**Teaching Science in Dual Language Classrooms/Teaching Science in Elementary Schools**

<table>
<thead>
<tr>
<th>Term: Fall 2014</th>
<th>BED 4311: 13577/ELED 4311: 14011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructor: Anthony Alvarez</td>
<td><a href="mailto:amalvarez3@utep.edu">amalvarez3@utep.edu</a></td>
</tr>
<tr>
<td>Class Day/Time: S 8:00-10:50 am</td>
<td>Location: Education 405</td>
</tr>
<tr>
<td>Office Hours: R 12:00-2:10 pm GEOL 302B</td>
<td>(915) 747-7088</td>
</tr>
</tbody>
</table>

**Guiding Principles for this Course**

*Texas State Examination: TEXES Exam #192 Bilingual Generalist EC-6*

- **Science Standard I:**
  - The science teacher manages classroom, field and laboratory activities to ensure the safety of all students and the ethical care and treatment of organisms and specimens

- **Science Standard II:**
  - The science teacher understands the correct use of tools, materials, equipment and technologies

- **Science Standard III:**
  - The science teacher understands the process of scientific inquiry and its role in science instruction

- **Science Standard IV:**
  - The science teacher has theoretical and practical knowledge about teaching science and about how students learn science

- **Science Standard V:**
  - The science teacher knows the varied and appropriate assessments and assessment practice to monitor science learning

- **Science Standard VI:**
  - The science teacher understands the history and nature of science

- **Science Standard VII:**
  - The science teacher understands how science affects the daily lives of students and how science interacts with and influences personal and societal decisions

- **Science Standard VIII:**
  - The science teacher knows and understands the science content appropriate to teach the statewide curriculum (Texas Essential Knowledge and Skills [TEKS]) in physical science

- **Science Standard IX:**
  - The science teacher knows and understands the science content appropriate to teach the statewide curriculum (Texas Essential Knowledge and Skills [TEKS]) in life science

- **Science Standard X:**
  - The science teacher knows and understands the science content appropriate to teach the statewide curriculum (Texas Essential Knowledge and Skills [TEKS]) in Earth and space science(s)

- **Science Standard XI:**
  - The science teacher knows unifying concepts and processes that are common to all Sciences

- **Bilingual Education Standard II:**
  - The bilingual education teacher has knowledge of the foundations of bilingual education and the concepts of bilingualism and biculturalism

- **Bilingual Education Standard III:**
  - The bilingual education teacher knows the process of first- and second-language acquisition and development

- **Bilingual Education Standard IV:**
  - The bilingual education teacher has a comprehensive knowledge of development and assessment of literacy in the primary language

- **Bilingual Education Standard V:**
  - The bilingual education teacher has a comprehensive knowledge of the development and assessment of biliteracy

- **Bilingual Education Standard VI:**
  - The bilingual education teacher has a comprehensive knowledge of content-area instruction in L1 and L2
**Student Learning Outcomes**

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Measureable Techniques</th>
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</thead>
<tbody>
<tr>
<td>SS I</td>
<td>Readings, Lectures, Quizzes</td>
</tr>
<tr>
<td>SS II</td>
<td>Discussions, Lesson Plans (usage), Lectures, Quizzes, Pre/Post Tests</td>
</tr>
<tr>
<td>SS III</td>
<td>Readings, Discussions, Lectures</td>
</tr>
<tr>
<td>SS IV</td>
<td>Lesson Plans, TExES Presentation</td>
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<tr>
<td>SS V</td>
<td>Readings, Lectures, TExES Presentation, Lesson Plans</td>
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<tr>
<td>SS VI</td>
<td>Lectures</td>
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<tr>
<td>SS VII</td>
<td>Lectures, Research, Readings, Pre/Post Tests, Quizzes (formal and informal assessments)</td>
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<tr>
<td>SS VIII</td>
<td>Lesson Plans, Lectures</td>
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<tr>
<td>SS IX</td>
<td>Research, Readings, Lectures, Lesson Plans</td>
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<tr>
<td>SS X</td>
<td>Research, Readings, Lectures, Lesson Plans</td>
</tr>
<tr>
<td>SS XI</td>
<td>Pre/Post Tests, Quizzes, Lesson Plans</td>
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</tbody>
</table>

