UNIVERSITY OF GEORGIA

University of Georgia
Athens, Georgia 30602
univcouncil@uga.edu
www.uga.edu

University Council

February 9, 2018

UNIVERSITY CURRICULUM COMMITTEE – 2017-2018
Dr. Alison F. Alexander, Chair
Agricultural and Environmental Sciences – Dr. Elizabeth Little
Arts and Sciences - Dr. Sujata Iyengar (Arts)
Dr. Mitch Rothstein (Sciences)
Business - Dr. Rich Gooner
Ecology – Dr. Sonia Altizer
Education – Dr. Morgan Faison
Engineering - Dr. Sudhagar Mani
Environment and Design – Professor Brad Davis
Family and Consumer Sciences - Dr. Patricia Hunt-Hurst
Forestry and Natural Resources - Dr. John C. Maerz
Journalism and Mass Communication – Dr. Jay Hamilton
Law – No representative
Pharmacy – Dr. Robin Southwood
Public and International Affairs - Dr. Robert Grafstein
Public Health – Dr. Anne Marie Zimeri
Social Work - Dr. David O. Okech
Veterinary Medicine - Dr. Kira L. Epstein
Graduate School – Dr. Amy Medlock
Ex-Officio - Provost Pamela S. Whitten
Undergraduate Student Representative – Mr. Max Harris
Graduate Student Representative – Ms. Johnita Daniel

Dear Colleagues:

The attached proposal from the College of Education to offer the existing major in Science Education (M.Ed.) as an online program will be an agenda item for the February 16, 2018, Full University Curriculum Committee meeting.

Sincerely,

Alison Alexander

Alison F. Alexander, Chair
University Curriculum Committee

cc: Provost Pamela S. Whitten
Dr. Rahul Shrivastav

Proposal for an External Degree
University of Georgia

Institution: University of Georgia **Date:** July 12, 2017

College/School/Division: College of Education

Department: Mathematics and Science Education

Degree: Master of Education (M.Ed.)

Major: Science Education (M.Ed.) as an Online Program

CIP Code: 13131601

Proposed Start Date: Summer 2018

1. Needs Assessment

Elements of the mission of the Science Education program at the University of Georgia (as expressed in the Mission Statement of the Department of Mathematics and Science Education) include:

> Teacher education is a central responsibility and priority of the department. This is a very broad responsibility that includes the identification and development of potential at every level. These levels include undergraduate, graduate, and post-graduate study; they include pre-service and in-service programs; they include preparing K-12 and college teachers; they include faculty development in teacher education.
>
> The department is committed to working with schools and other educational institutions to improve science education through courses, in-service degree programs, staff development, advising, curriculum development, research and evaluation. Working in collaboration with school personnel for the improvement of science education is an important vehicle for accomplishing outreach commitments.
>
> The department pursues program development and curriculum development grounded in the same level of scholarship as other aspects of their mission. Research and evaluation related to program development are part of the mission.
>
> The department continuously monitors and improves programs for the undergraduate and graduate degree programs in mathematics education and science education. These programs reflect the needs of the fields of mathematics education and science education and the best judgment and scholarship available for program elements and program improvement.

It is at the master's degree level that all of the above aspects of the program's mission can best be combined and integrated, particularly in service to the state of Georgia and its science teachers. As recently as 10 years ago, the M.Ed. program (which at the time also included, as an alternative pathway, what is now the separate M.A.T. program), was our largest, and a major source of ongoing connections with alumni of our undergraduate programs and with local science teachers. It has become increasingly clear in recent years that our narrower M.Ed. program, which is specifically designed for, and limited to, already-certified teachers, is no longer viable if all teacher-students must commute to Athens for class meetings, even if (as has always been the case) all classes are scheduled either one evening per week or in summer semester.

As a practical matter, in the past our M.Ed. program has only been able to serve those science teachers in northeast Georgia and the eastern part of the metropolitan Atlanta area, and until recent years that population was sufficient to maintain a "critical mass" of M.Ed. students and sufficient enrollment in master's-level courses so that those courses could consistently be offered. However, competition from both entirely-online programs in Science Education at universities in other states and more general programs in Secondary Education (which, crucially, are also accepted by the Georgia Professional Standards Commission for the purpose of certification upgrades) at Georgia universities located closer to Atlanta has led to rapidly dwindling enrollment in our M.Ed. (and also Ed.S.) programs in Athens. Over the past three years matriculation in our M.Ed. program has averaged fewer than two students per year, with sufficient enrollment (according to the College of Education's guidelines, which are more stringent than the university's) in graduate-only 6000- and 7000-level Science Education courses maintained only because of the enrollment of M.A.T. degree students (who take these courses in addition to the undergraduate/graduate courses required for initial certification), an even smaller number of Ed.S. and M.A. students, and occasional doctoral students (often from other departments).

