

**RENAISSANCE SCHOOL INTERNATIONAL™**  
**Tri-lingual Language Immersion Education**  
三种语言浸入式教学 • Educación Trilingüe de Inmersión al Lenguaje  
**COURSE CATALOG**

## **ACADEMIC**

### **ART (ART)**

ART 110: Historia del arte (Art History)

same as HIS 120, SPA 110

Credits: 10, Prerequisite: SPA 100

Advanced university level course. Writing intensive course.

Immersion Instruction. Students student art history and classic Spanish literature that enhances the students' appreciation of art history. In addition, students read passages for comprehension and answer questions associated with those passages. They also create outlines and write descriptive, narrative, process, compare/contrast, analysis, cause/effect, persuasive, and division/classification essays about history and literature topics; comprehend spoken instructions and questions about the history and literature studied; answer oral questions about the history and literature topics; and prepare and deliver extemporaneous speeches about history and literature topics. Vocabulary of approximately 2850 words.

### **CHINESE (CHI)**

CHI 10: 一年级中文 (First Year Chinese)

Credits: 10, Prerequisite: None

Immersion instruction. Students read words and simple passages aloud and silently, read simple passages for comprehension and answer questions associated with those passages, write characters (limited number), match characters and pinyin, understand spoken instructions and questions, and answer questions aloud using complete grammatically correct sentences. Vocabulary of approximately 500 words.

CHI 10A: 第一学期中文 (First Semester Chinese)

Credits: 5, Prerequisite: None

Immersion instruction. Students read words and simple passages aloud and silently, read simple passages for comprehension and answer questions associated with those passages, write characters (limited number), match characters and pinyin, understand spoken instructions and questions, and answer questions aloud using complete grammatically correct sentences. Vocabulary of approximately 250 words.

CHI 10B: 第二学期中文 (Second Semester Chinese)

Credits: 5, Prerequisite: CHI 10A

Immersion instruction. Students read words and simple passages aloud and silently, read simple passages for comprehension and answer questions associated with those passages, write characters (limited number), match characters and pinyin, understand spoken instructions and questions, and answer questions aloud using complete grammatically correct sentences. Vocabulary of approximately 500 words.

CHI 20: 二年级中文 (Second Year Chinese)

Credits: 10, Prerequisite: CHI 10 or CHI 10B

Immersion instruction. Students read words and simple passages aloud and silently, read simple passages for comprehension and answer questions associated with those passages, write characters (limited number), begin formal grammar instruction, match characters and pinyin, understand spoken instructions and questions, and answer questions aloud using complete grammatically correct sentences. Vocabulary of approximately 1000 words.

CHI 20A: 第三学期中文 (Third Semester Chinese)

Credits: 5, Prerequisite: CHI 10 or CHI 10B

Immersion instruction. Students read words and simple passages aloud and silently, read simple passages for comprehension and answer questions associated with those passages, write characters (limited number), begin formal grammar instruction, match characters and pinyin, understand spoken instructions and questions, and answer questions aloud using complete grammatically correct sentences. Vocabulary of approximately 750 words.

CHI 20B: 第四学期中文 (Fourth Semester Chinese)

Credits: 5, Prerequisite: CHI 20A

Immersion instruction. Students read words and simple passages aloud and silently, read simple passages for comprehension and answer questions associated with those passages, write characters (limited number), begin formal grammar instruction, match characters and pinyin, understand spoken instructions and questions, and answer questions aloud using complete grammatically correct sentences. Vocabulary of approximately 1000 words.

CHI 30: 三年级中文 (Third Year Chinese)

Credits: 10, Prerequisite: CHI 20 or CHI 20B

Immersion instruction. Students read words and passages aloud and silently, read passages for comprehension and answer questions associated with those passages, write dictated sentences, continue formal grammar instruction, translate characters into pinyin, understand spoken instructions and questions, and answer questions aloud

using complete grammatically correct sentences. Vocabulary of approximately 1425 words.

CHI 30A: 第五学期中文 (Fifth Semester Chinese)

Credits: 5, Prerequisite: CHI 20 or CHI 20B

Immersion instruction. Students read words and passages aloud and silently, read passages for comprehension and answer questions associated with those passages, write dictated sentences, continue formal grammar instruction, translate characters into pinyin, understand spoken instructions and questions, and answer questions aloud using complete grammatically correct sentences. Vocabulary of approximately 1225 words.

CHI 30B: 第六学期中文 (Sixth Semester Chinese)

Credits: 5, Prerequisite: CHI 30A

Immersion instruction. Students read words and passages aloud and silently, read passages for comprehension and answer questions associated with those passages, write dictated sentences, continue formal grammar instruction, translate characters into pinyin, understand spoken instructions and questions, and answer questions aloud using complete grammatically correct sentences. Vocabulary of approximately 1425 words.

CHI 40: 四年级中文 (Fourth Year Chinese)

Credits: 10, Prerequisite: CHI 30

Immersion instruction. Students read passages, and short stories aloud and silently; read passages for comprehension and answer questions associated with those passages; write dictated sentences; continue formal grammar instruction; write sentences (characters) from a picture; translate characters into pinyin; understand spoken instructions and questions; and answer questions aloud using complete grammatically correct sentences. Vocabulary of approximately 1900 words.

CHI 50: 五年级中文 (Fifth Year Chinese)

Credits: 10, Prerequisite: CHI 40

University level course.

Immersion instruction. Students read passages and short stories aloud and silently; read passages for comprehension and answer questions associated with those passages; write short descriptive paragraphs; continue formal grammar instruction; write sentences (characters) from a picture; translate characters into pinyin; understand spoken instructions and questions; and answer questions aloud using complete grammatically correct sentences. Vocabulary of approximately 2400 words.

CHI 60: 六年级中文 (Sixth Year Chinese)

Credits: 10, Prerequisite: CHI 50

University level course.