**Additional Student Learning Outcomes**

- Distinguish between behaviorism and constructivism, understand methods for incorporating inquiry-based teaching and design two inquiry-based lesson plans.
- Distinguish between enabling and empowering limited English proficiency (LEP) students.
- Understand state mandated standards such as Texas English Language Proficiency Assessment System (TELPAS), English Language Proficiency Standards (ELPs), and Texas Essential Knowledge and Skills (TEKS) and design lesson plans based upon them.
- Develop a clear understanding of elements required in lesson plans by local school districts.
- Develop a clear understanding of local school populations and labeling systems.
- Learn and use various methods of working with LEP students.
- Learn of proper use, storage and disposal of chemicals, lab and safety equipment.
- Develop a presentation based upon teaching science competencies for TExES exam 191 Generalist EC-6 or exam 192 Bilingual Generalist EC-6.

**Academic Dishonesty**

Academic Dishonesty is an assault upon the basic integrity and meaning of a university. Cheating, plagiarism, and collusion in dishonest activities are serious acts which erode the university’s educational and research roles and cheapen the learning experience not only for the perpetrators, but also for the entire community. It is expected that UTEP students will understand and subscribe to the ideal of academic integrity and that they will be willing to bear individual responsibility for their work. Materials (written or otherwise) submitted to fulfill academic requirements must represent a student’s own efforts. Any act of academic dishonesty attempted by a UTEP student is unacceptable and will not be tolerated. All assignments with plagiarized material will be given a grade of 0 AND automatically have 10% deducted from their grade. If you use ideas or written text from other people you must cite them. Violations will be referred to the Dean of Students Office for possible disciplinary action. Students may be suspended or expelled from UTEP for such actions.
No Text Required

*There will be handouts and free downloadable chapters made available, and below are some of the resources you may want to review on your own:

- Texas Essential Knowledge and Skills (TEKS) [http://www.tea.state.tx.us/index2.aspx?id=6148](http://www.tea.state.tx.us/index2.aspx?id=6148)
- English Language Proficiency (ELPS) Standards: [http://ritter.tea.state.tx.us/rules/tac/chapter074/ch074a.html#74.4](http://ritter.tea.state.tx.us/rules/tac/chapter074/ch074a.html#74.4)
- Texas Education Agency (TEA): [http://www.tea.state.tx.us/index.aspx](http://www.tea.state.tx.us/index.aspx)
- State Board for Educator Certification (SBEC): [http://www.tea.state.tx.us/index2.aspx?id=2147489433](http://www.tea.state.tx.us/index2.aspx?id=2147489433)
- Texas English Language Proficiency (TELPAS) Standards: [http://www.tea.state.tx.us/student.assessment/ell/telpas/](http://www.tea.state.tx.us/student.assessment/ell/telpas/)

**UTEP Teacher Education Department Policy on Course Absences**
The UTEP Teacher Education Department considers missing two weeks of class excessive. The student may be dropped for lack of attendance. If you miss two weeks of class, contact your instructor immediately. I reserve the right to drop students, and do not assume that I would have/did drop you, it is your responsibility to check if you have been dropped or not.

**Disability Statement**
Working for many years at the collegiate level for students with disabilities I am (personally) aware of the accommodations that are made for students with disabilities. Reasonable accommodations will be made for students with limitations due to disabilities, including learning disabilities. Please see me personally before or after class in the first two weeks or make an appointment, to discuss the matter. If you have a documented disability and require specific accommodations, you will need to contact the Disabled Student Services Office in the East Union Bldg., Room 106 within the first two weeks of classes. The Disabled Student Services Office can also be reached in the following ways: Web: [http://www.utep.edu/dsso](http://www.utep.edu/dsso) Phone: (915) 747-5148 voice or TTY Fax: (915) 747-8712
Attendance/Conduct Policies
The UTEP Teacher Education Department considers missing two weeks of class excessive. The student may be dropped for lack of attendance. If you miss two weeks of class, contact your instructor immediately. I reserve the right to drop students, and do not assume that I would have/did drop you, it is your responsibility to check if you have been dropped or not.

