

Penn High School
Early College (PAEC) Course Information
*green indicates Ivy Tech curriculum is a part of the course



9TH GRADE COURSE INFORMATION

2301

ENGLISH 9, *Penn Academy Early College*

2 Semesters 2 Credits Grade 9

Supplemental Fee: \$10.00

Paperback Purchase: \$25.00

COURSE DESCRIPTION: [IDOE 1002] English 9 PAEC focuses on increasing student understanding of our common humanity through literature. This is accomplished through a synthesis of literature, composition, research, grammar, usage, mechanics, public speaking and vocabulary; formative and summative assessments will follow in all of the above areas. Along with students becoming stronger writers, speakers, listeners and readers, they will also be better equipped for even more rigorous future English classes for college credit. Unique to PAEC English 9, students will have the opportunity to use project-based, authentic learning across the curriculum.

2303

Integrated Chemistry and Physics, *Penn Academy Early College*

2 Semesters 2 Credits Grade: 9

Prerequisite: Algebra I

Supplemental Fee: \$8.00

COURSE DESCRIPTION: [IDOE 3108] The course is required for students entering the Early College Program and prepares students for taking dual credit science classes through Ivy Tech Community College. This interdisciplinary science class investigates themes of chemistry and physics through a real world, project/lab-based approach which emphasizes scientific inquiry and process skills. The course will primarily focus on the following themes: Motion, Energy, Properties of Matter, Chemical Reactions, and Science in Society.

2306

Algebra I, *Penn Academy Early College*

2 Semesters 2 Credits Grade: 9

Supplemental Fee: \$5.00

COURSE DESCRIPTION: [IDOE 2520] The Mathematics standards for Algebra I are made up of 5 strands: Real Numbers and Expressions; Functions; Linear Equations, Inequalities, and Functions; Systems of Equations and Inequalities; Quadratic and Exponential Equations and Functions; and Data Analysis and Statistics. Algebra 1 is a required course for graduation.

2305**Geometry, Penn Academy Early College****2 Semesters 2 Credits Grade: 9****Prerequisite: Algebra I****Supplemental Fee: \$5.00**

COURSE DESCRIPTION: [IDOE 2532] This course is for students enrolled in the Early College Program. The curriculum will be the standards for Geometry and an in-depth review of Algebra topics preparing the students for Algebra II Honors their sophomore year. Geometry is designed to study the pattern and structure of geometry using the techniques of inductive and deductive reasoning. The properties and relationships of geometric figures will include the study of angles, lines, planes, congruent and similar triangles, trigonometric ratios, polygons, and circles. An understanding of proof and logic will be developed and formal proof will be emphasized. **A scientific calculator is required.**

2309**Spanish 1, Penn Academy Early College****2 Semesters 2 Credits Grade 9****Textbook Rental Fee: \$17.86****Supplemental Fee: \$10.00**

COURSE DESCRIPTION: [IDOE 2120] Spanish 1 EC is designed to prepare highly capable, motivated students to achieve dual credit through Ivy Tech in their junior or seniors. This course introduces students to the Spanish language by practicing the basic language acquisition skills of reading, writing, listening, and speaking on a daily basis. The goal of Spanish 1 EC is to establish a solid foundation in the Spanish language as well as to apply various strategies for learning a language. Within this context, Spanish 1 EC provides students with opportunities to:

- Comprehend new language through dialogues, clip art, rhymes, visuals, and video
- Practice communication through listening exercises, paired activities, and group activities
- Answer questions and express personal opinions both verbally and in writing
- Compare languages and cultures through grammar study, pronunciation, art, and readings in authentic settings
- Demonstrate all language skills through a variety of tasks and projects presented in the classroom

2311**IvyT111 Study Skills, Penn Academy Early College****2 Semesters 2 Credits Grade 9****Supplemental Fee: \$3.00*****This course is weighted on a 4.5 scale.***

COURSE DESCRIPTION: [IDOE 0500] Enhances success in college by assisting students in obtaining skills necessary to educational, career and life objectives. Students will create and apply critical thinking strategies in areas of time management, media literacy, learning styles, study skills, career planning, money management, resource utilization.