Immersion instruction. Students read passages and short stories aloud and silently; read passages for comprehension and answer questions associated with those passages; create outlines and write descriptive and narrative paragraphs; continue formal grammar instruction; translate characters into pinyin; understand spoken instructions and questions; answer questions aloud using complete grammatically correct sentences; prepare and give extemporaneous speeches; and type using pinyin input systems. Vocabulary of approximately 2650 words.

CHI 70: 七年级中文 (Seventh Year Chinese)

Credits: 10, Prerequisite: CHI 60

University level course.

Immersion instruction. Students read passages and short stories aloud and silently; read passages for comprehension and answer questions associated with those passages; create outlines and write descriptive, narrative, and process paragraphs; continue formal grammar instruction; translate characters into pinyin; understand spoken instructions and questions; answer questions aloud using complete grammatically correct sentences; prepare and give extemporaneous speeches; and type using pinyin input systems. Vocabulary of approximately 3450 words.

CHI 80: 八年级中文 (Eighth Year Chinese)

Credits: 10, Prerequisite: CHI 70

University level course.

Immersion instruction. Students read passages and short stories aloud and silently; read passages for comprehension and answer questions associated with those passages; create outlines and write descriptive, narrative, process, and compare/contrast essays; continue formal grammar instruction; translate characters into pinyin; understand spoken instructions and questions; answer questions aloud using complete grammatically correct sentences; prepare and give extemporaneous speeches; and type using pinyin input systems. Vocabulary of approximately 3950 words.

CHI 90: 九年级中文 (Ninth Year Chinese)

Credits: 10, Prerequisite: CHI 80

University level course. Writing Intensive Course.

Immersion instruction. Students read passages and short stories aloud and silently; read passages for comprehension and answer questions associated with those passages; create outlines and write descriptive, narrative, process, compare/contrast, and analysis essays; continue formal grammar instruction; translate characters into pinyin; understand spoken instructions and questions; answer questions aloud using

complete grammatically correct sentences; prepare and give extemporaneous speeches; and type using pinyin input systems. Vocabulary of approximately 4850 words.

CHI 100: 十年级中文 (Tenth Year Chinese)

Credits: 10, Prerequisite: CHI 90

University level course. Writing intensive course.

Immersion instruction. Students read passages short stories, and novels; read passages for comprehension and answer questions associated with those passages; create outlines and write descriptive, narrative, process, compare/contrast, analysis, and cause/effect essays; continue formal grammar instruction; understand spoken instructions and questions; answer questions aloud using complete grammatically correct sentences; prepare and give extemporaneous speeches; and type using pinyin input systems. Vocabulary of approximately 4975 words.

CHI 110: 十一年级中文 (Eleventh Year Chinese)

Credits: 10, Prerequisite: CHI 100

Advanced university level course. Writing intensive course.

Immersion instruction. Students read passages, short stories, and novels; read passages for comprehension and answer questions associated with those passages; create outlines and write descriptive, narrative, process, compare/contrast, analysis, cause/effect, and persuasive essays; continue formal grammar instruction; write sentences (characters) from a picture; translate characters into pinyin; understand spoken instructions and questions; answer questions aloud using complete grammatically correct sentences; prepare and give extemporaneous speeches; and type using pinyin input systems. Vocabulary of approximately 6350 words.

CHI 120: 中国文学史I (Chinese History through Literature I)

Same as HIS 130

Credits: 10, Prerequisite: CHI 110

Advanced university level course. Writing intensive course.

Immersion Instruction. Students read history materials and Chinese literature that is correlated to the history. In addition, students read passages for comprehension and answer questions associated with those passages. They also create outlines and write descriptive, narrative, process, compare/contrast, analysis, cause/effect, persuasive, and division/classification essays about history and literature topics; comprehend spoken instructions and questions about the history and literature studied; answer oral questions about the history and literature topics; prepare and deliver extemporaneous speeches about history and literature topics; and type essays using pinyin input systems. Vocabulary of approximately 6750 words.

CHI 130: 中国文学史II (Chinese History through Literature II)

same as HIS 140

Credits: 10, Prerequisite: CHI 120

Advanced university level course. Writing intensive course.

Immersion Instruction. Students read history materials and Chinese literature that is correlated to the history. In addition, students read passages for comprehension and answer questions associated with the passages. They also create outlines and write descriptive, narrative, process, compare/contrast, analysis, cause/effect, persuasive, and division/classification essays about history and literature topics; comprehend spoken instructions and questions about the history and literature studied; answer oral questions about the history and literature topics; prepare and deliver extemporaneous speeches about history and literature topics; and type essays using pinyin input systems.

CHI 140: 中文课题 (Chinese Project)

Credits: 10, Prerequisite: CHI 120

Honors course.

Students participate in an internship at a company where Chinese is the primary language of communication. They meet deadlines and expectations set by the company. At the end of the internship, each student prepares a report summarizing his/her experience.

**ENGLISH (ENG)**

ENG 90: Grade 9 English

Credits: 10, Prerequisites: ENG 80

Honors level course. Writing intensive course.

Students continue to perfect narrative summary, descriptive, process, cause and effect, compare/contrast, and argumentative essays and learn how to write persuasive essays. In addition, students read classic and contemporary literature that focuses on topics from the modern age and reinforce grammar, reading comprehension, vocabulary, spelling, and extemporaneous public speaking skills.

ENG 100: Advanced Composition

Credits: 10, Prerequisite: ENG 90

Honors level course. Writing intensive course.

Students develop advanced high school level writing skills as they review and perfect narrative summary, descriptive, persuasive, process, cause and effect, compare/contrast, and argumentative essays and learn how to write division/classification and narrative first person essays. Even though the focus of this class is writing, the student also read a number of classic literature books.

### ENG 110: Great Works I and II

Credits: 10, Prerequisite: ENG 100

University level course. Writing intensive course.

Students read and analyze classic literary works. In addition, they hone their textual analysis skills and perfect their verbal and written argumentation skills, so they are prepared for discussions and writing in college humanities courses.

