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ASU Preparatory Academy

ASU Preparatory Academy is an innovative K–12 charter school where teachers, students and families share the same goal – college graduation.

Mission: We personalize education, improving outcomes for all students.
Vision: To promote academic success, honor diversity, and to facilitate human potential.
Core Values: Access, Impact, Excellence

ASU Prep is committed to excellence, access and impact in everything we do. We measure ourselves by the outcomes our students achieve, the accomplishments of our graduates, our contributions to the public good and by the economic, social and cultural vitality of the communities that surround us.

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### ASU Preparatory Academy Graduation Credit Requirements

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<th>9th Gr.</th>
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<th>11th Gr.</th>
<th>12th Gr.</th>
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<td>1</td>
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<td>1</td>
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<tr>
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<td>Social Studies</td>
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<td>World Language</td>
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</table>

Credits required: **24**

### Sample Schedule

<table>
<thead>
<tr>
<th>1</th>
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<th>10th Gr.</th>
<th>11th Gr.</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Math</td>
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<td>2</td>
<td>English</td>
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</tr>
<tr>
<td>3</td>
<td>Science</td>
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<td>4</td>
<td>World Language</td>
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<td>ACT/SAT Test Prep + Ind Study Elective</td>
<td>Senior Seminar</td>
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<td>5</td>
<td>Intro to Biotech</td>
<td>World History</td>
<td>American History</td>
<td>Government/ Economics</td>
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<tr>
<td>6</td>
<td>University Prep 2/ Physical Education</td>
<td>Fine Art Elective</td>
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### Grading Scale

<table>
<thead>
<tr>
<th>Grade</th>
<th>Letter</th>
<th>4.0 Scale</th>
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<tbody>
<tr>
<td>Exemplary</td>
<td>A</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Highly Proficient</td>
<td>B</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Proficient</td>
<td>C</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Partially Proficient</td>
<td>D</td>
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<td>1</td>
</tr>
<tr>
<td>Minimally Proficient</td>
<td>F</td>
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<td>0</td>
</tr>
</tbody>
</table>

I consistently and independently demonstrate the ability to analyze and synthesize essential content, knowledge and skills in a new task.

I consistently and independently demonstrate the ability to apply and transfer essential content, knowledge and skills in a new task.

I demonstrate the ability to comprehend and apply essential content, knowledge and skills in a familiar task.

I am still trying to demonstrate the application and transfer of essential content, knowledge and skills.

I am not yet competent in this performance standard.

ASU Prep fosters educational environments that ensure equity of learning for all students and provides the opportunity to access rigorous and relevant curriculum Pre-K through College degree completion. ASU Prep personalizes learning in asynchronous and synchronous learning environments to prepare each student for college, career, and life. Providing various student-centered learning environments assists students to enhance executive functioning skills and learn how to collaborate in small groups, as well as in large groups. Our teachers develop individualized learning plans by integrating valuable input from each student. In doing so, this will empower students to take ownership of his/her education.

Honors level and college-prep curriculum are built into learning modalities that are utilized in each school for all students to access. Teachers utilize rubrics to help foster student agency and expectations of excellence in work submitted. Every class/course will provide a choice for students to learn and apply knowledge at levels equal to honors/college prep courses. Weighted grades will be designated to assignments within each course for students to choose the rigors of college-level assignments that support AZ standards. ASU Prep embraces a growth mindset in teaching and learning whereas every child will strive to master standards. This will ensure success every step of the way and each year throughout their ASU Prep high school experience.
Electives

ACT/SAT Test Prep, 0.5 Credit
Prerequisite: none.

Advanced STEM, 1 Credit
Prerequisite: Teacher approval.

Child Development, 1 Credit
Prerequisite: none.

CompuPower, 0.5 Credit
Prerequisite: none.

Computer Science, 1 Credit
Prerequisite: none.

Engineering II-Robotics, 1 Credit
Prerequisite: none.

Entrepreneurship I: Ideas and Strategies, 1 Credit

Entrepreneurship II: Entrepreneurial Research, 1 Credit
Prerequisite: Entrepreneurship I.

Humanities Academic Apprenticeship, 1 Credit
Prerequisite: Counselor approval.

Internship, 1 Credit
Prerequisite: Counselor approval.

Introduction to Engineering Design and Analysis, 1 Credit
Prerequisite: none.

Leadership 1, 1 Credit
Prerequisite: none.

Principles of Engineering I, 1 Credit
Prerequisite: none.

Psychology, 0.5 Credit
Prerequisite: none.

Robotics, 1 Credit
Prerequisite: none.

Senior Seminar, 1 Credit
Required. All Senior Status Students.

STEM 101, Makers Workshop, 1 Credit
Prerequisite: none.

University Prep, 1 Credit
Prerequisite: none.

Video Production, 1 Credit
Prerequisite: none.

Yearbook, 1 Credit
Prerequisite: application.

ACT/SAT Test Prep

Standardized Test Preparation courses help prepare students for national standardized tests such as the PSAT, SAT, and ACT. In particular, these courses assist students in developing and/or expanding their vocabulary, test-taking, and reasoning skills through study, lecture, and practice drills. Course topics may include vocabulary review; root words, prefixes, and suffixes; mathematical concepts, logic, and rules; and general problem-solving and test-taking strategies.

Advanced STEM

Students will further their understanding of the Engineering Design Process and use it to deepen their knowledge of making skill such as: circuits, soldering, 3D printing, power tools, etc.

