



Program Guidebook

Bachelor of Science, Science Education (Secondary Chemistry) - WA

The Bachelor of Science, Science Education (Secondary Chemistry) - WA is a competency based degree program that prepares students in the state of Washington to be licensed as secondary chemistry teachers. All work in this degree program is online with the exception of the Demonstration Teaching and in-classroom field experience components, which prepare teacher candidates for the classroom. Candidates develop and refine their teaching skills through a series of sequential experiences beginning with video-based observations of classroom instruction to prepare candidates for an authentic, collaborative, pre-clinical teaching experiences in K-12 settings. Clinical experiences culminate with supervised demonstration teaching in a real classroom. The program consists of work in General Education, Foundations of Teaching, General Science Content, Mathematics Content, Chemistry Content, Pedagogy, Science Education, Field Experience, and Demonstration Teaching.

Understanding the Competency-Based Approach

Practically speaking, how do competency-based programs like those offered at Western Governors University (WGU) work? Unlike traditional universities, WGU does not award degrees based on completion of a certain number of credit hours or a certain set of required courses. Instead, you will earn your degree by demonstrating your skills, knowledge, and understanding of important concepts.

Progress through a degree program is governed not by the amount of time you spend in class but by your ability to demonstrate mastery of competencies as you complete required courses. Of course, you will need to engage in learning experiences as you review competencies or develop knowledge and skills in areas in which you may be weak. To help you acquire the knowledge and skills you need to complete your courses and program, WGU provides a rich array of learning resources. Your program mentor will work closely with you to help you understand the competencies required for your program and to help you create a schedule for completing your courses. You will also work closely with course instructors as you engage in each of your courses. As subject matter experts, course instructors will guide you through the content you must master to pass the course assessments.

The benefit of this competency-based system is that it enables students who are knowledgeable about a particular subject to make accelerated progress toward completing a degree, even if they lack college experience. You may have gained skills and knowledge of a subject while on the job, accumulated wisdom through years of life experience, or already taken a course on a particular subject. WGU will award your degree based on the skills and knowledge that you possess and can demonstrate—not the number of credits hours on your transcript.

Accreditation

Western Governors University is the only university in the history of American higher education to have earned accreditation from four regional accrediting commissions. WGU's accreditation was awarded by (1) the Northwest Commission on Colleges and Universities, (2) the Higher Learning Commission of the North Central Association of Colleges and Schools, (3) the Accrediting Commission for Community and Junior Colleges of the Western Association of Schools and Colleges, and (4) the Accrediting Commission for Senior Colleges and Universities of the Western Association of Schools and Colleges. The university's accreditation status is now managed by the Northwest Commission on Colleges and Universities (NWCCU), which reaffirmed WGU's accreditation in February 2020. The WGU Teachers College is accredited at the initial-licensure level by the Council for the Accreditation of Educator Preparation (CAEP) and by the Association of Advancing Quality in Educator Preparation (AAQEP). The nursing programs are accredited by the Commission on Collegiate Nursing Education (CCNE). The Health Information Management program is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM). The College of Business programs are accredited by the Accreditation Council for Business Schools and Programs (ACBSP).

The Degree Plan

The focus of your program is your personalized Degree Plan. The Degree Plan is a detailed blueprint of the courses you will need to complete in order to earn your degree. The Degree Plan also lays out the accompanying learning resources and assessments that compose your program. The list of courses in the Degree Plan is often referred to as the standard path. The amount of time it takes to complete your program depends on both the amount of new information you need to learn and the amount of time you plan to devote each week to study.

Students vary widely in the specific skills and information they need to learn. For example, some students may be highly knowledgeable in a particular subject matter and would not need to engage in new learning opportunities. Other students may find that portions of the program require them to learn new information and that they need to take an online class or participate in a study module to acquire the knowledge and skills needed to fulfill program competencies in that area. Some individuals may be able to devote as little as 15–20 hours per week to the program, while others may need to devote more time. For this reason,

pre-assessments are there to help your program mentor form a profile of your prior knowledge and create a personalized Degree Plan.

How You Will Interact with Faculty

At WGU, faculty serve in specialized roles, and they will work with you individually to provide the guidance, instruction, and support you will need to succeed and graduate. As a student, it is important for you to take advantage of this support. It is key to your progress and ultimate success.

Upon your enrollment, you will be assigned a program mentor—an expert in your field of study who will provide you with regular program-level guidance and support from the day you start until the day you graduate. Your program mentor will set up regular telephone appointments (weekly at first) with you, which you will be expected to keep. The mentor will review program competencies with you and work with you to develop a plan and schedule for your coursework. Your program mentor will serve as your main point of contact throughout your program—helping you set weekly study goals, recommending specific learning materials, telling you what to expect in courses, and keeping you motivated. In addition to regular calls, your program mentor is available to help you resolve questions and concerns as they arise.

For many of the courses at WGU, you will be required to complete performance assessments. These include reports, papers, presentations, and projects that let you demonstrate your mastery of the required competencies. A separate group of faculty members, called evaluators, will review your work to determine whether it meets requirements. Evaluators are also subject matter experts in their field of evaluation. If your assessment needs further work before it “passes,” these evaluators, who review your work anonymously, will provide you with instructional feedback to help you meet evaluation standards and allow you to advance.

Connecting with Other Mentors and Fellow Students

As you proceed through your Degree Plan, you will have direct contact with multiple faculty members. These communications can take a variety of forms, including participation in one-on-one discussions, chats in the learning communities, and live cohort and webinar opportunities. As a WGU student, you will have access to your own personal MyWGU Student Portal, which will provide a gateway to your courses of study, learning resources, and learning communities where you will interact with faculty and other students.

The learning resources in each course are specifically designed to support you as you develop competencies in preparation for your assessments. These learning resources may include reading materials, videos, tutorials, cohort opportunities, community discussions, and live discussions that are guided by course instructors who are experts in their field. You will access your program community during your orientation course to network with peers who are enrolled in your program and to receive continued support through professional enrichment and program-specific chats, blogs, and discussions. WGU also provides Student Services associates to help you and your program mentor solve any special problems that may arise.

Orientation

The WGU orientation course focuses on acquainting you with WGU’s competency-based model, distance education, technology, and other resources and tools available for students. You will also utilize WGU program and course communities, participate in activities, and get to know other students at WGU. The orientation course must be completed before you can start your first term at WGU.

Transferability of Prior College Coursework

Because WGU is a competency-based institution, it does not award degrees based on credits but rather on demonstration of competency. WGU undergraduate programs may accept transfer credits or apply a

'Requirement Satisfied' (RS) in some cases. Refer to your specific program transfer guidelines to determine what can be satisfied by previously earned college credits. In most cases, WGU does not accept college transfer credits at the graduate (master's) level. Students entering graduate programs must have their undergraduate degree transcripts verified before being admitted to WGU. In addition to a program's standard course path, there may be additional state-specific requirements.

[Click here for the Student Handbook](#)

WGU does not waive any requirements based on a student's professional experience and does not perform a "résumé review" or "portfolio review" that will automatically waive any degree requirements. Degree requirements and transferability rules are subject to change in order to keep the degree content relevant and current.

