

# Program Guidebook

## Bachelor of Science, Science Education (Secondary Biological Science)

The Bachelor of Science, Science Education (Secondary Biological Science) is a competency based degree program that prepares students to be licensed as secondary biology 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

## 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 \RXU GHJUHH E\ GHPRQVWUDWLQJ \RXU VNLOOV NQRZOHGJH DQG

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 FRQWHQW \RX PXVW PDVWHU WR SDVV WKH FRXUVH DVVHVVPHQWV

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 Q X P E H U R I F U H G L W V K R X U V R Q \R X U W U D Q V F U L S W

## Accreditation

Western Governors University is the only university in the history of American higher education to have HDUQHG DFFUHGLWDWLRQ IURP IRXU UHJLRQDO DFFUHGLWLQJ FRF (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 DFFUHGLWHG E\WKH \$FFUHGLWDWLRQ & RXQFLO IRU %XVLQHVV 6F

## 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 SODQWRGHYRWHHDFKZHHNWRVWXG

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

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 \RXU GHWHUPLQDWLRQ WR SURFHHG DW D IDVWHU UDWH

Course Description	CUs
Professional Portfolio	2
Cohort Seminar	3
Student Teaching II in Secondary Education	6

## 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 UH HQWHU LQWR WKH PRVW FXUUHQW FDWDORJ YHUVLRQ RI WKH S

# Areas of Study for Bachelor of Science, Science Education (Secondary Biological Science)

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.

## **General Education**

#### Composition: Writing with a Strategy

Welcome to Composition: Writing with a Strategy! In this course, you will focus on three main topics: understanding purpose, context, and audience, writing strategies and techniques, and editing and revising. In addition, the first section, will offer review on core elements of the writing process, cross-cultural communication, as well as working with words and FRPPRQ\_VWDQGDUGV\_DQG\_SUDFWLFHV

Each section includes learning opportunities through readings, videos, audio, and other relevant resources. Assessment activities with feedback also provide opportunities to check your learning, practice, and show how well you understand course content. Because the course is self-paced, you may move through the material as quickly or as slowly as you need to gain proficiency in the seven competencies that will be covered in the final assessment. If you have no prior knowledge or experience, you can expect to spend 30-40 hours on the course content.

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 individual writes with purpose for a given context and target audience.
- " The individual incorporates writing strategies and techniques for written communication.
- " The individual constructs a written document with correct format, style, structure, and grammar.
- " The individual formulates a strategy for editing and revising written text.
- " The individual composes constructive feedback of written texts.

#### Introduction to Communication: Connecting with Others

Welcome to Introduction to Communication: Connecting with Others! It may seem like common knowledge that communication skills are important, and that communicating with others is inescapable in our everyday lives. While this may appear simplistic, the study of communication is actually complex, dynamic, and multifaceted. Strong communication skills are invaluable to strengthening a multitude of aspects of life. Specifically, this course will focus on communication in the professional setting, and present material from multiple vantage points, including communicating with others in a variety of contexts, across situations, and with diverse populations. Upon completion, you will have a deeper understanding of both your own and others' communication behaviors, and a toolbox of effective behaviors to enhance your experience in the workplace.

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 implements appropriate communication styles based on audience and setting.
- " The learner uses communication strategies for managing conflict.
- " The learner uses communication strategies to influence others.

#### 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.

- " 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.

#### 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.

- " 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.

" The learner incorporates self-expression in written communication.

