

EXECUTIVE SUMMARY FOR THE M.A.T./M.ED. SECONDARY SCIENCE EDUCATION

Major Findings of the Program's Quality and Productivity

Program Quality: Very Strong

In February 2013, a continuing approval review of the Educator Preparation Unit at CSU was conducted by a Board of Examiners (BOE) consisting of representatives from the National Council for Accreditation of Teacher Education (NCATE) and the Georgia Professional Standards Commission (PSC). The 2008 NCATE Standards and the Georgia 2008 Standards were used to assess the unit and its programs. The BOE judged all standards to be met for the unit and for all initial and advanced programs. There were no areas for improvement cited, and the team noted multiple areas of strength.

Overall, the M.A.T and M.Ed. Secondary Science Programs are very strong and prepare highly qualified science teachers who have the knowledge, skills, and dispositions to help all students learn.

This is demonstrated by GACE pass rates of 100 % in the past year, consistent ratings of meets or exceeds expectations on performance evaluations, overall GPAs of 3.0 or better, and satisfactory completion of a culminating research project.

Program Productivity: Satisfactory

The five year average of total number of students enrolled in master's degree programs in secondary science was 16. We observed a decline in the enrollment in the last two years, in 2011-2012 total enrollment was 8. This could be explained with the nationwide trend of declining graduate enrollment because of the financial crisis. A similar decline occurred in all other secondary education programs, with the exception of the M.A.T. in Secondary English, but the percentage decrease was lower in the other programs. The enrollment in the M.A.T./M.Ed. Secondary Science Education programs was the lowest compared to the other Secondary Education programs, but it was in close range with Secondary Social Science and Secondary Mathematics

The number of M.A.T./M.Ed. Secondary Science degrees conferred by CSU is small (an average of five per year). The five year average is comparable to Secondary Math and Secondary Social Science programs but less than Secondary English. Among the twelve USG state universities that offer master's degrees in secondary education, CSU ranks fourth in average number of degrees conferred.

As the only USG institution within a 90 mile radius of Columbus that offers a master's degree in secondary science, CSU provides science teachers in its service region an opportunity that they might not have otherwise, to gain expertise in science education.

List of Recommendations for Improving Program Quality

The Science Program Advisory Council (PAC) oversees the M.A.T. and M.Ed. programs in Secondary Science and works to improve the curriculum, courses, and resources offered to teachers. Though the program quality is very strong, we continue to look for ways to make improvements. Current initiatives include:

- Aligning the curriculum with the Next Generation Science Standards in an effort to help prepare teachers to teach with the new standards that will be adopted by Georgia soon.
- Aligning the course work with edTPA teacher assessment model which will be official in 2015-2016 academic year. Currently, this model is piloted for student teachers.
- Examining science course requirements in the M.Ed. program to determine whether or not changes are needed to make the program more relevant and attractive to teachers.
- Attracting more students into the undergraduate science and science education programs through UTeach Columbus program and other STEM initiatives.

List of Recommendations for Improving Program Productivity

Recommendations for improving program productivity are as follows:

- Attract more students into the undergraduate science and science education programs through an innovative UTeach replication program that will then provide a larger pool of teachers from which to recruit for the M.Ed. program.
- Align coursework with the Next Generation Science Standard which going to be adopted by Georgia.
- Align coursework with edTPA teacher assessment model that is going to be official by 2015-2016. By responding to current initiatives and mandates to make our programs more relevant for classroom teachers, we hope to recruit more teachers into the M.A.T. program.
- Seek grant funding to support graduate students in science education.
- Explore possibility of admitting students from outside of Georgia into the online M.A.T. program.

Conclusion about the Program's Viability at CSU

The M.A.T./M.Ed. Secondary Science Education programs at CSU are viable. As indicated by the evaluation of the NCATE/PSC Board of Examiners in February 2013, the quality of the programs is very strong. All NCATE/PSC standards were judged to be met for all initial and advanced programs with no areas for improvement and multiple areas of strength cited. In addition, program quality is enhanced by special opportunities available at CSU. Science education majors have access to resources and professional development opportunities offered through Coca Cola Space Science Center, Oxbow Meadows Environmental Learning Center.