Remember, WGU's competency-based approach lets you take advantage of your knowledge and skills, regardless of how you obtained them. Even when you do not directly receive credit, the knowledge you possess may help you accelerate the time it takes to complete your degree program.

Continuous Enrollment, On Time Progress, and Satisfactory Academic Progress

WGU is a "continuous enrollment" institution, which means you will be automatically enrolled in each of your new terms while you are at WGU. Each term is six months long. Longer terms and continuous enrollment allow you to focus on your studies without the hassle of unnatural breaks between terms that you would experience at a more traditional university. At the end of every six-month term, you and your program mentor will review the progress you have made and revise your Degree Plan for your next six-month term.

WGU requires that students make measurable progress toward the completion of their degree programs every term. We call this "On-Time Progress," denoting that you are on track and making progress toward on-time graduation. As full-time students, graduate students must enroll in at least 8 competency units each term, and undergraduate students must enroll in at least 12 competency units each term. Completing at least these minimum enrollments is essential to On-Time Progress and serves as a baseline from which you may accelerate your program. We measure your progress based on the courses you are able to pass, not on your accumulation of credit hours or course grades. Every time you pass a course, you are demonstrating that you have mastered skills and knowledge in your degree program. For comparison to traditional grading systems, passing a course means you have demonstrated competency equivalent to a "B" grade or better.

WGU assigns competency units to each course in order to track your progress through the program. A competency unit is equivalent to one semester credit of learning. Some courses may be assigned 3 competency units while others may be as large as 12 competency units.

Satisfactory Academic Progress (SAP) is particularly important to students on financial aid because you must achieve SAP in order to maintain eligibility for financial aid. We will measure your SAP quantitatively by reviewing the number of competency units you have completed each term. In order to remain in good academic standing, you must complete at least 66.67% of the units you attempt over the length of your program—including any courses you add to your term to accelerate your progress. Additionally, during your first term at WGU you must pass at least 3 competency units in order to remain eligible for financial aid. We know that SAP is complex, so please contact a financial aid counselor should you have additional questions. *Please note: The Endorsement Preparation Program in Educational Leadership is not eligible for federal financial aid.

Courses

Your Degree Plan includes courses needed to complete your program. To obtain your degree, you will be

required to demonstrate your skills and knowledge by completing the assessment(s) for each course. In general there are two types of assessments: performance assessments and objective assessments. Performance assessments contain, in most cases, multiple scored tasks such as projects, essays, and research papers. Objective assessments include multiple-choice items, multiple-selection items, matching, short answer, drag-and-drop, and point-and-click item types, as well as case study and video-based items. Certifications verified through third parties may also be included in your program. More detailed information about each assessment is provided in each course of study.

External Content & Basic Skills Exams

Western Governors University requires that candidates pass the state-mandated content exam that aligns with their WGU program in addition to a basic skills exam (initial licensure programs only). Specific information regarding required content and basic skills exams required for each program and state can be found in the WGU Student Handbook. In many cases, it is the candidates' responsibility to register and pay for the required exams and submit their official passing score reports to WGU.

State Licensure Requirements

Many states have specific licensure requirements that are not part of WGU programs that you will have to fulfill in addition to the degree requirements of your program. These state licensure requirements might include, but are not limited to: subject-specific licensure exams, state-specific teacher performance assessments, course work related to state history, basic skills exams, and background clearances. The WGU Student Handbook outlines the credentialing requirements of each state. Teacher candidates should consult the applicable section to become familiar with their state's expectations regarding licensure.

Learning Resources

WGU works with many different educational partners, including enterprises, publishers, training companies, and higher educational institutions, to provide high-quality and effective learning resources that match the competencies you are developing. These vary in type, and may be combined to create the best learning experience for your course. A learning resource can be an e-textbook, online module, study guide, simulation, virtual lab, tutorial, or a combination of these. The cost of most learning resources are included in your tuition and Learning Resource Fee. They can be accessed or enrolled for through your courses. Some degree-specific resources are not covered by your tuition, and you will need to cover those costs separately. WGU also provides a robust library to help you obtain additional learning resources, as needed.

Mobile Compatibility:

The following article provides additional details about the current state of mobile compatibility for learning resources at WGU.

[Student Handbook article: Can I use my mobile device for learning resources?](#)

Standard Path

As previously mentioned, competency units (CUs) have been assigned to each course in order to measure your academic progress. If you are an undergraduate student, you will be expected to enroll in a minimum of 12 competency units each term. Graduate students are expected to enroll in a minimum of 8 competency units each term. A standard plan for a student for this program who entered WGU without

any transfer units would look similar to the one on the following page. Your personal progress can be faster, but your pace will be determined by the extent of your transfer units, your time commitment, and your determination to proceed at a faster rate.

Standard Path *for* Bachelor of Science, Science Education (Secondary Chemistry) - WA

Course Description	CUs
Concepts in Science	2
Educational Foundations	2
English Composition I	3
Integrated Physical Sciences	3
Natural Science Lab	2
Educational Psychology and Development of Children and Adolescents	4
College Algebra	4
Introduction to Biology	3
General Chemistry I with Lab	4
The School as a Community of Care	3
Survey of Pacific Northwest History for Educators	3
English Composition II	3
General Chemistry II with Lab	4
Applied Probability and Statistics	3
Fundamentals of Diverse Learners	4
Managing Engaging Learning Environments	3
Physical Chemistry	3
Introduction to Communication	3
Trigonometry and Precalculus	4
Survey of United States History	3
Introduction to Curriculum, Instruction, and Assessment	3
Assessing Impact on Student Learning	3
Calculus I	4
Introduction to Humanities	3
Educational Technology for Teaching and Learning	3
Inorganic Chemistry	3
Organic Chemistry	3
Science, Technology, and Society	5
Biochemistry	3
Climate Change	4
Chemistry: Content Knowledge	2
Secondary Reading Instruction and Interventions	3
Secondary Disciplinary Literacy	3
Science Methods—Secondary Chemistry	4

Course Description	CUs
Preclinical Experiences in Science	3
Supervised Demonstration Teaching in Science, Observations 1 and 2	3
Supervised Demonstration Teaching in Science, Observation 3 and Midterm	3
Supervised Demonstration Teaching in Science, Observations 4 and 5	3
Supervised Demonstration Teaching in Science, Observation 6 and Final	3
Teacher Performance Assessment in Science	3
Professional Portfolio	2
Cohort Seminar	3

Changes to Curriculum

WGU publishes an Institutional Catalog, which describes the academic requirements of each degree program. Although students are required to complete the program version current at the time of their enrollment, WGU may modify requirements and course offerings within that version of the program to maintain the currency and relevance of WGU's competencies and programs. When program requirements are updated, students readmitting after withdrawal from the university will be expected to re-enter into the most current catalog version of the program.

Areas of Study for Bachelor of Science, Science Education (Secondary Chemistry) - WA

The following section includes the areas of study in the program, with their associated courses. Your specific learning resources and level of instructional support will vary based on the individual competencies you bring to the program and your confidence in developing the knowledge, skills, and abilities required in each area of the degree. The Degree Plan and learning resources are dynamic, so you need to review your Degree Plan and seek the advice of your mentor regarding the resources before you purchase them.

