



Bachelor of Arts in **Science for Prospective Physics Teachers** **Grade 5-12**

The Bachelor of Arts in Science (5–12, Physics) is a competency-based degree program that prepares students to be licensed as physics teachers in grades 5–12. 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 the Liberal Arts, the Foundations of Teaching, Effective Teaching Practices, Natural Science, Mathematics, General Chemistry, Physics, and Demonstration Teaching.

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 university is also accredited by the Distance Education and Training Council (DETC), and 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.

Education Without Boundaries Orientation

Education Without Boundaries (EWB) is a required orientation that 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 pre-calculus 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 – 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.

Essay Assessments are used to measure your ability to integrate and apply concepts. Your writing will be scored against competency-based rubrics established by the faculty.

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, 5-12 (PHYSICS)

CODE	ASSESSMENTS	CUs	TERM
FST4	Schools and Society	3	1
AGC1	Foundations of College Mathematics	3	1
BBC1	Communications Foundations	2	1
INC1	Integrated Natural Sciences	4	1
INT1	Integrated Natural Sciences Applications	4	2
CLC1	Reasoning and Problem Solving	3	2
ROT1	Pre-Calculus	3	2
SST1	General Education Social Sciences: Analysis and Applications	2	2
SSC1	General Education Social Sciences	1	3
QNT1	General Chemistry	5	3
IWC1	Literature, Arts and the Humanities	2	3
IWT1	Literature, Arts and the Humanities: Analysis and Interpretation	2	3
QJT1	Calculus I	3	3
BZC1	United States Constitution	3	4
BYT1	Physics: Mechanics	3	4
BZT1	Physics: Waves and Optics	3	4
LAE1	Language and Communication: Essay	2	4
LUT1	Language and Communication : Presentation	2	4
QBT1	Language and Communication: Research	3	5
DPT1	Physics: Electricity and Magnetism	3	5
FWT1	Modern Physics	3	5
DAV1	Physics: Content Knowledge	6	5
FHT4	Human Development and Learning	3	6
FDT4	Diversity and Inclusion	3	6
FCT4	Classroom Management	3	6
FTT4	Testing	3	6
FTC4	Foundations of Teaching Practice Integration	6	7
EIT4	Instructional Planning and Strategies	3	7

ETT4	Instructional Presentation and Follow-Up	6	7
EIO4	Instructional Planning, Strategies and Presentation Integration	3	8
DEC1	Specific Teaching Practices: Science Pedagogy	2	8
DET1	Specific Teaching Practices: Science	4	8
DZT1	Cohort Seminar in Science	3	9
DZA1	Supervised Teaching Practicum Science, Observations 1 and 2	3	9
DZA3	Supervised Teaching Practicum Science, Observation 3 and Midterm	3	9
DZA5	Supervised Teaching Practicum Science, Observations 4 and 5	3	9
DZA7	Supervised Teaching Practicum Science, Observation 6 and Final	3	9
ECT1	Professional Portfolio in Science	6	9

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.

Areas of Study Within the Bachelor of Arts in Science (5–12, Physics)

The content of the WGU Bachelor of Arts in Science (5–12, Physics) derives from research on effective instruction as well as national and state standards. It provides the knowledge and skills that enable teachers to perform effectively in diverse classrooms. The B.A. in Science (5–12 Physics) 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) scientifically based pedagogical course preparation, and (c) clinical field experiences in which teacher candidates are supervised by trained coaches.

The following section includes the larger domains of knowledge, which are then followed by the subject-specific subdomains of knowledge, their associated assessments (including the

four-character code that is used to identify the assessment), and the sample learning resources that have recently been used to help students gain the competencies needed to pass the assessments. 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.

Foundations of Teaching Domain

The Foundations of Teaching domain contains competencies underlying our knowledge about children, learning, and teaching. As you begin to work in the Foundations of Teaching domain, your mentor will assess your readiness to begin state-required content knowledge testing needed for certification. Your mentor will also assist you in beginning the process of application and acceptance into the two different components of WGU field experiences: the pre-clinical experiences (PCE) and demonstration teaching (DT). Video-based pre-clinical field experiences are embedded in the performance assessments of the Foundations of Teaching domain and require observation, analysis, and reflection based on real classroom situations (in-class PCE will take place in a school near you when you start work on the Effective Teaching Practices domain).