#### US History: Stories of American Democracy

7KLV FRXUVH SUHVHQWV D EURDG VXUYH\ RI 8 6 KLVWRU\ IURP HDUO\ FRORQL]E explores how historical events and major themes in American history have affected diverse populations, influenced changes LQ SROLF\ DQ HVWDEOLVKHG WKH \$PHULFDQ GHILQLWLRQ RI GHPRFUDF\ × 7KLV sections. Each section includes learning opportunities through reading, images, videos, and other relevant resources. Assessment activities with feedback also provide opportunities to practice and check how well you understand the content. Because the course is self-paced, you may move through the material as quickly or as slowly as you need to, with the goal of demonstrating proficiency in the five competencies covered in the final assessment. If you have no prior knowledge of this PDWHULDO \RX FDQ H[SHFW WR VSHQG KRXUV RQ WKH FRXUVH FRQWHQW × invitation to see the world through the humanities, examine the humanities during the Information Age, and explore the global origins of music—essentially questioning what makes us human, and how people are connected across culture and time. Each module includes learning opportunities through readings, videos, audio, and other relevant resources. Assessment activities with feedback also provide opportunities to practice and check learning. With no prior knowledge or exptrSgpdqsne I /Layvportuni>lored asee tpehec30-40 peur mun

- " 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.

#### 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.

- " 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

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 analyzes inter-dependencies of organisms and their environments.

#### Ecology and Environmental Science

Ecology and Environmental Science is an introductory course for undergraduate students seeking initial licensure or endorsement in secondary or middle grade science education. The course explores the relationships between organisms and their environment, including population ecology, communities, adaptations, distributions, interactions, and the environmental factors controlling these relationships. 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 examines ecosystems to analyze the relationship between populations and the environment.
- " The graduate examines the flow of energy in an ecosystem to assess how changes in that flow affect biodiversity.
- " The graduate analyzes biogeochemical cycles to explain the importance of these cycles to global processes.
- " The graduate researches environmental challenges to discuss potential solutions.
- " The graduate assesses the challenges associated with resource management in order to compare potential sustainable solutions.

#### Zoology

Zoology provides undergraduate students seeking licensure or endorsement in secondary science education with an introduction to the field of zoology. Zoology includes the study of major animal phyla emphasizing characteristics, variations in anatomy, life cycles, adaptations, and relationships among the animal kingdom. A prerequisite for this course is Introduction to Biology.

This course covers the following competencies:

- " Begin your course by discussing your course planning tool report with your instructor and creating your personalized FRXUVH SODQ WRJHWKHU
- " The graduate distinguishes the characteristics of animals to organize them into phyla.
- " The graduate analyzes the anatomies of animals to distinguish the relationships among organisms.
- " The graduate analyzes adaptations to recognize the impact on the evolution of phyla.
- " The graduate analyzes the life cycles of animals to determine the relationships within and between phyla.

## 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.

## **Chemistry Content**

#### Chemistry with Lab

Chemistry with Lab for undergraduates provides students seeking initial teacher licensure in middle grades science or secondary physics, biological science, or earth science with an introduction to the field of chemistry, the branch of science that studies the composition, structure, properties, and behavior of matter. Designed for those not majoring in chemistry education, this course highlights how the topics covered can be applied within various branches of science. 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 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 explains how chemistry is applied within other sciences to understand its relevance within the physical and natural world.
- " The graduate conducts safe and effective investigations to test hypotheses and draw conclusions.
- " The graduate determines the electronic structure of atoms and periodic trends to compare the properties of various substances.
- " The graduate names basic compounds, using the periodic table and IUPAC rules, to identify their composition.
- " The graduate explains how chemical bonds and electron orientation impact the structures and behavior of molecules to understand the composition of matter.
- " The graduate balances chemical equations to follow the Law of Conservation of Matter.
- " 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.

## **Biology Content**

#### Molecular and Cellular Biology

Molecular and Cellular Biology provides undergraduate students seeking initial licensure or endorsement in secondary science education with an introduction to the area of molecular and cellular biology. This course examines the cell as an organism, emphasizing the molecular basis of cell structure and functions of biological macromolecules, subcellular organelles, intracellular transport, cell division, and biological reactions. Introduction to Biology 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 FRXUVH SODQ WRJHWKHU
- " The graduate examines cells, organelles, viruses, and vaccines to analyze their structure and function in biological systems.
- " The graduate examines the processes within the cell cycle in order to recognize their impact on growth and development.
- " The graduate examines chemical principles, enzymes, biochemical pathways, energy flow, and cellular environments to analyze cellular metabolism.
- " The graduate analyzes the structure of biological macromolecules to determine their function within a cell
- " The graduate distinguishes the steps involved in the synthesis and processing of mRNA and protein to analyze their purpose in cell function.
- " The graduate applies basic laboratory techniques to examine biological processes and reactions.