### ENG 110A: Great Works I

Credits: 5, Prerequisite: ENG 100

University level course. Writing intensive course.

Semester 1 of ENG 110. Students read and analyze classic literary works. In addition, they hone their textual analysis skills and perfect their verbal and written argumentation skills, so they are prepared for discussions and writing in college humanities courses.

### ENG 120: English Language and Composition

Credits: 10, Prerequisites: ENG 100

University level course. Writing intensive course.

The course focuses on critical reading and writing university level essays which are unified, thorough, clear and convincing. There is a special focus on expository writing. Students reinforce the research, reasoning and organizational skills necessary for effective academic and research writing.

### ENG 130: English Literature and Composition

Credits: 10, Prerequisites: ENG 100

University level course. Writing intensive course.

The course focuses on literary study and writing university level essays which are unified, thorough, clear and convincing. There is a special focus on expository writing. Students reinforce the research, reasoning and organizational skills necessary for effective academic and research writing.

### ENG 140A: Technical Communication I

Credits: 5, Prerequisite: ENG 80

Honors level course. Writing intensive course.

Semester 1 of ENG 140. Students learn how to present technical concepts in ways that can be easily understood by technical and lay people. Students prepare a full-length technical report including technical appendices that are properly formatted for lay reading. They also prepare visual presentation materials. In addition, students learn how to properly present technical findings in speeches and how to discuss findings and answer questions during informal question and answer sessions.

### ENG 140B: Technical Communication II

Credits: 5, Prerequisite: ENG 140A

Honors level course. Writing intensive course.

Continuation of ENG 140A. Students refine techniques for presenting technical concepts in ways that can be easily understood by technical and lay people. Students prepare a full-length technical report including technical appendices that are properly formatted for lay reading. They also prepare visual presentation materials. In addition, students learn how to properly present technical findings in speeches and how to discuss findings and answer questions during informal question and answer sessions.

### **HISTORY (HIS)**

#### HIS 100: University World History

Credits: 10, Prerequisite: ENG 90

University level course. Writing intensive course.

Similar to AP World History. Students expand their knowledge of the people, events, and ideas that have shaped our world through a variety of perspectives. Students are expected to substantiate their viewpoints with research and rigorous analysis. Students share their research, viewpoints, and analyses in classroom discussions and essays.

#### HIS 110: University U.S. History

Credits: 10, Prerequisite: SPA 90

University level course. Writing intensive course.

Similar to AP World History. Students examine the history of the America from the pre-Columbian period to the present. The course challenges students to analyze cultural, political, social, and economic developments and to consider issues in U.S. history from a variety of viewpoints. Students are expected to substantiate their viewpoints with research and rigorous analysis. Students share research, viewpoints, and analyses in classroom discussions and essays.

#### HIS 120: Historia del Arte (Art History)

same as SPA 110

Credits: 10, Prerequisite: SPA 100

University level course. Writing intensive course.

Immersion Instruction. Students student art history and classic Spanish literature that enhances the students' appreciation of art history. In addition, students read passages for comprehension and answer questions associated with those passages. They also create outlines and write descriptive, narrative, process, compare/contrast, analysis, cause/effect, persuasive, and division/classification essays about history and literature topics; comprehend spoken instructions and questions about the history and literature studied; answer oral questions about the history and literature topics; and prepare and

deliver extemporaneous speeches about history and literature topics. Vocabulary of approximately 2850 Spanish words.

HIS 130: 中国文学史I (Chinese History through Literature I)

Same as CHI 120

Credits: 10, Prerequisite: CHI 110

University level course. Writing intensive course.

Immersion Instruction. Students read history materials and Chinese literature that is correlated to the history. In addition, students read passages for comprehension and answer questions associated with those passages. They also create outlines and write descriptive, narrative, process, compare/contrast, analysis, cause/effect, persuasive, and division/classification essays about history and literature topics; comprehend spoken instructions and questions about the history and literature studied; answer oral questions about the history and literature topics; prepare and deliver extemporaneous speeches about history and literature topics; and type essays using pinyin input systems. Vocabulary of approximately 6750 Chinese words.

HIS 140: 中国文学史II (Chinese History through Literature II)

Same as CHI 130

Credits: 10, Prerequisite: HIS 130 (CHI 120)

University level course. Writing intensive course.

Immersion Instruction. Students read history materials and Chinese literature that is correlated to the history. In addition, students read passages for comprehension and answer questions associated with the passages. They also create outlines and write descriptive, narrative, process, compare/contrast, analysis, cause/effect, persuasive, and division/classification essays about history and literature topics; comprehend spoken instructions and questions about the history and literature studied; answer oral questions about the history and literature topics; prepare and deliver extemporaneous speeches about history and literature topics; and type essays using pinyin input systems.

**MATHEMATICS (MAT)**

MAT 90: 九年级数学 (Grade 9 Math)

Credits: 10, Prerequisites: MAT 80, CHI 80

Honors level course.

Taught in Chinese. Singapore math system. Students study rate, ratio, proportion, and speed; percentage; algebraic applications; linear equations and inequalities; quadratic equations and inequalities; indices; set language and notation; graphs of linear functions and relations; application of graphs; graphs of non-linear functions; transformations; properties of circles; trigonometry; statistical data analysis; polynomials; graphs of non-linear functions and relations; mensuration, congruence and similarity, and Pathagoras' theorem. Chinese vocabulary of approximately 5125 words.

MAT 90E: Grade 9 Math (English)

Credits: 10, Prerequisite: MAT 80E

Honors level course.

Taught in English. Singapore math system. Students study rate, ratio, proportion, and speed; percentage; algebraic applications; linear equations and inequalities; quadratic equations and inequalities; indices; set language and notation; graphs of linear functions and relations; application of graphs; graphs of non-linear functions; transformations; properties of circles; trigonometry; statistical data analysis; polynomials; graphs of non-linear functions and relations; mensuration, congruence and similarity, and Pathagoras' theorem.

