

Contact: Rachel Boon

**REQUEST FOR NEW PROGRAM AT IOWA STATE UNIVERSITY:  
MASTER OF ARTS IN TEACHING: MATHEMATICS EDUCATION**

**Action Requested:** Consider approval of the request by Iowa State University for a Master of Arts in Teaching: Mathematics Education in the College of Human Sciences.

The Council of Provosts and Board office support approval of this program.

**Description of proposed program.** The Mathematics Education major within the MAT degree will more effectively identify this program as a program leading to recommendation for initial teacher licensure. The program is designed to support individuals who hold a bachelor's degree in mathematics as they complete the additional requirements (including student teaching) needed to be recommended to the Iowa Board of Educational Examiners for licensure as a secondary (grades 5-12) mathematics teacher. ISU currently offers a Science Education major in the MAT. Students pursuing the MAT complete the professional core and methods courses, as well as required field experiences, over a 12-month period.

**Academic objectives.** Students will complete the coursework and field experiences needed to be recommended for secondary teacher licensure in the state of Iowa.

**Relationship to existing programs at the institution.** The Mathematics Education major for the MAT degree is not new program, but instead represents a revision of an existing program. The 12-month format provides an additional option for ISU students who wish to teach mathematics in middle or high schools. Students can complete the teaching requirements as part of their undergraduate Mathematics major, or they can opt to focus on mathematics in their undergraduate studies and "add on" an additional year to complete the educator preparation requirements and earn a master's degree. There is no duplication, as the option to complete the educator preparation requirements at the graduate level is currently possible through the M.Ed. in Education with the Secondary Mathematics Licensure specialization.

**Relationship to existing programs at other colleges and universities.** The proposed new program is a reconfiguration of an existing program. Despite the fact that several higher education institutions in Iowa offer programs for secondary mathematics education, state and national shortages of mathematics teachers persist.

**Unique features.** It is appropriate that Iowa State would prepare secondary education teachers as part of its land grant mission to meet the needs of the state of Iowa, the nation and the world.

**Resources to establish a high-quality program.** Because this is an extension of an existing program, the existing ISU personnel, facilities and equipment are adequate to continue the current high-quality program. In the event that significant numbers of students are attracted to the program, the units within ISU's Educator Preparation program will seek additional resources to support this demand. Instructors for all dual-listed (undergraduate/graduate) courses will have graduate faculty or graduate lecturer status.

**Student demand.** Student demand for the program varies from year to year, in part because salaries for teaching are significantly lower than corporate or industry salaries for Mathematics majors. The coursework for the program overlaps with requirements for undergraduate

Elementary Education majors pursuing an endorsement in Mathematics, as well as the undergraduate mathematics education requirements, so the department is able to consistently offer needed coursework even when student numbers for the current M.Ed/proposed MAT are low.

Workforce need/demand. According to the U.S. Department of Education’s Teacher Shortage Areas website (<https://tsa.ed.gov/#/home/>), 46 states, including Iowa, have shortages of secondary mathematics teachers. The shortage of secondary mathematics teachers has been a longstanding situation, exacerbated in part by the disparity in salaries for individuals with mathematics degrees who opt to become teachers when compared to those who choose careers in business and industry.

Cost. The department has the necessary faculty and coursework in place to offering the program.

Projected student enrollment.

	Y1	Y 2	Y3	Y4	Y5	Y6	Y7
Graduate	3-4	3-4	3-4	3-4	3-4	3-4	3-4

Accreditation. The M.Ed. program leading to recommendation for licensure for program completers is currently approved by the Iowa Department of Education. Upon approval by the Board of Regents, the department will update materials with the state to reflect the new degree.

Evaluation plan. This program will be incorporated into the university’s normal academic review process. That review process assesses whether the program is achieving its mission, providing high quality academic experiences, and fulfilling the enrollment and success metrics identified for the program. In addition to the academic program review, as a part of the college budgeting process the program will be monitored annually for achievement of enrollment goals. Assessment of learning outcomes will be monitored to ensure students are meeting the desired learning objectives and for continual improvement of the program.

Date of implementation. August 2021.

Letters of Support



**College of Education**

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December 9, 2020

Dean Laura Jolly  
E262 Lagomarcino Hall  
Iowa State University  
901 Stange Rd.  
Ames, Iowa 50011

Dear Dean Jolly:

I am in support of the three new majors the Iowa State School of Education is proposing. As was the case for our double degrees, these new majors (one undergraduate and two graduate) ensure students are acknowledged for having completed teacher preparation coursework aligned with these proposed new majors through the School of Education. This documentation recognizes teaching as a profession while also acknowledging the importance of content expertise for those preparing to enter the teaching profession.

As you note in the proposal, the second undergraduate major would acknowledge the additional work being completed by your teacher candidates compared to students pursuing the content-area program but not educator preparation. The MAT in Mathematics Education major as proposed ensures Mathematics Education degree candidates' major more accurately reflects the work they are completing. The MAT in Secondary Education graduate major will provide candidates completing educator preparation the opportunity to receive a Master of Arts in Teaching degree for the work they have completed.

Thank you for the opportunity to review this proposal. We look forward to Iowa Board of Regents approval so that you can move forward with these majors – majors that recognize the completion of professional education requirements as well as disciplinary majors.

Sincerely,

A handwritten signature in black ink, appearing to read "Daniel L. Clay". The signature is fluid and cursive, with a large, sweeping flourish at the end.

Daniel L. Clay, Ph.D., MBA  
Dean and Professor

College of Education  
Office of the Dean

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December 7, 2020

Dean Laura Dunn Jolly  
College of Human Sciences  
Iowa State University  
E262 Lagomarcino Hall  
901 Stange Rd.  
Ames, Iowa 50011

Dear Dean Jolly:

Thank you for email inquiry requesting a letter of support for your proposal to offer three new majors – one undergraduate and two graduate – in educator preparation at Iowa State University.

We understand the need to revise current programming and that the proposals moving forward are not for a new programs, rather they are proposals to offer majors or change the major for existing programs. The undergraduate second major in education would acknowledge the additional work completed by your current secondary candidates compared to students pursuing the content-area program but not educator preparation.

Both MAT programs are not new programs, rather new pathways to a degree through an existing program: MAT in Mathematics Education (shifting the degree candidates receive to better reflect the work they are completing) and MAT in Secondary Education (for candidates already completing the educator preparation program to receive a degree).

We support you and your faculty in the development of these revised avenues for students at the undergraduate and graduate levels. Thank you for your continued commitment to the profession of teaching.

We wish you continued success in these endeavors.

Sincerely,

**Colleen S. Mulholland** [electronic signature]

Colleen S. Mulholland, Ed.D., NBCT  
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