The Bachelor of Arts in Science (5–9) is a competency-based degree program that prepares students to be licensed as science teachers in grades 5–9. All work in this degree program is online with the exception of the Demonstration Teaching and in-classroom field experience components. The program consists of work in General Education, Teacher Education Foundations and Diversity, General Science Content, Science Education and Instructional Planning and Presentation.
Understanding the Competency-Based Approach

Practically speaking, what does it mean when we say that WGU programs are competency-based? Unlike traditional universities, WGU does not award degrees based on credit hours or on a certain set of required courses. Instead, students earn their degrees by demonstrating their skills, knowledge, and understanding of important concepts through a series of carefully designed assessments.

Progress through your degree program is governed, not by classes, but by satisfactory completion of the required assessments that demonstrate your mastery of the competencies. Of course, you will need to engage in learning experiences as you brush up on competencies or develop knowledge and skills in areas in which you may be weak. For this learning and development, WGU has a rich array of learning resources in which you may engage under the direction of your mentor. You will work closely with your mentor to schedule your program for completing the assessments. (We discuss assessments in much more detail later in this guide.) You will work closely with additional faculty members as you proceed through courses of study that are designed to lead you through the content you must master in order to pass individual assessments.

The benefit of this competency-based system is that it makes it possible for people who are knowledgeable about a particular subject to make accelerated progress toward completing a WGU degree even if they lack college experience. You may have gained your skills and knowledge of a subject on the job, accumulated wisdom through years of life experience, or, indeed, took a course on a particular subject. WGU awards a degree to you based on the skills and knowledge that you possess and can demonstrate, not the number of credits you have 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). The WGU Teachers College is accredited by the National Council for Accreditation of Teacher Education (NCATE). The nursing programs are accredited by the Commission on Collegiate Nursing Education (CCNE). The Health Informatics program is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM).

The Degree Plan

The focus of your program is your personalized Degree Plan. The Degree Plan is a detailed blueprint of the learning resources and assessments that comprise your program. The length of 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 will vary widely in the specific skills and information they need to learn. For example, some may be highly knowledgeable in a subject matter and would not need to engage in new learning opportunities. Others may find that portions of the program require completely new learning and that they may need to take an online class or participate in a study module to acquire the knowledge and skills needed to pass the 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 have more time. For this reason, you will complete pre-assessments to help your mentor form a profile of your prior knowledge and experience for use in creating your Degree Plan.

**WGU’s Mentoring Approach**

Our mentoring approach is a powerful component of the WGU educational experience. When you enroll at WGU, you will begin interacting with your personal mentor, course mentors, and support staff. Your mentor takes an active role and a personal interest in your success. Whether by e-mail or phone, your mentor will be your “point person” of communication throughout your program. Your mentor will help motivate you to work hard to complete your program. When you have questions or concerns, your mentor team will help you resolve them.

You and your mentor will work together to evaluate your educational background, strengths, and weaknesses. With this analysis, your mentors will help determine in which areas you are already competent (and can move quickly to assessment) and areas you need to work on; this will become your personalized Degree Plan. Your mentor will direct you to the Courses of Study that contain the best learning resources for you (courses, texts, independent study modules, etc.) and are supported by course mentors that serve as your content experts for each area of study. As you proceed through your academic program, you and your mentor will determine when you are ready for the required assessments. If you are ready, your assessment will be scheduled. You will follow this same process as you proceed through each domain.

**Connecting with Other Mentors and Fellow Students**

As you proceed through your Degree Plan, you may also have direct contact with other faculty members. These communications can take a variety of forms, including participation in learning communities, office hours via the courses of study, and webinars. As a WGU student, you will have access to your own personal MyWGU Student Portal that will provide a gateway to courses of study, learning communities, and program communities where you will have interactions with faculty and other students. Courses of study and communities are specifically designed to support you as you develop competencies in preparation for your assessments through the utilization of threaded discussions, blogs, and chats that are guided by content experts. You will access your program community during the Education Without Boundaries introductory 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 a Student Services Associate to help you and your mentor solve any special problems that may arise.

**Orientation**

The Orientation focuses on acquainting the student with WGU’s competency-based model, distance education, technology, and other resources and tools available for students. You will
also utilize tutorials, message boards, online chats, and other activities to connect with other students in your program. This orientation is completed before you start your first term at WGU.

**Pre-Requisites and Transferability of Prior College Coursework**

In order to be admitted into this program students must have completed a course in mathematics at the level of college algebra or higher as well as a natural science course with a lab.