Child Development

In this course, students will gain an appreciation and understanding of the factors influencing child behavior and development. In addition, students will learn how to observe and apply scientific methods in the collection, analysis and interpretation of data. Students will explore the influence of genetics, prenatal and the early environment in shaping child development.

CompuPower

Computer Programming courses provide students with the knowledge and skills necessary to construct computer programs in one or more languages. Computer coding and program structure are often introduced with the BASIC language, but other computer languages, such as Visual Basic (VB), Java, Pascal, C++ and COBOL, may be used instead. Initially, students learn to structure, create, document, and debug computer programs, and as they progress, more emphasis is placed on design, style, clarity, and efficiency. Students may apply the skills they learn to relevant applications such as modeling, data management, graphics, and text-processing.
Computer Science  
**Prerequisite:** none.

In this course, students are introduced to fundamental concepts of computer science and computational thinking. This includes logical reasoning, problem solving, data representation, abstraction, the creation of digital artifacts such as web pages and programs, managing complexity, operation of computers and networks, effective web searching, ethical, legal and social aspects of information technology.

Engineering II-Robotics  
**Prerequisite:** none.

Students will work in teams to design, build, and code a working robot. Coding languages may include LabView and/or Java. Students will also learn basic machining and building techniques. Students will learn team building and communication skills as they work in conjunction with the after-school robotics club. The final robot will be entered in the FIRST Robotics regional competition in April.

Entrepreneurship I: Ideas and Strategies  
**Prerequisite:** none.

You will get a front row seat and see how early-stage business investors make their investments. You first look through the lens of an investor. Then you will learn the fundamentals of identifying opportunity, creating value, and capturing value with the Three Pillars of Entrepreneurship. You will prepare your own rubric for investing, and develop startup investment recommendations. Next, you will look through the lens of the entrepreneur and will apply insights and understanding to develop a business concept of your own, and develop your ideas into an investor pitch deck.

Entrepreneurship II: Entrepreneurial Research  
**Prerequisite:** Entrepreneurship I.

Research can be the difference between success and failure. This course teaches students approaches and methods for increasing their probability of success. Then students will apply value creation directly to venture design. They will take a deep dive into entrepreneurial strategy, and apply these learnings to further develop and fortify their venture.

Humanities Academic Apprenticeship  
**Prerequisite:** Counselor approval.

Humanities Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest within the field of humanities. Independent Study courses may provide students with an opportunity to expand their expertise in a particular specialization, to explore a topic of special interest, or to develop more advanced skills.

Internship  
**Prerequisite:** Counselor approval.

Internship programs empower students to develop leadership, academic, and technical skills needed in the global economy for continuous learning and workforce success. Internships offers opportunities to develop specialized skills while in high school and apply academic knowledge in real world settings. Learning is not limited to the classroom. Internship opportunities are a supervised, work-based learning experience in a paid or unpaid position within the internship program of study. The internship provides on the job experience and valuable industry networking.

Introduction to Engineering Design and Analysis  
**Prerequisite:** none.

This course introduces engineering as a profession, critical thinking in engineering design and modeling, teaming dynamics, and engineering communication. Students will engage in a project-based curriculum focusing on the engineering problem-solving process, systems thinking, the integration of mathematical analysis with engineering decision-making, and the science behind WHY we make certain design decisions.
Leadership 1  
1 Credit

Prerequisite: none.

Leadership courses are designed to strengthen students personal and group leadership skills. Typically intended for students involved in extracurricular activities (especially as officers of organizations or student governing bodies), these courses may cover such topics as public speaking, effective communication, human relations, parliamentary law and procedures, organization and management, and group dynamics.

Principles of Engineering I  
1 Credit

Prerequisite: none.

Introduction to Engineering Design is a course that aims to provide students with an understanding of the engineering field as a whole. Students will explore how engineers from a variety of disciplines work with customers to solve problems in a systematic manner. During the course, students will interact with prospective clients in order to solve authentic problems and affect the community in a positive fashion. Students will be introduced to the engineering design process as well as the teaming and communication skills necessary for success in the engineering field.

Psychology  
0.5 Credit

Prerequisite: none.

Psychology courses introduce students to the study of individual human behavior. Course content typically includes (but is not limited to) an overview of the field of psychology, topics in human growth and development, personality and behavior, and abnormal psychology.

Robotics  
1 Credit

Prerequisite: none.

This course leverages the “coolness” of robotics, and the excitement of head to head competition to inspire and engage students. Students will learn about robotics in our world, and how ALL the different aspects of STEM are all used in the field of robotics. Students will learn key STEM principles, and robotics concepts. At the culmination of this class, students will compete head-to-head against their peers in the classroom.

Senior Seminar  
1 Credit

Required. All Senior Status Students

ASU Prep Senior Seminar assists students through support in study, leadership and academic skills. Students solidify a variety of college and career knowledge through skills involving resume, cover letter writing, interview skills, college applications, scholarship and the financial aid process.

STEM 101, Makers Workshop  
1 Credit

Prerequisite: none.

Students will learn the basics of the Engineering Design Process and basic making skills such as: computer coding, 3D printing, circuits, etc.

University Prep  
1 Credit

Prerequisite: none.

Course to prepare students for success in high schools and/or for postsecondary education. Course topics may vary according to the students involved, but typically include reading improvement skills, such as scanning, note-taking and outlining, library and research skills, listening and note-taking, vocabulary skills, and test-taking skills. The courses may also include exercises designed to generate organized, logical thinking and writing.
Video Production

Prerequisite: none.

