



ANGELINE ACADEMY OF INNOVATION
8916 Angeline School Way • Land O' Lakes, FL • 34638
(813) 346-2500 • aai.pasco.k12.fl.us

JoAnne Glenn, Principal

BioDesign Course Descriptions

Principals of Biomedical Science^ (Year 1)

This course is designed to provide an overview of all the courses in the Biomedical Sciences program and lay the scientific foundation for subsequent courses. Students are introduced to human physiology, medicine, research processes and bioinformatics. Key biological concepts including homeostasis, metabolism, inheritance of traits, and defense against disease are embedded in the curriculum. Engineering processes are also included.

Human Body Systems^ (Year 2)

Students examine the interactions of body systems as they explore identity, communication, power, movement, protection, and homeostasis. Students design experiments, investigate the structures and functions of the human body, and use data acquisition software to monitor body functions such as muscle movement, reflex and voluntary action, and respiration.

Anatomy and Physiology Honors^ (Year 2)

Study the structures and functions of the human body. Essential for students interested in biological, medical, and health-oriented programs, such as nursing, medicine, and lab technology. Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course.

Medical Interventions^ (Year 3)

Students investigate the variety of interventions involved in the prevention, diagnosis and treatment of disease as they follow the lives of a fictitious family. The course is a "How-To" manual for maintaining overall health and homeostasis in the body as students explore: how to prevent and fight infection; how to screen and evaluate the code in human DNA; how to prevent, diagnose and treat cancer; and how to prevail when the organs of the body begin to fail.

Health Science Foundations^ (Year 3)

This course is part of the Secondary Health Core designed to provide the student with an in depth knowledge of the health care system and associated occupations. Emphasis is placed on communication and interpersonal skills, use of technology, ethics and the development of critical thinking and problem solving skills. Students will also learn first aid skills and demonstrate the measurement of vital signs.

Biomedical Innovations^ (Year 4)

This program offers a sequence of courses designed to prepare students to further their education and career in Health Sciences. The content includes, but is not limited to, the study of human body systems, medicine, and health. This course prepares students to take the BACE (Biotechnician Assistant Certification Examination).

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Cybersecurity Course Descriptions

IT Fundamentals^ (Year 1)

This course introduces students to the essential concepts, components, terminology, and knowledge about computers, computer systems, peripherals, and networks. This course prepares students to take the CompTIA IT Fundamentals+ Certification.

Computer and Network Security Fundamentals^ (Year 2)

This course introduces students to cybersecurity and provides them with essential computer and networking knowledge and skills, particularly those related to cybersecurity. This course prepares students to take the CompTIA Network+ Certification.

Cybersecurity Essentials^ (Year 2)

This course provides students with insight into the many variations of vulnerabilities, attack mechanisms, intrusion detection systems, and some methods to mitigate cybersecurity risks, including certificate services and cryptographic systems.

Operational Cybersecurity^ (Year 3)

This course provides students with insight into the many ways in which computer systems can be secured, countermeasures implemented, and risk assessment performed.

Cybersecurity Planning and Analysis^ (Year 3)

This course focuses on the mitigation planning, disaster recovery, business continuity planning, and forensic analysis associated with securing computer environments.

Web Security^ (Year 4)

This course addresses the creation of secure websites and authentication applications, including identifying the vulnerabilities and mitigation strategies. This course prepares students to take the CompTIA Security+ Certification.

Applied Cybersecurity Application^ (Year 4)

This is a project-based capstone course to provide Applied Cybersecurity students with the opportunity to apply their skills from both offensive and defensive perspectives. Students work in teams to research, plan, design, create, and configure a virtual network to prevent intrusion. Students will be expected to plan, document, perform, and report on penetration testing of a mock virtual network.



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Engineering and Robotics Course Descriptions

Introduction to Engineering Design^ (Year 1)

This course exposes students to the design process, research and analysis, teamwork, communication methods, global and human impacts, engineering standards, and technical documentation.

Foundation of Robotics^ (Year 1)

This course provides students with a foundation in content and skills associated with robotics and automation, including artificial intelligence, electronics, physics, and principles of engineering.

Principals of Engineering^ (Year 2)

This course helps students understand the field of engineering/engineering technology and prepares them for postsecondary engineering programs by developing a more in-depth mastery of the required knowledge and skills in mathematics, science, and technology.

Robotic Design Essentials^ (Year 2)

This course provides students with content and skills essential to the design and operation of robotics, including artificial intelligence, sensors, electronic devices, engineering technologies, motion physics, electrical motors, programming, simulation and more.

Robotic Systems^ (Year 3)

This course provides students with extended content and skills essential to the design and operation of robotic systems, including artificial intelligence, specialized sensors, electronic applications, engineering technologies, environmental physics, manufacturing, and more.

Digital Electronics^ (Year 3)

This is a course exposes students to the design process of combinational and sequential logic design, teamwork, communication methods, engineering standards, and technology.

Engineering Design and Development^ (Year 4)

The purpose of this course is to serve as a capstone course to provide students with the opportunity to develop a solution to a design problem from start to finish. Students work in teams to design, engineer, create a prototype, perform product testing, and present the completed product.