You may **not** transfer credits or prior years of teaching experience from other institutions to meet requirements of the Foundations of Teaching domain. In the first six months of working in the Foundation of Teaching domain, you must also register for and pass a Basic Skills Test. Many states require such a test for licensure, and you will need to take the one applicable to your state. For states with no specific Basic Skills Test, you will sign up for and take the Praxis 1 exam. More information about the Basic Skills requirement is available from your mentor and in the student handbook/knowledge base at www.wgu.edu/sh.

Schools and Society

Focuses on: fundamental knowledge about the field of education, including education; teaching standards; legal rights and responsibilities; and the history and organization of education.

Schools and Society (FST4)

Performance assessment

Sample Learning Resources:

Pearson CourseCompass provides an e-text version of the following text:

Kauchak, D. & Eggen, P. (2007). *Introduction to teaching: Becoming a professional* (3rd ed.). Upper Saddle River, NJ: Pearson. ISBN-13: 978-0131994553. (e-text, cost of this resource is included in tuition and fees)

MyLabSchool and Atomic Learning

Parents and Partners in Schooling provided by ASCD.

Human Development and Learning

Content relates to various dimensions of child development (e.g., cognitive, social, emotional, physical, cultural); learning theory and conditions of learning; influences on learning; and the impact of various developmental influences on instruction.

Human Development and Learning (FHT4)

Performance assessment

Sample Learning Resources:

CourseCompass provides an e-text version of the following text

Slavin, R. (2009). *Educational psychology: Theory and practice* (9th ed.). Boston: Allyn & Bacon. ISBN-13: 9780205616121. (e-text, cost of this resource is included in tuition and fees)

CourseSmart provides e-text versions of the following texts:

Garguilo, R.M. (2010). *Special education in contemporary society: An introduction to exceptionalism* (4th ed.). Thousand Oaks, CA: SAGE Publications. ISBN: 9781412988933. (e-text, cost of this resource is included in tuition and fees)

MyLabSchool and **TeachScope**, online, interactive resources.

Diversity and Inclusion

Content deals with exceptionalities, legal rights of students with disabilities, inclusion tactics, multiculturalism, bilingual education, and at-risk factors.

Diversity and Inclusion (FDT4)

Performance assessment.

Sample Learning Resources:

CourseSmart provides an e-text version of the following text:

Garguilo, R.M. (2010). *Special education in contemporary society: An introduction to exceptionalism* (4th ed.). Thousand Oaks, CA: SAGE Publications. ISBN: 9781412988933. (e-text, cost of this resource is included in tuition and fees)

MyLabSchool provides an e-text version of the following text as well as other resources:

Gollnick, D.M. & Chinn, P.C. (2009). *Multicultural education in a pluralistic society*. Upper Saddle River, NJ: Pearson/Allyn & Bacon. ISBN-13: 9780137147991. (e-text, cost of this resource is included in tuition and fees)

CaseNex and **E-Learning Creations** are online, interactive resources.

Classroom Management

Content includes competencies related to establishing and managing a classroom environment (e.g., organization of physical space, organization of time, behavior/academic expectations, social environment, culture for learning) and managing behavior (e.g., principles

for changing behavior, establishment/management systems for classroom behavior management, systems for individual behavior change).

Classroom Management (FCT4)

Performance Assessment.

Sample Learning Resources:

A custom e-book provided by Pearson includes selections from the following texts:

Evertson, C.M., & Emmer, E.T. (2009). *Classroom management for elementary teachers* (8th ed.). Boston, MA: Allyn & Bacon. ISBN-13: 9780205616114. (e-text, cost of this resource is included in tuition and fees)

Emmer, E.T., & Evertson, C.M. (2009). *Classroom management for middle and high school teachers* (8th ed.). Boston, MA: Allyn & Bacon. ISBN-13: 9780205643172. (e-text, cost of this resource is included in tuition and fees)

Jones, V. & Jones, L. (2010). *Comprehensive classroom management: Creating communities of support and solving problems* (9th ed.). Upper Saddle River, NJ: Allyn & Bacon. ISBN-13: 9780205625482. (e-text, cost of this resource is included in tuition and fees)

Slavin, R. (2009). *Educational psychology: Theory and practice* (9th ed.). Boston: Allyn & Bacon. ISBN-13: 9780205616121. (e-text, cost of this resource is included in tuition and fees)

Borich, G.D. (2007). *Effective teaching methods: Research-based practice* (6th ed.). Upper Saddle River, NJ: Allyn & Bacon. ISBN-13: 9780131714960. (e-text, cost of this resource is included in tuition and fees)

MyLabSchool and **Teachscape** are online, interactive resources.