#### Heredity and Genetics

Heredity and Genetics is an introductory course for undergraduate students seeking initial licensure or endorsement in secondary or middle grade science education. This course addresses the basic principles of heredity and the function of molecular genetics. Topics include Mendelian and non-Mendelian inheritance and population genetics. 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 researches the biological basis of inheritance to analyze patterns of heredity.
- " The graduate researches applications of molecular genetics to analyze chromosomal disorders and mutations.
- " The graduate examines the structure and expression of genes to explain resulting phenotypes.
- " The graduate applies the principles of population genetics to determine characteristics of a population.

#### Evolution

Students will learn why evolution is the fundamental concept that underlies all life sciences and how it contributes to advances in medicine, public health, and conservation. Course participants will gain a firm understanding of the basic mechanisms of evolution, including the process of speciation, and how these systems have given rise to the great diversity of life in the world today. They will also explore how new ideas, discoveries, and technologies are modifying prior evolutionary concepts. Ultimately, the course will explain how evolution works and how we know what we know.

This course covers the following competencies:

- " Begin your course by discussing your course planning tool report with your instructor and creating your personalized FRXUVH SODQ WRJHWKHU
- " The graduate has a practical understanding of Darwin and the evidence that led him to propose his theory of evolution.
- " The graduate can explain the basic theory of evolution and how evolutionary mechanisms have driven diversification among organisms.
- " The graduate has an in-depth understanding of how coevolution, genetic drift, natural selection, and sexual selection contribute to the organization of the Earth's biodiversity.
- " The graduate appreciates the different opinions about how species are defined based on using molecular data to understand evolutionary processes.
- " The graduate recognizes the complexities of human evolution, where humans fit with respect to other organisms on the Tree of Life, and what sets humans apart from other animals.
- " The graduate recognizes how evolutionary theory impacts our lives through modern medicine, agriculture, and conservation efforts.

#### **Biology: Content Knowledge**

This comprehensive course examines a student's conceptual understanding of a broad range of biology topics. High school biology teachers must help students make connections between isolated topics. This course starts with macromolecules that make up cellular components and continues with understanding the many cellular processes that allow life to exist. Connections are then made between genetics and evolution. Classification of organisms leads into plant and animal development that study the organ systems and their role in maintaining homeostasis. The course finishes by studying ecology and the effect humans have on 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 FRXUVH SODQ WRJHWKHU
- " The graduate synthesizes concepts and processes from across biology to generate a comprehensive understanding of the field.
- " The graduate verifies that they possess the requisite biology knowledge and skills by passing the biology content knowledge test required to become a beginning teacher of secondary school biology.

## **Health Sciences**

#### Human Anatomy and Physiology

This course examines the structures and functions of the human body and covers anatomical terminology, cells and tissues, and organ systems. Students will study the healthy state of the organ systems of the human body, including the digestive, skeletal, sensory, respiratory, reproductive, nervous, muscular, cardiovascular, lymphatic, integumentary, endocrine, and renal systems. 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 appropriate terminology to communicate about body position and human anatomical features and relationships.
- " The graduate analyzes the structures and functions of the human cardiovascular and respiratory systems.
- " The graduate analyzes the structure and function of the human renal and reproductive systems.
- " The graduate analyzes the structure and function of the human nervous system.
- " The graduate analyzes the structure and function of the human digestive system.
- " The graduate analyzes the structures and functions of the human muscular, skeletal, and integumentary systems.
- " The graduate analyzes the structure and function of the human lymphatic and endocrine systems.