Because WGU is a competency-based institution, it does not award degrees based on credits but on demonstration of competency. However, if you have completed college coursework at another accredited institution in addition to the requirements listed above you may be able to have some lower-division or co-requisite assessments cleared through transcript evaluation. The guidelines for determining what will “clear” through transfer vary based on the degree program.

The following transfer guidelines also generally apply to undergraduate programs: Degree requirements in the domains that can be considered the degree major cannot be cleared through transfer, except for the pre-requisite requirement or in certain cases where an applicable degree is presented according to the program transfer guidelines. Furthermore, WGU does not clear any requirements based upon the student's professional experience and does not perform a "resume review" or "portfolio review" that will automatically clear 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. Your terms are six months long. Longer terms and continuous enrollment allow you to focus on your studies without the hassle of unnatural breaks between the shorter terms that you would experience in a more traditional environment. At the end of every six-month term, you and your 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 eight (8) competency units each term, and undergraduate students must enroll in at least twelve (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 assessments you are able to pass, not on your accumulation of credit hours or course grades. Every time you pass an assessment, you are demonstrating that you have mastered skills and knowledge in your degree program. For
comparison to traditional grading systems, passing an assessment means you have demonstrated competency equivalent to a “B” grade or better.

WGU has assigned competency units to each assessment so that we can track your progress through the program. A competency unit is equivalent to one semester credit of learning. Some assessments may be assigned three competency units while other assessments may be as large as 12 competency units.

Satisfactory Academic Progress (SAP) is particularly important for financial aid students because you must make 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. As full-time students, WGU graduate students must enroll in at least eight competency units each term, and undergraduate students must enroll in at least 12 competency units 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 assessments you add to your term to accelerate your progress. Additionally, during your first term at WGU you must pass at least three 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.

Assessments

Your Degree Plan will include the assessments needed to complete your program. To obtain your degree you will be required to demonstrate your skills and knowledge by completing the following assessments:

Performance Assessments contain, in most cases, multiple scored tasks such as projects, essays, and research papers. Performance assessments contain detailed instructions and rubrics for completing each task and are submitted in TaskStream, an online project management and grading tool. Performance assessments also include observations and reflections of videotaped and real classroom situations. These pre-clinical experience performance assessments provide reflection instruction and enable students to analyze teaching and learning in real classroom situations and to apply pedagogical knowledge.

Objective Assessments are designed to evaluate your knowledge and skills in a domain of knowledge. Most 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.

Observations are used to measure your ability to perform the skills you have acquired as a student at WGU. These classroom observations occur during the Demonstration Teaching experience and are conducted and evaluated by a trained local clinical supervisor.

As previously mentioned, we have assigned competency units (CUs) to each assessment in order to measure your academic progress. As an undergraduate student, you will be expected to enroll in a minimum of 12 competency units each term. A standard plan for the program, at 12 units per term, for a student who has no transfer units would look similar to the one on the next 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 ARTS in SCIENCE (5-9)**

<table>
<thead>
<tr>
<th>Course Description</th>
<th>CUs</th>
<th>Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foundational Perspectives of Education</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Foundations of College Mathematics</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>English Composition I</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>English Composition II</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Critical Thinking and Logic</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>College Algebra</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Integrated Natural Science</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Integrated Natural Science Applications</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Elements of Effective Communication</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>General Chemistry I</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>General Chemistry Laboratory I</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Humanities</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Survey of United States Constitution and Government</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Principles of Biology</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Survey of United States History</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Science, Technology and Society</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Survey of World History</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Earth and Space Science</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>General Physics</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Middle School Science: Content Knowledge</td>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td>Fundamentals of Educational Psychology</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Fundamentals of Diversity, Inclusion, and Exceptional Learners</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Classroom Management, Engagement, and Motivation</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Educational Assessment</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Introduction to Pre-Clinical Experiences</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Introduction to Instructional Planning and Presentation</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>Instructional Planning and Presentation in Science</td>
<td>3</td>
<td>8</td>
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<tr>
<td>Pre-Clinical Experiences in Science</td>
<td>3</td>
<td>8</td>
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<tr>
<td>Science Teaching and Learning</td>
<td>4</td>
<td>8</td>
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<tr>
<td>Supervised Demonstration Teaching in Science, Observations 1 and 2</td>
<td>3</td>
<td>9</td>
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<tr>
<td>Supervised Demonstration Teaching in Science, Observation 3 and Midterm</td>
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<td>9</td>
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<tr>
<td>Supervised Demonstration Teaching in Science, Observations 4 and 5</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>Supervised Demonstration Teaching in Science, Observation 6 and Final</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>Teacher Work Sample in Science</td>
<td>2</td>
<td>9</td>
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<tr>
<td>Professional Portfolio</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Cohort Seminar</td>
<td>3</td>
<td>9</td>
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</tbody>
</table>
In this example, the program will take nine terms for the student to complete. The standard path shown above lists the courses of study (assessments) and the associated competency units by term. The Degree Plan will include greater detail about the courses of study, including the assessments and their associated standard learning resources.