An introduction class designed to provide students with artistic, creative and historical background in the fields of video, broadcasting, and film production. Additionally, this course provides instruction and training in pre-production, production and post production phases of project development. Projects include creating short documentaries and short films and assisting with broadcast journalism. Students who are interested in a career in entertainment production have opportunities to explore the many jobs involved in the making of such productions.

Yearbook

Prerequisite: application.

Students in this class will develop skills in graphic design, design software, digital photography, image manipulation software, journalistic writing techniques, principles of advertising including accounting and ad design, and leadership and cooperative work groups. This course is deadline driven and will require participation outside of regular class hours. Students are encouraged to attend sporting events, dances, as well as other student activities. Students are expected to be professional, punctual, organized, motivated, and possess strong artistic, reading and writing skills upon entering the class. This class provides foundational development in professional standards and yearbook journalism, as well as practice in adherence to due dates and accountability to peers.
English

English/Language Arts I (9th grade), 1 Credit
Prerequisite: none.

English/Language Arts II (10th grade), 1 Credit
Prerequisite: English/Language Arts I.

English/Language Arts III (11th grade), 1 Credit
Prerequisite: English/Language Arts II.

English/Language Arts IV (12th grade), 1 Credit
Prerequisite: English/Language Arts III.

English Composition ENG 101 Earned Admission, 0.5 Credit
Prerequisite: English/Language Arts III.

English Composition ENG 102 Earned Admission, 0.5 Credit
Prerequisite: ENG 101.

English/Language Arts I (9th Grade) 1 Credit
Prerequisite: none.
Courses build upon student’s prior knowledge of grammar, vocabulary, word usage, and the mechanics of writing and usually include the four aspects of language use: reading, writing, speaking, and listening. Typically, these courses introduce and define various genres of literature, with writing exercises often linked to reading selections.

English/Language Arts II (10th Grade) 1 Credit
Prerequisite: English/Language Arts I (9th Grade)
Courses usually offer a balanced focus on composition and literature. Typically, students learn about the alternate aims and audiences of written compositions by writing persuasive, critical, and creative multi-paragraph essays and compositions. Through the study of various genres of literature, students can improve their reading rate and comprehension and develop the skills to determine the author’s intent and theme and to recognize the techniques used by the author to deliver his or her message.

English/Language Arts III (11th Grade) 1 Credit
Prerequisite: English/Language Arts II (10th Grade)
Courses continue to develop students writing skills, emphasizing clear, logical writing patterns, word choice, and usage, as students write essays and begin to learn the techniques of writing research papers. Students continue to read works of literature, which often form the backbone of the writing assignments. Literary conventions and stylistic devices may receive greater emphasis than in previous courses.

English/Language Arts IV (12th Grade) 1 Credit
Prerequisite: English/Language Arts III (11th Grade)
English/Language Arts IV (12th grade) courses blend composition and literature into a cohesive whole as students write critical and comparative analyses of selected literature, continuing to develop their language arts skills. Typically, students primarily write multi-paragraph essays, but they may also write one or more major research papers.

English Composition ENG 101 Earned Admission 0.5 Credit
Prerequisite: English/Language Arts III (11th Grade)
English Composition 101 is on introductory composition course to help you develop and express ideas effectively for a variety of personal and professional purposes, audiences, and occasions. Students who successfully complete the course with a B or better may be eligible for 3 hours of university academic credit* in addition to the high school credit. Additional fees may apply.

English Composition ENG 102 Earned Admission 0.5 Credit
Prerequisite: ENG 101
English Composition 102 is a course to help you understand discourse and research writing with the goal of creating solutions to issues within your local community. Students who successfully complete the course with a B or better may be eligible for 3 hours of university academic credit* in addition to the high school credit. Additional fees may apply.
Fine Art

**Advanced Creative Writing, 1 Credit**
Elective. Prerequisite: Creative Writing.

**Art History, 1 Credit**
Elective. Prerequisite: none.

**Art Portfolio, 1 Credit**
Elective. Prerequisite: none.

**Art & Design, 1 Credit**
Elective. Prerequisite: none. Can be repeated for credit.

**Band, 1 Credit**
Elective. Prerequisite: none.

**Ceramics, 1 Credit**
Elective. Prerequisite: none.

**Creative Writing, 1 Credit**
Elective. Prerequisite: Creative Writing.

**Dance Technique, 1 Credit**
Elective. Prerequisite: none.

**Digital Photography, 1 Credit**
Elective. Prerequisite: none.

**Music, 1 Credit**
Elective. Prerequisite: none.

**Music Ensemble, 1 Credit**
Elective. Prerequisite: none.

**Theatre Production, 1 Credit**
Elective. Prerequisite: none.

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**Advanced Creative Writing**
Elective. Prerequisite: Creative Writing

Composition-Independent study, often conducted with instructors as mentors, allow students to explore particular topics within the field of language arts (emphasizing composition). Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.

**Art History**
Elective. Prerequisite: none

Art History courses introduce students to significant works of art, artists, and artistic movements that have shaped the art world and have influenced or reflected periods of history. These courses often emphasize the evolution of art forms, techniques, symbols, and themes.