Classroom Management for New Teachers and **Motivating Today's Learners**, a set of DVDs provided by Canter/Laureate.

Testing

Content addresses evaluating, selecting, developing, and administering assessments; analyzing, diagnosing, and reporting assessment results; and using results to plan and improve instruction.

Testing (FTT4)

Performance assessment

Sample Learning Resources:

Designing Assessment to Promote Learning, a set of DVDs provided by Canter/Laureate.

WGU Library E-Reserves provides electronic access to the following articles:

Briggs, C., Tully, B., & Stiefer, T. (1998, Fall). Direct informed assessment: Frequency of use in preservice teacher education programs within a five-state region. *Action in Teacher Education*, 20 (3), 30-38. (cost of this resource is included in tuition and fees)

- Cole, K.A. (1999, January). Walking around: Getting more from informal assessment. *Mathematics Teaching in the Middle School*, 4 (4), 224-227. (cost of this resource is included in tuition and fees)
- Ruiz-Primo, M.A. & Furtak, E.M. (2004, April). Informal formative assessment of students' understanding of scientific inquiry. Paper presented at the AERA Annual Meeting Symposium, Assessment for Reform-Based Science teaching & Learning, Stanford University, Stanford. (cost of this resource is included in tuition and fees)
- Shellard, E.G. (2003, November/December). Using assessment to support reading instruction. *Principal*, 83 (2), 40-43. (cost of this resource is included in tuition and fees)

Comprehensive Exam

The FTC4 is a comprehensive exam assessing the student's knowledge of the subdomains listed above. The student may participate in a comprehensive review session with a mentor and peers to prepare for the assessment.

Foundations of Teaching (FTC4)

Proctored, computer-based comprehensive objective exam.

Sample Learning Resources:

CourseSmart provides e-text versions of the following texts:

Garguilo, R.M. (2010). *Special education in contemporary society: An introduction to exceptionality* (4th ed.). Thousand Oaks, CA: SAGE Publications. ISBN: 9781412988933. (e-text, cost of this resource is included in tuition and fees)

A custom e-book provided by Pearson includes the following texts:

Evertson, C.M., & Emmer, E.T. (2009). *Classroom management for elementary teachers* (8th ed.). Boston, MA: Allyn & Bacon. ISBN-13: 9780205616114. (e-text, cost of this resource is included in tuition and fees)

Emmer, E.T., & Evertson, C.M. (2009). *Classroom management for middle and high school teachers* (8th ed.). Boston, MA: Allyn & Bacon. ISBN-13: 9780205643172. (e-text, cost of this resource is included in tuition and fees)

Jones, V. & Jones, L. (2010). *Comprehensive classroom management: Creating communities of support and solving problems* (9th ed.). Upper Saddle River, NJ: Allyn & Bacon. ISBN-13: 9780205625482. (e-text, cost of this resource is included in tuition and fees)

Slavin, R. (2009). *Educational psychology: Theory and practice* (9th ed.). Boston: Allyn & Bacon. ISBN-13: 9780205616121. (e-text, cost of this resource is included in tuition and fees)

Borich, G.D. (2007). *Effective teaching methods: Research-based practice* (6th ed.). Upper Saddle River, NJ: Allyn & Bacon. ISBN-13: 9780131714960. (e-text, cost of this resource is included in tuition and fees)

Kauchak, D. & Eggen, P. (2007). *Introduction to teaching: Becoming a professional* (3rd ed.). Upper Saddle River, NJ: Pearson. ISBN-13: 978-0131994553. (e-text, cost of this resource is included in tuition and fees)

Miller, M.D., Linn, R.L., & Gronlund, N.E. (2008). *Measurement and assessment in teaching* (10th ed). Upper Saddle River, NJ: Prentice Hall. ISBN-10: 0132408937. ISBN-13: 9780132408936. (e-text, cost of this resource is included in tuition and fees)

Gollnick, D.M. & Chinn, P.C. (2009). *Multicultural education in a pluralistic society*. Upper Saddle River, NJ: Pearson/Allyn & Bacon. ISBN-13: 9780137147991. (e-text, cost of this resource is included in tuition and fees)

WGU Library E-Reserves provides electronic access to the following texts:

Cambron-McCabe, N.H., McCarthy, M.M., & Thomas, S.B. (2004). *Public school law: Teachers' and students' rights* (5th ed.). Boston, MA: Allyn and Bacon. (cost of this resource is included in tuition and fees)

Cooper, P.J. & Simonds, C.J. (2007). *Communication for the classroom teacher*. Boston, MA: Pearson. (cost of this resource is included in tuition and fees)

Teachscape and **E Learning Creations** are online, interactive resources.