MAT 100: 大学预科数学 (Precollege Math)

Credits: 10, Prerequisites: MAT 90, CHI 90

Honors level course.

Taught in Chinese. Singapore math system. Student study algebraic manipulation; proportion; linear equations and inequalities; quadratic equations and inequalities; indices; set language and notation; matrices, graphs of linear functions and relations; application of graphs; graphs of non-linear functions; transformations; loci; properties of circles; trigonometry; statistics and probability; logarithms and surds; polynomials, identities, and binomial expansion; partial fractions; graphs of non-linear functions and relations; geometric proofs; and vectors. Chinese vocabulary of approximately 5215 words.

MAT 100E: Precollege Math (English)

Credits: 10, Prerequisite: MAT 90E

Honors level course.

Taught in English. Singapore math system. Student study algebraic manipulation; proportion; linear equations and inequalities; quadratic equations and inequalities; indices; set language and notation; matrices, graphs of linear functions and relations; application of graphs; graphs of non-linear functions; transformations; loci; properties of circles; trigonometry; statistics and probability; logarithms and surds; polynomials, identities, and binomial expansion; partial fractions; graphs of non-linear functions and relations; geometric proofs; and vectors.

MAT 110: 大学微积分一、二 (University Calculus 1 and 2)

Credits: 10, Prerequisites: MAT 100, CHI 100

University level course.

Taught in Chinese. Similar to AP Calculus BC. Students study limits and continuity, differentiation of logarithmic, exponential, trigonometric, and rational functions, related rates, analysis of functions and their graphs, applications of the derivative, Newton's method, Rolle's Theorem, Mean-Value Theorem, integration, Simpson's rule, hyperbolic functions. mathematical modeling with differential equations, application of integrals,

integral evaluation, L'Hopital's Rule and indeterminate limits, improper integrals, infinite series, and topics in analytical geometry, conics, parametric equations, and polar equations.

MAT 110E: University Calculus 1 and 2 (English)

Credits: 10, Prerequisite: MAT 100E  
University level course.

Taught in English. Similar to AP Calculus BC. Students study limits and continuity, differentiation of logarithmic, exponential, trigonometric, and rational functions, related rates, analysis of functions and their graphs, applications of the derivative, Newton's method, Rolle's Theorem, Mean-Value Theorem, integration, Simpson's rule, hyperbolic functions. mathematical modeling with differential equations, application of integrals, integral evaluation, L'Hopital's Rule and indeterminate limits, improper integrals, infinite series, and topics in analytical geometry, conics, parametric equations, and polar equations.

MAT 120: 大学微积分三 (University Calculus 3)

Credits: 10, Prerequisites: MAT 110, CHI 110  
University level course.

Taught in Chinese. Students study differential and integral calculus of two or more variables.

MAT 120E: University Calculus 3 (English)

Credits: 10, Prerequisite: MAT 110E  
University level course.

Taught in English. Students study differential and integral calculus of two or more variables.

MAT 130A: 线性代数 (Linear Algebra)

Credits: 5, Prerequisites: MAT 100, CHI 120  
University level course.

Taught in Chinese. Students study vector analysis, abstract vector spaces, bases and inner products, projections, orthogonal complements and least squares, linear maps, structure theorems, elementary spectral theory, and applications for linear algebra.

MAT 130AE: Linear Algebra (English)

Credits: 5, Prerequisite: MAT 100E  
University level course.

Taught in English. Students study vector analysis, abstract vector spaces, bases and inner products, projections, orthogonal complements and least squares, linear maps, structure theorems, elementary spectral theory, and applications for linear algebra.

MAT 130B: 微分方程 (Differential Equations)

Credits: 5, Prerequisite: MAT 110, CHI 120  
University level course.

Taught in Chinese. Students study the classification, solution, and application of differential equations and systems of equations. Solutions to differential equations are obtained using both Laplace Transform and classical methods.

MAT 130BE: Differential Equations (English)

Credits: 5, Prerequisite: MAT 110E  
University level course.

Taught in English. Students study the classification, solution, and application of differential equations and systems of equations. Solutions to differential equations are obtained using both Laplace Transform and classical methods.

**SCIENCE (SCI)**

SCI 90: 高中自然科学一：生物、化学、物理包含实验 (High School Science I - Biology, Chemistry, and Physics with Lab)

Credits: 12 Course (2 Bio, 5 Chemistry, 5 Physics) 2 Lab, Prerequisites: CHI 80, MAT 80, SCI 80; Corequisite: CHI 90  
Honors level course.

Taught in Chinese. Students continue the study of physics (measurement; kinematics; forces; mass, weight and density; turning effect of forces; energy, work and power; pressure; and thermal physics), chemistry (kinetic particle theory; measurement and experimental techniques; separation and purification; elements, compounds and mixtures; atomic structure; ionic bonding; covalent and metallic bonding; writing chemical equations; the mole; chemical calculations; acids and bases; salts) and biology (the science of life, cells, movement of substances, nutrients, and enzymes). Classroom topics are reinforced with labs. Chinese vocabulary of approximately 5925 words.

SCI 90E: High School Science I - Biology, Chemistry, and Physics with Lab (English)

Credits: 12 Course (2 Bio, 5 Chemistry, 5 Physics) 2 Lab, Prerequisites: SCI 80E, MAT 80E  
Honors level course.

Taught in English. Students continue the study of physics (measurement; kinematics; forces; mass, weight and density; turning effect of forces; energy, work and power; pressure; and thermal physics), chemistry (kinetic particle theory; measurement and experimental techniques; separation and purification; elements, compounds and mixtures; atomic structure; ionic bonding; covalent and metallic bonding; writing chemical equations; the mole; chemical calculations; acids and bases; salts) and biology (the science of life, cells, movement of substances, nutrients, and enzymes). Classroom topics are reinforced with labs.