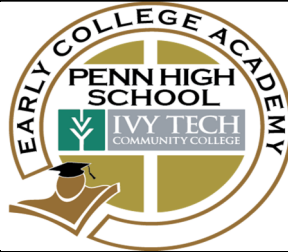
2313**Freshman Resource, Penn Academy Early College****2 Semesters 2 Credits Grade 9****Supplemental Fee: \$3.00**

COURSE DESCRIPTION: Students in the Penn Academy of Early College will participate in a study hall class that serves the unique college-bound population. Early College teachers will lead the class and provide students with resources such as tutors, access to technology, and individual instruction to help students succeed. Students will participate in the Penn Freshman Mentoring program and PCC, Penn College and Career Exploration, course through the resource time.

2307**Geography and History of the World, *Penn Academy Early College*****2 Semesters 2 Credits Grade: 9****Prerequisite: None****Supplementary Fee: \$5.00****Paperback Purchase \$30.00**

COURSE DESCRIPTION: [IDOE 1570] Honors Geography focuses on integrating the spatial and ecological geographic perspectives. Using critical thinking, analysis and pre-AP style assessments the course aims to allow students to study the inter-dependency of the Earth's physical and human systems, putting humans and the earth in context. The course supplements these perspectives with historic, economic, civic and cultural perspectives to frame a distinctly geographic way of looking at the world.

PENN ACADEMY OF EARLY COLLEGE



10th GRADE COURSE INFORMATION

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2315**ENGLISH 10, *Penn Academy Early College******Ivy Tech Eng095*****2 Semesters 2 Credits Grade 10****Supplemental Fee: \$10.00****Paperback Purchase: \$30.00*****This course is weighted on a 4.5 scale.***

COURSE DESCRIPTION: [IDOE 1004] English 10 PAEC is designed to prepare students for success in future dual credit classes, building on the literary and study skills they developed in English 9 PAEC. This course also pushes students to be prepared for the Accuplacer and PSAT tests, of which a certain level of competency is required for college credit classes. In addition to the curriculum developed by Penn teachers, Ivy Tech's Integrated Reading and Writing Course will also be used to help make the above goals achievable. Students analyze and respond through reading, writing, speaking, and listening to a variety of fiction and non-fiction pieces of literature, as well as informational texts, giving students the necessary skills to be successful, college-level readers and writers.

2319**Biology, *Penn Academy Early College*****2 Semesters 2 Credits Grade: 10****Prerequisite: ICP Honors****Supplemental Fees: \$8.00**

COURSE DESCRIPTION: [IDOE 3024] The course highlights how biology applies to and potentially improves human life. To help students develop into productive and responsible citizens, they will make connections between biological concepts and their current and future lives. Through

inquiry laboratory investigations, data analysis, demonstrations, reading, research, group discussion, and computer simulations, Early College Biology Honors provides a study of four major themes:

- Biochemistry and Cells-Organic molecules, cellular components and functions.
- Ecology-the study of the relationships between living organisms and the environment.
- Genetics-the study of the molecular basis of heredity and inheritance of traits.
- Evolution-the mechanism for change over time and the unity and diversity of life.

In the spring, students will take Indiana Statewide Testing for Educational Progress-Plus (ISTEP) in Biology.

2317

US History, *Penn Academy Early College*

Course Title: U.S. History Detectives

2 Semesters 2 Credits Grade 10

Prerequisite: None

Supplemental Fee: \$5.00

Paperback purchase: \$30.00

COURSE DESCRIPTION: [IDOE 1538] US History Detectives is designed to introduce Early College students to the History of the United States with an investigative approach. In this course students will ask probing questions surrounding iconic mysteries from America's past. This course has students to step into the shoes of a history detective and tackle some of history's toughest mysteries. Students will evaluate conflicting evidence by examining sources, evaluating the context of those source, including identifying the differences between then and now. Additionally, students are expected to examine multiple sources to see what other sources say about the information found in primary source documents. This course requires close reading of primary sources to establish what the source says, its bias, tone, etc. The intent of this course is to equip students with research tools that they can use throughout their academic and lifetime careers.

