

BACHELOR OF SCIENCE, SCIENCE TEACHER EDUCATION-CHEMISTRY TEACHER SPECIALIZATION

Program Code: STBSCHM

Meta-Major: EDUC

Location(s): Cocoa, Melbourne, Palm Bay, Titusville, Online

Delivery Method(s): On-Campus, Hybrid, 50% or more Online

Previous Degree Required: AS/AA

Eligible for Financial Aid: Yes

Additional Limited Access Application Process Required:

Program Testing Requirements:

Classification of Instructional Programs (CIP) Code: 13.1316

Florida Department of Education CIP Code: 1101313161

The Chemistry Teacher specialization is designed to provide a seamless articulation for students who complete an Associate of Arts Degree, with the prerequisite elective courses illustrated below. Students in the Chemistry Teacher specialization will be preparing to teach chemistry for grades 6-12. Before entering the BS Chemistry Teacher Specialization track, students will need to earn a grade of "C-" or higher in the following Common Program Prerequisites courses:

EDF 1005 Introduction to the Teaching Profession*

CHM 1045 General Chemistry 1*#

CHML 1045 General Chemistry Lab 1*#

CHM 1046 General Chemistry 2*

CHML 1046 General Chemistry Lab 2*

CHM 2210 Organic Chemistry 1*

CHML 2210 Organic Chemistry Lab 1*

MAC 2311 Calculus 1*#

PHYC 2053 College Physics 1*#

PHYC 2054 College Physics 2 *

Candidates transferring from another institution must meet admission requirements prior to being accepted into the education program at Eastern Florida State College (EFSC). Students already enrolled at EFSC do not have to reapply to EFSC, only to the bachelor's program. Procedures for determining candidate's admission are as follows:

Admission to the bachelor's program is contingent upon meeting the following Department of Education's Teacher Educator Certification requirements:

1. Earn a 2.5 overall GPA;
2. Complete all general education and state mandated common prerequisite courses with a C- or higher in each;
3. Pass all sections of the General Knowledge Test.
4. Complete the Eastern Florida State College Bachelors admissions application.

Note: Students in an AS degree program must meet all general education requirements and the mandatory State program prerequisites. Additional hours would be needed to be admitted to the Chemistry Teacher program due to higher level math and sciences courses.

[Visit the program page for more details and how to apply.](#)

The AA degree would be the recommended and preferred pathway to this degree. It is suggested that students take the ACCUPLACER for Math placement.

* Common Program Prerequisites (Prerequisites pending approvals)

#Common Program Prerequisites and their required prerequisites:

Common Program Prerequisite	Required Prerequisite
CHM 1015	MAC 1105
MAC 2311	MAC 1147 or MAC 1114 and MAC 1114
PHYC 2053	MAC 1105

Curriculum

Code	Title	Credit Hours
Associate Degree		
Complete Associate Degree		60
Education Core		
EDF 2720	Children in Schools: Legal, Ethical, and Safety Concerns ²	3
EDF 4430	Measurement, Evaluation, and Assessment	3
EDG 3214	Human Development and Learning	3
EDG 3343	Instructional Strategies	3
EDG 4410	Classroom Management ²	3
EEX 4242	Teaching Exceptional Students in Secondary Settings ²	3
RED 4335	Subject Area Reading ²	3
SCE 4943	Seminar in Student Teaching	3
TSL 4324	ESOL Strategies for the Content Area Teacher ³	3
SCE 3940	Internship ⁴	4
SCE 4941	Student Teaching in Science (Senior Internship)	9
Science Core		
BCH 4024	Introduction to Biochemistry and Molecular Biology	4
BCHC 4103	Biochemical Methods	2
BSC 4911	Individual Mentored Research in Biology/ Biotechnology (Course taken twice, one credit per semester)	2
CHM 2211	Organic Chemistry 2	3
CHML 2211	Organic Chemistry 2 Laboratory	1
CHMC 3120	Analytical Chemistry with Laboratory	4
HSCC 3543	Quantitative Biomedical Laboratory Methods	4
Total Credit Hours		120

1.

Courses to be modified in the fall 2022.

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Students are required to complete a minimum of 15 hours of field-based experience with children and youth in school or similar settings and not via virtual modes of film or Internet. Students must obtain security clearance before obtaining hours in public schools.

3.

Students must volunteer 15 hours in diverse classroom settings including ELL, high performing, and/or Improving classrooms. Students must obtain security clearance before obtaining hours in public schools.

4.

Students are required to complete semester-long practicum in a classroom of the grade/subject intended to teach. Children and youth must be in a school or similar setting and not via virtual modes of film or Internet. Students must obtain security clearance before obtaining hours in public schools.