It is EXTREMELY important that you attend class regularly and on time!

Point Procedure on not attending class:
• You have ONE FREE day to miss class; after one missed day, eight points will be subtracted from your OVERALL grade for every missed class
• If you are more than 20 minutes late to class, it will be counted as an absence
• After three tardies, three points will be subtracted from your OVERALL grade, and additional point for every tardy beyond that
• The instructor reserves the right to drop you from the course; for example but not limited to conduct detrimental to the instructor, the class, or the individual, excessive absences, etc; this conduct also refers to public forums and private emails

Late Assignments
A maximum of one late assignment will be accepted, with 20% deducted for every day that assignment is late; a second late assignment will not be accepted.

Grading Policy/Breakdown
All students will be graded on their prompt arrival to class, attendance, lack of frequent class disruptions, and participation in class. Disruptions can include (but are not limited to) frequently talking and/or disrupting class, answering cell phone/texting, habitual tardiness, and/or laptop use for unprofessional activities during class. Any of these deviations from professionalism will be documented and can adversely affect your grade.

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100 points total

Grade Distribution of Point total

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<tr>
<th>Letter Grade</th>
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<tbody>
<tr>
<td>Point total</td>
<td>100-91</td>
<td>90-80</td>
<td>79-75</td>
<td>74-70</td>
<td>69-0</td>
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</table>
Course Schedule and/or Assignment Changes
The course instructor reserves the right to adjust the course syllabus or change assignments as needed. While every effort will be made to adhere to the calendar and the course outlines, there will without a doubt be changes due to unexpected situations or pacing that may arise during the semester. Every attempt will be made for advance ‘warning.’ These modifications will be based on the specific needs of all the students in the course, but not to exceed difficulty or the due dates of the originally proposed assignment.

The schedule of assignments and classroom discussions may also change over the course of the semester. Any changes to the syllabus will be announced in class. Every student is responsible for these changes whether or not she/he is present in class.

Technology Requirements
You must have access to UTEP email prior to the beginning of the second class meeting. If you do not have one yet, you may apply for your UTEP email account, login, and password from a form available online at: https://newaccount.utep.edu