Foundations Domain

The Foundations domain focuses on basic subject matter knowledge that is typically required for baccalaureate level study.

Foundations

Focuses on application of grammatical standards, reading skills, basic numeracy and calculation skills, basic algebra skills, basic geometry principles, and basic data and probability skills.

Foundations of College Mathematics (AGC1)

Proctored, computer-based objective exam

Communications Foundations (BBC1)

Proctored, computer-based objective exam

Sample Learning Resources:

MyFoundationsLab in MyLabsPlus. This online interactive system allows students to move at their own pace as they work through the content to develop language and communication and quantitative literacy skills.

Liberal Arts Domain

The liberal arts domain focuses on basic subject matter knowledge that is typically included in baccalaureate level programs. Evaluation of your previous college transcripts may clear assessment requirements for some areas of the liberal arts domain, which could shorten your program of study by removing assessments. To waive or clear a subdomain, the transcript must show that you have taken equivalent classes in the subdomain content areas and passed those classes with a C grade or higher at an accredited institution of higher education.

Natural Science

Content focuses on scientific concepts and inquiry as well as key concepts across and within disciplines of natural science.

Integrated Natural Sciences (INC1)

Proctored, computer-based objective exam

Integrated Natural Sciences Applications (INT1)

Performance assessment that utilizes scientific inquiry and analysis of evidence

Sample Learning Resources:

Integrated Natural Science provided by Pearson CourseCompass. This online, interactive resource includes an e-text version of the following text:

Hewitt, P. G., Lyons, S., Suchocki, J., & Yeh, J. (2007). *Conceptual integrated science*. (1st ed.). San Francisco: Addison-Wesley. ISBN: 0805390383. (e-text, cost of this resource is included in tuition and fees)

Collegiate Level Reasoning and Problem Solving

Content includes problem identification and clarification, planning and information gathering, identifying assumptions and values, analysis and interpretation of information and data, reaching well-founded conclusions, and identifying the role of critical thinking in the disciplines and professions.

Reasoning and Problem Solving (CLC1)

Proctored, computer-based objective exam

Sample Learning Resources:

Collegiate Level Reasoning and Problem-Solving Skills provided by MindEdge.

This online interactive module system allows students to move at their own pace as they develop competency and includes an e-text version of the following text:

Paul, R., & Elder, L. (2006). *Critical thinking: Tools for taking charge of your learning and your life* (2nd ed.). Upper Saddle River, NJ: Pearson Prentice Hall. ISBN 0-13-114962-8. (e-text, cost of this resource is included in tuition and fees)

General Education Social Sciences

Content includes social science theory and method; human development and behavior; modern economic, social, and political institutions; and geography and human cultures.

General Education Social Science: Analysis and Applications (SST1)

Performance assessment that includes analysis and application of social science theories and methods

General Education Social Science (SSC1)

Proctored, computer-based objective exam

Sample Learning Resources:

General Education Social Sciences provided by Pearson CourseCompass. This online, interactive resource includes e-text versions of the following texts:

Bergman, E., & Renwick, W. H. (2008). *Introduction to geography: People, places and environment* (4th ed.). Upper Saddle River, NJ: Pearson Prentice Hall. ISBN-13: 9780132238991. (e-text, cost of this resource is included in tuition and fees)

Perry, J., & Perry, E. (2009). *Contemporary society: An introduction to social science* (12th ed.). Boston: Pearson Allyn and Bacon. ISBN-13: 9780205578672. (e-text, cost of this resource is included in tuition and fees)

Literature, Arts, and the Humanities

Content focuses on content, concepts, terminology, methodology, models, and issues within and across the disciplines of the humanities.

Literature, Arts, and the Humanities (IWC1)

Proctored, computer-based objective exam

Literature, Arts, and the Humanities: Analysis and Interpretation (IWT1)

Performance assessment that includes subjective and objective analysis and interpretation in the humanities

Sample Learning Resources:

Humanities provided by MindEdge. This online interactive module system allows students to move at their own pace as they develop competency and includes e-text versions of the following texts:

Janaro, R. P., & Altshuler, T. C. (2009). *The art of being human* (9th ed.). New York: Longman. ISBN-10: 0205605427. (e-text, cost of this resource is included in tuition and fees)

Sporre, D.J. (2009). *Perceiving the arts: An introduction to the humanities* (9th ed). New Jersey: Pearson Prentice Hall. ISBN-13: 978-0136045694. (e-text, cost of this resource is included in tuition and fees)

Themes in United States and World History/United States Government, Law and Constitution

Content includes major themes in world history and United States history; basic economic concepts; and the nature and development of American government.

