A.3.2 Course Offerings and Graduation Requirements

A. High School Graduation Requirements

Highland Prep students must earn 28 credits to graduate from the school. Below are the course offerings in accordance with the Arizona State Gradation Requirements, (see Table 1). Highland Prep students will be required to take a full schedule of four classes each quarter. Highland Prep students will take the azMERIT English Language Arts/Literacy and Mathematics exams. Beginning in 2016, high schools will be able to incorporate a percentage of course grades for courses with standards being assessed. The specific courses and percentages have yet to be determined by the State Board of Education. Beginning in 2017, the graduation requirements will be based entirely on completion of the minimum course of study and competency requirements, which will incorporate the azMERIT exam results (ADE, 2015).

Table 1: Graduation Requirements

Graduation Requirements		
Course Requirements	Arizona Credit Requirements (for 2014-2015 school year)	Highland Prep Credit Requirements
Math	4	4
Science	3	3
English	4	4
Social Studies	3	3
Foreign Language	0	2
STEM Coursework	0	2
Fine Arts/CTE	1	1
Physical Education/Health	0	1
Electives	7	8
Total	22	28

B. Highland Prep's Awarding of Academic Credit

Course Credit Guidelines:

1. Any student who scores below a "C" in any core academic course will have to repeat the course. If a student receives a "D" she or he will receive elective credit for the course. Highland Prep's commitment to minimizing course failure will be addressed with the school's Weekly Grade Check; where grade level advisors and the administrative team will review and where necessary, prescribe remedial interventions where students are required to follow through as per Highland Prep's Code of Conduct.

One-half (.50) unit of credit is granted for work completed in a subject that meets one period daily for an academic quarter.

One (1) unit of credit is granted for work completed in a subject that meets one period daily for two academic quarters (semester).

Two (2) units of credit are granted for work completed in a subject that meets one period daily for a full academic year.

2. Credits applied toward high school graduation must be earned in grades 9 through 12. The only exception is are Algebra I.

3. All students must be enrolled full-time at the school. Students are expected to be enrolled in four classes per quarter to be considered a full-time student and on track for graduation.

4. A student must attend at least 90 percent of class sessions to earn credit. Failure to meet this standard may lead to withholding of credit. Cases of prolonged illness will be reviewed by school administration

Advanced Placement (AP) Course Weighting
AP courses taken at Highland Prep will receive weighted grade point values. Weighted grade point values are possible because of higher expectations and greater rigor required in the work. The grade point values for these courses are: A = 5.0, B = 4.0, C = 3.0, D = 2.0, D- = 1.0 and F = 0. Weighted grades are only granted when the student completes the entire course.

C. Consistency with Strategy III of the Academic Systems Plan
As mentioned in the Academic Systems Plan and the Program of Instruction, each student's grades will be (1) reported by their teachers weekly. Each student's grade level advisor (2) and the administrative team (3) will review weekly grades as well; ensuring that timely interventions (4) are carried out that result in individual and collective student success to ensure students stay on track with personal education plan (PEP) goals, and graduation requirements. *See course credit guidelines (1).

D. Highland Prep's Course Offerings

English Language Arts
The student will become proficient in Arizona's College and Career Ready Standards for Writing and Reading through participation in both Writing and Literature courses.

State Reading and Writing Standards:
The student will be able to apply the concepts of:

Writing
• Strand 1: Writing Process
• Strand 2: Writing Components (6 Traits)
• Strand 3: Writing Applications

Reading
• Strand 1: Reading Process
• Strand 2: Comprehending Literary Text
• Strand 3: Comprehending Informational Text

<u>English 1-2</u> 1.00 Credit Prerequisites: Placement Test Eligibility
Students will engage in the writing process and the reading process, including reading fluency, comprehension, and literature, informational text, grammar, vocabulary, spelling and research.

<u>English 3-4</u> 1.00 Credit Prerequisites: English 1-2
This course integrates the principles of survey literature and composition. Course content combines the study and skill of effective writing for a variety of purposes. Writing exercises emphasize the writing process, research, critical and creative thinking, language skills; and are based on literary models. Literature study introduces literary terminology, critical and analytical reading, and appreciation of literature.