SCI 100: 高中自然科学二：化学和物理 (High School Science II – Chemistry and Physics)

Credits: 10 (5 Chemistry, 5 Physics); Prerequisites: CHI 90, MAT 90, SCI 90;

Corequisite: CHI 100

Honors level course.

Taught in Chinese. Students continue the study of physics (light, waves, sound, electricity and magnetism) and chemistry (oxidation and reduction, metals, electrolysis, periodic table, energy changes, speed of reaction, ammonia, the atmosphere and environment, introduction to organic chemistry, alkanes and alkenes, alcohols and carboxylic acids, macromolecules). Chinese vocabulary of approximately 6075 words.

SCI 100E: High School Science II – Chemistry and Physics (English)

Credits: 10 (5 Chemistry, 5 Physics), Prerequisite: MAT 90E, SCI 90E

Honors level course.

Taught in English. Students continue the study of physics (light, waves, sound, electricity and magnetism) and chemistry (oxidation and reduction, metals, electrolysis, periodic table, energy changes, speed of reaction, ammonia, the atmosphere and environment, introduction to organic chemistry, alkanes and alkenes, alcohols and carboxylic acids, macromolecules).

SCI 100L: 高中自然科学二实验 (High School Science II Lab)

Credits: 2; Prerequisites: CHI 90, MAT 90, SCI 90; Corequisite: CHI 100, SCI 100

Honors level course.

Taught in Chinese. Students reinforce the physics and chemistry concepts learned in SCI 100 in the lab. Chinese vocabulary of approximately 6075 words.

SCI 100LE: High School Science II Lab (English)

Credits: 2; Prerequisites: MAT 90E, SCI 90E; Corequisite: SCI 100E

Honors level course.

Taught in English. Students reinforce the physics and chemistry concepts learned in SCI 100E in the lab.

SCI 110: 大学化学 (University Chemistry)

Credits: 10; Prerequisites: CHI 100, MAT 100, SCI 100; Corequisite: CHI 110

University level course.

Taught in Chinese. Similar to AP Chemistry. Students continue the study of chemistry (matter and measurement; atoms, molecules, and ions; chemical reactions and reaction stoichiometry; reactions in aqueous solution; thermochemistry; electronic structure of atoms; periodic properties of the elements; basic concepts of chemical bonding; molecular geometry and bonding theories; gases; liquids and intermolecular forces; solids and modern materials; properties of solutions; chemical kinetics; chemical

equilibrium; acid–base equilibria; additional aspects of aqueous equilibria; chemistry of the environment; chemical thermodynamics; electrochemistry; nuclear chemistry; chemistry of the nonmetals; transition metals and coordination chemistry; the chemistry of life: organic and biological chemistry).

SCI 110E: University Chemistry (English)

Credits: 10; Prerequisite: MAT 100E, SCI 100E

University level course.

Taught in English. Similar to AP Chemistry. Students continue the study of chemistry (matter and measurement; atoms, molecules, and ions; chemical reactions and reaction stoichiometry; reactions in aqueous solution; thermochemistry; electronic structure of atoms; periodic properties of the elements; basic concepts of chemical bonding; molecular geometry and bonding theories; gases; liquids and intermolecular forces; solids and modern materials; properties of solutions; chemical kinetics; chemical equilibrium; acid–base equilibria; additional aspects of aqueous equilibria; chemical thermodynamics; electrochemistry; nuclear chemistry; chemistry of the nonmetals; transition metals and coordination chemistry; the chemistry of life: organic and biological chemistry).

SCI 110L: 大学化学实验 (University Chemistry Lab)

Credits: 10; Prerequisite: CHI 100, MAT 100, SCI 100; Corequisite: CHI 110, SCI 110

University level course.

Taught in Chinese. Students reinforce the chemistry concepts learned in SCI 110 in the lab.

SCI 110LE: University Chemistry Lab (English)

Credits: 10; Prerequisite: MAT 100E, SCI 100E; Corequisite: SCI 110E

University level course.

Taught in English. Students reinforce the chemistry concepts learned in SCI 110E in the lab.

SCI 120: 大学物理 : 力学 (University Physics: Mechanics)

Credits: 10; Prerequisite: CHI 110, MAT 110, SCI 100; Corequisite: CHI 120

University level course.

Taught in Chinese. Similar to AP Physics C: Mechanics. Students study units, physical quantities, and vectors; motion along a straight line; motion in two or three dimensions; newton's laws of motion; applying newton's laws; work and kinetic energy; potential energy and energy conservation; momentum, impulse, and collisions; rotation of rigid bodies; dynamics of rotational motion; equilibrium and elasticity; fluid mechanics; gravitation; and periodic motion.

SCI 120E: University Physics: Mechanics (English)

Credits: 10, Prerequisite: MAT 110E, SCI 100E

University level course.

Taught in English. Similar to AP Physics C: Mechanics. Students study units, physical quantities, and vectors; motion along a straight line; motion in two or three dimensions; Newton's laws of motion; applying Newton's laws; work and kinetic energy; potential energy and energy conservation; momentum, impulse, and collisions; rotation of rigid bodies; dynamics of rotational motion; equilibrium and elasticity; fluid mechanics; gravitation; and periodic motion.

SCI 120L: 大学物理 : 力学实验 (University Physics: Mechanics Lab)

Credits: 2; Prerequisite: CHI 110, MAT 110, SCI 100; Corequisite: CHI 120, SCI 120

University level course.

Taught in Chinese. Students reinforce the physics concepts learned in SCI 120 in the lab.

SCI 120LE: University Physics: Mechanics Lab (English)

Credits: 2; Prerequisite: MAT 110E, SCI 100E; Corequisite: SCI 120E

University level course.

Taught in English. Students reinforce the physics concepts learned in SCI 120 in the lab.

SCI 130: 大学物理 : 电磁学 (University Physics: Electricity and Magnetism)

Credits: 10, Prerequisite: CHI 120, MAT 110, SCI 120

University level course.