## 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.

- " 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 problemsdy aq hpssence, Technology, and Society

- " 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 FRPSOHWLRQ RI WKH, QWURGXFWLRQ WR & XUULFXOXP, QVWUXFWLRQ DQG \$VVF 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.

- " 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 readi text 0584eTf 2.0 E1 /Lbl </lg65 readi text 0587ontent areas and th specialized reading pract 6ing prrrla ()Tj EMC unw tht 0 rg /Tbasicread, write,T1 1 Tf Tf -1.439le enguired to /C2\_0 1 Tlinary Li019a specialized reading practices needed to comprehend text in a readi text 6584eTf 2.0 E1 /Lbl </lg65 readi text 0587ontent area and the specialized reading practices needed to comprehend text in a readi text 6584eTf 2.0 E1 /Lbl </lg65 readi text 0587ontent area area Tdsher</p>

## **Field Experience**

#### Preclinical Experiences in Science

Preclinical Experiences in Science provides students the opportunity to observe and participate in a wide range of inclassroom 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.

## Student Teaching

#### Student Teaching I in Secondary Education

Student Teaching I in Secondary Education is the first of two culminating experiences and is a required course for all initial licensure candidates. Student Teaching I is a supervised classroom-based activity in an authentic setting, which enables the candidate to demonstrate professional dispositions and ethics while collaborating with a practicing teacher and applying instructional strategies using co-teaching models. The candidate assumes increasing responsibilities while developing the skills and confidence necessary to be an effective teacher. Each candidate receives formative feedback through observations and a mid-term evaluation on the relevance of required activities, how culturally engaging the activities are, and how successful each candidate is in teaching each student. Each candidate is also evaluated on the ability to think about, analyze, and modify classroom actions as needed, and on a willingness to take risks and experiment with materials and methods that may be new or that may challenge your cultural knowledge.

This course covers the following competencies:

- " The learner implements the full cycle of teaching while exhibiting professional dispositions and ethics.
- " The learner analyzes feedback and data from observations and evaluations to identify opportunities for improvement.

#### Student Teaching II in Secondary Education

Student Teaching II in Secondary Education is the second of two culminating experiences and is a required course for all initial licensure candidates. Student Teaching II is a supervised classroom-based activity in an authentic setting, which enables the candidate to demonstrate professional dispositions and ethics while collaborating with a practicing teacher and applying instructional strategies using co-teaching models. The candidate assumes increasing responsibilities while developing the skills and confidence necessary to be an effective teacher. Each candidate receives formative feedback through observations and a final evaluation on the relevance of required activities, how culturally engaging the activities are, and how successful each candidate is in teaching each student. Each candidate is also evaluated on the ability to think about, analyze, and modify classroom actions as needed, and on a willingness to take risks and experiment with materials and methods that may be new or that may challenge your cultural knowledge. The final evaluation in Student Teaching II is the determining factor in applying for licensure as a professional educator.

- " The learner engages in a continual improvement process in order to advance learner outcomes and personal professional practice.
- " The learner plans content-based instruction that supports student learning objectives.
- " The learner integrates instructional strategies to address the needs of all students and meet the learning goals and objectives.
- " The learner assesses student learning to monitor progress, engage learners in their own growth, and guide decisionmaking.

## **Demonstration Teaching**

#### 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 FRQWHQW SODQQLQJ LQVWUXFWLRQDO DQG UHIOHFWLYH VNLOOV 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 FRPPXQLFDWLRQ ZLWK IDPLOLHV GHYHORSHG DQG DFTXLUHG GXULQJ 'HPRQVWU 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

## Accessibility and Accommodations

Western Governors University is committed to providing equal access to its academic programs to all qualified VWXGHQWV :\*8¶V \$FFHVVLELOLW\ 6HUYLFHV×WHDP VXSSRUWV WKLV PLV collaboration, and academic accommodations for students with disabilities and other qualifying conditions under the