For up-to-date Bright Futures and State University System course eligibility information, go to:
http://www.floridastudentfinancialaid.org/SSFAD/bf/acadrequire.htm

For up-to-date NCAA Clearinghouse course eligibility information, go to:
https://web1.ncaa.org/eligibilitycenter/student/index_student.html

The first seven digits of any course number listed below are determined by the Florida Department of Education. The 8th digit of any course number listed below is issued only by BCPS to meet the scheduling needs of our district.

Program Title: **Geospatial/Geographic Information System (GIS) Technology**
Course Title: **Introduction to Information Technology**
Course Number: **82073100**
Credit: **1.00**
Grade Level: **9-10**
Major Concepts/Content
This course provides an introduction to information technology concepts and careers as well as the impact information technology has on the world, people, and industry and basic web design concepts. The content includes information technology career research; operating systems and software applications; electronic communications including e-mail and Internet services; basic HTML, DHMTL, and XML commands; emerging technologies; and web page design.
PREREQUISITE: NONE

General Course Information:

	YES	NO	Other
Graduation Requirement	X		FINE ARTS
Bright Futures (BF)			
Florida Academic Scholar (FAS)		X	
Florida Medallion Scholar (FMS)		X	
Florida Gold Seal Vocational (FGSV)	X		4 YR 24 CREDIT OPTION ONLY **
State University System (SUS)	X		ELECTIVE
National Collegiate Athletic Association (NCAA)		X	
BCPS "Core" Course		X	
Course Level 1=below grade level, 2= at grade level, 3= above grade level			2
Industry Credential Eligible	X		
Weighted Quality Points			
State Honors (1 quality point)		X	
BCPS Local Honors ONLY (1 quality point)		X	
Pre IB (1 quality point)		X	
Pre AICE (1 quality point)		X	
AP (Advanced Placement) (2 quality points) *		X	
IB (International Baccalaureate) (2 quality points)		X	
AICE (Advanced International Certificate of Education) (2 quality points)		X	
Technical Dual Enrollment (2 quality points)		X	

* Must take AP exam; otherwise only 1 quality point.
** For the 3-year, 18 credit option, requirements may differ. See your guidance counselor for more information.

All information contained in this Curriculum Guide is subject to change. For current information, please visit the respective websites for each program.

Course Title: Introduction to GIS/RS Technology
Course Number: 8600260
Credit: 1.00
Grade Level: 9-10
Major Concepts/Content

While learning about the basics from the evolution of maps and projections, to learning about the modern uses of a geographic information system, students will complete many "hands-on" activities such as creating their own maps using compasses, rulers and tape measures. Specific areas of focus for this course include fundamental GIS and remote sensing concepts, project management strategies, and essential basic computer skills. Students will acquire a basic understanding of geographic terms and concepts necessary for the appropriate use of GIS, including concepts of spatial variables, scale, map projection, and map coordinate systems. Students will also be exposed to the history of GIS, how GIS fits into overall information management systems, and a variety of applications in which GIS can contribute to analysis and decision-making. They will also use a software application used to simulate satellite movements and utilize data, imagery, and GIS software to study their state, county, and school campus.

This hands-on course provides step-by-step instructions that will take you from learning the basics of these programs; like launching a map, viewing and editing metadata, to creating new shape files, and eventually to building a local map with data that you download from the Internet. While learning these valuable skills, students will be using the same geospatial tools that GIS Technicians in the industry are using. Technology Student Association (TSA) is the co-curricular career and technical student organization, which provides leadership training experiences and reinforces specific technical skills. These activities are considered an integral part of this instructional program.

PREREQUISITE: Recommend - Introduction to Information Technology (8800200)
SPECIAL NOTE: This course has no substitute.