Taught in Chinese. Similar to AP Physics C: Electricity and Magnetism. Students study electric charge and electric field, Gauss's law, electric potential, capacitance and dielectrics, current, resistance, and electromotive force, direct-current circuits, magnetic field and magnetic forces, sources of magnetic field, electromagnetic induction, inductance, alternating current, and electromagnetic waves.

SCI 130E: University Physics: Electricity and Magnetism (English)

Credits: 10, Prerequisite: MAT 110E, SCI 120E

University level course.

Taught in English. Similar to AP Physics C: Electricity and Magnetism. Students study electric charge and electric field, Gauss's law, electric potential, capacitance and dielectrics, current, resistance, and electromotive force, direct-current circuits, magnetic field and magnetic forces, sources of magnetic field, electromagnetic induction, inductance, alternating current, and electromagnetic waves.

SCI 130L: 大学物理：电磁学实验 (University Physics: Electricity and Magnetism Lab)

Credits: 2; Prerequisites: CHI 120, MAT 110, SCI 120; Corequisite: SCI 130

University level course.

Taught in Chinese. Students reinforce the physics concepts learned in SCI 130 in the lab.

SCI 130LE: University Physics: Electricity and Magnetism Lab (English)

Credits: 2; Prerequisites: MAT 110E, SCI 120E; Corequisite: SCI 130E

University level course.

Taught in English. Students reinforce the physics concepts learned in SCI 130E in the lab.

SCI 140: 大学生物 (University Biology)

Credits: 10; Prerequisites: CHI 100, MAT 100, SCI 70, SCI 80, SCI 90; Corequisite: CHI 110 or higher

University level course.

Taught in Chinese. Similar to AP Biology. Students study chemistry of life, genetics, biologic diversity, plant form and function, animal form and function, and ecology.

SCI 140E: University Biology (English)

Credits: 10; Prerequisites: MAT 100E, SCI 70E, SCI 80E, SCI 90E

University level course.

Taught in English. Similar to AP Biology. Students study chemistry of life, genetics, biologic diversity, plant form and function, animal form and function, and ecology.

SCI 140L: 大学生物实验 (University Biology Lab)

Credits: 10; Prerequisites: CHI 100, MAT 100, SCI 70, SCI 80, SCI 90; Corequisite: CHI 110 or higher, SCI 140

University level course.

Taught in Chinese. Students reinforce the biology concepts learned in SCI 140 in the lab.

SCI 140LE: University Biology Lab (English)

Credits: 10; Prerequisites: MAT 100E, SCI 70E, SCI 80E, SCI 90E; Corequisite: SCI 140E

University level course.

Taught in English. Students reinforce the biology concepts learned in SCI 140E in the lab.

SCI 150LA: Scientific Research - Biology

Credits: 5; Prerequisite: SCI 70; Corequisite: SCI 80

Honors level course.

A student conducts innovative biologic research under the direction of a scientist or engineer and submits a written report (in standard technical report format) that documents the work and findings.

SCI 150LB: Scientific Research - Biology

Credits: 5; Prerequisites: SCI 70, SCI 150LA; Corequisite: SCI 80

Honors level course.

A student conducts innovative biologic research under the direction of a scientist or engineer and submits a written report (in standard technical report format) that documents the work and findings.

SCI 160LA: Scientific Research - Chemistry

Credits: 5; Prerequisite: SCI 80; Corequisite: SCI 90

Honors level course.

A student conducts innovative chemistry research under the direction of a scientist or engineer and submits a written report (in standard technical report format) that documents the work and findings.

SCI 160LB: Scientific Research - Chemistry

Credits: 5; Prerequisites: SCI 80, SCI 160LA; Corequisite: SCI 90

Honors level course.

A student conducts innovative chemistry research under the direction of a scientist or engineer and submits a written report (in standard technical report format) that documents the work and findings.

SCI 170LA: Scientific Research - Physics

Credits: 5; Prerequisite: SCI 80; Corequisite: SCI 90

Honors level course.

A student conducts innovative physics research under the direction of a scientist or engineer and submits a written report (in standard technical report format) that documents the work and findings.

SCI 170LB: Scientific Research - Physics

Credits: 5; Prerequisite: SCI 80; Corequisite: SCI 90

Honors level course.

A student conducts innovative physics research under the direction of a scientist or engineer and submits a written report (in standard technical report format) that documents the work and findings.

SCI 180LA: Scientific Research - Other

Credits: 5; Prerequisite: SCI 80; Corequisite: SCI 90

Honors level course.

A student conducts innovative science research under the direction of a scientist or engineer and submits a written report (in standard technical report format) that documents the work and findings.

SCI 180LB: Scientific Research - Other

Credits: 5; Prerequisite: SCI 80; Corequisite: SCI 90

Honors level course.

A student conducts innovative science research under the direction of a scientist or engineer and submits a written report (in standard technical report format) that documents the work and findings.

**SPANISH (SPA)**

SPA 10: Primer año de español (First Year Spanish)

Credits: 10, Prerequisite: None

Immersion instruction. Students read words and simple passages aloud and silently; read simple passages for comprehension and answer questions associated with those passages; begin formal grammar instruction; write sentences from a picture; understand spoken instructions and questions; and answer questions aloud using complete grammatically correct sentences. Vocabulary of approximately 300 words.

SPA 10A: Primer semestre de español (First Semester Spanish)

Credits: 5, Prerequisite: None

Immersion instruction. Students read words and simple passages aloud and silently; read simple passages for comprehension and answer questions associated with those passages; begin formal grammar instruction; write sentences from a picture; understand spoken instructions and questions; and answer questions aloud using complete grammatically correct sentences. Vocabulary of approximately 225 words.