<u>English 5-6</u> 1.00 Credit Prerequisites: English 3-4
This course integrates the modes of expository essay writing with the study of American literature. Course content combines the study of literary models of fiction and nonfiction, and the composition skills of exposition. Composition emphasis is on research skills, development of language skills, and multi-paragraph essays. Literary emphasis is on themes and literary movements in America.

<u>English 7-8</u> 1.00 Credit Prerequisites: English 5-6
This course integrates writing for a variety of purposes and audiences with literature study. Writing includes a focus on "real world" skills, including expository, communication, research and analysis modes. Universal themes in literature are explored in a variety of fiction, non-fiction, poetry and drama

selections. Readings from a broad variety of authors (western civilization, world and English literature, multicultural literature, mythology, science fiction and fantasy literature) are surveyed.

Advanced Placement (AP) English Literature and Composition 2.0 Credits Prerequisites: English 5-6
This course engages students in the careful reading and critical analysis of imaginative literature. As they read, students consider a work's structure, style, and themes, as well as specific elements such as the use of figurative language, imagery, symbolism, and tone.

Mathematics
The student will become proficient in Arizona's College and Career Ready Standards for Mathematics.

The student will be able to apply the concepts of:
• Number and Operations
• Data analysis, probability, and discrete math
• Patterns, algebra, and functions
• Geometry and measurement
• Structure and Logic

Algebra I 1.00 Credit
Curriculum includes the skills, strategies and vocabulary involved in algebraic problem solving, discrete math, functions and relationships, algebraic representations, data analysis and analysis of change.

Geometry 1.00 Credit Prerequisite: Algebra I
Curriculum includes communicating with the vocabulary and notation of geometry, inductive and deductive reasoning, measurement, coordinate geometry, problem solving and applications of geometric theorems, properties and proofs as well as algorithmic thinking. Students will make connections between geometry, algebra, statistics and number theory.

Algebra 2 1.00 Credit Prerequisites: Algebra 1 & Geometry
This course extends and applies the concepts of Algebra I and Geometry. The curriculum includes the study of linear and quadratic functions, complex numbers, linear systems, powers, roots and radicals, exponential functions, probability, matrices and summary statistics.

Probability & Statistics 0.50 Credit Prerequisite: Algebra 2
This course provides an introduction to probability and statistics with applications. Topics include basic probability models; combinatorics; random variables; discrete and continuous probability distributions; statistical estimation and testing; confidence intervals; and an introduction to linear regression.

Trigonometry 0.50 Credit Prerequisite: Algebra 2
Trigonometry is a higher level math course that incorporates the previous math content learned in Geometry including sign, co-sign and tangent functions and right triangular geometry. This is an upper level course that must be mastered before a student is enrolled into a Pre-Calculus course.

Pre-Calculus 0.50 Credit Prerequisite: Trigonometry
The course content includes functions and graphs, polynomial functions, rational functions, exponential and logarithmic functions, trigonometric functions, solving polynomial equations, optimization problems, arithmetic and geometric sequences and series, conic sections, polar graphing, parametric equations, systems of equations, matrices, determinants, and vectors.

Calculus I.00 Credit Prerequisite: Pre-Calculus
A senior level high school course with topic areas covering calculating x-values and corresponding values, limits, notation, continuous functions, asymptotes, negative and positive infinities, graphing tangents, secants, and cosecants, derivatives, Leibniz notation, constant functions and derivatives,

functions that are products, the derivative as a reciprocal of sine, acceleration as a derivative of velocity, maximum and minimum values of given functions at closed intervals, sign graphs, using related rates to determine the volume of cones, determining graphing data, antiderivatives with negative exponents.

Science
Highland Prep's curriculum for Science will be aligned with Arizona's State Standards. Highland Prep will ensure literacy and connections to Arizona's College and Career Ready literacy standards through secondary alignment with the Next Generation Science Standards (NGSS).

Chemistry 1-2 1.00 Credit
This course examines scientific investigation through hands on laboratory experimentation and the use of conceptual models. Course topics include properties and composition of substances; qualitative and quantitative relationships and measurements of energy; and products of chemical reactions.