**Art Portfolio**
Elective. Prerequisite: none

The purpose of this course is to enable students to communicate and express through visual perception and aesthetic experiences an artistic language in addition to those used by literary, mathematical, scientific, and factually-based subjects. This studio-based language will enable students to develop their abilities of observation and analysis of the visual world, sensitivity, skill, personal expression, and imagination. Students should also learn to relate these skills to an enhanced knowledge of their own and other cultures, past, and present, and an appreciation of practical design problems. Students will continue to develop skills gained in Art or Design, with new emphasis on manipulative, artistic, and analytical skills, as well as an appreciation of aesthetic qualities.

**Art & Design**
Elective. Prerequisite: none. Can be repeated for credit

This course encourages personal expression, imagination, sensitivity, conceptual thinking, powers of observation, and an analytical ability. It also enables students to develop creativity, visual awareness, and critical and cultural understanding; an imaginative, creative, and personal response; and confidence, enthusiasm, and a sense of achievement. It is especially concerned with the development of visual perception and aesthetics and is a form of communication and a means of expressing ideas and feelings. You will produce a range of artworks and designs showing visual knowledge and understanding along with critical and cultural awareness. Students will explore and experiment with appropriate materials, selecting, and controlling appropriate media and processes, demonstrating practical, technical, and expressive skills and intentions. By the end of the course, students will be able to show personal vision and commitment through an interpretive and creative response and present an informed response through personal evaluation, reflection, and critical thinking. Students will analyze design briefs and tackle practical design tasks.
Band 1 Credit

Elective. Prerequisite: none.

Come learn an instrument (flute, trumpet, clarinet, saxophone, trombone, or percussion) in concert band at ASU Prep; no previous experience needed. The class will be divided into sections where new players can learn the basics of their instruments and more advanced players can hone their skills. We will play music of various styles at several concerts throughout the year as well as traveling to other events. We will also learn elements of music theory (how music is written) and music history. Each student will be responsible for renting an instrument (instruments placements will be determined during the first week of school). Be ready to learn an instrument, work as a team, and build great memories!

Ceramics 1 Credit

Elective. Prerequisite: none.

This class is designed for students who would be more successful in a three-dimensional art class instead of one in a two-dimensional art class. The class will have over 5 ceramic assignments, there will be tool tests, test about clay and ceramics. The class will go over art history specifically to Ceramics and the history behind all of the types of creating the pottery.

Creative Writing 1 Credit

Elective. Prerequisite: none.

This is an introductory course in creative writing. Short spontaneous exercises and longer assignments combine to motivate, and refine, students’ writing, both about the chronicler’s main subjects (place, people, and things) and about the fiction writer’s concerns (character, plot or narrative economy, and closure). Whether fiction or nonfiction, students’ writing is discussed via criteria pertinent to literary work. Learning to analyze a piece of writing critically is a key component of the course. Guidelines/criteria will be provided. Students are encouraged to apply them as well as to improvise, as long as opinions are always grounded in evidence from the relevant text.

Dance Technique 1 Credit

Elective. Prerequisite: none.

For this course student will learn the different components to creating, performing, and teaching a dance class. They will get the opportunity to perform different routines including dance fusion, hip-hop, cardio kickbox, salsa, cumbia, bachata, merengue, chacha, samba, and other international dance formats. The routines feature aerobic/fitness interval training with a combination of fast and slow rhythms that tone and sculpt the body. During this course students will have the opportunity to create dance choreography and teach dance fitness classes to peers using different dance formats.

Digital Photography 1 Credit

Elective. Prerequisite: none.

This is a beginning to intermediate level course dealing primarily with camera controls as they relate to digital photography, and how to make the best out of every digital image. The basics of shooting successful pictures with a digital camera will reference tips from traditional photography and highlight how traditional photography applies to the digital shoot. Students will then learn how to improve, repair, and manipulate digital images within professional software to achieve the best possible digital image. Students will learn composition through the practice, completion of various types of pictures, and will learn how to prepare them for print, computer slideshows, and the web.

Music 1 Credit

Elective. Prerequisite: none.

Music encompasses a vast array of musical avenues, from Western music history, to World Music, advanced music theory, and performing and composing music. Students will be asked to work rigorously as they build their skills in listening, creating, and interpreting music with a variety of instruments. Students who already play an instrument are welcome to bring their instrument for utilization in class projects.
Music Ensemble

Elective. Prerequisite: none.

In Music Ensemble, students will compose and perform many styles of music, including percussion-based music, blues, various song forms, and much more. Students will learn to create and arrange music in many contexts. Students who already play an instrument are welcome to bring their instrument for utilization in class projects.

Theatre Production

Elective. Prerequisite: none.

Theatrical production class takes place in two parts: the first half of the school year focuses on presenting and performing in front of an audience utilizing drama skills and rotating through sections of Drama, Art, and Music, learning rudiments and experiencing how each element contributes to the whole of a production. The second half of the school year will involve developing characters with memorized lines in preparation of a theatre piece that will be performed at the end of the school year.
# Health & Fitness Education

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Health, Wellness &amp; Fitness</strong></td>
<td>1</td>
<td>Students will develop an understanding of the importance of healthy choices and the influence of friends in maintaining health and wellness while developing a fitness routine that will support health &amp; wellness.</td>
</tr>
<tr>
<td><strong>Lifetime Fitness</strong></td>
<td>1</td>
<td>This course emphasizes acquiring knowledge and skills regarding lifetime physical fitness. Content may include related topics such as nutrition, stress management and consumer issues. Students may develop and implement a personal fitness plan.</td>
</tr>
</tbody>
</table>

**Health, Wellness & Fitness**  
*Elective. Prerequisite: none.*

**Lifetime Fitness**  
*Elective. Prerequisite: none.*
Mathematics

Algebra I, 1 Credit
Prerequisite: none.