Technical Assistance
The University of Texas at El Paso offers complete technical information and help desk support at: http://issweb.utep.edu/techsupport/
<table>
<thead>
<tr>
<th>Topic</th>
<th>Readings and Assignments are to be completed before class</th>
</tr>
</thead>
<tbody>
<tr>
<td>S 8-30 Definition of science, syllabus, Dropbox intro, safety, lab responsibilities, MSDS, NFPA</td>
<td>Pretest</td>
</tr>
<tr>
<td>S 9-6 Pedagogical techniques, behaviorism vs. constructivism, traditional vs. inquiry-based, Piaget/Vygotsky</td>
<td>*Educator selected for Bilingual Educator Paper</td>
</tr>
<tr>
<td>S 9-13 Bilingual education (brief) history, begin non-negotiables: LEP, ESL, ESOL, migrant, TELPAS, IEP, classroom management, BIP, ARD, etc.</td>
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<tr>
<td>S 9-20 Lesson Plan Essentials (aka non-negotiables)</td>
<td>Bilingual Educator Paper</td>
</tr>
<tr>
<td>S 9-27 Intro to grade-based technology, sample lesson plans, modeling, reinforcement, reteaching, Dewey</td>
<td>Quiz #1</td>
</tr>
<tr>
<td>S 10-4 Assessments, backward design, spiraling, project-based learning, problem based learning</td>
<td>Biliteracy Assessment (Questions based on individual TExES Competency)</td>
</tr>
<tr>
<td>S 10-11 Experimental Design (ExD), Chomsky/Gardner, Learning Styles Learning Styles Inventory</td>
<td>Lesson Plan #1 (Based on TExES Competency)</td>
</tr>
<tr>
<td>S 10-18 10 min. class presentation going over elements of Lesson Plan #1</td>
<td></td>
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<tr>
<td>S 10-25 Review Experimental Design-Computer Lab</td>
<td></td>
</tr>
<tr>
<td>S 11-1 Sample lab hands-on science activities/method ideas; Bilingual foundations</td>
<td></td>
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<tr>
<td>S 11-8 Interventions, PDAS, PLC, TEKS, TEA, NGSS, teaching organizations, bilingualism v biculturalism</td>
<td>Quiz #2</td>
</tr>
<tr>
<td>S 11-15 10 min. class presentation discussing your TExES competencies: teaching science content</td>
<td>TExES Competency Presentation</td>
</tr>
<tr>
<td>S 11-22 Inquiry-based laboratory suggestions, lab equipment, Assessments (cont.), spiraling, scaffolding,</td>
<td>*Topics Selected for LP#2</td>
</tr>
<tr>
<td>S 11-29 Teaching philosophy, classroom approach, pedagogy, Bloom’s Taxonomy (higher-order thinking)/Krashen</td>
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<tr>
<td>S 12-6 Videos must be 10 minutes minimum and will introduce a topic and actually “teach your topic.”</td>
<td>Lesson Plan #2</td>
</tr>
<tr>
<td>S 12-13 Final Exam</td>
<td>Comprehensive Final</td>
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</table>
Competency 033 (Assessments in Science Learning): *The teacher knows the varied and appropriate assessments and assessment practices for monitoring science learning in laboratory, field and classroom settings.*

The beginning teacher:

A. Understands the relationships between a science curriculum, assessment and instruction and bases instruction on information gathered through assessment of students’ strengths and needs.

B. Understands the importance of monitoring and assessing students’ understanding of science concepts and skills on an ongoing basis, including how to use formal and informal assessments of student performance and how to use products (e.g., projects, lab journals, rubrics, portfolios, student profiles, checklists) to evaluate students’ understanding of and participation in the inquiry process.

C. Selects — or designs — and administers a variety of appropriate assessment methods (e.g., performance assessment, self-assessment, formal/informal assessment, formative/summative assessment) to monitor students’ understanding and progress and to plan for instruction.

D. Understands the importance of communicating evaluation criteria and assessment results to students.

Competency 034 (Physical Science): *The teacher understands forces and motion and their relationships.*

The beginning teacher:

A. Demonstrates an understanding of the properties of universal forces (e.g., gravitational, electrical, magnetic).

B. Understands how to measure, graph and describe changes in motion by using concepts of position, direction of motion and speed.

C. Analyzes the ways unbalanced forces acting on an object cause changes in the position or motion of the object.

D. Analyzes the relationship between force and motion in a variety of situations (e.g., simple machines, geologic processes).
Competency 035 (Physical Science): The teacher understands the physical and chemical properties of and changes in matter.

The beginning teacher:

A. Describes the physical and chemical properties of substances (e.g., size, shape, temperature, magnetism, hardness, mass, conduction, density).
B. Describes the physical properties of solids, liquids and gases.
C. Distinguishes between physical and chemical changes in matter.
D. Applies knowledge of physical and chemical properties of and changes in matter to processes and situations that occur in life science and in Earth and space science.
E. Distinguishes between mixtures and solutions and describes their properties.
F. Explains the importance of a variety of chemical reactions that occur in daily life (e.g., rusting, burning of fossil fuels, photosynthesis, cell respiration, chemical batteries, digestion of food).

Competency 036 (Physical Science): The teacher understands energy and interactions between matter and energy.

