposal approval.

1. **Next steps for SACSCOC:** None required
2. **Verification that OSPIE has reviewed the proposal:** Based on the proposal documentation presented and Substantive Change Checklist, the proposed program changes (refer to list below) are not substantive changes as defined by the University or SACSCOC, the university's regional accreditor. Therefore, no additional information is required by the Office of Strategic Planning & Institutional Effectiveness at this time. The proposed program change(s) may move forward in accordance with college and university-level approval processes.

Description of Proposed Change(s):

· The program documents for this program have not been updated in several years. Revisions to the required courses are being requested due to course name and numbers changing over the years, better courses to fit criteria being developed, and courses offerings have changed over time.

Should you have questions or concerns about UK's substantive change policy and its procedures, please do not hesitate contacting our office.

Office of Strategic Planning & Institutional Effectiveness  
University of Kentucky

Visit the Institutional Effectiveness Website: <https://proxy.qualtrics.com/proxy/?url=http%3A%2F%2Fwww.uky.edu%2Fie&token=w%2BXHkAS0tASxS4xDceQ8e0MxnHdJ2Eu4smnkDcYodCE%3D>

**Subject:** STEM Education Program Request  
**Date:** Wednesday, January 23, 2019 at 9:21:00 PM Eastern Standard Time  
**From:** Nash, John  
**To:** Fisher, Molly  
**Attachments:** 3C7C3F7C-2711-4CF2-8BB5-FD563FFD801E[2].png

Dear Dr. Fisher,

I'm pleased to let you know the faculty in EDL voted unanimously in favor of the STEM Ed proposal.

All the best,  
--->john

Sent from my TRS-80