2323

Spanish 2, *Penn Academy Early College*

2 Semesters 2 Credits Grade 10

Prerequisite: Spanish I

Textbook Fee: \$17.86

Supplemental Fee: \$10.00

Paperback Purchase: \$10.00

COURSE DESCRIPTION: [IDOE 2122] Spanish 2 EC is the continuation of preparing the students to achieve dual credit through Ivy Tech in their junior and senior years. This course continues to focus on the important skills of reading, writing, listening, and speaking while studying new tenses. Special emphasis will be placed on open-ended writing as well as oral proficiency that includes studying and applying pronunciation rules. Within this context, Spanish 2 EC provides students with opportunities to:

- Comprehend new language through dialogues, clip art, rhymes, visuals, video, and games
- Practice communication through listening exercises, paired activities, and group activities
- Answer questions and express personal opinions both verbally and in writing
- Compare languages and cultures through grammar study, pronunciation, art, and readings in authentic settings
- Demonstrate all language skills through a variety of tasks and projects presented in the classroom

2327

CINS 101 Introduction to Microcomputers, Penn Academy Early College

1 Semester 1 Credit Grade 10

TransferIN 3 College Credits

Prerequisites: Passing score on the English Accuplacer Tests OR “C” or higher in ENG 095

This course is weighted on a 4.5 scale.

COURSE DESCRIPTION: [IDOE 4528] Introduces the physical component and operations of microcomputers. Focuses on computer literacy and provides hands-on training in four areas of microcomputer applications software: word processing, electronic spreadsheets, database management and presentation software. Use of a professional business computer application program is encouraged.

2321

ALGEBRA II, Penn Academy Early College

2 Semesters 2 Credits

Prerequisite: Geometry

Supplemental Fee: \$5.00

COURSE DESCRIPTION: [IDOE 2522] This course is for students with above average performance in math. It expands on the topics of Algebra I and provides further development of the concepts of a function, domain and range. Reviews linear equations, inequalities, graphing, and factoring algebraic expressions. Concentrates on properties of integer and rational exponents, systems of linear equations, radicals, radical equations, quadratic equations, functions including their graphs, and applications. Compared to Algebra II, the pace of this course is accelerated and topics are covered in greater depth. Students will gain experience using the graphing calculator. **A scientific calculator is required and a graphing calculator is highly recommended.**

PENN ACADEMY OF EARLY COLLEGE



11th GRADE COURSE INFORMATION

***green indicates Ivy Tech curriculum is a part of the course**

#2329/2330 (USE 3078)

ENGLISH 111/112, Penn Academy Early College

2 Semesters 2 HS Credits Grade 11

TransferIN 6 College Credits

Paperback Purchase: \$20.00

Supplemental Fee: \$10.00

Prerequisites: Passing score on the English Accuplacer Tests OR “C” or higher in ENG 095

This course is weighted on a 4.5 scale.

COURSE DESCRIPTION: [IDOE 1006/1098] English composition is designed to develop students' abilities to think, organize, and express their ideas clearly and effectively in writing. This course incorporates reading, research and critical thinking. Emphasis is placed on the various forms of expository writing such as process,

description, narration, comparison, analysis, persuasion, and argumentation. A research paper is required. Numerous in-class writing activities are required in addition to extended essays written outside of class. E112 continues the work of 111, emphasizing the persuasion and argumentation aspects of writing. Unique to EC English 111/112 is the cross-curricular project based learning incorporated.

#2333

Chemistry 101, Penn Academy Early College

2 Semesters 2 HS Credits Grade: 11

TransferIN 3 College Credits

Prerequisites: Demonstrated competency through appropriate assessments or a passing score on the math Accuplacer or PSAT.

Textbook Rental: \$15.78

Supplemental Fees: \$8.00

This course is weighted on a 4.5 scale.

COURSE DESCRIPTION: [IDOE 3066] An introductory course that includes the science of chemistry and measurement, atomic theory and the periodic table, chemical bonding, equation writing and balancing, stoichiometry, gases and acids/bases.