Learning Resources
You will work with your mentor to select the various learning resources needed to prepare for the required assessments. In most cases, the learning materials you will use are independent learning resources such as textbooks, e-learning modules, study guides, simulations, virtual labs, and tutorials. WGU works with dozens of educational providers, including enterprises, publishers, training companies, and higher educational institutions to give you high quality and effective instruction that matches the competencies that you are developing. The cost of many learning resources is included in your tuition, and you can enroll directly in those through your Degree Plan as your mentor has scheduled them. Some resources (e.g., many textbooks) are not covered by your tuition, and you will need to cover those costs separately. WGU has excellent bookstore and library arrangements to help you obtain the needed learning resources.

Changes to Curriculum
WGU publishes an Institutional Catalogue, 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. As these changes are implemented, WGU will ensure that the length of the student's degree program (i.e., total competency unit requirements) will not increase and that competency units already earned will be applied to the updated program version. When program requirements are updated, students returning from term break or returning after withdrawal from the University will be expected to re-enter the updated version of the program.

Areas of Study Within the Bachelor of Arts in Science (5–9)
The WGU Bachelor of Arts in Science (5–9) program content is based on research on effective instruction as well as national and state standards. It provides the knowledge and skills that enable teachers to teach effectively in diverse classrooms. The B.A. in Science (5–9) program content and training processes are consistent with the accountability intent of the No Child Left Behind Act of 2001. The degree program is focused on the preparation of highly qualified teachers. As described in the federal legislation, a highly qualified teacher is one who not only possesses full state certification, but also has solid content knowledge of the subject(s) he or she teaches. The hallmarks of our program include: (a) appropriate and rigorous subject-matter preparation, (b) research-based pedagogical course preparation, and (c) clinical field experiences in which teacher candidates are supervised by trained coaches.

The following section includes the areas of study in the program, which are then followed by their associated courses, and in some cases, the sample learning resources that have recently been used to help students gain the competencies needed to pass the assessments in the course. 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. Please note that the learning resources included in the following sections are sample resources that will vary based on your own Degree Plan and the resources current at the time you enroll in the program. 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.

Teacher Education Foundations

**Foundational Perspectives in Education**

*Students will learn the historical, legal, and philosophical foundations of education while reflecting on educational issues impacting today's educators. This course covers the following competencies:*

- The graduate evaluates the impact of various educational philosophies on historical and current educational trends.
- The graduate analyzes the relationship of current trends in education and educational reform to historical foundations and evolution of the industry.
- The graduate evaluates the impact of various social issues and influences on students, teachers, instruction, and schools.
- The graduate analyzes the role of federal and state governance in determining standard educational practices and ensuring access to educational opportunities.
- The graduate applies major federal and state laws related to exceptional learners to the teaching and learning strategies used in various situations.
- The graduate evaluates the affordances and challenges of standards-based curriculum on students, teachers, instruction, and schools.
- The graduate analyzes the benefits, challenges, and proper uses of technology in the classroom.
- The graduate articulates a personal code of ethics that reflects the major ethical, moral, and legal issues teachers commonly face.

**Fundamentals of Educational Psychology**

*Students will learn the major theories of typical and atypical physical, social, cognitive, and moral development of children and adolescents. Information processing, brain research, memory, and metacognition will also be covered. This course covers the following competencies:*

- The graduate analyzes how classic theories of development and learning can be applied in an educational situation.
- The graduate analyzes contemporary and emerging research on the development and learning of individuals.
- The graduate recommends strategies for supporting the needs of students with typical and atypical development.
• The graduate analyzes the various influences and contexts that inform students’
  individual approaches to learning.
• The graduate analyzes the relationships between cognition and metacognition as they
  pertain to the construction of knowledge, thinking skills, and problem-solving strategies.
• The graduate analyzes the relationships among motivation, engagement, and cognition
  as they pertain to the design and selection of instructional materials and approaches.
• The graduate evaluates the appropriateness and effectiveness of various technology
  tools in supporting development and learning.