Science

Concepts in Science

Concepts in Science for undergraduates provides students seeking a bachelor's degree and initial teacher licensure in science education with an introduction to essential science themes present within and across all science disciplines, including chemistry, physics, biology, and the geosciences. These themes include comprehending the magnitude of the physical and natural world, analyzing and converting measurements, understanding the basic nature and behavior of matter and energy, examining atomic structure, identifying and naming basic types of chemical bonds, and analyzing and interpreting scientific data. Concepts in Science provides a solid foundation for future, in-depth scientific studies and should be taken prior to any other science content course. There are no prerequisites for this course.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The graduate applies principles of measurement to solve scientific problems.*
- *The graduate explains how various forms of matter and energy respond to physical and chemical changes to understand how matter and energy flow within and among systems.*
- *The graduate determines the composition of atoms and compounds to understand the properties of matter.*
- *The graduate analyzes numeric data to identify patterns and relationships.*

Professional Core

Educational Foundations

Educational Foundations is a key component of WGU's Professional Core and is a required course for all initial licensure candidates. The course provides candidates with early classroom experience where they observe multiple school settings at three different levels of schooling and interview an educator to learn how state standards and various legal and ethical issues affect classrooms today. The course also provides candidates with opportunities to gain foundational knowledge about what it means to be a teacher in the current educational context while exploring their future role within the larger landscape of historical and cultural influences. This course ensures candidates have a firm grasp on important issues affecting educators including state standards-based curriculum, legal and ethical requirements affecting educational opportunities, and professionalism, preparing them for subsequent coursework within the Professional Core and their content area major courses. Five preclinical hours are interwoven throughout this course, and cross-cutting themes of technology and diversity are introduced for further development throughout the candidate's programs.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The graduate analyzes the role of historical and cultural influences, including issues of federal and state governance, in determining standard educational practices and ensuring equal access to educational opportunities.*
- *The graduate examines the impact of standards-based curriculum on students and teachers to determine how it supports a school's goals.*
- *The graduate evaluates the application of educational best practices in diverse learning settings to inform teaching practice.*
- *The graduate explores pathways and opportunities for professional development to grow as an educator.*

Educational Psychology and Development of Children and Adolescents

Educational Psychology and Development of Children and Adolescents is a key component of WGU's Professional Core and is a required course for all initial licensure candidates. This course prepares candidates to support classroom practices grounded in research-validated principles from the areas of educational psychology and child/adolescent development. Candidates will be introduced to learning theories that equip them with the knowledge and skills necessary to support the diverse populations of students with whom they will interact. This course addresses theories of human development, spanning early childhood through adolescence, and candidates completing this course will be able to explain and analyze the guiding perspectives on linguistic, physical, cognitive, and social development. This course will also cover appropriate instructional and assessment strategies to support student learning and development. Candidates will engage in four hours of virtual classroom observations related to issues in educational psychology and learner development. Cross-cutting themes of technology and diversity are interwoven for further development.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The graduate describes theories of development across the cognitive, linguistic, social, emotional, and physical areas to understand the needs of students at various developmental levels.*
- *The graduate evaluates the influence of students' developmental characteristics on their learning and evaluates performance to inform instructional decisions.*
- *The graduate recommends instructional strategies that will positively impact learning, based on principles of learning theories.*
- *The graduate evaluates classroom practices to determine how theories of child and adolescent psychology, learning, and development are applied in the classroom environment.*

The School as a Community of Care

The School as a Community of Care is a key component of WGU's Professional Core and is a required course for all initial licensure candidates. This course prepares candidates to meet the social and emotional needs of learners, taking into account theories and philosophical perspectives on child and adolescent development and learning. Candidates learn to effectively collaborate with parents, families, caregivers, and other community stakeholders in each child's education, to build a strong foundation for academic and personal success. Emphasis is placed on family engagement as candidates gain knowledge of individual, cultural, and community assets that can be used to facilitate learner growth and development, as well as understand mental health and emotional differences among learners that may necessitate leveraging additional resources to support students' wellbeing. Issues of youth mental health, substance abuse, suicide awareness and prevention, and abuse within families will be addressed as will the importance of parent involvement. Candidates will engage in seven hours of preclinical experiences, which include visual observations of learning environments that involve parents and families in their children's education while supporting the social and emotional learning (SEL) needs of learners and an interview with an educational professional to explore topics related to parent involvement, youth mental health issues, and professional responsibilities to ensure student wellbeing. Additionally, crosscutting themes of technology and diversity are interwoven for further development.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The graduate plans for learning environments that meet all students' cultural, social, and emotional learning needs by incorporating knowledge of individual learners, diverse cultures, and communities.*
- *The graduate develops strategies to address the social and emotional learning (SEL) needs of students, including the incorporation of trauma-informed or restorative instructional practices.*
- *The graduate identifies appropriate resources and processes to support the mental health and emotional well-being of students.*
- *The graduate collaborates with families, caretakers, and the larger community to identify partnerships that facilitate learner growth.*

Fundamentals of Diverse Learners

Fundamentals of Diverse Learners is a key component of WGU's Professional Core and is a required course for all initial licensure candidates. This course prepares candidates to consider and address the wide range of learning needs in the classrooms of today. This course teaches candidates to identify and support the needs of diverse populations of learners, including, for example, students with disabilities (Including Dyslexia), students who are English language learners, and students who are gifted and talented. Practical strategies for differentiating instruction while creating a safe, inclusive, and culturally responsive learning environment are explored. This course helps candidates develop skills for partnering with parents and advocating for all students, particularly those impacted by provisions of IDEA and Section 504 of the

Rehabilitation Act. Multitiered systems of support are addressed to prepare candidates for their future classrooms as they seek to select appropriate instructional practices and interventions to best serve their students. Candidates will engage in four hours of preclinical experiences that include a simulated teaching experience in which skills learned can be applied. Cross-cutting themes of technology and diversity are interwoven for further development.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The graduate analyzes the application of policies, practices, and legal requirements to inform teaching practice.*
- *The graduate creates inclusive learning environments featuring multitiered systems of supports to address the needs of all students, including exceptional learners and English learners.*
- *The graduate creates learning experiences that accommodate the needs of students with exceptionalities, including gifted and talented students, in order to facilitate the success of all learners.*
- *The graduate integrates equity pedagogy to address the needs of multicultural learners.*
- *The graduate plans learning experiences that accommodate linguistic diversity to facilitate the success of all learners.*
- *The graduate recommends strategies to engage with students, families, administrators, and other stakeholders in ways that are effective, legal, and ethical.*

Managing Engaging Learning Environments

Managing Engaging Learning Environments is a key component of WGU's Professional Core and is a required course for all initial licensure candidates. This course prepares candidates to establish and contribute to safe and productive learning environments that support the success of all learners by ensuring student engagement and motivation for learning. Candidates will learn strategies, such as incorporating consistent routines and expectations, to provide positive behavior supports, increase learner motivation, promote active learning and self-direction, and ensure a safe and productive classroom setting that fosters a sense of community through collaborative educational practices. The course will culminate in evidence-based, practical application of current strategies, theories, or philosophical perspectives related to motivating and engaging all students in a learning community. Candidates will engage in seven hours of preclinical experiences that include both virtual observations of classroom settings and time in a simulated classroom environment where theory can be put into practice. Cross-cutting themes of technology and diversity are interwoven for further development.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The graduate establishes norms and routines to create a safe and productive learning environment that encourages positive social interactions, individual and collaborative learning, and appropriate classroom behaviors.*
- *The graduate interacts with each student in a way that builds positive relationships by using knowledge of individual learners, diverse cultures, and communities.*
- *The graduate analyzes the theoretical foundations and application of classroom management strategies, including behavior support and conflict management, to inform teaching practice.*
- *The graduate recommends strategies that are motivating and encourage active engagement from all students.*