United States Constitution (BZC1)

Proctored, computer based objective exam

Sample Learning Resources:

Americans Governing provided by Soomo provides documents, reference materials and recorded chats to help you prepare for the assessment.

Language and Communication

Content focuses on collegiate reading skills, basic information retrieval skills, writing skills, and speaking and writing skills.

Language and Communication: Essay (LAE1)

Performance assessment that includes writing

Language and Communication: Presentation (LUT1)

Performance assessment that includes an oral presentation

Language and Communication: Research (QBT1)

Performance assessment that includes writing a research paper

Sample Learning Resources:

Language and Communication: Essay provided by Pearson CourseCompass. This online, interactive resource includes e-text versions of the following texts:

Faigley, L. (2007). *Writing: A guide for college and beyond*. New York: Pearson Longman. ISBN: 0-321-39626-X. (e-text, cost of this resource is included in tuition and fees)

Ruszkiewicz, J., Seward, D. E., & Hairston, M. (2007). *SF writer* (4th ed.). New York: Pearson Longman. ISBN: 0-13-233458-5. (e-text, cost of this resource is included in tuition and fees)

Smith, B. D. (2007). *The reader's handbook: Reading strategies for college and everyday life* (3rd ed.). New York: Pearson Longman. ISBN-10: 0321476840. (e-text, cost of this resource is included in tuition and fees)

Language and Communication: Research and **Language and Communication: Presentation** provided by MindEdge. These online, interactive modules allow students to move at their own pace as they develop competency.

General Science Content Domain

Below are all of the subdomains that make up this content domain. Each subdomain is made up of specific competencies, or performance descriptions, that correspond to the specific skills or knowledge areas you must master.

Pre-calculus

This sub-domain focuses on the complex number system and trigonometry.

Pre-calculus (ROT1)

Proctored, computer-based objective assessment

Sample Learning Resources:

MyMathLab provided by Pearson CourseCompass. An online, interactive resource that includes an e-text version of the following text:

Blitzer, R. (2010). *Algebra and trigonometry* (4th ed.). New Jersey: Pearson Education (Prentice Hall). ISBN-13: 9780321559852. ISBN-10: 0321559851. (e-text, cost of this resource is included in tuition and fees)

Precalc ONLINE provided by Thinkwell.

Chemistry

The focus in this subdomain is on chemical structure, chemical reactions, stoichiometry, solutions, rates, and energy changes.

General Chemistry (QNT1)

Performance assessment

Sample Learning Resources:

Chemistry – Section of OWL which includes an e-text version of the following text:

Zumdahl, S. & Zumdahl, S. (2010). *Chemistry* (8th ed.). Boston: Brooks/Cole. ISBN: 0-547-12532-1. (e-text, cost of this resource is included in tuition and fees)

Chemistry Lab provided by Latenitelabs is a simulation program that encourages learning by allowing you to model and experiment with virtual chemicals.

Calculus I

This sub-domain focuses on limits, derivatives, continuity, and applications of differential calculus to mathematics and the sciences.

Calculus I (QJT1)

Performance assessment

Sample Learning Resources:

MyMathLab provided by Pearson CourseCompass. An online, interactive resource that includes an e-text version of the following text:

Thomas, G., Weir, M., Hass, J., & Giordano, F. (2008). *Thomas' calculus, early transcendental, media upgrade* (11th ed.). Boston: Addison-Wesley. ISBN: 9780321495754. (e-text, cost of this resource is included in tuition and fees)

Calculus provided by Thinkwell.

WGU Library E-reserves provides electronic access to the following:

Fernandez, E. (2004). The students' take on the epsilon-delta definition of a limit. *Primus: Problems, resources, and issues in mathematics undergraduate studies*, 14 (1), pp. 43-54. (cost of this resource is included in tuition and fees)

Physics Content Domain

This domain covers mechanics, waves and optics, electricity and magnetism, and modern physics.

Mechanics

This subdomain covers the following topics: describing motion; Newton's laws of motion; gravitation and Newton's synthesis; work and energy; momentum and collisions; rotational motion; static equilibrium; fluids; and oscillations.