The beginning teacher:

A. Understands conservation of energy and energy transformations and analyzes how energy is transformed from one form to another (e.g., mechanical, sound, heat, light, chemical, electrical) in a variety of everyday situations.
B. Understands the basic concepts of heat energy and related processes (e.g., melting, evaporation, boiling, condensation).
C. Understands the principles of electricity and magnetism and their applications (e.g., electric circuits, motors, audio speakers, lightning).
D. Applies knowledge of properties of light (e.g., reflection, refraction) to describe the functioning of optical systems and phenomena (e.g., camera, microscope, rainbow, eye).
E. Demonstrates an understanding of the properties, production and transmission of sound.
Competency 037 (Physical Science): The teacher understands energy transformations and the conservation of matter and energy.

The beginning teacher:

A. Describes sources of electrical energy and processes of energy transformation for human uses (e.g., fossil fuels, solar panels, hydroelectric plants).

B. Applies knowledge of transfer of energy in a variety of situations (e.g., the production of heat, light, sound and magnetic effects by electrical energy; the process of photosynthesis; weather processes; food webs; food and energy pyramids).

C. Understands applications of energy transformations and the conservation of matter and energy in life science and in Earth and space science.

Competency 038 (Life Science): The teacher understands the structure and function of living things.

The beginning teacher:

A. Understands that living systems have different structures that perform different functions.

B. Understands and describes stages in the life cycles of common plants and animals.

C. Understands that organisms have basic needs.

D. Analyzes how structure complements function in cells, tissues, organs, organ systems and organisms.

E. Identifies human body systems and describes their functions.
Competency 039 (Life Science): The teacher understands reproduction and the mechanisms of heredity.

The beginning teacher:

A. Describes the processes by which plants and animals reproduce and explains how hereditary information is passed from one generation to the next.
B. Compares and contrasts inherited traits and learned characteristics.
C. Understands the organization of hereditary material and how an inherited trait can be determined by one or many genes and how more than one trait can be influenced by a single gene.
D. Distinguishes between dominant and recessive traits and predicts the probable outcomes of genetic combinations.
E. Evaluates the influence of environmental and genetic factors on the traits of an organism.

Competency 040 (Life Science): The teacher understands adaptations of organisms and the theory of evolution.

The beginning teacher:

A. Demonstrates knowledge of adaptive characteristics and explains how adaptations influence the survival of populations or species.
B. Describes how populations and species change through time.
C. Describes processes that enable traits to change through time, including selective breeding, mutation and other natural occurrences.
Competency 041 (Life Science): The teacher understands the relationship between organisms and the environment.

The beginning teacher:

A. Understands that organisms respond to internal or external stimuli and analyzes the role of internal and external stimuli in the behavior of organisms.

B. Understands relationships between organisms and the environment and describes ways that living organisms depend on one another and on the environment to meet their basic needs.

C. Identifies organisms, populations or species with similar needs and analyzes how they compete with one another for resources.

D. Analyzes the interrelationships and interdependence among producers, consumers and decomposers in an ecosystem (e.g., food webs, food chains, competition, predation).

E. Identifies factors that influence the size and growth of populations in an ecosystem.

F. Analyzes adaptive characteristics that result in a population’s or species’ unique niche in an ecosystem.

G. Knows how populations and species modify and affect ecosystems.

Competency 042 (Earth and Space Science): The teacher understands the structure and function of Earth systems.

The beginning teacher:

A. Understands the structure of Earth and analyzes constructive and destructive processes that produce geologic change.

B. Understands the form and function of surface water and groundwater.

C. Applies knowledge of the composition and structure of the atmosphere and its properties.

D. Applies knowledge of how human activity and natural processes, both gradual and catastrophic, can alter Earth systems.
Competency 043 (Earth and Space Science): The teacher understands cycles in Earth systems.

The beginning teacher:

A. Understands the rock cycle and how rocks, minerals and soils are formed.
B. Understands the water cycle and its relationship to weather processes.
C. Understands the nutrient (e.g., carbon, nitrogen) cycle and its relationship to Earth systems.
D. Applies knowledge of how human and natural processes affect Earth systems.
E. Understands and describes the properties and uses of Earth materials (e.g., rocks, soils, water, atmospheric gases).