Introduction to Curriculum, Instruction, and Assessment

Introduction to Curriculum, Instruction, and Assessment is a key component of WGU's Professional Core and is a required course for all initial licensure candidates. This course provides candidates with the knowledge and skills necessary to create engaging and standards-aligned lessons that meet the needs of all learners. Candidates will learn to analyze learner needs based on a variety of inputs, including their state P–12 standards, assessment results, and knowledge of learner differences. This course will help candidates design, deliver, and modify instruction in accordance to needs and educational requirements. Candidates will engage in three hours of preclinical experiences that include virtual classroom observations. They also will record a short teaching segment, allowing for authentic teaching experience. Cross-cutting themes of technology and diversity are interwoven for continued development.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The graduate aligns lessons to learning goals by synthesizing knowledge about students and their assessment data.*
- *The graduate analyzes the role of various assessment types in evaluating student learning and planning future*

instruction.

- *The graduate implements evidence-based instructional strategies to increase content area learning.*
- *The graduate differentiates instruction to facilitate mastery for all learners.*
- *The graduate incorporates cross-disciplinary instruction, skills, and content into lessons.*
- *The graduate creates standards-based instructional plans based on their state's P–12 standards that incorporate knowledge of learners' developmental needs, prior learning, and community and cultural context.*

Assessing Impact on Student Learning

Assessing Impact on Student Learning is a key component of WGU's Professional Core and is a required course for all initial licensure candidates. This course equips candidates to evaluate student learning and their own professional practice, ensuring candidates are prepared to ensure all learners' success. In this course, candidates learn multiple methods of assessment to ensure they are able to implement a balanced approach to assessment while monitoring their students' progress. Assessments types such as formative, summative, standardized, and common assessments are addressed so candidates understand their purposes and can apply them within the context of a lesson to determine impact on learning. Data literacy skills are taught to ensure candidates interpret and analyze individual and classroom data and apply their knowledge in ways that support academic success. Candidates will engage in three hours of preclinical experiences that include virtual classroom observations. Cross-cutting themes of technology and diversity are interwoven for further development.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The graduate plans a progress-monitoring strategy, including formative, summative, and common assessments, that actively engages students in their own learning.*
- *The graduate analyzes assessment results to evaluate student learning and teacher effectiveness.*
- *The graduate makes evidence-based instructional decisions that are informed by student assessment data.*
- *The graduate determines their impact on learners and the broader school community through evaluation of teaching practice.*

Educational Technology for Teaching and Learning

Educational Technology for Teaching and Learning is a key component of WGU's professional core and is a required course for all initial licensure candidates. This course prepares candidates to incorporate technology into their classroom practices in ways that improve teaching and learning. The ISTE standards will form the basis for their practice. The material will teach candidates to critically evaluate software and hardware options that may positively impact the classroom environment, while also increasing their awareness of ethical usage and considerations related to equity, access to technology, and appropriate use of technology by P–12 students. Assistive technologies to meet the needs of a diverse learner population also will be taught in this course. Candidates will engage in three hours of preclinical experience that include virtual observations of classroom practices incorporating technology to support educational goals. Cross-cutting themes of technology and diversity are interwoven for further development.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The graduate analyzes how research-based applications of technology facilitate student learning.*
- *The graduate evaluates the application of technology in the classroom, including its impact on learning for all students and potential equity or access issues.*
- *The graduate promotes a technology-enabled classroom culture that is equitable, ethical, and socially responsible.*
- *The graduate applies curricular and instructional design principles to create effective digital learning environments.*
- *The graduate recommends technology as an assessment tool to encompass multiple learner needs, provide in the moment feedback, and inform instruction.*
- *The graduate fosters student self-directedness and independent learning through the use of technology.*

General Education

English Composition I

English Composition I introduces candidates to the types of writing and thinking that are valued in college and beyond. Candidates will practice writing in several genres with emphasis placed on writing and revising academic arguments. Instruction and exercises in grammar, mechanics, research documentation, and style are paired with each module so that writers can practice these skills as necessary. Composition I is a foundational course designed to help candidates prepare for success at the college level. There are no prerequisites for English Composition I.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The graduate applies appropriate grammatical rules, sentence structure, and writing conventions.*
- *The graduate selects appropriate rhetorical strategies that improve writing and argumentation.*
- *The graduate appropriately uses a given writing style.*
- *The graduate uses appropriate writing and revision strategies.*
- *The graduate integrates credible and relevant sources into written arguments.*
- *The graduate composes an appropriate narrative for a given context.*
- *The graduate composes an appropriate argumentative essay for a given context.*

Integrated Physical Sciences

This course provides students with an overview of the basic principles and unifying ideas of the physical sciences: physics, chemistry, and earth sciences. Course materials focus on scientific reasoning and practical, everyday applications of physical science concepts to help students integrate conceptual knowledge with practical skills.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The learner describes the nature and process of science.*
- *The learner examines applications of physics including fundamental concepts such as forces, motion, energy, and waves.*
- *The learner examines applications of key chemistry concepts including the structure of matter and the behavior and conservation of matter in chemical reactions.*
- *The learner describes the underlying organization, interactions, and processes within the Earth system including the Earth's structure and atmosphere, and Earth's interactions within the solar system.*

Natural Science Lab

This course provides students an introduction to using the scientific method and engaging in scientific research to reach conclusions about the natural world. Students will design and carry out an experiment to investigate a hypothesis by gathering quantitative data. They will also research a specific ecosystem using academic sources and draw conclusions from their findings.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The graduate evaluates academic sources for their credibility and relevance to a chosen research topic on a natural world phenomenon.*
- *The graduate accurately executes the process of scientific inquiry through experimentation in the natural world.*
- *The graduate draws conclusions based on academic research and scientific inquiry.*

College Algebra

This course provides further application and analysis of algebraic concepts and functions through mathematical modeling of real-world situations. Topics include: real numbers, algebraic expressions, equations and inequalities, graphs and functions, polynomial and rational functions, exponential and logarithmic functions, and systems of linear equations.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The graduate classifies and performs operations on real numbers; solves linear equations and inequalities; connects a linear equation to its graph; and identifies a function.*
- *The graduate solves systems of linear equations and their related applications.*
- *The graduate simplifies and factors polynomial expressions, and solves polynomial equations.*
- *The graduate simplifies rational, radical, and quadratic expressions, solves corresponding equations, and extends this knowledge to the study of functions.*
- *The graduate combines functions, finds inverse functions, solves exponential and logarithmic equations and functions.*