Physics: Mechanics (BYT1)

Performance assessment

Sample Learning Resources:

CourseSmart provides e-text versions of the following text:

Hewitt, P.G. (2009). *Conceptual physics* (11th ed.). San Francisco: Addison Wesley. ISBN-13: 978-0-321-56809-0. (e-text, cost of this resource is included in tuition and fees)

Touger, J. (2006). *Introductory physics: Building understanding* (1st ed.). John Wiley & Sons, Inc. ISBN-13: 9780471940005. (e-text, cost of this resource is included in tuition and fees)

Physics I ONLINE for Physics majors provided by Thinkwell includes multi-media video lectures, review notes, interactive animations and sample exercises.

Virtual Physics provides inquiry-based physics simulations and includes a CD-ROM with the program and lab manual.

Physics PK-W Labpaq which includes a lab manual, laser, digital multi-meter, thermometer, stop watch, electrical components, optical equipment, pulleys, scales, and all of the other equipment necessary to complete experiments covering physics topics.

Space, Time and Motion. An optional, online seminar provided by American Museum of Natural History (AMNH).

Waves and Optics

This subdomain covers the following topics: wave motion, sound, temperature, thermal expansion, and the ideal gas law; kinetic theory and gases; laws of thermodynamics; light; lenses and optical instruments; the wave nature of light; and diffraction and polarization.

Physics Part: Waves and Optics (BZT1)

Performance assessment

Sample Learning Resources:

CourseSmart provides e-text versions of the following text:

Hewitt, P.G. (2009). *Conceptual physics* (11th ed.). San Francisco: Addison Wesley. ISBN-13: 978-0-321-56809-0. (e-text, cost of this resource is included in tuition and fees)

Touger, J. (2006). *Introductory physics: Building understanding* (1st ed.). John Wiley & Sons, Inc. ISBN-13: 9780471940005. (e-text, cost of this resource is included in tuition and fees)

Virtual Physics provides inquiry-based physics simulations and includes a CD-ROM with the program and lab manual.

Physics PK-W Labpaq which includes a lab manual, laser, digital multi-meter, thermometer, stop watch, electrical components, optical equipment, pulleys, scales, and all of the other equipment necessary to complete experiments covering physics topics.

Electricity and Magnetism

This subdomain covers the following topics: electric charge and electric field; electric currents and resistance; magnetism; electromagnetic induction and faraday's law; and Maxwell's equation and electromagnetic waves.

Physics: Electricity and Magnetism (DPT1)

Performance assessment

Sample Learning Resources:

CourseSmart provides e-text versions of the following text:

Hewitt, P.G. (2009). *Conceptual physics* (11th ed.). San Francisco: Addison Wesley. ISBN-13: 978-0-321-56809-0. (e-text, cost of this resource is included in tuition and fees)

Touger, J. (2006). *Introductory physics: Building understanding* (1st ed.). John Wiley & Sons, Inc. ISBN-13: 9780471940005. (e-text, cost of this resource is included in tuition and fees)

Virtual Physics provides inquiry-based physics simulations and includes a CD-ROM with the program and lab manual.

Physics PK-W Labpaq which includes a lab manual, laser, digital multi-meter, thermometer, stop watch, electrical components, optical equipment, pulleys, scales, and all of the other equipment necessary to complete experiments covering physics topics.

Open Learning Initiative (OLI) is a web-based resource that provides access to the Andes Physics Tutor. It includes a large bank of practice questions, hints for solving the problems and immediate feedback for your answers.

Modern Physics

This subdomain covers the following topics: birth of modern physics; Quantum Theory and models of the atom; Special Theory of Relativity and quantum mechanics; molecules and solids; nuclear physics and radioactivity; elementary particles; astrophysics; cosmology; and general relativity.

Modern Physics (FWT1)

Performance assessment

Sample Learning Resources:

Krane, K. (1996). *Modern physics* (2nd ed.). Hoboken, NJ: Wiley. ISBN-13: 9780471828723. (\$134.00)

CourseSmart provides e-text versions of the following text:

Hewitt, P.G. (2009). *Conceptual physics* (11th ed.). San Francisco: Addison Wesley. ISBN-13: 978-0-321-56809-0. (e-text, cost of this resource is included in tuition and fees)

Touger, J. (2006). *Introductory physics: Building understanding* (1st ed.). John Wiley & Sons, Inc. ISBN-13: 9780471940005. (e-text, cost of this resource is included in tuition and fees)

Physics I ONLINE for Physics majors provided by Thinkwell includes multi-media video lectures, review notes, interactive animations and sample exercises.