SPA 10B: Segundo semestre de español (Second Semester Spanish)

Credits: 5, Prerequisite: SPA 10A

Immersion instruction. Students read words and simple passages aloud and silently; read simple passages for comprehension and answer questions associated with those passages; begin formal grammar instruction; write sentences from a picture; understand spoken instructions and questions; and answer questions aloud using complete grammatically correct sentences. Vocabulary of approximately 300 words.

SPA 20: Segundo año de español (Second Year Spanish)

Credits: 10, Prerequisite: SPA 10 or SPA 10B

Immersion instruction. Students read words and simple passages aloud and silently; read passages for comprehension and answer questions associated with those passages; continue formal grammar instruction; write sentences from a picture; understand spoken instructions and questions; and answer questions aloud using complete grammatically correct sentences. Vocabulary of approximately 475 words.

SPA 20A: Tercero semestre de español (Third Semester Spanish)

Credits: 5, Prerequisite: SPA 10 or SPA 10B

Immersion instruction. Students read words and simple passages aloud and silently; read passages for comprehension and answer questions associated with those passages; continue formal grammar instruction; write sentences from a picture; understand spoken instructions and questions; and answer questions aloud using complete grammatically correct sentences. Vocabulary of approximately 400 words.

SPA 20B: Cuarto semestre de español (Fourth Semester Spanish)

Credits: 5, Prerequisite: SPA 20A

Immersion instruction. Students read words and simple passages aloud and silently; read passages for comprehension and answer questions associated with those passages; continue formal grammar instruction; write sentences from a picture; understand spoken instructions and questions; and answer questions aloud using complete grammatically correct sentences. Vocabulary of approximately 475 words.

SPA 30: Tercero año de español (Third Year Spanish)

Credits: 10, Prerequisite: SPA 20 or SPA 20B

Immersion instruction. Students read words and passages aloud and silently; read passages for comprehension and answer questions associated with those passages; continue formal grammar instruction; write sentences from a picture; understand spoken instructions and questions; and answer questions aloud using complete grammatically correct sentences. Vocabulary of approximately 650 words.

SPA 30A: Quinto semestre de español (Fifth Semester Spanish)

Credits: 5, Prerequisite: SPA 20 or SPA 20B

Immersion instruction. Students read words and passages aloud and silently; read passages for comprehension and answer questions associated with those passages; continue formal grammar instruction; write sentences from a picture; understand spoken instructions and questions; and answer questions aloud using complete grammatically correct sentences. Vocabulary of approximately 570 words.

SPA 30B: Sexto semestre de español (Sixth Semester Spanish)

Credits: 5, Prerequisite: SPA 30A

Immersion instruction. Students read words and passages aloud and silently; read passages for comprehension and answer questions associated with those passages; continue formal grammar instruction; write sentences from a picture; understand spoken instructions and questions; and answer questions aloud using complete grammatically correct sentences. Vocabulary of approximately 650 words.

SPA 40: Cuarto año de Español (Fourth Year Spanish)

Credits: 10, Prerequisite: SPA 30

Immersion instruction. Students read passages and short stories aloud and silently; read passages for comprehension and answer questions associated with those passages; write short descriptive paragraphs; continue formal grammar instruction; understand spoken instructions and questions; and answer questions aloud using complete grammatically correct sentences. Vocabulary of approximately 950 words.

SPA 50: Quinto año de español (Fifth Year Spanish)

Credits: 10, Prerequisite: SPA 40

Immersion instruction. Students read passages and short stories aloud and silently; read passages for comprehension and answer questions associated with those passages; create outlines and write descriptive and narrative paragraphs; continue formal grammar instruction; understand spoken instructions and questions; answer questions aloud using complete grammatically correct sentences; and prepare and give extemporaneous speeches. Vocabulary of approximately 1200 words.

SPA 60: Sexto año de español (Sixth Year Spanish)

Credits: 10, Prerequisite: SPA 50

University level course.

Immersion instruction. Students read passages and short stories aloud and silently; read passages for comprehension and answer questions associated with those passages; create outlines and write descriptive, narrative, and process paragraphs; continue formal grammar instruction; understand spoken instructions and questions; answer questions using complete grammatically correct sentences; and prepare and give extemporaneous speeches. Vocabulary of approximately 1450 words.

SPA 70: Séptimo año de español (Seventh Year Spanish)

Credits: 10, Prerequisite: SPA 60

University level course.

Immersion instruction. Students read passages and short stories aloud and silently; read passages for comprehension and answer questions associated with those passages; create outlines and write descriptive, narrative, process, and compare/contrast essays; continue formal grammar instruction; understand spoken

instructions and questions; answer questions aloud using complete grammatically correct sentences; and prepare and give extemporaneous speeches. Vocabulary of approximately 1800 words.

SPA 80: Octavo año de español (Eight Year Spanish)

Credits: 10; Prerequisite: SPA 70

University level course. Writing Intensive Course.

Immersion instruction. Students read passages and short stories aloud and silently; read passages for comprehension and answer questions associated with those passages; create outlines and write descriptive, narrative, process, compare/contrast, and analysis essays; continue formal grammar instruction; understand spoken instructions and questions; answer questions aloud using complete grammatically correct sentences; and prepare and give extemporaneous speeches. Vocabulary of approximately 1950 words.

SPA 90: Noveno año de español (Ninth Year Spanish)

Credits: 10, Prerequisite: SPA 80

University level course. Writing Intensive Course.

Immersion instruction. Students read passages, short stories, and novels; read passages for comprehension and answer questions associated with those passages; create outlines and write descriptive, narrative, process, compare/contrast, analysis, and cause/effect essays; continue formal grammar instruction; understand spoken instructions and questions; answer questions aloud using complete grammatically correct sentences; and prepare and give extemporaneous speeches. Vocabulary of approximately 2325 words.

SPA 100: Décimo año de español (Tenth Year Spanish)

Credits: 10, Prerequisite: SPA 90

University level course. Writing intensive course.

