



8D120 Business Computer Information Management I (R) **1 credit** **Gr: 9-12**

8D125 Business Computer Information Management I (DC) 

R. Prerequisite: Touch Systems Data Entry – Keyboarding

Description: In Business Information Management I, students implement personal and interpersonal skills to strengthen individual performance in the workplace and in society and make a successful transition to the workforce and postsecondary education. Students apply technical skills to address business applications of emerging technologies, create word-processing documents, develop a spreadsheet, formulate a database, and make an electronic presentation using appropriate software. Students are provided the opportunity to gain OPAC (Office Proficiency Assessment and Certification) and/or MOS (Microsoft Office Specialist) certification for a fee. This course is a prerequisite for the dual credit course, Business Computer Information Management II, through the DCCCD System. Students must complete interest form. Course requirements to be met

8K900 Computer Maintenance with Lab (R) **2 credits** **Gr: 11-12**

8K905 Computer Maintenance with Lab (DC) 



R. Prerequisite: Principles of Information Technology or any Business and Industry Endorsement Principles course

Description: In Computer Maintenance, students will acquire knowledge of computer maintenance and creating appropriate documentation. Students will analyze the social responsibility of business and industry regarding the significant issues relating to the environment, ethics, health, safety, and diversity in society and in the workplace as related to computer maintenance. Students will apply technical skills to address the IT industry and emerging technologies. Students must complete interest form. Course requirements to be met

8K950 Computer Programming I (Fall) **1 credit** **Gr: 11-12**



R. Prerequisite: Principles of Information Technology and Algebra I.

Description: In Computer Programming I, students will acquire knowledge of structured programming techniques and concepts appropriate to developing executable programs and creating appropriate documentation. Students will analyze the social responsibility of business and industry regarding the significant issues relating to the environment, ethics, health, safety, and diversity in society and in the workplace as related to computer programming. Students will apply technical skills to address business applications of emerging technologies. Students will learn software and game development. Students must complete interest form. Course requirements to be met

8K952 Computer Programming II (Spring) **1 credit** **Gr: 11-12**



Prerequisite: Computer Programming I; Recommended prerequisites: Principles of Information Technology or any Business and Industry Endorsement Principles course and Algebra I.

Description: In Computer Programming II, students will expand their knowledge and skills in structured programming techniques and concepts by addressing more complex problems and developing comprehensive programming solutions. Students will analyze the social responsibility of business and industry regarding the significant issues relating to environment, ethics, health, safety, and diversity in society and in the workplace as related to computer programming. Students will apply technical skills to address business applications of emerging technologies. Students must complete interest form. Course requirements to be met

NOTE: All courses may not be offered on every campus.

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**8K910 Computer Technician Practicum****2 credits****Gr: 11-12****Prerequisite:** Computer Maintenance with Lab

Description: In the Computer Technician Practicum, students will gain knowledge and skills in the area of computer technologies, including advanced knowledge of electrical and electronic theory, computer principles, and components related to the installation, diagnosis, service, and repair of computer based technology systems. Students will reinforce, apply, and transfer their knowledge and skills to a variety of settings and problems. Proper use of analytical skills and application of IT concepts and standards are essential to prepare students for success in a technology-driven society. Critical thinking, IT experience, and product development may be conducted in a classroom setting with an instructor, with an industry mentor, or both.


8K940 Computer Technician Practicum - Cyber Security**2 credits****Gr: 11-12****Prerequisite:** Principles of Cyber Security and Networking

Description: In the Computer Technician Practicum, students will gain knowledge and skills in the area of computer technologies, including advanced knowledge of electrical and electronic theory, computer principles, and components related to the installation, diagnosis, service, and repair of computer based technology systems. Students will reinforce, apply, and transfer their knowledge and skills to a variety of settings and problems. Proper use of analytical skills and application of IT concepts and standards are essential to prepare students for success in a technology-driven society. Critical thinking, IT experience, and product development may be conducted in a classroom setting with an instructor, with an industry mentor, or both.