Physics PK-W Labpaq which includes a lab manual, laser, digital multi-meter, thermometer, stop watch, electrical components, optical equipment, pulleys, scales, and all of the other equipment necessary to complete experiments covering physics topics.

Space, Time and Motion. An optional, online seminar provided by American Museum of Natural History (AMNH).

Comprehensive Exam

The comprehensive exam will assess the student's knowledge of the subdomains in the General Science Content and Physics Content domains.

Physics: Content Knowledge (DAV1)

Praxis II 0265 – Physics: Content Knowledge

Effective Teaching Practices Domain

The Effective Teaching Practices domain deals with knowledge and skills related to how to teach. All competencies in this domain are derived from research. While you are engaged in the learning opportunities of Effective Teaching Practices, you will also participate in pre-clinical experiences (PCE) that now go beyond the FOT video cases to actual teaching experiences in real classroom situations. You will apply for, and be given approval, by the Field Experiences Office to do your pre-clinical experiences in a school. PCE takes place prior to your actual demonstration teaching (DT) (student teaching) and will require you to spend time in a school completing various required tasks. While you are completing your Effective Teaching Practices domain, you will be assigned a placement specialist who will work to place you in an appropriate classroom for your demonstration teaching as you approach that point.

As you continue your work in this domain, you must pay careful attention to the cohort requirements and deadlines pertaining to your specified demonstration teaching entry date. Your final acceptance into your desired DT cohort will be approved only when you have met all the requirements. Your mentor and the Field Experiences Office will help you through this process. An additional fee is required prior to beginning demonstration teaching (the fee, except for the DT application fee, can be covered through the use of financial aid proceeds). This fee covers the cost of in-classroom clinical supervision. You may not transfer credits or prior years of teaching experience from other institutions to meet requirements of the Effective Teaching Practices domain.

Instructional Strategies and Approaches

Content refers to curriculum design and evaluation; lesson planning and materials development; and adapting instruction, accommodating diverse learners, and using technology to facilitate learning. Additional content deals with empirically based methods of teaching, both general case (e.g., learning strategies) and content specific (e.g., reading methods).

Instructional Planning and Strategies (EIT4)

Performance assessment

Sample Learning Resources:

CourseSmart provides e-text version of the following texts:

Slavin, R. E. (2009). *Educational psychology: Theory and practice* (9th ed.). Boston, MA: Pearson. ISBN-13: 9780205616121. (e-text, cost of this resource is included in tuition and fees)

Smaldino, S. E., Lowther, D. L., & Russell, J. D. (2008). *Instructional technology and media for learning* (9th ed.). Upper Saddle River, NJ: Pearson. ISBN: 9780132391740. (e-text, cost of this resource is included in tuition and fees)

Teachscape provides online videos and other resources.

Designing Curriculum and Instruction and Building your Repertoire of Teaching Strategies provided by Canter and Associates which includes DVDs and a workbook.

CourseCompass provides e-text versions of the following texts:

Borich, G. (2007). *Effective teaching methods: Research-based practice*. Upper Saddle River, NJ: Pearson. ISBN: 9780131714960. (e-text, cost of this resource is included in tuition and fees)

Linn, R., Miller, M., & Gronlund, N. (2009). *Measurement and assessment in teaching* (10th ed.). Upper Saddle River, NJ: Pearson. ISBN: 9780132408936. (e-text, cost of this resource is included in tuition and fees)

Instructional Presentation and Follow-Up

Content relates explicitly to teaching skills and information to children.

Instructional Presentation and Follow-Up (ETT4)

Performance assessment

Sample Learning Resources:

CourseSmart provides e-text version of the following texts:

Slavin, R. E. (2009). *Educational psychology: Theory and practice* (9th ed.). Boston, MA: Pearson. ISBN-13: 9780205616121. (e-text, cost of this resource is included in tuition and fees)

Teachscape provides online videos and other resources.

CourseCompass provides e-text versions of the following texts:

Borich, G. (2007). *Effective teaching methods: Research-based practice*. Upper Saddle River, NJ: Pearson. ISBN: 9780131714960. (e-text, cost of this resource is included in tuition and fees)

Linn, R., Miller, M., & Gronlund, N. (2009). *Measurement and assessment in teaching* (10th ed.). Upper Saddle River, NJ: Pearson. ISBN: 9780132408936. (e-text, cost of this resource is included in tuition and fees)

Designing Curriculum and Instruction and Building your Repertoire of Teaching Strategies provided by Canter and Associates which includes DVDs and a workbook.