Classroom Management, Engagement, and Motivation
Students will learn the foundations for effective classroom management as well as strategies for
creating a safe, positive learning environment for all learners. Students will be introduced to
systems that promote student self-awareness, self-management, self-efficacy, and self-esteem.
This course covers the following competencies:
• The graduate analyzes major strategies of classroom management as they apply to
  specific areas of specialization.
• The graduate analyzes classroom management strategies and approaches that promote
• The graduate integrates strategies for managing routine misbehaviors into classroom
  management strategies and procedures.
• The graduate incorporates evidence-based strategies and materials in the design of
  classroom management plans.
• The graduate effectively applies principles of intrinsic and extrinsic motivation to a
  variety of classroom scenarios.
• The graduate appropriately uses technology to enhance teaching, learning,
  engagement, and motivation.
• The graduate evaluates best practices that encourage positive social interaction, self-
  motivation, and active engagement in learning environments.
• The graduate generates appropriate instructional interventions for a variety of students
  and learning contexts.
• The graduate designs emotionally safe classroom environments that foster learning and
  deal effectively with emotions, conflicts, and serious behavior problems.

Educational Assessment
Students will learn how to make appropriate data-driven instructional decisions by exploring key
concepts relevant to the administration, scoring, and interpretation of classroom assessments.
This course covers the following competencies:
• The graduate analyzes assessment information to inform instructional decision-making
  and to support and adapt instruction for all students, including those individuals with
  exceptional learning needs.
The graduate analyzes assessment information to inform instructional decision-making and to support and adapt instruction for all students, including those individuals with exceptional learning needs.

The graduate utilizes effective methods and strategies in the planning, development, and evaluation of student assessment.

The graduate plans and designs assessments aligned to learning outcomes, standards, benchmarks, and objectives.

The graduate effectively and appropriately communicates the results of assessments with stakeholders, including students.

The graduate evaluates assessment results to make informed educational recommendations, including those for program and school improvement.

The graduate recommends appropriate and effective uses of technology to support assessment, instruction, and learning.

General Education

Foundations of College Mathematics
This course focuses on basic numeracy and calculation skills, basic algebra skills, basic geometry principles, and basic data and probability skills. It covers the following competencies:

- The student utilizes the operations, processes, and procedures of basic numeracy and calculation skills to solve quantitative problems in arithmetic and basic algebra.
- The student applies the operations, processes, and procedures of basic algebra to solve quantitative problems.
- The student utilizes the operations, processes, and procedures of basic geometry and measurement to solve problems in mathematics.
- The graduate evaluates quantitative data by interpreting statistical and graphic representations and solves basic probability problems.

English Composition I
This course introduces learners to the types of writing and thinking that is valued in college and beyond. Students will practice writing in several genres and several media, with emphasis placed on writing and revising academic arguments. It covers the following competencies:

- 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.

**English Composition II**

English Composition II introduces learners to research writing and thinking that are valued in college and beyond. The Composition II course at WGU should be seen as a foundational course designed to help undergraduate students build fundamental skills for ongoing development in writing and research. Students will complete an academic research paper. This course covers the following competencies:

- 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.

**Critical Thinking and Logic**

This course introduces students to the basic concepts of logic and critical thinking. Students are introduced to the use of logical principles to accurately express and establish the validity of various forms of reasoning. The main objective of the course is for students to understand the range of concepts and techniques employed by critical thinkers. Students learn how to correctly apply the principles of logic and cultivate the skills they need to be able to recognize, analyze, and critically evaluate arguments. This course covers the following competencies:

- The graduate applies conceptual foundations of logic and critical thinking to patterns of thinking and reasoning.
- The graduate evaluates arguments, demonstrating validity through application of formal logic and methods.
- The graduate evaluates sophisticated types of reasoning through the concepts and methods of logic and critical thinking.

**College Algebra**

Understanding algebraic functions and their graphs as well as methods for solving equations and inequalities allows you to model real-world phenomena and solve problems. Engaging in this course will help you build these skills, as well as build a strong foundation in algebra for further mathematics courses you may complete for your degree program. Additionally, this course aims to help you build your problem-solving and critical-thinking skills, which can be used in any course, job, or situation. It covers the following competencies:

- The graduate uses properties of numbers to analyze and evaluate numeric and algebraic expressions.
- The graduate solves equations and inequalities and applies them to model data and solve problems.
- The graduate analyzes and interprets functions using multiple representations.
- The graduate solves polynomial and rational functions and applies them to model data and solve problems.
• The graduate solves exponential and logarithmic functions and applies them to model data and solve problems.
• The graduate analyzes and solves systems of linear equations.