Biology 1-2 1.00 Credit Prerequisite: Chemistry
This course examines scientific investigation and the concepts of change and diversity. Course topics include classification, molecular biology, energy production and use, and homeostasis.

Physics 1-2 1.00 Credit Prerequisite: Algebra 2
This course presents major topics within the field of mechanics in great detail. It is highly mathematical in nature and maintains a fast pace through topics. Understanding of algebraic representation and graphical analysis of relationships will be especially stressed.

AP Chemistry 2.00 Credit Prerequisites: Chemistry, Biology & Algebra 2
AP Chemistry is a college level lab course covering the same topics as Chemistry I in greater depth, with the added topics of thermodynamics, equilibrium, nuclear chemistry and a basic introduction to organic topics.

AP Biology 2.00 Credit Prerequisites: Chemistry, Biology & Algebra 2
AP Biology is a capstone course that is taught at a college level where students can earn college credit if they do well on the AP exam. The concepts include cell chemistry, cell morphology, genetics, ecology, evolution, and population genetics.

Social Studies
Highland Prep's Social Studies will be aligned with Arizona's State Standards with literacy infused across the curriculum.

World History/Geography 1.00 Credit
A survey of the major cultural, political, social, and economic developments of western cultures will be examined. This course covers World History from the rise of civilizations to the Industrial Revolution. Primary source documents, the historical method, and research and writing in the discipline of history are emphasized.

U.S/ AZ History 1.00 Credit Prerequisites: World History
This course engages United States History from its pre-Columbian past until the beginning of the Industrial Revolution. Emphasis is placed on reading, writing and critical thinking. Students will address the differences between primary and secondary literature as well as learn how historians string facts together to compose historical narrative. Students will, therefore, make presentations, write papers—both research papers and literature reviews—and take essay based tests.

Government 0.50 Credit Prerequisites: US/Arizona History
The goal of this semester-length course is to increase understanding of the American political system, its framework, traditions and values, and to have each student develop an enthusiasm for the American political system.

Economics 0.50 Credit Prerequisite: US/Arizona History 1-2
This course examines American economics with an emphasis on micro- and macro-economic issues. The course will study economic principles and systems, supply and demand, price and competition, business organizations, money and banking, and finance.

AP Microeconomics 2.00 Credit Prerequisites: Economics & Government
Students in this course will gain a thorough understanding of the principles of economics as they apply to both consumers and producers, within the economic system.

AP World History 2.00 credit Prerequisite: World History
Students in this course will analyze world history themes from the Renaissance onward to the present day. Students will be challenged to use critical thinking skills, in their examination of historical issues from various perspectives.

Foreign Languages

Spanish 1 1.00 Credit Prerequisites: None
This introductory course for non-native speakers is the first in a three-year series that will emphasize conversational Spanish skills and provide students with the linguistic and cultural foundation necessary to complete the requirements for graduation.

Spanish 2 1.00 Credit Prerequisites: Spanish 1
This course will be in-depth study of Spanish, requiring the student to think in the language. The course will utilize periodicals and other materials to help students become more fluent in the language. This course will place more emphasis on grammar and conversation.

AP Spanish Literature 1.00 Credit Prerequisite: Spanish 2
For the proficient Spanish student, this course is designed to refine linguistic skills integrated with focus on literature and literary analysis.

Mandarin 1 1.00 Credit Prerequisite: None
This course will cover the fundamentals of Chinese, with a focus on communication. Emphasis will be placed upon learning tones, Romanization, and character formation to facilitate study. Students will also acquire a general knowledge of Chinese culture, geography, and history.

Mandarin 2 1.00 Credit Prerequisite: Mandarin 1
This course will provide the opportunity for students to expand their capabilities in speaking, listening, reading, and writing Chinese. A continuation of cultural topics, geography, and history will also be covered.

French 1 1.00 Credit Prerequisite: None
This course will emphasize conversational French skills and provide students with the linguistic and cultural foundation.

French 2 1.00 Credit Prerequisite: French 1
This course will be an in-depth study of French requiring the student to think in the language. The course will utilize periodicals and other materials to help students become more fluent in the language with an emphasis on grammar and conversation.