Differentiating Instruction provided by the Association for Supervision and Curriculum Development (ASCD).

Comprehensive Exam

The comprehensive exam will assess the student's knowledge of the subdomains listed above. The student may participate in a comprehensive review session with a mentor and peers to prepare for the assessment.

Instructional Planning, Strategies and Presentation Integration (EIO4)

Proctored, computer-based comprehensive objective exam

Specific Teaching Practices--Science

Content focuses on the knowledge and skills necessary to provide safe, effective, research-based instruction in science.

Specific Teaching Practices: Science Pedagogy (DEC1)

Proctored, computer-based objective exam

Specific Teaching Practices: Science (DET1)

Performance assessment

Sample Learning Resources:

Teaching Science Grades 5-12 provided by Pearson CourseCompass. These interactive modules also include an e-text version of the following texts:

Chaipetta, E. & Koballa, T. (2010). *Science instruction in the middle and secondary schools: Developing fundamental knowledge and skills* (7th ed.). Boston: Allyn & Bacon. ISBN-13: 9780137153046. (e-text, cost of this resource is included in tuition and fees)

Moyer, R. H., Hackett, J. K., & Everett, S. A. (2007). *Teaching science as investigations: Modeling inquiry through learning cycle lessons*. Columbus, Ohio: Pearson. ISBN-13: 9780132186278. (e-text, cost of this resource is included in tuition and fees)

Gallagher, J. J. (2007). *Teaching science for understanding: A practical guide for middle and high school teachers*. Columbus, Ohio: Pearson. ISBN-13: 9780131144255. (e-text, cost of this resource is included in tuition and fees)

MyLabSchool and **Teachscape** provide video clips and other resources.

WGU Library E-Reserves provides electronic access to the following:

“The Concept of Disease: Structure and Change” by Paul Thagard

“Students’ Pre-Instructional Beliefs and Reasoning Strategies About Astrobiology Concepts” by Erika Offerdahl, Edward Prather, and Timothy Slater.

Diversity of Fishes, Earth: Inside and Out, Solar Systems, Genetics, Genomics, Genethics, Space, Time and Motion, Evolution and The Ocean System.
Optional, online seminars provided by American Museum of Natural History (AMNH).

Demonstration Teaching Domain

The Demonstration Teaching Domain deals with the competencies a prospective teacher must demonstrate when teaching. Before you begin Demonstration Teaching, you must complete a number of requirements. These include a background check, standardized content examinations, and a dispositions inventory. Also, you must have completed all the above academic requirements before beginning Demonstration Teaching.

Demonstration Teaching is a full-time, in-classroom supervised experience required of all teacher candidates. The Demonstration Teaching phase of a teacher candidate's program includes a series of classroom performance observations designed to gather data about your actual performance skills. A WGU clinical supervisor (an experienced educator who lives and works near your teaching location) will observe you on multiple occasions—at least six observations are required—and evaluate you in accordance with published checklists and observation rubrics. In addition, where authorized, principals may provide one or more independent observations of WGU candidates. The clinical supervisors submit the results to WGU for review and recording. During your time in Demonstration Teaching, you will participate in a weekly cohort session via conference call. Your cohort is led by a facilitator and is comprised of a group of students teaching at about the same grade level. Your cohort facilitator will guide and support you through the Demonstration Teaching processes. For questions specifically related to placement for Demonstration Teaching, please contact the Demonstration Teaching Team at wgudt@wgu.edu. You will be required to complete the following assessments:

Cohort Seminar (DZT1)

Addresses information about schools (e.g., finance, law), professional behavior, and other common job-related expectations (committee work, reporting, etc.)

Supervised Teaching Practicum (DZA1, DZA3, DZA5, DZA7)

Includes a series of classroom performance observations gathered across time that serve as comprehensive performance data about the teacher candidate's skills

Professional Portfolio (ECT1)

The professional portfolio is a written document containing a comprehensive Teacher Work Sample. It provides direct evidence of the teacher candidate's ability to design and implement a multiweek, standards-based unit of instruction; assess student learning; and then reflect on the learning process. The WGU Teacher Work Sample requires teacher candidates to plan and teach a multiweek, standards-based instructional unit consisting of seven components: (1) contextual factors, (2) learning goals, (3) assessment, (4) design for instruction, (5) instructional decision making, (6) analysis of student learning, and (7) self-evaluation and reflection.

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, 6 AM to 12 AM and Saturday and Sunday, 10 AM to 7 PM, MT.**

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>.