Integrated Natural Sciences
Integrated Natural Sciences explores the natural world through an integrated perspective and helps students begin to see and draw numerous connections among events in the natural world. Topics include the universe, the Earth, ecosystems and organisms. Students apply scientific concepts in the examination of natural science fundamentals. This course covers the following competencies:
• The graduate recognizes and analyzes various natural phenomena and applies natural science methods and approaches to these natural phenomena.
• The graduate examines fundamental concepts and theories in the natural sciences.
• The graduate analyzes the organization, interactions, and predictable processes of the universe.
• The graduate identifies and analyzes the organization, interactions, and processes of the Earth.
• The graduate analyzes the components, organization, interactions, and processes of ecosystems.
• The graduate recognizes and applies underlying principles of matter and chemical reactions to analyze the structure, organization, interactions, and processes of organisms.

Elements of Effective Communication
Elements of Effective Communication introduces learners to elements of communication that are valued in college and beyond. Materials are based on five principles: being aware of your communication with yourself and others; using and interpreting verbal messages effectively; using and interpreting nonverbal messages effectively; listening and responding thoughtfully to others, and adapting messages to others appropriately. This course covers the following competencies:
• The graduate applies foundational elements of effective communication.
• The graduate applies appropriate communication strategies in interpersonal and group contexts.
• The graduate demonstrates effective presentational communication strategies in a given context.

Introduction to Humanities
This introductory humanities course allows students 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 students to more effectively enter the global community with a broad and enlightened perspective. This course covers the following competencies:

- 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 Middle Ages.
- 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 Baroque period.
- The graduate analyzes the primary contributions and characteristics of humanities within the Neoclassical and Enlightenment period.

Survey of United States Constitution and Government

In Survey of United States Constitution and Government, you will examine the structure, institutions and principles of the American political system. The foundation of the United States government is the U.S. Constitution, and this course will introduce the concepts of (a) separation of powers, (b) checks and balances, (c) civil liberties and civil rights, and (d) federalism and republicanism.

By completing this course, you will have proven competency in the structures of government, your own role in the policy-making process, and the ways in which the Constitution and government has changed over time. This course covers the following competencies:

- The graduate analyzes the dilemmas and principles of government.
- The graduate analyzes the central themes and founding principles of the U.S. Constitution and the U.S. government.
- The graduate analyzes the division of power between national and state governments.
- The graduate analyzes the development and protection of individual civil liberties and civil rights.
- The graduate analyzes the powers of each branch of government and the relationships among them.
- The graduate analyzes the formation of personal and collective political opinions and the influence of the media.
- The graduate analyzes the role of individuals, interest groups, and political parties in the U.S. electoral system.
- The graduate analyzes the institutional pressures involved in making domestic and foreign policy.
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:

- 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.

Survey of World History
Through a thematic approach, this course explores the history of human societies over 5,000 years. Students examine political and social structures, religious beliefs, economic systems, and patterns in trade, as well as many cultural attributes that came to distinguish different societies around the globe over time. Special attention is given to relationships between these societies and the way geographic and environmental factors influence human development. This course covers the following competencies:

- The graduate examines how primary characteristics (political, religious, and geographical features) of the first civilizations (Mesopotamia, Egypt, India, and China) contributed to the development of these societies.
- The graduate analyzes major cultural, political, and economic shifts that led to revolution, industrialization, and ideological change in the modern period.
- The graduate analyzes the spread of peoples, ideas, and technologies into new territories as civilizations advanced beyond their borders of origin.
- The graduate examines how primary characteristics (political, cultural, and geographical features) of the first empires (Greece, Rome, Persia, and China) contributed to the establishment and rise of these societies.

General Science Content
General Chemistry I and Lab
In this course students will attain a solid understanding of fundamental chemistry concepts and a reasonable ability to solve chemical problems. Topics include measurement, elements and compounds, properties of matter and energy, the periodic table and chemical nomenclature, quantities in chemistry, chemical reactions, the modern atomic theory, and the chemical bond. Laboratory work focuses on using effective laboratory techniques to examine the physical and chemical characteristics of matter.

- The graduate applies principles of measurement to solve problems.
• The graduate analyzes the chemical structure of atoms to predict bond and compound properties.

• The graduate accurately describes physical and chemical properties of matter and the exchange of energy in physical and chemical processes.

• The graduate applies knowledge of the periodic table to classify elements and aid in naming molecular and ionic compounds.

• The graduate determines quantities of materials consumed and produced in chemical reactions using moles and stoichiometry.

• The graduate classifies chemical reactions and writes balanced equations using atomic and molecular models and the principles of conservation.

• The graduate applies the modern atomic theory to explain the structure of atoms and periodic trends. The graduate predicts the nature of chemical bonds formed between atoms from various elemental groups.

Principles of Biology
This course provides a broad overview of cellular biology, evolution, organisms, and ecology. It covers the following competencies:

• The graduate has a broad understanding of the important concepts in molecular and cellular biology.