English Composition II

English Composition II introduces candidates to the types of research and writing that are valued in college and beyond. Candidates will practice writing, with emphasis placed on research, writing, and revising an academic argument. Instruction and exercises in grammar, mechanics, research documentation, and style are paired with each module so that writers can practice these skills as necessary. Composition II is a foundational course designed to help candidates prepare for success at the college level. Composition I is the prerequisite for Composition II.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The graduate evaluates the quality, credibility, and relevance of evidence in order to integrate evidence into a final research paper.*
- *The graduate applies steps of the writing process appropriately to improve quality of writing.*
- *The graduate composes an argumentative research paper.*

Applied Probability and Statistics

Applied Probability and Statistics is designed to help students develop competence in the fundamental concepts of basic statistics including: introductory algebra and graphing; descriptive statistics; regression and correlation; and probability. Statistical data and probability are often used in everyday life, science, business, information technology, and educational settings to make informed decisions about the validity of studies and the effect of data on decisions. This course discusses what constitutes sound research design and how to appropriately model phenomena using statistical data. Additionally, the content covers simple probability calculations, based on events that occur in the business and IT industries. No prerequisites are required for this course.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The graduate applies the operations, processes, and procedures of fractions, decimals, and percentages to evaluate quantitative expressions.*
- *The graduate applies the operations, processes, and procedures of basic algebra to evaluate quantitative expressions, and to solve equations and inequalities.*
- *The graduate evaluates categorical and quantitative data pertaining to a single variable using appropriate graphical displays and numerical measures.*
- *The graduate evaluates the relationship between two variables through interpretation of visual displays and numerical measures.*
- *The graduate evaluates the relationship between two quantitative variables through correlation and regression.*
- *The graduate applies principles and methods of probability-based mathematics to explain and solve problems.*

Introduction to Communication

This introductory communication course allows candidates to become familiar with the fundamental communication theories and practices necessary to engage in healthy professional and personal relationships. Candidates will survey human communication on multiple levels and critically apply the theoretical grounding of the course to interpersonal, intercultural,

small group, and public presentational contexts. The course also encourages candidates to consider the influence of language, perception, culture, and media on their daily communicative interactions. In addition to theory, candidates will engage in the application of effective communication skills through systematically preparing and delivering an oral presentation. By practicing these fundamental skills in human communication, candidates become more competent communicators as they develop more flexible, useful, and discriminatory communicative practices in a variety of contexts. Note: There are references within this video to Taskstream. If Taskstream is not part of your student experience, please disregard, and locate your task(s) within your course.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The graduate applies foundational elements of effective communication.*
- *The graduate applies appropriate communication strategies in interpersonal and group contexts.*
- *The graduate utilizes appropriate presentational communication strategies in personal and professional settings.*

Survey of United States History

This course presents a broad and thematic survey of U.S. history from European colonization to the mid-twentieth century. Students will explore how historical events and major themes in American history have affected a diverse population.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The graduate analyzes the colonial experience and the foundations of the American Revolution.*
- *The graduate analyzes the challenges of partisan politics and sectionalism in the Early Republic and Civil War eras.*
- *The graduate examines the major changes that defined the United States in the late-nineteenth and early-twentieth centuries.*
- *The graduate explains significant international and domestic challenges that the United States confronted since World War I.*

Introduction to Humanities

This introductory humanities course allows candidates to practice essential writing, communication, and critical thinking skills necessary to engage in civic and professional interactions as mature, informed adults. Whether through studying literature, visual and performing arts, or philosophy, all humanities courses stress the need to form reasoned, analytical, and articulate responses to cultural and creative works. Studying a wide variety of creative works allows candidates to more effectively enter the global community with a broad and enlightened perspective.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The graduate assesses the development of humans through the study of key concepts, disciplines, and primary influences of the humanities.*
- *The graduate analyzes the primary contributions and characteristics of humanities during the Classical period.*
- *The graduate analyzes the primary contributions and characteristics of humanities during the Renaissance.*
- *The graduate analyzes the primary contributions and characteristics of humanities during the Neoclassical and Enlightenment period.*
- *The graduate analyzes the primary contributions and characteristics of humanities during the Romantic period.*
- *The graduate analyzes the primary contributions and characteristics of humanities during the Realism movement.*

General Science Content

Introduction to Biology

This course is a foundational introduction to the biological sciences. The overarching theories of life from biological research are explored as well as the fundamental concepts and principles of the study of living organisms and their interaction with the environment. Key concepts include how living organisms use and produce energy; how life grows, develops, and

reproduces; how life responds to the environment to maintain internal stability; and how life evolves and adapts to the environment.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The graduate analyzes the characteristics and classifications of living organisms.*
- *The graduate analyzes the basic chemical composition of cells and the basic processes that happen at the cellular level.*
- *The graduate analyzes different types of cells based on their structures and biological functions.*
- *The graduate analyzes the biological basis for and patterns of heredity and gene expression.*
- *The graduate analyzes inter-dependencies of organisms and their environments.*

Climate Change

This course explores the science of climate change. Students will learn how the climate system works; what factors cause climate to change across different time scales and how those factors interact; how climate has changed in the past; how scientists use models, observations, and theory to make predictions about future climate; and the possible consequences of climate change for our planet. The course explores evidence for changes in ocean temperature, sea level, and acidity due to global warming. Students will learn how climate change today is different from past climate cycles and how satellites and other technologies are revealing the global signals of a changing climate. Finally, the course looks at the connection between human activity and the current warming trend and considers some of the potential social, economic, and environmental consequences of climate change.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The graduate evaluates climate as a system and the components of the climate system.*
- *The graduate interprets climate system factors to evaluate drivers and forcings related to climate change.*
- *The graduate evaluates models, observations, past evidence, and theories to understand the changing climate.*
- *The graduate utilizes knowledge of risks and uncertainties in predicting consequences of climate change to educate others.*

Chemistry Content

General Chemistry I with Lab

General Chemistry I with Lab for undergraduates provides students seeking initial teacher licensure in secondary chemistry with an introduction to the field of chemistry, the branch of science that studies the composition, structure, properties, and behavior of matter. This course provides students with opportunities to examine the electronic structure of atoms, study periodic trends, name chemical compounds, write chemical formulas, determine the structure of molecules, balance chemical reactions, and discover the changing states of matter. Laboratory experiences facilitate the study of matter and the application of laboratory safety and maintenance procedures. Concepts in Science is a prerequisite for this course.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The graduate conducts safe and effective investigations to examine the physical and chemical characteristics of matter.*
- *The graduate determines the electronic structure of atoms and periodic trends to explain the characteristics and behaviors of chemicals*
- *The graduate applies IUPAC rules to name compounds and write chemical formulas.*
- *The candidate distinguishes the ways in which chemical bonds and electron orientation impact the structures and behavior of molecules to understand the composition of matter.*
- *The graduate writes balanced chemical equations to follow the Law of the Conservation of Mass.*
- *The graduate applies principles of stoichiometry to determine quantities of materials consumed and produced in*

chemical reactions.