Admission Requirements

Admission Requirements

Applicants for the Science Teacher Education B.S. degree must meet the following requirements as part of the admissions process:

1. Must have earned an Associate in Arts (A.A.) or Associate in Science (A.S.) degree from a regionally accredited college and must have completed all required general education courses with a grade of C- or higher. Applicants with an A.S. degree must have completed all [general education courses](#). Please schedule an appointment with a bachelor's advisor to ensure you have satisfied the general education requirements before applying for this B.S. degree program, especially if you are applying with an A.S. degree.
2. Have earned a Grade Point Average of 2.5 or higher on a 4-point scale as reflected on the official degree transcript.
3. Must submit all final, official non-EFSC, regionally accredited college transcripts following the how-to information in step 3 of the [bachelor's enrollment process](#). Use the [Transfer Equivalency Self-Service \(TESS\) Audit tool](#) to determine how a transfer class would articulate and apply toward a degree at EFSC.
4. Pass all four sections of the FTCE General Knowledge Test. See Pre-Acceptance Testing Requirement section below for more details.
5. Must have completed the state-mandated common program prerequisite courses listed below for their chosen track with a grade of C- or higher.

Request Admissions Credentials: Request the associate's degree transcripts and all previous non-EFSC college transcripts to be sent to:

Office of the Registrar
 Eastern Florida State College
 1519 Clearlake Rd
 Cocoa, FL 32922

Transcript Evaluation

Transcripts will be evaluated by the Registrar's Office for courses applicable to the selected degree program. While an AAS degree is not acceptable for entrance into BS programs, if the student has an AAS degree, or an associate's degree that is not from a regionally accredited institution, but one that is accredited by a body recognized by the U.S. Department of education, a course-by-course evaluation will be done in accordance with EFSC's transfer practices to determine course transfer eligibility.

Program Sequence

Course	Title	Credit Hours
Year 1		
Term 1		
EDF 2720	Children in Schools: Legal, Ethical, and Safety Concerns	3
EDG 3214	Human Development and Learning	3
CHM 2211	Organic Chemistry 2	3
CHML 2211	Organic Chemistry 2 Laboratory	1
HSCC 3543	Quantitative Biomedical Laboratory Methods	4
Credit Hours		14
Term 2		
EDG 3343	Instructional Strategies	3
BCH 4024	Introduction to Biochemistry and Molecular Biology	4
CHMC 3120	Analytical Chemistry with Laboratory	4
TSL 4324	ESOL Strategies for the Content Area Teacher	3
Credit Hours		14
Term 3		
EDF 4430	Measurement, Evaluation, and Assessment	3
EEX 4242	Teaching Exceptional Students in Secondary Settings	3
BSC 4911	Individual Mentored Research in Biology/Biotechnology	1
Credit Hours		7
Year 2		
Term 4		
EDG 4410	Classroom Management	3
BCHC 4103	Biochemical Methods	2
BSC 4911	Individual Mentored Research in Biology/Biotechnology	1
RED 4335	Subject Area Reading	3
SCE 3940	Internship	4
Credit Hours		13
Term 5		
SCE 4941	Student Teaching (Senior Internship)	9
SCE 4943	Seminar in Student Teaching	3
Credit Hours		12
Total Credit Hours		60

Graduation Requirements

Responsibility for meeting the requirements for graduation rests with the student. Students must fulfill all admissions requirements in addition to the program requirements to receive a degree from EFSC. The bachelor's degree is awarded to those students who have:

1. Passing scores on subject area exam and Professional Education Test.

2. Filed an 'Intent to Graduate' Application and paid the graduation fee. Applications submitted after the published deadline will incur a late fee.
3. Earned a minimum of 120 unduplicated credit hours as outlined in the program of study.
4. Earned an overall cumulative grade point average of 2.0 or higher in the 3000-4000 level courses attempted. Transfer work will be included in attempts.
5. Earned at least 39 of the 120 credit hours in 3000-level courses or above (upper-division), or as specified in the program requirements.
6. Completed 36 semester hours of general education coursework in accordance with the Associate in Arts general education requirements.
7. Effective with the 2022-23 academic year, the general education core course requirement applies to all students who are entering into any programs under the 2022-23 catalog year and beyond, regardless of prior postsecondary coursework. This includes transfer students, students entering with prior postsecondary coursework and students from out-of-state.
8. Demonstrated proficiency in a foreign language through any of the following means: completion of two years of high school instruction in the same foreign language (with a grade of D or higher); completion of a college-level course at the Elementary-2 level (or higher) in a foreign language or in American Sign Language (ASL) (e.g., [SPN 1121](#) Spanish 2, [FRE 1121](#) French 2, [ASL 1150](#) American Sign Language 2; achievement of minimum scores on a foreign language proficiency exam; achievement of appropriate scores on nationally standardized examination programs in accordance with recommendations established by the statewide Articulation Coordinating Committee (ACC); or documented completion of a high school diploma from a foreign country where the student studied in a language other than English.
9. Civic Literacy Competency: Senate Bill 1108 amends s.1007.25, Florida Statutes (F.S.), to require ANY student entering a FCS institution in the 2021-2022 school year and thereafter to complete a course AND pass an assessment to demonstrate competency in civic literacy prior to the award of a baccalaureate degree. This rule applies to all students who are entering into baccalaureate programs under the 2021-22 catalog year regardless of prior postsecondary coursework earned in Florida or out-of-state, prior admit terms at Eastern Florida State College, or prior degrees earned.