• The graduate has a broad understanding of evolution and the history of life on earth.

Earth and Space Science
This course provides a broad overview of the basic concepts in astronomy, geology, meteorology, and oceanography. It covers the following competencies:

• The graduate has a broad understanding of the basic concepts of astronomy.

• The graduate has a broad understanding of the principles of geology.

• The graduate has a broad understanding of the concepts of meteorology.

• The graduate has a broad understanding of the basic concepts of oceanography.

General Physics
This course provides a broad overview of the principles of mechanics, thermodynamics, wave motion, modern physics, and electricity and magnetism and invites students to apply them by solving problems, performing labs, and reflecting on concepts and ideas. It covers the following competencies:

• The graduate has a broad understanding of energy, including mechanics, heat, and electricity and magnetism.

• The graduate has a broad understanding of wave motion and atomic nuclear physics.
Middle School Science: Content Knowledge
This course covers the content knowledge that a middle-level science teacher is expected to know and understand. Topics include scientific methodologies, history of science, basic science principles, physical sciences, life sciences, Earth and space sciences, and the role of science and technology and their impact on society. This course covers the following competencies:

- The graduate has a broad understanding of the important concepts in molecular and cellular biology.
- The graduate has a broad understanding of the important concepts related to the biology of organisms.
- The graduate has a broad understanding of important concepts of ecology.
- The graduate has a broad understanding of evolution and the history of life on earth.
- The graduate has a broad understanding of chemical structure and stability.
- The graduate has a broad understanding of chemical reactions.
- The graduate has a broad understanding of stoichiometry.
- The graduate has a broad understanding of solutions, rates of reaction, and energy changes.
- The graduate has a broad understanding of energy, including mechanics, heat, and electricity and magnetism.
- The graduate has a broad understanding of wave motion and atomic nuclear physics.
- The graduate has a broad understanding of the basic concepts of astronomy.
- The graduate has a broad understanding of the principles of geology.
- The graduate has a broad understanding of the concepts of meteorology.
- The graduate has a broad understanding of the basic concepts of oceanography.
- The graduate understands and provides safe, effective, research-based instruction in science.

Science Education
Science, Technology, and Society
This course engages students in the study of the nature, processes, and applications of science and technology and arms them with the knowledge and skills necessary to understand explain important science concepts. The course addresses the historical evolution of scientific ideas, scientific inquiry, as well as how science is used to inform decision making on current issues. It covers the following competencies:

- 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 Teaching and Learning**

This course focuses on how to teach science and on preparing preservice science educators to teach science in a way that is accurate, current and engaging. Topics include models for teaching science through inquiry, evaluation of alignment to standards, effective use of learning communities, formative assessment strategies, and safety responsibilities. This course covers the following competencies:

• The graduate integrates learning communities that foster understanding into the design of learning activities and curriculum.

• The graduate integrates various models for teaching science through inquiry into the design of learning activities and curriculum.

• The graduate integrates formative assessment strategies into the design of learning activities and curriculum.

• The graduate evaluates the quality of a unit of study with regard to pedagogical strength and alignment to National Science Education Standards.

• The graduate integrates the legal and ethical responsibilities of a science teacher into the design of instruction.

• The graduate develops plans for the use, storage, and maintenance of science materials and safety equipment and the care of living organisms.

• The graduate develops emergency response plans for the science classroom that account for various potential emergencies.

• The graduate creates appropriate resources for communicating safety and emergency procedures to students.
Teacher Education Diversity

Fundamentals of Diversity, Inclusion, and Exceptional Learners

Students will learn the history of inclusion and develop practical strategies for modifying instruction, in accordance with legal expectations, to meet the needs of a diverse population of learners. This population includes learners with disabilities, gifted and talented learners, culturally diverse learners, and English language learners. This course covers the following competencies.

- The graduate applies appropriate policies, programs, accepted practices, and legal requirements to classroom and instructional practices as they relate to special education, English language learners, and gifted and talented learners.
- The graduate integrates knowledge of characteristics, contexts, and conditions of students in the process to address the needs of multicultural learners, exceptional learners, atypical development, English language learners, and gifted and talented learners and to implement equity pedagogy into their practice.
- The graduate selects appropriate strategies to effectively and ethically engage with students, families, administrators, and other stakeholders in support of the education of diverse learners.
- The graduate selects effective and appropriate learning opportunities for the specific needs of diverse learners.
- The graduate recommends best practices to plan classroom instruction in a supportive learning environment for ELL students.
- The graduate selects appropriate behavioral intervention strategies for students with special educational needs.
- The graduate selects appropriate technology tools and accommodations to support the education of diverse learners.
- The graduate selects research-based and data-driven assessment strategies that meet the needs of diverse learners.