German 1 1.00 Credit Prerequisite: None
This course will emphasize conversational German skills and provide students with the linguistic and cultural foundation.

German 2 1.00 Credit Prerequisite: German 1
This course will be an in-depth study of German, requiring the student to think in the language. The course will utilize periodicals and other materials to help students become more fluent in the language with an emphasis on grammar and conversation.

Science, Technology, Engineering & Math (STEM) Courses: (PLTW, 2013)

Introduction to Engineering Design (IED) 1.00 Prerequisite: Algebra 1
Students will use 3D solid modeling design software to help them design solutions to solve proposed problems. Students will learn how to document their work and communicate solutions to peers and members of the professional community. This course will include research and analysis, teamwork, various communication methods, global and human impacts, engineering standards and technical documentation.

Principals of Engineering (POE) 1.00 Prerequisites: Algebra 1 and IED
This survey course of engineering exposes students to some of the major concepts they'll encounter in a postsecondary engineering course of study. Students employ engineering and scientific concepts in the solution of engineering design problems by designing, creating and presenting solutions to various challenges.

Civil Engineering & Architecture (CEA) 1.00 Prerequisites: Geometry & IED
Students complete long-term projects that involve the development of property sites. As students learn about various aspects of civil engineering and architecture, they apply what they learn to the design and development of a property. Students work in teams, exploring hands-on activities and projects to learn the characteristics of civil engineering and architecture. In addition, students use 3D design software to help them design solutions to solve major course projects.

Aerospace Engineering (AE) 1.00 Prerequisites: Geometry & POE
This course propels students' learning in the fundamentals of atmospheric and space flight. As they explore the physics of flight, students bring the concepts to life by designing an airfoil, propulsion system, and rockets. They learn basic orbital mechanics using industry-standard software. They also explore robot systems through projects such as remotely operated vehicles.

Computer Integrated Manufacturing (CIM) 1.00 Prerequisites: Algebra 2 & POE
Students learn about the manufacturing processes, robotics, and automation. The course is built around several key concepts: computer modeling, Computer Numeric Control (CNC) equipment, Computer Aided Manufacturing (CAM) software, robotics and flexible manufacturing systems.

Engineering Design & Development (EDD) 1.00 Prerequisites: Algebra 2, POE (12th grade)
This capstone course allows students to design a solution to a technical problem of their choosing. Students will work in teams to research, design, test, and construct a solution to an open-ended engineering problem. The team presents and defends their solution to a panel of outside reviewers at the conclusion of the course. The use of 3D design software helps students design solutions to the problem their team has chosen.

Physical Education

Health 0.50 Credit Prerequisites: None
This course will introduce students to the many aspects of physical and mental health. The course topics will include nutrition, exercise and fitness; disease and substance abuse prevention; and positive mental health education. Students will learn to assess their own physical and mental health levels in order to evaluate individual needs.

Physical Education 1.00 Credit
Students will learn and apply components of health-related fitness, proper nutrition and physiology. Students will participate in individual and team sports, and fitness activities, which will include cardiovascular activities, resistance training, and individual fitness assessments. The courses can also be taken as an elective.

Fine Arts & Humanities
Highland Prep will offer elective fine arts and vocational education classes aligned to Arizona's College and Career Ready Standards with literacy infused across the curriculum.

Electives
Highland Prep will offer other elective classes aligned to Arizona's College and Career Ready Standards with literacy infused across the curriculum.

Student Internships
Highland Prep students will be exposed to STEM fields through professionals from local industries who supplement the real-world aspect of the curriculum through mentorships and workplace experiences. Students will have the opportunity to participate in summer, evenings or weekends, and in their senior year of school during the school day. Highland Prep wants students to be able to confirm or rule out career choices, and to acquire a realistic understanding of the workplace (See A.1, A.2, & A.3).

E. Consistency with the Program of Instruction and alignment with the Business Plan
Highland Prep's Course Offerings and Graduation Requirements are in alignment with the Program of Instruction where Standards Alignment and Student Internships have been articulated, and in the Business Plan in both the Start-Up and Three Year Operational Budgets.