Algebra II, 1 Credit
Prerequisite: Geometry.

Algebra II with Trigonometry, 1 Credit
Prerequisite: Teacher placement.

Algebra III, 1 Credit
Prerequisite: Algebra II.

Calculus, 1 Credit
Prerequisite: Algebra II.

Calculus for Engineers I MAT265 Earned Admission, 1 Credit
Prerequisite: Recommended MAT170 or teacher placement.

College Algebra/College Algebra and Problem Solving
MAT117 Earned Admission, 1 Credit
Prerequisite: Teacher placement.

Discrete Math, 1 Credit
Prerequisite: Teacher Placement.

Geometry, 1 Credit
Prerequisite: Algebra I.

Pre-Calculus, 1 Credit
Prerequisite: Algebra I.

Pre-Calculus MAT 170 Earned Admission, 1 Credit
Prerequisite: Recommended MAT117 or teacher placement.

Transition Algebra, 1 Credit
Prerequisite: Teacher placement.

Algebra I
Prerequisite: none.

Algebra I courses include the study of properties and operations of the real number system; evaluating rational algebraic expressions; solving and graphing first degree equations and inequalities; translating word problems into equations; operations with and factoring of polynomials; and solving simple quadratic equations.

Algebra II
Prerequisite: Algebra I

Algebra II course topics typically include field properties and theorems; set theory; operations with rational and irrational expressions; factoring of rational expressions; in-depth study of linear equations and inequalities; quadratic equations; solving systems of linear and quadratic equations; graphing of constant, linear, and quadratic equations; properties of higher degree equations; and operations with rational and irrational exponents.

Algebra II with Trigonometry
Prerequisite: teacher placement

The purpose of this course is to enable students to: consolidate and extend their elementary mathematical skills and use these in the context of more advanced techniques; further develop their knowledge of mathematical concepts and principles and use this knowledge for problem solving; appreciate the interconnected-ness of mathematical knowledge; devise mathematical arguments and present them precisely and logically integrate information technology to enhance the mathematical experience; develop the confidence to apply their mathematical skills and knowledge in appropriate situations; develop creativity and perseverance in the approach to problem solving; derive enjoyment and satisfaction from engaging in mathematical pursuits, and gain an appreciation of the beauty, power and usefulness of mathematics. By the end of this course, students will have a suitable foundation in mathematics for advanced mathematics courses and in related subjects.

Algebra III
Prerequisite: Algebra II

Algebra III courses review and extend algebraic concepts for students who have already taken Algebra II. Course topics include (but are not limited to) operations with rational and irrational expressions, factoring of rational expressions, linear equations and inequalities, quadratic equations, solving systems of linear and quadratic equations, properties of higher degree equations, and operations with rational and irrational exponents. The courses may introduce topics in discrete math, elementary probability and statistics; matrices and determinants; and sequences and series.
Calculus 1 Credit
Prerequisite: Algebra II
Calculus courses include the study of derivatives, differentiation, integration, the definite and indefinite integral, and applications of calculus. Typically, students have previously attained knowledge of pre-calculus topics (some combination of trigonometry, elementary functions, analytic geometry, and math analysis).

Calculus for Engineers I MAT265 Earned Admission 1 Credit
Prerequisite: MAT170 or teacher placement
Calculus for Engineers include the study of limits (including those involving infinity); derivatives and rates of change; continuity; applications of derivative; linear approximation; accumulation; antidifferentiation; definite integrals; and more. Students who successfully complete the course with a B or better may be eligible for 3 hours of university academic credit* in addition to the high school credit. Additional fees may apply.

College Algebra/College Algebra and Problem Solving MAT117 Earned Admission 1 Credit
Prerequisite: Teacher placement
In this face-to-face college level algebra course, students will learn to apply algebraic reasoning to solve problems effectively. They will develop skills in linear and quadratic functions, general polynomial functions, rational functions, and exponential and logarithmic functions. Students will also study systems of linear equations. This course will emphasize problem-solving techniques, specifically by means of discussing concepts in each of these topics. Students who successfully complete the course with a B or better may be eligible for 3 hours of university academic credit* in addition to the high school credit. Additional fees may apply.

Discrete Math 1 Credit
Prerequisite: Teacher placement
Discrete Mathematics courses include the study of topics such as number theory, discrete probability, set theory, symbolic logic, Boolean algebra, combinatorics, recursion, basic algebraic structures and graph theory.

Geometry 1 Credit
Prerequisite: Algebra I
Geometry courses, emphasizing an abstract, formal approach to the study of geometry, typically include topics such as properties of plane and solid figures; deductive methods of reasoning and use of logic; geometry as an axiomatic system including the study of postulates, theorems, and formal proofs; concepts of congruence, similarity, parallelism, perpendicularity, and proportion; and rules of angle measurement in triangles.

Pre-Calculus 1 Credit
Prerequisite: Algebra I and Geometry
Pre-Calculus courses combine the study of Trigonometry, Elementary Functions, Analytic Geometry, and Math Analysis topics as preparation for calculus. Topics typically include the study of complex numbers; polynomial, logarithmic, exponential, rational, right trigonometric, and circular functions, and their relations, inverses and graphs; trigonometric identities and equations; solutions of right and oblique triangles; vectors; the polar coordinate system; conic sections; Boolean algebra and symbolic logic; mathematical induction; matrix algebra; sequences and series; and limits and continuity.