Pre-Clinical Experiences

Introduction to Pre-Clinical Experiences

Students will utilize video observations to reflect on a wide range of educational considerations so that they can develop the tools necessary to be prepared in the classroom. Students will document at least 40 hours of video observation.

- The graduate analyzes the theoretical and practical implications of various instructional practices intended to support classroom management, engagement, and motivation.
- The graduate analyzes the theoretical and practical implications of various instructional practices intended to support equity and the teaching of diverse learners.
- The graduate evaluates various uses of academic language and classroom discourse to determine possible theoretical and practical implications for instructional practice and student learning.
• The graduate analyzes the theoretical and practical implications of various instructional strategies and models intended to support teaching and learning.
• The graduate analyzes the use of standards, state and federal regulations, and educational policy for classroom teaching and learning.
• The graduate analyzes the legal and ethical responsibilities of teachers in the classroom.
• The graduate analyzes how various professional practices intended to support learners relate to theories of learning and development.
• The graduate analyzes the effectiveness of instructional practices intended to address atypical development and exceptional learning.
• The graduate analyzes observed professional practices in relation to a personal teaching philosophy.

Pre-Clinical Experiences in Science
Students will 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 at least 60 hours of in-classroom observations. 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, a completed resume, philosophy of teaching, and professional photo.

• 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 general instructional strategies, models, and trends in the context of classrooms and schools.
• The graduate evaluates the theoretical and practical implications of various elementary education instructional strategies, models, and trends in the context of classrooms and schools.
• 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.
Instructional Planning and Presentation

Introduction to Instructional Planning and Presentation
Students will develop a basic understanding of effective instructional principles and how to differentiate instruction in order to elicit powerful teaching in the classroom.

- The graduate incorporates best principles and practices into the design of learning outcomes.
- The graduate evaluates the appropriateness of various current and emerging digital tools that support student learning.
- The graduate analyzes the role of assessment in the cycle of instruction.
- The graduate selects appropriate and effective instructional strategies to support the full range of learners.
- The graduate evaluates appropriate and effective learning resources that support student learning.
- The graduate applies research-based and evidence-based instructional design and presentation principles in the evaluation of effective unit and lesson plans.
- The graduate evaluates various influences on learning and instruction to ensure positive and engaging learning experiences.
- The graduate applies strategies to develop academic language through learning and instruction.
- The graduate selects appropriate and effective tools for communicating with students, colleagues, families, and others to support and facilitate student success and achievement.
- The graduate analyzes the relationships among technology, pedagogy, instruction, and learning.

Instructional Planning and Presentation for Science
Students will continue to build instructional planning skills with a focus on selecting appropriate materials for diverse learners, selecting age- and ability-appropriate strategies for the content areas, promoting critical thinking, and establishing both short- and long-term goals. These courses cover the following competencies:

- The graduate effectively evaluates and integrates standards, learning outcomes, assessment, instructional strategies, and learning resources in the development and modification of unit and lesson plans.
- The graduate integrates appropriate and effective presentation strategies in the planning or delivery of lessons for a variety of learners.
- The graduate integrates research derived from evidence-based practice into the planning and delivery of meaningful, relevant, and engaging instruction and assessment.
- The graduate develops active learning opportunities for a variety of students to promote meaningful, relevant, and engaging student-focused instruction.
• The graduate develops instructional materials that effectively incorporate prior learning and cross-curricular learning outcomes to promote relevant, meaningful, and engaging instruction.

• The graduate incorporates various grouping strategies into instruction to facilitate learning for all students.

• The graduate uses technology appropriately in the planning and delivery of meaningful, relevant, and engaging instruction.

• The graduate plans safe and engaging learning environments that foster cultural and community understanding, collaboration, student voice, positive social interactions, and that include individuals with exceptional learning needs.

• The graduate effectively and appropriately uses data, including assessment results, in the planning, delivery, and evaluation of meaningful, relevant, and engaging instruction.

Demonstration Teaching
Supervised Demonstration Teaching in Science
The Supervised Demonstration Teaching in Science courses involve a series of classroom performance observations by the host teacher and clinical supervisor that develop comprehensive performance data about the teacher candidate’s skills. These courses cover the following competencies:

• The graduate provides developmentally appropriate instruction that supports the cognitive, linguistic, social, emotional, and physical needs of all students.

• The graduate establishes a safe and productive learning environment that supports individual learning, collaboration, and positive social interaction.