- *The graduate determines quantities of heat released or absorbed during chemical reactions to examine relationships between heat and other forms of energy.*
- *The graduate explains how matter changes from one state to another to determine the causes and effects of such transformations.*

General Chemistry II with Lab

C374: General Chemistry II with Lab for undergraduates continues the study of general chemistry for students seeking initial teacher licensure in secondary chemistry. Building on the topics covered in General Chemistry I, General Chemistry II examines the behavior of gases and solutions, reaction rates and equilibrium, acids and bases, and oxidation-reduction reactions. Also, this course provides an introduction to three sub-disciplines of chemistry: organic chemistry, biochemistry, and nuclear chemistry. Laboratory experiences reinforce the essential skills required for conducting successful scientific investigations. C373: General Chemistry I for undergraduates is a prerequisite for this course.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The graduate conducts effective scientific investigations to analyze chemical processes in real-world contexts.*
- *The graduate applies the gas laws to solve problems involving the relationships between volume, pressure, and temperature.*
- *The graduate applies chemical kinetics to alter reaction rates and equilibrium.*
- *The graduate determines the concentrations of solutions to generate new solutions and calculate their reactions.*
- *The graduate examines how acids and bases react to predict the outcomes of chemical reactions.*
- *The graduate analyzes oxidation-reduction (redox) reactions to examine the practical application of electrochemistry.*
- *The graduate analyzes nuclear reactions to determine the nature of the nuclear decay.*
- *The graduate determines the composition of key organic biochemical compounds to distinguish various macromolecules.*

Physical Chemistry

Physical Chemistry introduces the study of chemistry in terms of physical concepts. It includes thermodynamics, reaction kinetics, chemical equilibrium, electrochemistry, and matter.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The graduate applies the first law of thermodynamics to analyze heat transfers associated with chemical processes and changes in state.*
- *The graduate applies concepts of the second law of thermodynamics and free energy to predict the spontaneity of a process and analyze chemical equilibrium.*
- *The graduate applies models and equations of state to analyze properties of real gases.*
- *The graduate applies concepts of thermodynamics and electrochemistry to analyze the interchange of chemical and electrical energy.*
- *The graduate uses experimental data and kinetic models to analyze reaction rates and reaction mechanisms.*

Inorganic Chemistry

Inorganic Chemistry introduces the concepts of inorganic chemistry—the branch of chemistry that studies the properties and behavior of any compound avoiding a specific focus on carbon. It will focus on the three most important areas of inorganic chemistry: the structure, properties, and reactions of various groups of inorganic compounds.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*

- *The graduate analyzes atomic structure and can demonstrate major principles and rules of atomic structure.*
- *The graduate demonstrates that groups of elements possess similar physical and chemical properties and can determine trends using the periodic chart.*
- *The graduate demonstrates how atoms or ions in minerals are glued together by electrical bonds that are ionic or covalent, and computes the bond order in a molecule.*
- *The graduate demonstrates properties of compounds and constructs models of bonding compounds and complex ions.*
- *The graduate demonstrates the microscopic and macroscopic features of solids and demonstrates how crystallography informs solid state chemistry.*
- *The graduate can demonstrate how the structure of a material's molecules can determine its strength and uses.*

Organic Chemistry

This course focuses on the study of compounds that contain carbon, much of which is learning how to organize and group these compounds based on common bonds found within them in order to predict their structure, behavior, and reactivity.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The graduate uses drawings and models to communicate and predict the structure and shape of organic molecules.*
- *The graduate applies concepts of acid-base chemistry to determine the relative acidities of organic acids and the position of equilibrium in an acid-base reaction.*
- *The graduate applies the IUPAC nomenclature to name organic molecules.*
- *The graduate applies concepts of stereochemistry to analyze organic molecules.*
- *The graduate applies mechanisms to analyze organic reactions, including organic synthesis.*
- *The graduate analyzes properties and reactions of important organic compounds, including aromatic compounds.*
- *The graduate applies instrumental methods of analysis to determine the structure of organic compounds.*

Biochemistry

Biochemistry covers the structure and function of the four major polymers produced by living organisms. These include nucleic acids, proteins, carbohydrates, and lipids. This course focuses on application. Be sure to understand the underlying biochemistry in order to grasp how it is applied. By successfully completing this course, you will gain an introductory understanding of the chemicals and reactions that sustain life. You will also begin to see the importance of this subject matter to health.

This course covers the following competencies:

- *Begin your course by discussing the results of your Course Planning Assessment with your Course Instructor and design a course plan together.*
- *The graduate demonstrates how nucleic acid polymers can transform cells and transmit information within the cell.*
- *The graduate explains how the structure and composition of amino acids and proteins impact the human body.*
- *The graduate explains how the structure and function of myoglobin and hemoglobin impact the human body.*
- *The graduate explains how the structure and function of enzymes and inhibitors in reactions impact the human body.*
- *The graduate analyzes the role of ATP in carbohydrate metabolism and the impact of irregular ATP synthesis on the human body.*
- *The graduate explains how lipids are essential to the normal function of cells and the impact of abnormal lipid metabolism on the human body.*

Chemistry: Content Knowledge

Chemistry: Content Knowledge provides advanced instruction in the main areas of chemistry for which secondary chemistry teachers are expected to demonstrate competency. Topics include matter and energy; thermochemistry; structure; bonding; reactivity; biochemistry and organic chemistry; solutions; the nature of science, technology, and social perspectives; mathematics, and laboratory procedures.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The graduate synthesizes concepts and processes from across chemistry to generate a comprehensive understanding of the field.*
- *The graduate verifies that they possess the requisite chemistry knowledge and skills by passing the chemistry content knowledge test required to become a beginning teacher of secondary school chemistry.*

Education

Survey of Pacific Northwest History for Educators

Survey of Pacific Northwest History is an overview of the historical, geographic, social, and economic development of the Pacific Northwest region of the United States, with a special emphasis on the Native American population who were the region's first inhabitants. The purpose of the course is to increase the candidate's awareness and sensitivity to the varying needs of their students based upon these populations. This course stresses the importance of relationships with local tribes and their continuous contributions to the development of Washington State and local communities and utilizes the Since Time Immemorial curriculum developed by Washington's Office of the Superintendent of Public Instruction. There are no prerequisites for this course.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The graduate analyzes the relationship between the geographic features of the Pacific Northwest and the culture and customs of the original peoples inhabiting the region (pre-European contact).*
- *The graduate analyzes the effects of contact, colonization, wars, and treaties on the cultural, social, and political structures of the Pacific Northwest.*
- *The graduate analyzes the influence of early industrialization, urbanization, and social movements on the Pacific Northwest Region.*
- *The graduate analyzes the impact of contemporary social, political, economic, and environmental changes in the Pacific Northwest.*

Mathematics Content

Trigonometry and Precalculus

Trigonometry and Precalculus covers the knowledge and skills necessary to apply trigonometry, complex numbers, systems of equations, vectors and matrices, sequence and series, and to use appropriate technology to model and solve real-life problems. Topics include degrees; radians and arcs; reference angles and right triangle trigonometry; applying, graphing and transforming trigonometric functions and their inverses; solving trigonometric equations; using and proving trigonometric identities; geometric, rectangular, and polar approaches to complex numbers; DeMoivre's Theorem; systems of linear equations and matrix-vector equations; systems of nonlinear equations; systems of inequalities; and arithmetic and geometric sequences and series. College Algebra is a prerequisite for this course.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The graduate applies trigonometric ratios and triangle formulas to model and solve real-life problems.*
- *The graduate uses a unit circle to define trigonometric functions and applies these functions to model and solve real-life problems.*
- *The graduate proves trigonometric identities and solves trigonometric equations.*
- *The graduate applies various representations of complex numbers to solve problems.*
- *The graduate uses systems of equations, systems of inequalities, and matrices to model and solve real-life problems.*
- *The graduate explores arithmetic and geometric sequences and uses them to model and solve real-life problems.*