Pre-Calculus MAT170 Earned Admission 1 Credit
Prerequisite: MAT117 or teacher placement
This college level Precalculus course focuses on quantitative reasoning and functions. Topics typically include the study of the behaviors and properties of liner, exponential, logarithmic, polynomial, rational, and trigonometric functions. Students who successfully complete the course with a B or better may be eligible for 3 hours of university academic credit* in addition to the high school credit. Additional fees may apply.
Transition Algebra  1 Credit

Prerequisite: Teacher placement

Transition Algebra courses review and extend algebra and geometry concepts for students who have already taken Algebra I and Geometry. Transition Algebra courses include a review of such topics as properties and operations of real numbers; evaluation of rational algebraic expressions; solutions and graphs of first degree equations and inequalities; translation of word problems into equations; operations with and factoring of polynomials; simple quadratics; properties of plane and solid figures; rules of congruence and similarity; coordinate geometry including lines, segments, and circles in the coordinate plane; and angle measurement in triangles including trigonometric ratios.
## Science

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Prerequisites</th>
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<tbody>
<tr>
<td><strong>Biology</strong></td>
<td>1</td>
<td>none.</td>
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<tr>
<td><strong>Biotechnology</strong></td>
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<tr>
<td><strong>Chemistry</strong></td>
<td>1</td>
<td>Biology.</td>
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<tr>
<td><strong>Environmental Science</strong></td>
<td>1</td>
<td>Biology.</td>
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<tr>
<td><strong>Human Anatomy &amp; Physiology</strong></td>
<td>1</td>
<td>Biology.</td>
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<tr>
<td><strong>Physics</strong></td>
<td>1</td>
<td>Biology.</td>
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</tbody>
</table>

### Biology 1 Credit

Biology courses are designed to provide information regarding the fundamental concepts of life and life processes. These courses include (but are not restricted to) such topics as cell structure and function, general plant and animal physiology, genetics, and taxonomy.

### Biotechnology 1 Credit

Students will be offered the opportunity to perform experiments based on microbiology, human genetics, immunology, and exploration of bioethical issues. The course will allow students to gain knowledge on how to perform different science experiments in different fields, learning the history behind the techniques and the potential bioethics that come with new technology.

### Chemistry 1 Credit

Chemistry courses involve studying the composition, properties, and reactions of substances. These courses typically explore such concepts as the behaviors of solids, liquids, and gases; acid/base and oxidation/reduction reactions; and atomic structure. Chemical formulas and equations and nuclear reactions are also studied.

### Environmental Science 1 Credit

Environmental Science courses examine the mutual relationships between organisms and their environment. In studying the interrelationships among plants, animals, and humans, these courses usually cover the following subjects: photosynthesis, recycling and regeneration, ecosystems, population and growth studies, pollution, and conservation of natural resources.

### Human Anatomy and Physiology 1 Credit

Human Anatomy and Physiology requires students to explore a new field of science through learning about the human body. Anatomy refers to the structures of the body, and physiology describes the processes through which these structures interact with each other. By learning the relationship between structure and function of the human body, students develop a strong understanding of how the body works as a whole and how it differs from other organisms. Students will learn about all the body systems, as well as more complex interactions between the systems. This class allows students to build on previous science knowledge and apply it to the human body.

### Physics 1 Credit

Physics courses involve the study of the forces and laws of nature affecting matter, such as equilibrium, motion, momentum, and the relationships between matter and energy. The study of physics includes examination of sound, light, and magnetic and electric phenomena.
Social Studies

American History, 1 Credit
Prerequisite: none.

Economics, 0.5 Credit
Prerequisite: none.

Government, 0.5 Credit
Prerequisite: none.

World History, 1 Credit
Prerequisite: none.

American History
Prerequisite: none.
U.S. History Comprehensive courses provide students with an overview of the history of the United States, examining time periods from discovery or colonialism through World War II or after. These courses typically include a historical overview of political, military, scientific, and social developments. Course content may include a history of the North American peoples before European settlement.

Economics
Prerequisite: none.
The purpose of this course is for students to develop a basis of factual knowledge of economics; an appreciation of the methods of study used by the economist; and of the most effective ways economic data may be analyzed, correlated, discussed, and presented. Students will demonstrate knowledge and understanding of the advanced economics content; interpret economic information presented in verbal, numerical, or graphical form; and explain and analyze economic issues and arguments, using relevant economic concepts, theories, and information. Students will be expected to evaluate economic information, arguments, proposals, and policies, taking into consideration relevant information and theory, and distinguishing facts from hypothetical statements and value judgments. By the end of the course, student will be able to organize, present, and communicate economic ideas and informed judgments in a clear, logical, and appropriate form.

Government
Prerequisite: none.
In this course, students apply knowledge gained in previous years of study to pursue a deeper understanding of the institutions of government. In addition, they draw on their studies of world and American history and geography and other societies to compare differences and similarities in world governmental systems today. This course is the culmination of history/social sciences classes to prepare students to solve society’s problems, to understand and to participate in the governmental process, and to be a responsible citizen of the United States and the world.