General Course Information:

	YES	NO	Other
Graduation Requirement	X		VO
Bright Futures (BF)			
Florida Academic Scholar (FAS)		X	
Florida Medallion Scholar (FMS)		X	
Florida Gold Seal Vocational (FGSV)	X		4 YR 24 CREDIT OPTION ONLY **
State University System (SUS)		X	
National Collegiate Athletic Association (NCAA)		X	
BCPS "Core" Course		X	

Course Level
   1=below grade level,
   2= at grade level,
   3= above grade level
			2

Industry Credential Eligible			
Weighted Quality Points			
State Honors (1 quality point)		X	
BCPS Local Honors ONLY (1 quality point)		X	
Pre IB (1 quality point)		X	
Pre AICE (1 quality point)		X	
AP (Advanced Placement) (2 quality points) *		X	
IB (International Baccalaureate) (2 quality points)		X	
AICE (Advanced International Certificate of Education) (2 quality points)		X	
Technical Dual Enrollment (2 quality points)		X	

* Must take AP exam; otherwise only 1 quality point.
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Course Title: **Essential GIS Tools and Processes**
Course Number: **8600270**
Credit: **1.00**
Grade Level: **9-10**
Major Concepts/Content

Students in this course will use their knowledge of mapping and cataloging to complete numerous geospatial applications. They will learn techniques in displaying, managing, querying, symbolizing, and Create geospatial data. Students will learn the skills required to work on and/or build advanced GIS/RS projects. Students will follow a course of hands-on instruction to learn advanced skills ranging from introductory spatial analysis to examining spatial relationships within a specified area. Additionally, they will study site suitability to using three-dimensional generating software to gain a different perspective of their environment by modeling surfaces. Students will use scenarios to map features and study relationships that exist in their local community. Students will use remote sensing applications and data to develop skills that will allow them to take images and convert them to data that they will use for different types of analyses. The types of analyses will include using data in image analysis, feature extraction, vegetation mapping and change detection, and image enhancement. After successful completion of Introduction to GIS/RS Technology and Essential GIS Tools & Processes, students will have met Occupational Completion Point - Data Code A, GIS Technician Assistant - SOC Code 17-3031.02. Technology Student Association (TSA) is the co-curricular career and technical student organization, which provides leadership training experiences and reinforces specific technical skills. These activities are considered an integral part of this instructional program.

PRE REQUISITE: Introduction to GIS/RS Technology
SPECIAL NOTE: This course has no substitute.

General Course Information:

	YES	NO	Other
Graduation Requirement	X		VO
Bright Futures (BF)			
Florida Academic Scholar (FAS)		X	
Florida Medallion Scholar (FMS)		X	
Florida Gold Seal Vocational (FGSV)	X		4 YR 24 CREDIT OPTION ONLY **
State University System (SUS)		X	
National Collegiate Athletic Association (NCAA)		X	
BCPS "Core" Course		X	
Course Level 1=below grade level, 2= at grade level, 3= above grade level			2
Industry Credential Eligible			
Weighted Quality Points			
State Honors (1 quality point)		X	
BCPS Local Honors ONLY (1 quality point)		X	
Pre IB (1 quality point)		X	
Pre AICE (1 quality point)		X	
AP (Advanced Placement) (2 quality points) *		X	
IB (International Baccalaureate) (2 quality points)		X	
AICE (Advanced International Certificate of Education) (2 quality points)		X	
Technical Dual Enrollment (2 quality points)		X	

* Must take AP exam; otherwise only 1 quality point.
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Course Title:　　**GIS Analysis & Modeling**
Course Number:　**8600280**
Credit:　　　　**1.00**
Grade Level:　　**10-12**
Major Concepts/Content

This course covers Surface Analysis, 3D modeling, and working with street networks. This course directs students through five types of applications in Surface Analysis. It focuses on the various methods and uses of displaying continuous, or grid, data over a surface. Students will be expected to map data such as elevation, rainfall and temperature – data that differs from one location to the next on the surface of the earth. The five types of analyses used in this course are: mapping distance, density, interpolation, surface analysis, and statistics. This course will conclude with a short project where student will use their newly acquired skills to perform surface analysis tasks to their local area. There is a strong emphasis on students viewing their local area and the world in three dimensions. Students will learn skills such as viewing and displaying data, acquiring and processing data from online resources, displaying non-elevation data in 3D, applying surface analysis to 3D, adding raster and vector data, animating data, and exporting projects. Students will also explore in greater depth data layers previously studied in order to analyze the flow or navigation of networked data. They will also delve into the specifics of network analysis and examine how problems dealing with geospatial networks and routing may be found in the business world and in communities. The five types of network analyses covered in this course include Exploring Geospatial Networks, Finding the Best Route, Finding the Closest Facility, Determining Service Areas, and Modeling Real World Traffic Flow. Technology Student Association (TSA) is the co-curricular career and technical student organization, which provides leadership training experiences and reinforces specific technical skills. These activities are considered an integral part of this instructional program.