#2331/2332 (USE 3081)

US History, Penn Academy Early College

Course Title: U.S. History H101/H102

2 Semesters 2HS Credits Grade 11

TransferIN 3 College Credits

Prerequisites: Topics in U.S. History, Passing score on the English Accuplacer Tests OR “C” or higher in ENG 095

Supplemental Fee: \$5.00

Paperback purchase: \$20.00

This course is weighted on a 4.5 scale.

COURSE DESCRIPTION: HIST 101: Survey of American History I - [IDOE 1542] Covers major themes and events in history including exploration of the New World; the colonial period; causes and results of the American Revolution; the development of the federal system of government; the growth of democracy; early popular American culture; territorial expansion; slavery and its effect; reform movements, sectionalism; causes and effects of the Civil War.

COURSE DESCRIPTION: HIST 102: Survey of American History II - [IDOE 1542] Covers majors themes including the post-Civil War period; western expansion, industrial growth of the nation and its effects; immigration and urban discontent and attempts at reform; World War I; the Roaring Twenties; social and governmental changes of the thirties; World War II and its consequences; the growth of the federal government; social upheaval in the sixties and seventies; and recent trends in conservatism, globalization, and cultural diversity.

#2337/2338 (USE 3080)

Spanish 101/102, Penn Academy Early College

2 Semesters 2 Credits Grade 11

TransferIN 8 College Credits

Prerequisites: Passing score on the English Accuplacer Tests OR “C” or higher in ENG 095

Supplemental Fee: \$10.00

Textbook Rental: \$17.86

This course is weighted on a 4.5 scale.

COURSE DESCRIPTION: [IDOE 2124] Ivy Tech Span 101 is a dual credit, one semester course designed to introduce students to the Spanish language and focuses on all four language skills: listening, speaking, reading, and writing. Students will move more quickly through grammar topics that they have been introduced

to in their first two years of preparatory study. Ivy Tech Span 101 provides students with the opportunity to:

- Master basic Spanish vocabulary and grammar
- Understand simple oral communication about familiar topics
- Speak in complete sentences about specific topics
- Ask and answer questions on everyday topics in the present tense
- Write simple standard expressions, complete sentences and short paragraphs
- Read and discuss simple paragraphs and articles which may include literary and cultural works
- Understand cultural traits and geography of the Spanish speaking world

COURSE DESCRIPTION: [IDOE 2124] Ivy Tech Span 102 is a dual credit, one semester course designed for students to speak Spanish in class as much as possible. Students will study more challenging grammar that includes multiple tenses and moods. Ivy Tech Spanish 102 provides students with the opportunity to:

- Master basic Spanish vocabulary and grammar
- Speak in Spanish about everyday topics such as chores and daily routines
- Speak about familiar topics using the present and past tenses in both formal and informal situations
- Paraphrase material in Spanish
- Describe and express ideas in writing with coherence
- Read and discuss Spanish articles and texts with understanding
- Demonstrate knowledge, understanding and appreciation of the Spanish language and cultures of the Spanish-speaking world

#2339

Speech COMM101, Penn Academy Early College

2 Semesters 2 HS Credits Grade 11

TransferIN 3 College Credits

Supplemental Fee: \$5.00

This course is weighted on a 4.5 scale.

COURSE DESCRIPTION: [IDOE 1078] Introduces fundamental concepts and skills for effective public speaking, including audience analysis, outlining, research, delivery, critical listening and evaluation, presentational aids, and use of appropriate technology. Upon successful completion of this course the student will be expected to:

1. Analyze an audience and adapt presentations accordingly.
2. Apply principles of composition to the development of oral presentations, such as effective organization and outlining.
3. Develop ideas with credible forms of support and appropriate documentation.
4. Recognize and demonstrate nonverbal communication appropriate to the verbal message.
5. Use presentational aids to support and enhance oral presentations.
6. Actively listen to and critically evaluate oral presentations.
7. Apply the fundamental concepts of effective public speaking through a minimum of 4 oral presentation of significance three of which must be delivered extemporaneously.
8. Incorporate appropriate technology to support and enhance oral presentations.