Immersion instruction. Students read passages, short stories, and novels; read passages for comprehension and answer questions associated with those passages; create outlines and write descriptive, narrative, process, compare/contrast, analysis, cause/effect, and persuasive essays; continue formal grammar instruction; write sentences (characters) from a picture; translate characters into pinyin; understand spoken instructions and questions; answer questions aloud using complete grammatically correct sentences; and prepare and give extemporaneous speeches. Vocabulary of approximately 2550 words.

SPA 110: Historia del Arte (Art History)

same as HIS 120

Credits: 10, Prerequisite: SPA 100

Advanced university level course. Writing intensive course.

Immersion Instruction. Students read art history and classic Spanish literature that enhances the students' appreciation of art history. In addition, students read passages for comprehension and answer questions associated with those passages. They also create outlines and write descriptive, narrative, process, compare/contrast, analysis, cause/effect, persuasive, and division/classification essays about history and literature topics; comprehend spoken instructions and questions about the history and literature studied; answer oral questions about the history and literature topics; and prepare and deliver extemporaneous speeches about history and literature topics. Vocabulary of approximately 2825 words.

SPA 120: Literatura hispana (Spanish Literature)

Credits: 10, Prerequisite: SPA 110

Advanced university level course. Writing intensive course.

Immersion Instruction. Students read classic Spanish literature. In addition, students read passages for comprehension and answer questions associated with those passages. They also create outlines and write descriptive, narrative, process, compare/contrast, analysis, cause/effect, persuasive, and division/classification essays about literature topics; comprehend spoken instructions and questions about the literature studied; answer oral questions about the literature topics; and prepare and deliver extemporaneous speeches about literature topics.

SPA 130: Proyecto en español (Spanish Project)

Credits: 10, Prerequisite: SPA 120

Honors course.

Students participate in an internship at a company where Spanish is the primary language of communication. They meet deadlines and expectations set by the company. At the end of the internship, each student prepares a report summarizing his/her experience.

## **NON-ACADEMIC**

### **ART (ART)**

ART 5: Art I

Credits 5, Prerequisite: None

Student participates in documented, third-party verified art activities of at least 80 hours in a one semester period. Non-academic Satisfactory/Unsatisfactory (S/U) grading only.

### ART 10: Art II

Credits 5, Prerequisite: ART 5

Student completes ART 5 and participates in documented, third-party verified art activities of at least 80 hours in a one semester period. Non-academic Satisfactory/Unsatisfactory (S/U) grading only.

### ART 15: Art III

Credits 5, Prerequisite: ART 10

Student completes ART 10 and participates in documented, third-party verified art activities of at least 80 hours in a one semester period. Non-academic Satisfactory/Unsatisfactory (S/U) grading only.

### ART 20: Art IV

Credits 5, Prerequisite: ART 15

Student completes ART 15 and participates in documented, third-party verified art activities of at least 80 hours in a one semester period. Non-academic Satisfactory/Unsatisfactory (S/U) grading only.

### ART 25: Art V

Credits 5, Prerequisite: ART 20

Student completes ART 20 and participates in documented, third-party verified art activities of at least 80 hours in a one semester period. Non-academic Satisfactory/Unsatisfactory (S/U) grading only.

### ART 30: Art VI

Credits 5, Prerequisite: ART 25

Student completes ART 25 and participates in documented, third-party verified art activities of at least 80 hours in a one semester period. Non-academic Satisfactory/Unsatisfactory (S/U) grading only.

### ART 35: Art VII

Credits 5, Prerequisite: ART 30

Student completes ART 30 and participates in documented, third-party verified art activities of at least 80 hours in a one semester period. Non-academic Satisfactory/Unsatisfactory (S/U) grading only.

### ART 40: Art VIII

Credits 5, Prerequisite: ART 35

Student completes ART 35 and participates in documented, third-party verified art activities of at least 80 hours in a one semester period. Non-academic Satisfactory/Unsatisfactory (S/U) grading only.

## **PHYSICAL EDUCATION (PHY)**

### PHY 5: Physical Education I

Credits 5, Prerequisite: None

Student participates in documented, third-party verified physical education activities of at least 80 hours in a one semester period. Non-academic Satisfactory/Unsatisfactory (S/U) grading only.

### PHY 10: Physical Education II

Credits 5, Prerequisite: PHY 5

Student completes PHY 5 and participates in documented, third-party verified physical education activities of at least 80 hours in a one semester period. Non-academic Satisfactory/Unsatisfactory (S/U) grading only.

### PHY 15: Physical Education III

Credits 5, Prerequisite: PHY 10

Student completes PHY 10 and participates in documented, third-party verified physical education activities of at least 80 hours in a one semester period. Non-academic Satisfactory/Unsatisfactory (S/U) grading only.

### PHY 20: Physical Education IV

Credits 5, Prerequisite: PHY 15

Student completes PHY 15 and participates in documented, third-party verified physical education activities of at least 80 hours in a one semester period. Non-academic Satisfactory/Unsatisfactory (S/U) grading only.

### PHY 25: Physical Education V

Credits 5, Prerequisite: PHY 20

Student completes PHY 20 and participates in documented, third-party verified physical education activities of at least 80 hours in a one semester period. Non-academic Satisfactory/Unsatisfactory (S/U) grading only.

### PHY 30: Physical Education VI

Credits 5, Prerequisite: PHY 25

Student completes PHY 25 and participates in documented, third-party verified physical education activities of at least 80 hours in a one semester period. Non-academic Satisfactory/Unsatisfactory (S/U) grading only.

PHY 35: Physical Education VII

Credits 5, Prerequisite: PHY 30

Student completes PHY 30 and participates in documented, third-party verified physical education activities of at least 80 hours in a one semester period. Non-academic Satisfactory/Unsatisfactory (S/U) grading only.

PHY 40: Physical Education VIII

Credits 5, Prerequisite: PHY 35

Student completes PHY 35 and participates in documented, third-party verified physical education activities of at least 80 hours in a one semester period. Non-academic Satisfactory/Unsatisfactory (S/U) grading only.