Robotic Applications Capstone^ (Year 4)

This course provides students with extended content and skills essential to the design and operation of autonomous robotic systems in the context of a capstone project. This course prepares students to take the Pre-Engineering certification.



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Supplementary Courses of Study Course Descriptions

Entrepreneurship

Business Entrepreneurship Principles^ (Year 1)

This course teaches the basics to entrepreneurship and prepares students to enter the workforce in a business position. The content includes but is not limited to electronic research methods; business communications including speaking, listening, writing, and telecommunicating; multimedia presentation skills; ethical considerations related to technology; and emerging technology.

Accounting Applications^ (Year 2)

This course is designed to continue the study of accounting principles. The content includes voucher systems, cash receipts, petty cash, payroll records, and internal control systems. The use of computers is required.

Legal Aspects of Business^ (Year 3)

This course is designed to assist with administrative office duties and procedures specific to the legal environment. The course explores and expands the competencies learned in Administrative Office Technology 1 and promotes application of higher-level office procedures tasks and communication skills.

Artificial Intelligence and Machine Learning

Artificial Intelligence in the World* (Year 1)

The course defines “Intelligent Behavior”, describes the relationship between AI and computer science, explains the history of AI and showcases applications of AI in the real world.

Applications of Artificial Intelligence* (Year 1)

The content includes but is not limited to foundational knowledge and skills related to methods and software used to develop AI applications using data sets.

Procedural Programming^ (Year 2)

This course continues the study of computer programming concepts with a focus on the creation of software applications employing procedural programming techniques.

Foundations of Machine Learning^ (Year 3)

The purpose of this course is to provide students with core foundational knowledge to deepen their understanding of machine learning (ML) practices and applications. The content includes but is not limited to foundational knowledge and skills related to computer coding and software development.



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High School Elective Course Descriptions

Foundations of Journalism^

This course is designed to develop basic entry-level skills required for careers in the writing and editing industry.

Journalism 2, 3, 4, 5, 6, 7, 8^

The purpose of this course is to enable students to extend fundamental skills in the production of journalism across print, multimedia, web, and broadcast/radio platforms and to develop further knowledge of journalism history, ethics use, and management techniques related to the production of journalistic media. The courses must be taken in order and they build off each other with new experiences each year. Students may be required to participate in events outside of standard school hours.

HOPE^

The purpose of this course is to develop and enhance healthy behaviors that influence lifestyle choices and student health and fitness. Students will realize the full benefit of this course when it is taught with an integrated approach.

AP Computer Science Principles^

AP Computer Science Principles is an introductory college-level computing course that introduces students to the breadth of the field of computer science. Students learn to design and evaluate solutions and to apply computer science to solve problems through the development of algorithms and programs. They incorporate abstraction into programs and use data to discover new knowledge. Students also explain how computing innovations and computing systems—including the internet—work, explore their potential impacts, and contribute to a computing culture that is collaborative and ethical.

AP Computer Science A^

AP Computer Science A is an introductory college-level computer science course. Students cultivate their understanding of coding through analyzing, writing, and testing code as they explore concepts like modularity, variables, and control structures.

Computer Science Principles^

Computer Science Principles introduces students to the foundational concepts of computer science and challenges them to explore how computing and technology can impact the world. More than a traditional introduction to programming, it is a rigorous, engaging, and approachable course that explores many of the foundational ideas of computing, so all students understand how these concepts are transforming the world we live in.



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2-D Studio Art 1^

Students explore media and techniques used to create a variety of 2-D artworks through developing skills in drawing, painting, printmaking, and collage. Students practice, sketch, and manipulate the structural elements of art. Investigation of artworks from Western and non-Western cultures provide a means for students to expand their understanding and appreciation of the role of art in global culture.

Band 1^

This year-long, entry-level class, designed for students having little or no previous band experience with woodwind, brass, and/or percussion instruments, promotes the enjoyment and appreciation of music through performance of high-quality, beginning wind and percussion literature from different times and places. Rehearsals focus on the development of critical listening/aural skills; rudimentary instrumental technique and skills, music literacy, and ensemble skills; and aesthetic musical awareness culminating in periodic public performances. This class may require students participate in activities outside of school hours and obtain an instrument.

Spanish 1^

Spanish 1 introduces students to the Spanish language and its culture. Students develop communicational skills. This course covers 1 credit of the Foreign Language Requirement.

Spanish 2^

Spanish 2 advances students of their knowledge of the Spanish language and its culture. Students develop communicational skills. This course covers 1 credit of the Foreign Language Requirement.

Personal Financial Literacy*

The purpose of this course is to give students an overview of personal and family finance concepts including the American economic system, personal and family management of resources including income, money management, saving and investing, spending and credit, the role of financial institutions and the consumer, consumer information and taxation and financial planning.

eSchool & PHSC On/Off Campus

Choose any course from the Pasco eSchool catalog and submit the registration from on the Pasco eSchool website. Courses can be one semester or full year. Classes can be done at home or in the computer lab at AAI.

Select any approved course from the PHSC Dual-Enrollment catalog. See the counselor for more details or go to phsc.edu.

*** Semester Courses**

^ Full Year Courses

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