World History
Prerequisite: none.
World History Overview courses provide students with an overview of the history of human society from early civilization to the contemporary period, examining political, economic, social, religious, military, scientific, and cultural developments. World History overview courses may include geographical studies, but often these components are not as explicitly taught as geography. In addition to covering the objectives of World History Overview courses, World History and Geography courses provide an overview of world geography. These courses are often developed in response to increased national concern regarding the importance of geography, and they explore geographical concepts.
World Language

**French I, 1 Credit**  
Prerequisite: none.

French I offers a continuation of the vocabulary, grammar, and culture study introduced in French 1. Students will target the improvement of all four language skills – speaking, writing, reading and listening comprehension – while acquiring new vocabulary related to varying themes in their textbook (a combination of D’accord: Levels 1-2). Students will also access different sources including short stories, songs, and video clips from which to learn, as well as prepare several projects related to their language acquisition.

**Mandarin Chinese I, 1 Credit**  
Prerequisite: none.

This course aims to teach students elementary Chinese. Students will learn basic listening, speaking, reading and writing skills. Students will also gain an understanding of the culture as well as discover the importance of learning a non-Romance language. A combination of textbook materials, supplemental materials, and other activities will be incorporated in the class. Other opportunities such as studying Chinese at the university level, study abroad options, field trips, and guest speakers may be available.

**Spanish I, 1 Credit**  
Prerequisite: none.

Spanish I aims to teach students elementary Spanish. It is an extension of Spanish 1. Students will learn basic listening, speaking, reading and writing skills. Students will also gain an understanding of the culture as well as discover the importance of learning a non-Romance language. A combination of textbook materials, supplemental materials, and other activities will be incorporated in the class. Other opportunities such as studying Spanish at the university level, study abroad options, field trips, and guest speakers may be available.
Mandarin Chinese III  
**1 Credit**

*Prerequisite: Mandarin Chinese II.*

This course aims to teach students elementary/intermediate Chinese. Students will learn basic listening, speaking, reading and writing skills. Students will also gain an understanding of the culture as well as discover the importance of learning a non-Romance language. A combination of textbook materials, supplemental materials, and other activities will be incorporated in the class. Other opportunities such as studying Chinese at the university level, study abroad options, field trips, and guest speakers may be available.

Mandarin Chinese IV  
**1 Credit**

*Prerequisite: Mandarin Chinese III.*

This course aims to teach students intermediate Chinese. Students will learn basic listening, speaking, reading and writing skills. Students will also gain an understanding of the culture as well as discover the importance of learning a non-Romance language. A combination of textbook materials, supplemental materials, and other activities will be incorporated in the class. Other opportunities such as studying Chinese at the university level, study abroad options, field trips, and guest speakers may be available.

Spanish I  
**1 Credit**

*Prerequisite: none.*

The primary objective of Intermediate Spanish is to provide basic conversational skills, emphasis on introducing vocabulary and basic grammar. The emphasis is on communication in everyday situations. Skills, such as listening, reading and writing, will be part of the course. Another important component of the course is to develop insight and understanding of Spanish-speaking countries and their cultures.

Spanish II  
**1 Credit**

*Prerequisite: Spanish I.*

The objective of this course is to foster in students a better command of the grammatical structures and vocabulary to facilitate conversation. Skills such as listening, reading and writing are emphasized. Spanish-speaking countries and their cultures will be examined.

Spanish III  
**1 Credit**

*Prerequisite: Spanish II.*

The objective of this course is to be able to describe and narrate in a proper Spanish language style, and defend ideas in a conversation with valid arguments and a wide vocabulary. Students will become familiar with different editing techniques. Students will be able to debate and discuss, and to compare and contrast different readings.

Spanish IV  
**1 Credit**

*Prerequisite: Spanish III and teacher recommendation.*

The objective of this course is to prepare students to communicate authentically in Spanish by interpreting (reading, listening, viewing), exchanging (speaking and listening; reading and writing), and presenting (speaking, writing) information, concepts, and ideas on a variety of topics, including connections to other subject areas. This course promote students' understanding of the relationships among the products, practices, and perspectives of Spanish-speaking countries and cultures.
**Miscellaneous Courses**

**Critical Thinking Skills, 0.5 Credit**  
*Prerequisite: none.*

**Strategic Reading, 0.5 Credit**  
*Prerequisite: none.*

**Critical Thinking Skills**

*Elective.*

Critical Thinking Skills courses prepare students for success in high school and/or for postsecondary education. Course topics may vary according to the students involved, but typically include reading improvement skills, such as scanning, note-taking, and outlining; library and research skills; listening and note-taking; vocabulary skills; and test-taking skills. The courses may also include exercises designed to generate organized, logical thinking and writing.

**Strategic Reading**

*Elective.*

Strategic Reading courses are intended to improve a student’s vocabulary, critical-thinking and analysis skills, or reading rate and comprehension level. Although these courses typically emphasize works of fiction, they may also include works of nonfiction (including textbooks). Strategic Reading courses often have a time-management focus, offering strategies for note-taking or for understanding and evaluating the important points of a text.
## Distance Learning, ASU Prep Digital