Competency 044 (Earth and Space Science): The teacher understands the role of energy in weather and climate.

The beginning teacher:

A. Understands the elements of weather (e.g., humidity, wind speed, pressure, temperature) and the tools used for measurement.
B. Compares and contrasts weather and climate.
C. Analyzes weather charts and data to make weather predictions.
D. Applies knowledge of how transfers of energy between Earth systems affect weather and climate.
E. Analyzes how Earth’s position, orientation and surface features affect weather and climate.

Competency 045 (Earth and Space Science): The teacher understands the characteristics of the solar system and the universe.

The beginning teacher:

A. Understands the properties and characteristics of objects in the sky.
B. Applies knowledge of the Earth–Moon–Sun system and the interactions between them (e.g., seasons, lunar phases, eclipses).
C. Identifies properties of the components of the solar system.
DOMAIN I — BILINGUAL EDUCATION

Standards Assessed: Bilingual Education II–VI

Competency 001: The beginning bilingual education teacher understands the foundations of bilingual education and the concepts of bilingualism and biculturalism and applies this knowledge to create an effective learning environment for students in the bilingual education program.

The beginning teacher:

A. Understands the historical background of bilingual education in the United States, including pertinent federal and state legislation, significant court cases related to bilingual education and the effects of demographic changes on bilingual education.

B. Understands procedures (e.g., Language Proficiency Assessment Committee) for the identification, assessment and instructional placement of English-language learners, including identification of students’ English-language proficiency levels in the domains of listening, speaking, reading and writing. These proficiency levels are in accordance with the descriptors for the beginning, intermediate, advanced and advanced-high levels as described in the English Language Proficiency Standards (ELPS).

C. Demonstrates an awareness of global issues and perspectives related to bilingual education, including how bilingual education and bilingualism are perceived throughout the world.

D. Understands the importance of creating an additive educational program that reinforces a bicultural identity, including understanding the differences between acculturation and assimilation.

E. Uses knowledge of the historical, legal, legislative and global contexts of bilingual education to be an effective advocate for the bilingual education program and to advocate equity for bilingual students.

F. Understands convergent research related to bilingual education (e.g., best instructional practices as determined by student achievement) and applies convergent research when making instructional decisions.

G. Knows models of bilingual education, including characteristics and goals of various types of bilingual education programs, research findings on the effectiveness of various models of bilingual education and factors that determine the nature of a bilingual program on a particular campus.

H. Uses knowledge of various bilingual education models to make appropriate instructional decisions based on program model and design and selects appropriate instructional strategies and materials in relation to specific program models.
I. Knows how to create an effective bilingual and multicultural learning environment (e.g., by demonstrating sensitivity to students’ diverse cultural backgrounds and generational/acculturation differences, showing respect for regional language differences, incorporating the diversity of the home into the classroom setting, applying strategies to bridge the home and school cultural environments).

J. Knows how to create a learning environment that addresses bilingual students’ affective, linguistic and cognitive needs (e.g., by emphasizing the benefits of bilingualism and biculturalism, selecting linguistically and culturally appropriate instructional materials and methodologies).
Competency 002: The beginning bilingual education teacher understands processes of first- and second-language acquisition and development and applies this knowledge to promote students’ language proficiency in their first language (L1) and second language (L2).

The beginning teacher:

A. Understands basic linguistic concepts in L1 and L2 (e.g., language variation and change, dialects, register) and applies knowledge of these concepts to support students’ language development in L1 and L2.

B. Demonstrates knowledge of major language components (e.g., phonetics, phonology, morphology, syntactic features, semantics, pragmatics) and applies this knowledge to address students’ language development needs in L1 and L2.

C. Demonstrates knowledge of stages of first- and second-language development and theories/models of first- and second-language development (e.g., behaviorist, cognitive) and understands the instructional implications of these stages and theories/models.

D. Applies knowledge of linguistic concepts and theories/models of language acquisition to select and implement linguistically and developmentally appropriate Instructional methods, strategies and materials for teaching L1 and L2.