The viability of the program is also ensured by the sharing of resources among all secondary science education programs at CSU. Graduate science courses at the 5000-level also enroll undergraduates on a cross-listed basis. Furthermore, the College of Education and Health Professions, Science Department, and P-12 teachers work collaboratively on the design and implementation of the secondary science education programs at all levels (B.S, M.A.T., M.Ed., and Ed.S.). Representatives from each of these groups work together to make improvements to the science education programs at CSU and to impact science education in our region. The M.A.T. and M.Ed. programs in secondary

science are valuable resources for teachers in our region who want to grow professionally and gain expertise in the field of science education.

Graduates of the M.Ed. Secondary Science program are also a valuable resource for our undergraduate program in secondary science. A substantial number of program graduates teach in systems served by CSU, especially Muscogee County. Our graduate programs in secondary science have helped to create a cadre of leaders within our Partner School Network. Graduates often serve CSU as pre-student teaching cooperating teachers and cooperating teachers for student teaching. They are an invaluable asset in assisting with the development of our undergraduates.

Enrollment in the M.A.T./M.Ed. Secondary Science Education programs has been comparable to enrollment in other graduate secondary education programs. Although in average enrollment, Secondary Science Education ranks last among the M.A.T./M.Ed. Secondary Education programs the numbers are within close range of Social Sciences and Math Education. As the only USG institution within a 90 mile radius of Columbus that offers a master’s degree in secondary science, CSU provides science teachers in its service region an opportunity to gain expertise in science education. This is an opportunity they might not have if CSU did not offer this degree program. With the critical shortage of highly-qualified science teachers, we need to provide every possible opportunity for teachers to grow professionally and enhance their knowledge and skills in teaching science.

Program Improvement Plan

In response to the findings of the Comprehensive Program Review, the faculty members and administrators of the M.A.T./M.Ed. in Secondary Science Education propose the strategies outlined below to improve the quality, productivity and viability of the program. These strategies will be facilitated by the Science Education Program Advisory Council (PAC).

Goals	Projected Timeline
Align the curriculum with the new Next Generation Science Standards.	2013-2014
Align the curriculum with the edTPA model of teacher assessment model which is currently piloted for student teachers, and will be official by 2015-2016.	2013-2014
Examine science course requirements in the M.Ed. program to determine whether or not changes are needed to make the program more relevant and attractive to teachers.	2013-2014
Attract more students into the undergraduate science and science education programs through UTeach Columbus program and other STEM initiatives.	Ongoing
Seek grant funding to support graduate students in science education.	Ongoing
Seek ways to offer more graduate level science courses for master’s students.	Ongoing
Explore possibility of admitting students from outside the state of Georgia into the online M.A.T. program.	2013-2014

Summary Recommendation and Supporting Rationale

Recommendation: *Continue to Maintain and Enhance the Program*

The program quality is very strong, but the number of degrees conferred each year is small. Based on the changes in certification, scholarships, teacher accountability (furloughs, keys, merit

pay) and the economy in general, it remains a challenge to grow the enrollment. We are working to change this through various STEM initiatives on campus (UTeach Columbus, Noyce Scholarship Program, NeXtGen STEM). Through these efforts, we hope to attract more students into the undergraduate science and science education programs so that we have a larger pool of candidates from which to recruit for our M.A.T. and M.Ed. programs.

CSU will continue to work to improve the program by responding to new initiatives such as improving the curriculum, aligning the curriculum with the edTPA model of teacher assessment model, providing better support and resources for students, preparing P-12 teachers to teach online, developing a retention and graduation plan to improve program viability, and intensifying recruitment efforts.

By enhancing the quality of the program, we hope to attract more potential students.