<table>
<thead>
<tr>
<th>Biology</th>
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<tbody>
<tr>
<td>Chemistry</td>
<td>Science</td>
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<td>Physics</td>
<td>Science</td>
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<td>Art History</td>
<td>Fine Arts</td>
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<td>Music Appreciation</td>
<td>Fine Arts</td>
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<td>Economics</td>
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<td>Modern U.S. History</td>
<td>Social Studies</td>
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<td>Government</td>
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<td>Modern World History</td>
<td>Social Studies</td>
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<td>French 1</td>
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<td>French 2</td>
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<td>Mandarin 3</td>
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<td>Latin 1</td>
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<td>Arabic 1</td>
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<td>Leadership 1</td>
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<td>Leadership 2: Culture Building</td>
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<td>Leadership 3: Conflict Management</td>
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<td>Leadership 4: Senior Seminar</td>
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<td>Entrepreneurship 1: Ideas &amp; Strategies</td>
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<td>Entrepreneurship 2: Entrepreneurial Research</td>
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<td>Entrepreneurship 3: Telling Your Story</td>
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<td>Creative Writing</td>
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<td>Fitness Fundamentals</td>
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<td>Forensic Science</td>
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<td>Health &amp; Personal Wellness</td>
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<td>Lifetime &amp; Leisure Sports</td>
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<td>Marine Science</td>
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<td>Personal &amp; Family Finance</td>
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<td>Psychology</td>
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### ASU Concurrent and Open Scale Courses

**Applied Food Principles** | Concurrent College Credit Courses  
**Art in My World** | Concurrent College Credit Courses  
**Brief Calculus** | Concurrent College Credit Courses  
**Buried Cities & Lost Tribes** | Concurrent College Credit Courses  
**Career Development** | Concurrent College Credit Courses  
**Clinical Health Care Ethics** | Concurrent College Credit Courses  
**College Algebra** | Concurrent College Credit Courses  
**Communication in Business and the Professions** | Concurrent College Credit Courses  
**Courts and Sentencing** | Concurrent College Credit Courses  
**Criminal Justice Crime Control Policies and Practices** | Concurrent College Credit Courses  
**Culture and Health** | Concurrent College Credit Courses  
**Economics: A Social Issues Perspective** | Concurrent College Credit Courses  
**Elementary French I** | Concurrent College Credit Courses  
**Elementary French II** | Concurrent College Credit Courses  
**Elementary Romanian** | Concurrent College Credit Courses  
**Elementary Spanish I** | Concurrent College Credit Courses  
**Elementary Spanish II** | Concurrent College Credit Courses  
**Elements of Intercultural Communication** | Concurrent College Credit Courses  
**Elements of Interpersonal Communication** | Concurrent College Credit Courses  
**Elements of Statistics** | Concurrent College Credit Courses  
**Engineering Perspectives on Biological Systems** | Concurrent College Credit Courses  
**Finite Math** | Concurrent College Credit Courses  
**First-Year Composition** | Concurrent College Credit Courses  
**Global History to 1500** | Concurrent College Credit Courses  
**Greek and Latin Roots in Bio scientific Terminology** | Concurrent College Credit Courses  
**Human Anatomy and Physiology I** | Concurrent College Credit Courses  
**Human Development** | Concurrent College Credit Courses  
**Human Pathophysiology** | Concurrent College Credit Courses  
**Intermediate French I** | Concurrent College Credit Courses  
**Intermediate French II** | Concurrent College Credit Courses  
**Intermediate Romanian** | Concurrent College Credit Courses  
**Intermediate Spanish** | Concurrent College Credit Courses  
**Introduction to Criminal Justice** | Concurrent College Credit Courses  
**Introduction to Sociology** | Concurrent College Credit Courses  
**Introduction to Social Work** | Concurrent College Credit Courses  
**Introduction to Communication Inquiry** | Concurrent College Credit Courses  
**Introduction to Corrections** | Concurrent College Credit Courses
Introduction to Criminology | Concurrent College Credit Courses
Introduction to Digital Culture | Concurrent College Credit Courses
Introduction to Environmental Science | Concurrent College Credit Courses
Introduction to Human Communication | Concurrent College Credit Courses Introduction to Nonprofit Organizations | Concurrent College Credit Courses
Introduction to Nursing and Health Care Systems | Concurrent College Credit Courses
Introduction to Nutrition, Health and Safety | Concurrent College Credit Courses
Introduction to Policing | Concurrent College Credit Courses
Introductory Chemistry | Concurrent College Credit Courses
Introductory Ethics: A Social Issues Perspectives | Concurrent College Credit Courses
Media and Culture | Concurrent College Credit Courses
Media Literacy for Musicians | Concurrent College Credit Courses
Modern Social Problems | Concurrent College Credit Courses
Non-majors Class Piano: Beginner | Concurrent College Credit Courses
Orientation to Education of Exceptional Children | Concurrent College Credit Courses
Pre-calculus | Concurrent College Credit Courses
Professional Growth in Criminal Justice | Concurrent College Credit Courses
Exploration of Public Service and Careers | Concurrent College Credit Courses
Racial and Ethnic Relations | Concurrent College Credit Courses
Religions of the World | Concurrent College Credit Courses
Technology Literacy: Problem Solving Using | Concurrent College Credit Courses
Digital Technology Applications | Concurrent College Credit Courses
The Developing Child: Theory into Practice, Prenatal-Grade 3 | Concurrent College Credit Courses
The Living World | Concurrent College Credit Courses
The Thread of Energy | Concurrent College Credit Courses
U.S. History 1865 to Present | Concurrent College Credit Courses
U.S. History to 1865 | Concurrent College Credit Courses
World History Since 1500 | Concurrent College Credit Courses
Special Topics, Sustainability Issues | Concurrent College Credit Courses
Prep for college.

Prep for careers.

Prep for life.