Calculus I

Calculus I is the study of rates of change in the slope of a curve and covers the knowledge and skills necessary to use differential calculus of one variable and technology to solve basic problems. Topics include graphing functions and finding their domains and ranges; limits, continuity, differentiability, visual, analytical, and conceptual approaches to the definition of the derivative; the power, chain, and sum rules applied to polynomial and exponential functions, position and velocity; and L'Hopital's Rule. Precalculus is a prerequisite for this course.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The graduate demonstrates a conceptual understanding of limits and finds limits of functions.*
- *The graduate demonstrates a conceptual understanding of and solves problems involving continuity, and defines the relationship of continuity to differentiability and integrability.*
- *The graduate demonstrates a conceptual understanding of differentiation and applies differentiation techniques to solve problems and aid in function graphing.*
- *The graduate applies differentiation in various ways to solve problems.*
- *The graduate applies integration techniques to solve problems.*

Science Education

Science, Technology, and Society

Science, Technology, and Society explores the ways in which science influences and is influenced by society and technology. Science is a humanistic and social endeavor and serves the needs of ever-changing societies by providing methods for observing, questioning, discovering, and communicating information about the physical and natural world. This course prepares educators to explain the nature and history of science, the various applications of science, and the scientific and engineering processes used to conduct investigations, make decisions, and solve problems. There are no prerequisites for this course.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The graduate analyzes the relationships among themes that appear across multiple scientific ideas.*
- *The graduate analyzes the nature of science, including how science distinguishes itself from other ways of knowing.*
- *The graduate analyzes the historical development of science, including how scientific knowledge evolves.*
- *The graduate analyzes the various ways in which science, technology, and society are interrelated.*
- *The graduate analyzes socially relevant scientific issues to make informed decisions based on data and context.*
- *The graduate analyzes the principles, processes, and assumptions of investigations in science to engage students in the nature of inquiry.*
- *The graduate uses technology tools and mathematics to improve investigations and the communication of results.*
- *The graduate formulates testable hypotheses for scientific investigations.*
- *The graduate conducts investigations in science to solve open-ended problems using appropriate scientific methods.*

Science Methods—Secondary Chemistry

Science Methods—Secondary Chemistry provides an introduction to teaching methods specific to science for undergraduate students seeking initial licensure or endorsement in secondary chemistry. Course content focuses on the design and teaching of standards-based lessons using the three dimensions of science (science and engineering practices, crosscutting concepts, and disciplinary core ideas) and the appropriate integration of technology into those lessons. Students in this course work within their content areas to evaluate, enhance, and plan appropriate science instruction. This course includes laboratory safety training and certification, which includes safe laboratory practices and procedures for science classrooms and the proper use of personal protective equipment. A prerequisite for this course is Curriculum, Instruction, and Assessment.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*

- *The graduate analyzes connections among the three dimensions of science instruction—disciplinary core ideas, crosscutting concepts, and science and engineering practices—to prepare and plan for instruction.*
- *The graduate integrates technology into science activities to support student engagement and content mastery.*
- *The graduate develops assessment strategies that measure three-dimensional science learning to determine the effectiveness of teaching and learning experiences.*
- *The graduate develops lessons that integrate the three dimensions of science with applicable technologies to connect scientific concepts and phenomena.*
- *The graduate develops plans for the use, storage, and maintenance of science materials and protective equipment and for the care of living organisms to comply with district, state, and federal safety, ethical, and legal standards for science teachers.*
- *The graduate establishes an emergency response plan to prepare for potential emergency situations in the science learning environment.*

Pedagogy

Secondary Reading Instruction and Interventions

Secondary Reading Instruction and Interventions explores the comprehensive, student-centered response to intervention (RTI) model used to identify and address the needs of learners in middle school and high school who struggle with reading comprehension and/or information retention. Course content provides educators with effective strategies designed to scaffold instruction and help learners develop increased skill in the following areas: reading, vocabulary, text structures and genres, and logical reasoning related to the academic disciplines. This course is designed to be taken after successful completion of the Introduction to Curriculum, Instruction, and Assessment course OR Introduction to Instructional Planning and Presentation AND Instructional Planning and Presentation in Special Education.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The graduate explains how the Response to Intervention (RTI) approach identifies, monitors, and differentiates instruction to ensure that struggling readers obtain the appropriate support and interventions to improve academic progress.*
- *The graduate develops effective vocabulary instruction to enhance students' reading comprehension in the content areas.*
- *The graduate integrates knowledge of effective comprehension strategies to help students monitor and improve their own comprehension when reading.*
- *The graduate integrates reading strategies that scaffold instruction for students when reading increasingly complex texts.*
- *The graduate integrates reading assessments to make informed instructional and placement decisions.*

Secondary Disciplinary Literacy

Secondary Disciplinary Literacy examines teaching strategies designed to help learners in middle and high school improve upon the literacy skills required to read, write, and think critically while engaging content in different academic disciplines. Themes include exploring how language structures, text features, vocabulary, and context influence reading comprehension across the curriculum. The course highlights strategies and tools designed to help teachers assess the reading comprehension and writing proficiency of learners and provides strategies to support students' reading and writing success in all curriculum areas. This course has no prerequisites.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The graduate distinguishes between the basic strategies used to facilitate comprehension in the content areas and the specialized reading practices needed to comprehend text in a specific discipline.*
- *The graduate integrates discipline-specific literacy instruction to help students understand the text structures, vocabulary, and language knowledge required for specific disciplines.*
- *The graduate plans writing activities that promote understanding of discipline-specific content through the organization, analysis, and synthesis of ideas.*

- *The graduate creates authentic learning tasks and activities that provide students with opportunities to demonstrate discipline specific understandings.*
- *The graduate integrates instructional strategies and materials in disciplinary literacy practices to enhance student understanding within the disciplines.*

Field Experience

Preclinical Experiences in Science

Preclinical Experiences in Science provides students the opportunity to observe and participate in a wide range of in-classroom teaching experiences in order to develop the skills and confidence necessary to be an effective teacher. Students will reflect on and document the 75 hours of in-classroom observation and experience in their performance assessments. Prior to entering the classroom for the observations, students will be required to meet several requirements including a cleared background check, passing scores on the state or WGU required basic skills exam and a completed resume.