The proportion of inquiries to the Graduate Coordinator about graduate programs for teachers that specify interest in a largely or entirely online option has steadily increased, and the experiment of offering all of our graduate-only master's courses in hybrid or entirely asynchronous online versions over the past two and a half years (beginning on a pilot basis in summer 2014 and with a complete commitment beginning in fall 2015) has noticeably increased enrollment in those courses. In calendar years 2015 and 2016, all scheduled 6000- and 7000- level courses had sufficient enrollment to be offered (although barely), while half had to be cancelled in 2014, and systematic records of e-mail and telephone inquiries reveal that well over 90% of potential M.Ed. students will not seriously consider our program if it cannot be completed entirely online.

We therefore propose to completely replace the current M.Ed. program at the Athens campus with an entirely online program. We have already taken the step of getting approval for E versions of the graduate-only courses whose enrollment is expected to be drawn primarily from M.Ed. and M.A.T. degree students, namely ESCI 6200, 6990, 7040, and 7080. The intent is not to offer the on-campus versions of these courses in Athens in the future. The non-E course numbers remain because the possibility exists of using them at the Gwinnett campus, as was true for a number of years in the 1990s and 2000s.

2. Admission Requirements

Requirements for admission to the fully online M.Ed. program will be the same as for our current campus-based degree. Prospective candidates must, at a minimum, hold a baccalaureate degree from an accredited college or university and Clear Renewable Certification at the T-4 level. Although nearly all students enrolled in the program currently and in the recent past hold certification in a Secondary (Grades 6-12) Science field (Biology, Chemistry, Physics, Earth/Space Science, and/or "Broad Field" Secondary Science), some have been science specialists who hold Middle Grades certification, and we are open in principle to admitting those with Early Childhood certification who have an unusually strong commitment to studying science teaching.

Admissions decisions for this program are made in nearly all cases by the Graduate Coordinator, and criteria and standards for judging applicants' suitability include: (a) cumulative grade point average for all previous undergraduate and graduate courses, with a preferred standard of a minimum of 3.0 on a 4-point scale, both overall and specifically in science courses; (b) recent Graduate Record Examination scores (verbal and quantitative) as defined by the University of Georgia Graduate School, with a preferred minimum standard of 146 on each part (representing 29th percentile for Verbal and 25th percentile for Quantitative); (c) the aforementioned initial certification requirements; and (d) a brief statement of purpose consistent with the intended focus of the program, as stated above. Admissions decisions are made on a "rolling" basis (as soon as possible after application materials are complete) and are not explicitly competitive–meeting the minimum requirements stated above normally results in admission. Additionally, for this program, students must certify that they have access to a computer with a high-speed Internet connection. Students are classified as in-state or out-of-state based on University System of Georgia Board of Regents policy.

3. Program Content

The course requirements and standards for this program are the same as for the current degree originally designed for face-to-face delivery. The degree requires the same standards of academic excellence and rigor. Expectations for the coursework will be the same in terms of requirements for reading professional materials, papers, and participation in discussions. Like the existing program, the online program is *not* designed around an inflexible cohort schedule. As with the current program, most students are expected to take one or two courses per academic year semester and two to three courses per summer semester, resulting in a modal time-to-degree of approximately 6 semesters (2 calendar years). All of the proposed required courses are offered in E-versions that have already been fully approved. There are no laboratory or supervised field experience requirements for the program, although students who are willing and able to attend science courses in Athens (or at the UGA Marine Education Center at Skidaway Island or the UGA campus in Costa Rica), typically in summer semester at both locations, are encouraged to include lab and/or field experiences in science content fields as part of their coursework.

The course requirements and Comprehensive Exam guidelines for the online M.Ed. program in Science Education are specified on the Requirements/Advising Sheet and Professional Portfolio Instructions accompanying this document.

4. Student Advising

Students will be assigned an advisor from among the faculty who will advise the student as part of his/her normal advisement load. Students may be advised online, by phone, or in person, as they wish. As with the current M.Ed. program, the degree requirements, advising worksheet (annotated in great detail), and instructions for the compilation and assessment of the Professional Portfolio will be available online on the department web site.

5. Residency Requirement

There is no residency requirement beyond the minimum required by the UGA Graduate School for M.Ed. degrees, which is two semesters of enrollment, not necessarily consecutive.

6. Program Management

Maintenance of the quality and viability of the program will be the responsibility of the Science Education (ESCI) faculty, with the Graduate Coordinator for Science Education Programs taking the lead with the support of the program and departmental administration. With the exception of out-of-department courses (for which their own policies apply), all courses will be taught by tenured or tenure-track faculty of the Mathematics and Science Education Department or by appropriately highly qualified part-time faculty, vetted by the Science Education program faculty and approved formally by the department. Thus far the online versions of the ESCI courses proposed to be included in the program have all been taught by tenured faculty.

Once established, it is hoped that the online M.Ed. program (separate from the M.A.T., even though the two programs have some courses in common) will attract and support, at minimum, approximately 15 new students per year, with the hope that numbers may eventually return to, or even exceed, the levels customary before competition from other online programs existed.

Timetable for the first iteration of the degree program:

Spring-summer 2017: Determine the optimum course rotation schedule (which semesters, which portions of summer semesters in particular) for the online M.Ed. program. Survey the recently typical online availability of out-of-department coursework expected most

often to be included in students' programs. Ensure technical competence and availability of existing faculty consistently to teach courses in the program and to support it in principle. (This work has been completed.)