#2341/2343 (USE 3079)

Pre-calculus - Consists of College Algebra M136 and Trigonometry M137, MATH 136 and MATH 137 together comprise a standard two-semester college algebra and trigonometry course.

College Algebra M136

1 Semesters 1 HS Credits Grade 11

TransferIN 3 College Credits

Prerequisite: Algebra II Honors “C” or higher and a passing score on the Math Accuplacer or PSAT

Supplemental Fee: \$2.50

This course is weighted on a 4.5 scale.

COURSE DESCRIPTION: [IDOE 2564] Presents an in-depth study of functions, quadratic, polynomial, radical, and rational equations, radicals, complex numbers, systems of equations, rational fractions and exponential and logarithmic functions.

Trigonometry with Analytic Geometry M137

1 Semesters 1 HS Credits Grade 11

TransferIN 3 College Credits

Prerequisite: Algebra II Honors "C" or higher and a passing score on the Math Accuplacer or PSAT

Supplemental Fee: \$2.50

This course is weighted on a 4.5 scale.

COURSE DESCRIPTION: [IDOE 2566] Presents an in-depth study of right triangle trigonometry, oblique triangles, vectors, graphs of trigonometric functions, trigonometric identities and equations and complex numbers in rectangular and polar/ trigonometric forms, rectangular and polar coordinates and conics.

PENN ACADEMY OF EARLY COLLEGE



12th GRADE COURSE INFORMATION

***green indicates Ivy Tech curriculum is a part of the course**

#2346

ENGLISH 206, Penn Academy Early College

ENGL 206 Introduction to Literature

2 Semesters 2 HS Credits Grade 12

TransferIN: 3 College Credits

Paperback Purchase: \$36.00

Supplemental Fee: \$5.00

Prerequisites: ENG 111/112

This course is weighted on a 4.5 scale.

COURSE DESCRIPTION: [IDOE 1124] Development of basic strategies for critically reading and interpreting poetry, fiction, and drama; introduction to the premises and motives of literary analysis and critical methods associated with various literary concerns through class discussion and focused writing assignments.

#2369

ENGLISH 202, Penn Academy Early College

ENGL202 Creative Writing

1 Semester 1 HSCredit Grade 12

TransferIN: 3 College Credits

Paperback Purchase: \$30.00

Prerequisites: ENG 111/112

Course Description: This course introduces students to opportunities for self-expression in one or more literary genres - fiction, poetry, drama, and the creative essay.

Creative writing will be conducted using a workshop model; students will share their writing with each other and collaborate in response groups to give and receive feedback.

#2347

POLS 101, Penn Academy Early College

POLS 101 Introduction to American Government and Politics

1 Semester 1 HS Credit Grade 12

TransferIN: 3 College Credits

Paperback Purchase: \$20.00

Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of “C” or better in ENGL095 Integrated Reading and Writing.

This course is weighted on a 4.5 scale.

COURSE DESCRIPTION: [IDOE 1540] Studies federalism, theories of origins and purposes of government and other aspects of the American government including interest groups, political parties, and the electoral process. Emphasis is placed on constitutional backgrounds and the organization and functions of the executive, legislative, and judicial segments of the national government, civil liberties and civil rights, public opinion, media, bureaucracies, and domestic and foreign policy.

#2355

BIOLOGY 101, Penn Academy Early College

BIOL 101 Introductory Biology

1 Semester 2 HS Credits Grade 12

TransferIN: 3 College Credits

Textbook Rental: \$45.25

Supplemental Fee: TBD

Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of “C” or better in ENGL095 Integrated Reading and Writing.

COURSE DESCRIPTION: [IDOE 3026] Introduces the basic concepts of life. Includes discussion of cellular and organismal biology, genetics, evolution, ecology, and interaction among all living organisms. Addresses applications of biology in a global community.