E. Understands the interrelatedness and interdependence of first- and second-language acquisition and assists students in making connections between languages (e.g., using cognates, noting similarities and differences).

F. Knows and uses effective, developmentally appropriate methodologies and strategies for teaching English as a Second Language (ESL) and for supporting ESL development across all areas of the curriculum, including providing focused, targeted and systematic second language acquisition instruction to ELLs in grade 3 or higher who are at the beginning or intermediate level of English-language proficiency in listening, speaking, reading and/or writing in accordance with the English Language Proficiency Standards (ELPS).

G. Understands cognitive, linguistic, social and affective factors affecting second-language acquisition (e.g., academic background, length of time in the United States, language status, age, self-esteem, inhibition, motivation, home/school/community environment, literacy background) and uses this knowledge to promote students’ language development in L2.
Competency 003: *The beginning bilingual education teacher has comprehensive knowledge of the development and assessment of literacy in L1 and the development and assessment of biliteracy.*

The beginning teacher:

A. Knows common patterns and stages of literacy development in L1 and how to make appropriate instructional modifications to deliver the statewide language arts curriculum in L1 to students at various levels of literacy development.

B. Knows types of formal and informal literacy assessments in L1 and uses appropriate assessments on an ongoing basis to help plan effective literacy instruction in L1.

C. Knows the state educator certification standards in reading/language arts in grades EC–12, understands distinctive elements in the application of the standards for English and for L1 and applies this knowledge to promote bilingual students’ literacy development in L1.

D. Knows the statewide Spanish language arts curriculum and reading curriculum for grades EC–6 and ESL middle and high school, as appropriate, as specified in the *Texas Essential Knowledge and Skills (TEKS)* and applies this knowledge to promote bilingual students’ L1 literacy development in grades EC–12.

E. Knows how to help students transfer literacy competency from L1 to L2 by using students’ prior literacy knowledge in L1 to facilitate their acquisition of L2 literacy, including using explicit instruction to help students make connections between L1 and L2 (e.g., in phonemic awareness, decoding skills, comprehension strategies).

F. Knows how to apply linguistic concepts (e.g., comprehensible input) and integrate ESL techniques in reading instruction to promote the development of L2 literacy.

G. Knows how to promote students’ biliteracy (e.g., by maintaining students’ literacy in L1 while developing students’ literacy in L2, by using ongoing assessment and monitoring of students’ level of proficiency in oral and written language and reading to plan appropriate literacy instruction in L1 and L2, by including authentic children’s literature in L1 and L2).
Competency 004: The beginning bilingual education teacher has comprehensive knowledge of content area instruction in L1 and L2 and uses this knowledge to promote bilingual students’ academic achievement across the curriculum.

The beginning teacher:

A. Knows how to assess bilingual students’ development of cognitive-academic language proficiency and content-area concepts and skills in both L1 and L2 and to use the results of these assessments to make appropriate instructional decisions in L1 and L2 in all content areas.

B. Knows how to create authentic and purposeful learning activities and experiences in both L1 and L2 that promote students’ development of cognitive-academic language proficiency and content-area concepts and skills as defined in the state educator certification standards and the statewide curriculum (TEKS), including developing the foundation of English language vocabulary, grammar, syntax and English mechanics necessary to understand content-based instruction and accelerated learning of English in accordance with the English Language Proficiency Standards (ELPS).

C. Knows strategies for integrating language arts skills in L1 and L2 into all content areas and how to use content-area instruction in L1 and L2 to promote students’ cognitive and linguistic development.

D. Knows various approaches for delivering comprehensible content-area instruction in L2 (e.g., sheltered English approaches, reciprocal teaching) and can use various approaches to promote students’ development of cognitive-academic language and content-area knowledge and skills in L2.

E. Knows how to differentiate content-area instruction based on student needs and language proficiency levels in L2 and how to select and use a variety of strategies and resources, including technology, to meet students’ needs.