8K200 Digital Media (R)**1 credit****Gr: 9-12****8K205 Digital Media (DC) **

R. Prerequisite: Touch Systems Data Entry - Keyboarding or BCIM I, or Principles of Information of Technology or any Business and Industry Endorsement Principles course

Description: In Digital Media, students will analyze and assess current and emerging technologies, while designing and creating multimedia projects that address customer needs and resolve a problem. Students will implement personal and interpersonal skills to prepare for a rapidly evolving workplace environment. The knowledge and skills acquired and practiced will enable students to successfully perform and interact in a technology-driven society. Students will enhance reading, writing, computing, communication, and critical thinking and apply them to the IT environment. Examples of software used are Microsoft Office Suite - Word, Excel, PowerPoint, Publisher, as well as Movie Maker, and Adobe Design & Web Premium CS6 Photoshop, Dreamweaver, Illustrator, InDesign, Flash, and Audacity. Adobe Certified Associate (ACA) Certifications are available for a fee.

8K300 Geographic Information Systems (R)**1 credit****Gr: 11-12****8K305 Geographic Information Systems (DC) **

R. Prerequisite: Principles of Information Technology or any Business and Industry Endorsement Principles course

Description: [SHS only] This course will provide fundamental concepts of Geographic Information Systems (GIS), elements of GISD, analysis of spatial information, real-world applications, map creation, and analysis. The primary objective is to investigate the multiple interactive GIS applications. Garland ISD's partnership with Brookhaven College and DCCCD will provide a study of the latest technology with Dual Credit opportunities.

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8K710 MST Computer Maintenance for PC's (R) **1 credit** **Gr: 10-12**
8K715 MST Computer Maintenance for PC's (DC) ⓓ

MST

R. Prerequisite: Principles of Information Technology or any Business and Industry Endorsement Principles course

Description: [MST only at NGHS] Students acquire principles of computer maintenance, including electrical and electronic theory, computer hardware principles, and broad level components related to the installation, diagnosis, service, and repair of computer systems. The student uses troubleshooting skills with hardware knowledge to solve client problems, and applies knowledge of operating system design, including operation and maintenance, to perform information support and service tasks. The student installs and configures software programs and updates information technology systems, and installs, configures, and verifies active network connection.

8K730 MST Internetworking I (CISCO) (H) **1 credit** **Gr: 10-12**
8K735 MST Internetworking I (CISCO) (DC) ⓓ

MST

R. Prerequisite: MST Principles of Information Technology

Description: [MST only at NGHS] The CISCO courses teach students to design, build and maintain computer networks. Licensed by Cisco Systems, Inc., the NGHS Cisco Networking Academy uses Web technologies to prepare students for the 21st century workplace and simultaneously serves as a valuable model for successful e-learning. Laboratory exercises provide opportunity for hands-on experimentation to hone network troubleshooting skills as well as critical-thinking and problem-solving abilities. The Cisco Networking Academy Program qualifies students to pursue a number of industry-standard certifications.

8K740 MST Internetworking II (CISCO) (H) **1 credit** **Gr: 11-12**
8K745 MST Internetworking II (CISCO) (DC) ⓓ

MST

Prerequisite: MST Internetworking I (CISCO)

Description: [MST only at NGHS] The Cisco Networking Academy Program qualifies students to pursue a number of industry-standard certifications, including the Cisco Certified Networking Associate (CCNA), Computing Technology Industry Association (CompTIA) Network+ and Cisco Certified Networking Professional (CCNP) certifications. These initial steps in Cisco Career Certifications culminate with the Cisco Certified Internetworking Expert (CCIE) certification, the industry's most respected certification for networking professionals. All content in these courses is delivered via the internet. It is strongly recommended that students enrolled in these courses have internet access available at home.