Students who were previously exempted from the civic literacy competency or graduated as having met the competency must still meet the graduation competency under the new requirements if they return or pursue a bachelor's degree in fall 2021 or later.

A. Course Requirement

Complete one of two State-designated courses: AMH 2020 – US History since 1877 or POS 2041 – American National Government, with a grade of "C" or higher.

Students may also earn credit for the courses through credit-by-exam:

- Advanced Placement Government and Politics: United States (Minimum Score 3)
- Advanced Placement United States History (Minimum Score 4)
- CLEP: American Government (Minimum Score 50)

Note: students who earn credit for either course through other credit-by-exam mechanisms, such as Cambridge AICE or International Baccalaureate, will meet the course requirement but must still take an assessment.

B. Course and Assessment

Students who earn credit for the courses through credit-by exam are considered to have satisfied both the course and assessment (FCLE) requirement:

- Advanced Placement Government and Politics: United States (Minimum Score 3)
- Advanced Placement United States History (Minimum Score 4)
- CLEP: American Government (Minimum Score 50)

Note: students who earn credit for either course through other credit-by-exam mechanisms not listed in the rule, such as Cambridge AICE or International Baccalaureate, will be considered as having met only the course requirement. These students will need to be assessed using the approved assessment Florida Civic Literacy Exam.

Visit the [College website](#) for more details on how to meet these requirements, including an FAQ, and how to schedule the FCLE at an EFSC Center.

8. Completed at least 25% (30 credits) of the credit hours required for the degree through regular instruction at EFSC. Credit by Examination may not be used to satisfy this requirement.
9. Completed at least 25 percent of the upper-division courses required for the bachelor's program at EFSC, including the capstone course if applicable.
10. Completed all coursework with a final grade. Students with a grade of "Incomplete" will not be processed for graduation until a final grade is posted. For graduation in the term of application, the final grade must be posted within the first three weeks of the following term.
 - If a final grade is not posted within the first three weeks of the following term, student must reapply and repay for graduation. Student may request to have the "I" converted to an "F" if the course is not required for graduation.
11. Submitted all outstanding transcripts and removed all financial obligations to the college. Final transcript and diploma will not be released until student has removed all financial obligations to the college.

Learning Outcomes: Science Teacher Education-Chemistry Teacher Specialization

1. Research and investigate the Consent Decree and describe the accommodations needed for ESOL learners in the classroom.
 - *Core Ability Supported: Process Information*
2. Students will evaluate learning techniques for working with diverse student populations including ESOL, High and low Socioeconomic Schools.
 - *Core Ability Supported: Model Ethical & Civic Responsibility*
3. Students will evaluate learning techniques for working with Exceptional Education classes in Schools.
 - *Core Ability Supported: Model Ethical & Civic Responsibility*

4. Identify potentially issues that could be encountered in the classroom as relates to the child's and or adolescent's development, and how you would handle that situation as a classroom teacher.
 - *Core Ability Supported: Think Critically and Solve Problems*
5. Create lesson plans incorporating active learning in science.
 - *Core Ability Supported: Think Critically and Solve Problems*
6. Create an alternative assessment assignment that demonstrates learning of a concept taught and present it to the class.
 - *Core Ability Supported: Communicate Effectively*
7. Students will create a digital portfolio and present to the class.
 - *Core Ability Supported: Communicate Effectively*
8. Perform peer-reviewed literature searches to find practice-based and research articles focused on comprehension, oral language, phonological awareness, phonics, fluency, vocabulary, and integration of reading components.
 - *Core Ability Supported: Process Information*
9. Identify aspects of safety as pertains to school level and how to incorporate that in your future classroom.
 - *Core Ability Supported: Process Information*
10. Students will evaluate learning techniques for teaching science in diverse student populations in Schools.
 - *Core Ability Supported: Model Ethical & Civic Responsibility*
11. Students will evaluate and learning techniques and implement teaching techniques for teaching science in diverse student populations in Schools.
 - *Core Ability Supported: Model Ethical & Civic Responsibility*