#2367

FINITE 135, Penn Academy Early College

M135 Finite Math

2 Semester 2 HS Credit Grade 12

TransferIN: 3 College Credits

Textbook Rental: \$25.27

Supplemental Fee: \$5.00

Prerequisites: M136/M137 Pre-Calculus

Course Description: [IDOE 2530] This course is designed for college bound students. Topics include solving and graphing linear equations and inequalities, elementary set theory, matrices and their applications, linear programming, and elementary probability. This is a standard finite mathematics course. Ivy Tech Credit may be earned.

#2353

CALCULUS M211, Penn Academy Early College

MATH 211 Calculus I

2 Semester 2 HS Credit Grade 12

TransferIN: 4 College Credits

Supplemental Fee: \$5.00

Prerequisites: Demonstrated competency through appropriate assessment or successful completion Math 136 College Algebra and Math 137 Trigonometry with Analytical Geometry.

This course is weighted on a 4.5 scale.

COURSE DESCRIPTION: [IDOE 2527] Reviews the concepts of exponential, logarithmic and inverse

functions. Studies in depth the fundamental concepts and operations of calculus including limits, continuity, differentiation including implicit and logarithmic differentiation. Applies differential calculus to solve problems in the natural and social sciences, to solve estimation problems and to solve optimization problems. Applies differential calculus to sketch curves and to identify local and global extrema, inflection points, increasing/decreasing behavior, concavity, behavior at infinity, horizontal and vertical tangents and asymptotes, and slant asymptotes. Applies the concept of Riemann sums and antiderivatives to find Riemann integrals. Applies the fundamental theorem of calculus to solve initial value problems, and to find areas and volumes and the average values of a function.

#2351/2352 (USE 3087)

SPANISH 201/202, Penn Academy Early College

SPAN 201 Spanish Level III

SPAN 202 Spanish Level IV

2 Semester 2 HS Credit Grade 12

TransferIN: 6 College Credits

Paperback Fee: \$25.00

Supplemental Fee: \$15.00

Prerequisites: Spanish 201: Spanish 102 Spanish Level II or demonstrated competency through appropriate assessment; demonstrated earning a grade of “C” or better in ENGL095 Integrated Reading and Writing.

Spanish 202: Spanish 201 Spanish Level III or demonstrated competency through appropriate assessment; demonstrated earning a grade of “C” or better in ENGL095 Integrated Reading and Writing.

This course is weighted on a 4.5 scale.

COURSE DESCRIPTIONS: [IDOE 2126] Spanish is the primary medium of instruction. The goal of the course is to continue the development and reinforcement of the skills of the target language: listening, speaking, reading and writing at an intermediate level. The course continues the study of grammar and syntax, vocabulary building, and Spanish and Latin American civilizations, cultures, and literature through discussion and written and oral reports.

#2363

PSYCHOLOGY 101, Penn Academy Early College

PSYC 101 Introduction to Psychology

1 Semester 1 HS Credit Grade 12

TransferIN: 3 College Credits

***This class will be taken on Ivy Tech’s campus with an Ivy Tech professor.**

***If students choose to opt out of this course but are still working towards the Associate of Science in General Studies, they will also have the option of taking a range of other CTE courses at Ivy Tech University.**

Textbook Rental: TBD by Ivy Tech professor

Supplemental Fee: TBD by Ivy Tech professor

Paperback Purchase: TBD by Ivy Tech professor

Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of “C” or better in ENGL095 Integrated Reading and Writing.

This course is weighted on a 4.5 scale.

COURSE DESCRIPTION: [IDOE 1532] Surveys behavior and cognitive processes as they affect the individual. The course focuses on biological foundations, learning processes, research methodologies, personality, human development and abnormal and social psychology.

#2361/2365

GENS 279 CAPSTONE PROJECT, *Penn Academy Early College*

Senior Resource, Penn Academy Early College

2 Semesters 2 Credits Grade 12

TransferIN: 1 College Credit

COURSE DESCRIPTION: For the Early College Capstone Project, students will develop a semester-long multimedia project guided by an early college staff member. Students will be mentored in this endeavor, culminating in a reflective final project and presentation at the end of the semester which highlights one or multiple aspects of their education throughout their tenure in the Early College program at Penn, as well as potentially directing them toward their future path. This course will require both independent study and class instruction.