PRE REQUISITE: Essential GIS Tools and Processes
SPECIAL NOTE: This course has no substitute.
General Course Information:

	YES	NO	Other
Graduation Requirement	X		VO
Bright Futures (BF)			
Florida Academic Scholar (FAS)		X	
Florida Medallion Scholar (FMS)		X	
Florida Gold Seal Vocational (FGSV)	X		4 YR 24 CREDIT OPTION ONLY **
State University System (SUS)		X	
National Collegiate Athletic Association (NCAA)		X	
BCPS "Core" Course		X	
Course Level 　1=below grade level, 　2= at grade level, 　3= above grade level			2
Industry Credential Eligible			
Weighted Quality Points			
State Honors (1 quality point)		X	
BCPS Local Honors ONLY (1 quality point)		X	
Pre IB (1 quality point)		X	
Pre AICE (1 quality point)		X	
AP (Advanced Placement) (2 quality points) *		X	
IB (International Baccalaureate) (2 quality points)		X	
AICE (Advanced International Certificate of Education) (2 quality points)		X	
Technical Dual Enrollment (2 quality points)		X	

* Must take AP exam; otherwise only 1 quality point.
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Course Title: **Advanced GIS Applications**
Course Number: **8600290**
Credit: **1.00**
Grade Level: **10-12**
Major Concepts/Content

This project-based, capstone course challenges students to apply all skills and techniques learned in the previous three courses to create their first extensive GIS and Remote Sensing project. In this project, students will work in teams to create a three-dimensional map of their campus using GIS and RS tools. Once the base map is completed, each student selects one of the designated campus-based projects to complete. Students will be involved with all parts of the process including problem identification, data collection using GPS units, determining the appropriate type of analysis to be conducted or type of product to address the problem statement, performing the analysis, Create their solution, and formally presenting the project to interested stakeholders. Each project integrates project planning, geographic problem solving, GIS/RS tools and software applications, project management, data creation, data manipulation, data analysis, report, and presentations. After successful completion of Introduction to GIS/RS Technology, Essential GIS Tools & Processes, GIS Analysis & Modeling, and Advanced GIS Applications, students will have met Occupational Completion Point - Data Code B, GIS Analyst - SOC Code 17-3031.02. Technology Student Association (TSA) is the co-curricular career and technical student organization, which provides leadership training experiences and reinforces specific technical skills. These activities are considered an integral part of this instructional program.

PRE REQUISITE: GIS Analysis & Modeling
SPECIAL NOTE: This course has no substitute.

General Course Information:

	YES	NO	Other
Graduation Requirement	X		VO
Bright Futures (BF)			
Florida Academic Scholar (FAS)		X	
Florida Medallion Scholar (FMS)		X	
Florida Gold Seal Vocational (FGSV)	X		4 YR 24 CREDIT OPTION ONLY **
State University System (SUS)		X	
National Collegiate Athletic Association (NCAA)		X	
BCPS "Core" Course		X	

Course Level
   1=below grade level,
   2= at grade level,
   3= above grade level
			2

Industry Credential Eligible			
Weighted Quality Points			
State Honors (1 quality point)		X	
BCPS Local Honors ONLY (1 quality point)		X	
Pre IB (1 quality point)		X	
Pre AICE (1 quality point)		X	
AP (Advanced Placement) (2 quality points) *		X	
IB (International Baccalaureate) (2 quality points)		X	
AICE (Advanced International Certificate of Education) (2 quality points)		X	
Technical Dual Enrollment (2 quality points)		X	

* Must take AP exam; otherwise only 1 quality point.
** For the 3-year, 18 credit option, requirements may differ. See your guidance counselor for more information.

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