• The graduate integrates effective strategies to manage the resources, students, procedures, and routines of the classroom.

• The graduate designs instruction that effectively integrates understanding of subject matter, curriculum goals, cross-disciplinary skills, pedagogy, and students.

• The graduate integrates multiple methods of assessment that engage students in their own growth, document student progress, and inform ongoing planning and instruction.

• The graduate integrates a variety of instructional strategies that engage students in the learning process and encourage deep understanding of content and development of the skills needed to apply knowledge in meaningful ways.

• The graduate integrates effective strategies to manage the delivery of lesson content.

• The graduate integrates appropriate central concepts, tools of inquiry, and structures of the discipline to make content accessible and meaningful for all students and to assure mastery.

• The graduate demonstrates the professional conduct, commitment to personal growth, and leadership skills expected within the profession.
**Teacher Work Sample in Science**

The Teacher Work Sample in Science is a culmination of the wide variety of skills learned during your time in the Teachers College at WGU. In order to be a competent and independent classroom teacher, you will showcase a collection of your content, planning, instructional, and reflective skills in this professional assessment.

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

**Professional Portfolio**

You will create an online teaching portfolio that includes professional artifacts (e.g. resume and Philosophy of Teaching Statement) that demonstrate the skills you have acquired throughout your Demonstration Teaching experience. This course covers the following competencies:

- The graduate recommends strategies for effectively collaborating with colleagues, parents, and community professionals to support student development, learning, and well-being.
- The graduate recommends best practices for classroom management, effective transitions, and pacing to maximize instructional time.
- The graduate recommends improvements for instruction and professional practice through personal reflection.
- The graduate develops appropriate plans for professional growth in subject matter knowledge and pedagogical skills, including habits and skills of continual inquiry and learning.
- The graduate demonstrates the ability to positively impact student learning through work samples, student artifacts, assessment results, and reflection.
- 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 demonstrates ethical responsibilities and appropriate teaching dispositions, including those outlined in the Western Governors University Teachers College Code of Ethics.

The graduate recommends effective strategies to maintain high levels of student engagement.

Cohort Seminar

The 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 covers the following competencies:

- The graduate recommends improvements for instruction and professional practice through personal reflection.
- The graduate develops appropriate plans for professional growth in subject matter knowledge and pedagogical skills, including habits and skills of continual inquiry and learning.
- The graduate demonstrates ethical responsibilities and appropriate teaching dispositions, including those outlined in the Western Governors University Teachers College Code of Ethics.

California Teacher Candidates

Effective July 1, 2008, teacher candidates matriculating in a WGU teacher licensure program and seeking licensure in California will be required to pass the California Teacher Performance Assessment (TPA). This assessment consists of four performance tasks that will ask you to plan and give instruction for elementary or secondary classes; you will also be asked to develop and administer assessment plans. In addition, WGU candidates will demonstrate how to adapt instruction and assessments to accommodate the needs of English language learners and students who are instructionally challenged. WGU will facilitate the completion of this credentialing requirement concurrent with the teacher candidate’s completion of program assessments in the Effective Teaching Practices and Demonstration Teaching domains. California students will receive guidance and support on the TPA from participation in the CATPA Learning Community during their program.

External Content Exams

Prior to graduation, Western Governors University requires that candidates pass the state-mandated content exam that aligns with their WGU program. This exam may or may not be the PRAXIS II. Specific information regarding required content exams required for each program can be found in the WGU Student Handbook. It is the candidates’ responsibility to register and pay for the required exams and submit their official passing score reports to WGU.
Need More Information? WGU Student Services

WGU has a Student Services team dedicated exclusively to helping students achieve their academic goals. The Student Services Office is available during extended hours to assist students with general questions and administrative or accessibility issues. The Student Services team members help students resolve issues, listen to student issues and concerns, and make recommendations for improving policy and practice based on student feedback. The Student Services team provides a formal means by which students can express their views, and those views in turn inform the decisions we make.

Student Services team members also assist students with unresolved concerns to find equitable resolutions. To contact the Student Services team, please feel free to call (866) 903-0110 or email studentservices@wgu.edu. We are available Monday through Friday from 6 AM to 10 PM, Saturday from 7 AM to 7 PM, and Sunday from 10 AM to 7 PM, Mountain Time.

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 AM to 12 AM and Saturday and Sunday, 10 AM to 7 PM, MT. To contact the IT Service Desk, please call 1-877-HELP-WGU (877-435-7948) and select option 2 or email servicedesk@wgu.edu.

For the most current information regarding WGU support services, please visit the “Help” tab on the Student Portal at http://my.wgu.edu.