Summer 2017: Offer online versions of the last of the ESCI courses to be taught for the first time in a fully asynchronous online format, ESCI 7080 and 6200. (This has been completed.)

Summer and fall semesters 2017: Admit the last new M.Ed. students to the existing program.

Spring semester 2018: Advertise, recruit, and admit students explicitly to the online program.

May 2018: Hold online orientation for first students in the online program.

Summer 2018: Most of the first students expected to take two ESCI courses (7040 or 7080, and one version of 6200), and possibly an additional one or two courses (from any of the course requirement areas). New students may well be admitted to begin the program in fall semester.

Fall 2018 and spring 2019: Students expected to take at least one course per semester, including ESCI 6990 in fall.

Summer 2019: Most of the first students expected to take the two ESCI courses not given the previous summer (7040 or 7080, and the other version of 6200) and possibly an additional one or two courses (from any of the course requirement areas).

Fall 2019 and spring 2020: Students expected to take at least one course per semester, including ESCI 6990 in fall if not taken previously.

Summer 2020: A majority of first students in the program are expected to graduate, including fulfilling the capstone Portfolio Requirement.

Assessing the Program

Summer 2019: Formative assessment of first year of the program via online interviews, course evaluation, and/or surveys of students. Focus will be to determine strengths and weaknesses in the ongoing program. Program inquiries and enrollment so far will be examined to determine whether there is likely to be sufficient ongoing demand for the program.

Summer 2020: Summative evaluation of the program in the light of the experiences of its first graduates, addressing issues identified in individual courses in the past to determine if issues have been remediated. Ongoing assessment will occur annually by survey in subsequent years.

Application and Matriculation

Students will apply for this degree program in the same way they would apply for on-campus programs. The only difference will be their intention to be part of the online cohort and indication that they have the technological capacity to participate in the program. Applications will be reviewed for initial matriculation in fall, spring, or summer, although the number choosing to start in spring is expected to be much smaller than in summer or fall. In the long run it is expected that summer will be the most popular semester in which to start because students willing to study particularly intensively may be able to complete the program in 4 semesters (summer-fall-spring-summer).

The capstone Professional Portfolio will serve as the Comprehensive Exam required by the Graduate School, as is true of the current program.

Duplication

There is an online master's degree program in Science Education at Georgia State University; however, we still receive many inquiries from science teachers throughout the state and region who would prefer a UGA degree. There are Science Education master's programs in other states that are largely but not completely online (e.g., Montana State University) and completely online master's programs not specific to Science Education but that do qualify science teachers for certification upgrades (e.g., Central Michigan University). Both of these programs currently enroll many Georgia science teachers, either in many individual courses or for entire programs. However, there is no wholly online master's program in Science Education at a flagship state university or a major private university.

Currently in the College of Education there are one undergraduate, nine graduate, and four certificate programs that may be completed entirely online. This program would not duplicate or compete for potential students with any of those.

7. Library and Laboratory Resources

There are no laboratory requirements for the program. In terms of library access, students will have access to Galileo and GIL. Students also have access to a multitude of interactive internet-based resources which have been incorporated into the web sites for our master's-level Science Education courses.

8. Budget

Because this online version of a program mirrors the existing program in the department with face-to-face classes, no funds are requested for the development of, and transition to, this online version. The program will include courses–ESCI 6990, 7040, 7080, and 6200 (2 versions with different foci)–of which online versions have already been developed and taught by program faculty over the course of the last 2 years (beginning in summer 2015).

The faculty believe that we can make this program modification without any additional funds. The courses in the current program are subsumed in regular faculty teaching loads (academic year) and customarily funded summer courses. Many of the courses required in the proposed program are also currently taken by most of our full-time, campus-based M.A.T. students, and at least in the short run this is likely to continue. If enrollment increases as much as hoped, separate sets of courses or separate sections of some current courses for M.Ed. vs. M.A.T. students may be established. The proposed program will employ current library resources, and we do not anticipate additional fees in the form of library, laboratory, or other specialized facility resource requirements. We do not anticipate any start-up costs for the proposed program, special costs for the completion of the first cycle of students, or any additional costs associated with future cycles of students. Therefore, we submit this proposal with a $0 budget.

9. Program Costs Assessed to Students

Costs for students taking the online M.Ed. would be consistent with the established E-rate fee structure. The current cost per credit hour is $629 for E-rate programs in the UGA College of Education.

10. Accreditation

The online master's degree, like all Science Education degrees, will be subject to accreditation by the Georgia Professional Standards Commission and the National Council for Accreditation of Teacher Education or its successors.

Approvals on File

Proposal: Offer the existing major in Science Education (M.Ed.) as an Online Program

College: College of Education

Department: Mathematics and Science Education

Proposed Effective Term: Fall 2018

Department:

- Mathematics and Science Education Department Head, Dr. Roger Hill, 9/29/2017

School/College:

- College of Education Associate Dean, Dr. Stacey Neuharth-Pritchett, 9/1/2017

Graduate School:

- Graduate School Dean, Dr. Suzanne Barbour, 2/8/2018