This course covers the following competencies:

- *The graduate develops a classroom management plan that integrates best practices for engagement and motivation.*
- *The graduate evaluates the theoretical and practical implications of various content knowledge applications, tools of inquiry, instructional strategies, models and trends in the context of classrooms and schools.*
- *The graduate collaborates with a mentor teacher in the planning and delivery of instruction in a classroom setting.*
- *The graduate evaluates the theoretical and practical implications of various strategies that are intended to support the use of academic language, metacognition, and communication in classroom contexts.*
- *The graduate evaluates the theoretical and practical applications of various assessment practices as they relate to student learning and instructional design.*
- *The graduate evaluates various applications of technological integration in support of learning for all students.*
- *The graduate evaluates the theoretical, legal, ethical, and practical applications of teaching students with exceptional learning needs.*
- *The graduate evaluates educational observations and experiences connected to professional practices to support the development of appropriate teaching dispositions and a personal teaching philosophy.*

Demonstration Teaching

Supervised Demonstration Teaching in Science, Observations 1 and 2

Supervised Demonstration Teaching in Science involves a series of classroom performance observations by the host teacher and clinical supervisor that develop comprehensive performance data about the teacher candidate's skills. This course is eligible for an In Progress grade. Please see the Grading Scale Policy for more information.

Supervised Demonstration Teaching in Science, Observation 3 and Midterm

Supervised Demonstration Teaching in Science involves a series of classroom performance observations by the host teacher and clinical supervisor that develop comprehensive performance data about the teacher candidate's skills. This course is eligible for an In Progress grade. Please see the Grading Scale Policy for more information.

Supervised Demonstration Teaching in Science, Observations 4 and 5

Supervised Demonstration Teaching in Science involves a series of classroom performance observations by the host teacher and clinical supervisor that develop comprehensive performance data about the teacher candidate's skills. This course is eligible for an In Progress grade. Please see the Grading Scale Policy for more information.

Supervised Demonstration Teaching in Science, Observation 6 and Final

Supervised Demonstration Teaching in Science involves a series of classroom performance observations by the host teacher and clinical supervisor that develop comprehensive performance data about the teacher candidate's skills. This course is eligible for an In Progress grade. Please see the Grading Scale Policy for more information.

Teacher Performance Assessment in Science

Teacher Performance Assessment in Science course is a culmination of the wide variety of skills learned in the Teachers

College at WGU. In order to be a competent and independent classroom teacher, students will showcase a collection of content, planning, instructional, and reflective skills.

This course is eligible for an In Progress grade. Please see the Grading Scale Policy for more information.

This course covers the following competencies:

- *The graduate evaluates the teaching context to accommodate student differences to plan for instruction and assessment.*
- *The graduate plans learning environments that support individual learning, collaboration, and positive social interaction.*
- *The graduate plans comprehensive learning segments of instruction and assessment that align with standards and the needs of students.*
- *The graduate applies instructional strategies that promote learning, engage students, and provide differentiated instruction.*
- *The graduate integrates strategies to develop academic language that facilitates effective student participation and engagement in learning.*
- *The graduate utilizes assessment data to profile student learning, communicate information about student progress and achievement, and guide and modify instruction.*
- *The graduate evaluates teaching experiences including the planning and implementing of curriculum and instruction through ongoing reflection.*

Professional Portfolio

Professional Portfolio requires candidates to create an online teaching portfolio that demonstrates professional beliefs, growth, and effective teaching practices from the Demonstration Teaching experience. The portfolio includes reflective essays (educational beliefs, professional growth, and collaboration with stakeholders) and professional artifacts (resume and artifacts with commentary on academic language, systems of student support, education technology, and professional communication with families) developed and acquired during Demonstration Teaching.

This course is eligible for an In Progress grade. Please see the Grading Scale Policy for more information.

This course covers the following competencies:

- *The graduate recommends improvements for instruction and professional practice through personal reflection.*
- *The graduate integrates technology into classroom learning experiences to enhance student learning and monitor academic progress.*
- *The graduate demonstrates ethical responsibilities and appropriate teaching dispositions, including those outlined in the Western Governors University Teachers College Code of Ethics.*
- *The graduate recommends strategies that support the development of academic language for all students.*
- *The graduate integrates a variety of strategies and resources to differentiate instruction and meet the needs of diverse learners.*
- *The graduate develops appropriate plans for professional growth in subject matter knowledge and pedagogical skills, including habits and skills of continual inquiry and learning.*

Cohort Seminar

Cohort Seminar provides mentoring and supports teacher candidates during their demonstration teaching period by providing weekly collaboration and instruction related to the demonstration teaching experience. It facilitates their demonstration of competence in becoming reflective practitioners, adhering to ethical standards, practicing inclusion in a diverse classroom, exploring community resources, building collegial and collaborative relationships with teachers, and considering leadership and supervisory skills.

This course is eligible for an In Progress grade. Please see the Grading Scale Policy for more information.

This course covers the following competencies:

- *The graduate demonstrates the ability to positively impact student learning through work samples, student artifacts, assessment results, and reflection.*
- *The graduate recommends improvements for instruction and professional practice through personal reflection.*
- *The graduate demonstrates ethical responsibilities and appropriate teaching dispositions, including those outlined in the Western Governors University Teachers College Code of Ethics.*
- *The graduate recommends strategies for effectively collaborating with colleagues, parents, and community professionals to support student development, learning, and well being.*

- *The graduate selects community resources that support students' non-instructional needs in and out of the classroom.*
- *The graduate recommends strategies that support the development of academic language for all students.*
- *The graduate integrates a variety of strategies and resources to differentiate instruction and meet the needs of diverse learners.*
- *The graduate recommends effective strategies to maintain high levels of student engagement.*
- *The graduate recommends best practices for classroom management, effective transitions, and pacing to maximize instructional time.*
- *The graduate develops appropriate plans for professional growth in subject matter knowledge and pedagogical skills, including habits and skills of continual inquiry and learning.*

Accessibility and Accommodations

Western Governors University is committed to providing equal access to its academic programs to all qualified students. WGU's Accessibility Services team supports this mission by providing support, resources, advocacy, collaboration, and academic accommodations for students with disabilities and other qualifying conditions under the Americans with Disabilities Act (ADA). WGU encourages student to complete the Accommodation Request Form as soon as they become aware of the need for an accommodation. Current and prospective students can reach the Accessibility Services team Monday through Friday 8:00 a.m. to 5:00 p.m. MST at 1-877-HELP-WGU (877-435-7948) x5922 or at ADASupport@wgu.edu.

Need More Information? WGU Student Services

WGU's Student Services team is dedicated exclusively to helping you achieve your academic goals. The Student Services office is available during extended hours to assist with general questions and requests. The Student Services team members help you resolve issues, listen to student issues and concerns, and make recommendations for improving policy and practice based on student feedback.

Student Services team members also assist with unresolved concerns to find equitable resolutions. To contact the Student Services team, please feel free to call 877-435-7948 or e-mail studentservices@wgu.edu. We are available Monday through Friday from 6:00 a.m. to 10:00 p.m., Saturday from 7:00 a.m. to 7:00 p.m., mountain standard time. Closed Sundays.

If you have inquiries or concerns that require technical support, please contact the WGU IT Service Desk. The IT Service Desk is available Monday through Friday, 6:00 a.m. to 10:00 p.m. and Saturday and Sunday, 10:00 a.m. to 7:00 p.m., mountain standard time. To contact the IT Service Desk, please call 1-877-HELP-WGU (877-435-7948) or e-mail servicedesk@wgu.edu. The support teams are generally closed in observance of university holidays.

For the most current information regarding WGU support services, please visit "Student Support" on the Student Portal at <http://my.wgu.edu>.