8K760 MST Networking (R) **1 credit** **Gr: 11-12**
8K765 MST Networking (R) (DC) ⓓ

MST

Prerequisite: None; Recommended Prerequisites: Principles of Information Technology or any Business and Industry Endorsement Principles course

Description: [Math-Science-Technology magnet course offered only at NGHS] In Networking, students will develop knowledge of the concepts and skills related to data networking technologies and practices in order to apply them to personal or career development. To prepare for success, students will have opportunities to reinforce, apply, and transfer knowledge and skills to a variety of settings and problems.

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**8K700 MST Principles of Information Technology (R)****1 credit****Gr: 9-10****MST****Prerequisite:** None

Description: [Math-Science-Technology magnet course offered only at NGHS] In Principles of Information Technology, students will develop computer literacy skills to adapt to emerging technologies used in the global marketplace. Students will implement personal and interpersonal skills to prepare for a rapidly evolving workplace environment. Students will enhance reading, writing, computing, communication, and reasoning skills and apply them to the information technology environment.

8K750 MST Research in Information Technology Solutions - PBR (H)**1 credit****Gr: 12****8K755 MST Research in Information Technology Solutions - PBR (H) ⓓ****MST****Prerequisite:** MST Internetworking II (CISCO)

Description: [Math-Science-Technology magnet course offered only at NGHS] Students gain advanced knowledge and skills in the application, design, production, implementation, maintenance, evaluation, and assessment of products, services, and systems. Knowledge and skills in the proper use of analytical skills and application of information technology concepts and standards are essential to prepare students for success in a technology-driven society.

8K930 Networking (R)**1 credit****Gr: 11-12****8K935 Networking (R) (DC) ⓓ****GRCTC**

Prerequisite: None; Recommended Prerequisites: Principles of Information Technology or any Business and Industry Endorsement Principles course

Description: In Networking, students will develop knowledge of the concepts and skills related to data networking technologies and practices in order to apply them to personal or career development. To prepare for success, students will have opportunities to reinforce, apply, and transfer knowledge and skills to a variety of settings and problems.

8K920 Principles of Cyber Security (R)**1 credit****Gr: 11-12****8K925 Principles of Cyber Security (DC) ⓓ****GRCTC**

R. Prerequisite: Principles of Information Technology or any Business and Industry Endorsement Principles course and Business Computer Information Management I

Description: This course develops the knowledge and skills needed to master fundamental concepts of cybersecurity. Students in the course will develop a basic foundation for continuing their cybersecurity education and choosing a career in the cybersecurity field.

8K100 Principles of Information Technology (R)**1 credit****Gr: 9-10****Prerequisite:** None

Description: In Principles of Information Technology, students will develop computer literacy skills to adapt to emerging technologies used in the global marketplace. Students will implement personal and interpersonal skills to prepare for a rapidly evolving workplace environment. Students will enhance reading, writing, computing, communication, and reasoning skills and apply them to the information technology environment.

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**8K960 Practicum in Information Technology - Programming****2 credits****Gr: 11-12****GRCTC**

Prerequisite: A minimum of two high school information technology (IT) courses (Computer Programming II)

Description: In the Practicum in Information Technology - Programming, students will gain advanced knowledge and skills in the application, design, production, implementation, maintenance, evaluation, and assessment of products, services, and systems. Knowledge and skills in the proper use of analytical skills and application of IT concepts and standards are essential to prepare students for success in a technology-driven society. Critical thinking, IT experience, and product development may be conducted in a classroom setting with an industry mentor, as an unpaid or paid internship, as part of a capstone project, or as career preparation. A key focus for this course is on the software and game development industry.

8K980 Practicum in Information Technology - Web Design**2 credits****Gr: 11-12****GRCTC**

Prerequisite: Computer Programming I and Web Technologies

Description: In the Practicum in Information Technology - Programming, students will gain advanced knowledge and skills in the application, design, production, implementation, maintenance, evaluation, and assessment of products, services, and systems. Knowledge and skills in the proper use of analytical skills and application of IT concepts and standards are essential to prepare students for success in a technology-driven society. Critical thinking, IT experience, and product development may be conducted in a classroom setting with an industry mentor, as an unpaid or paid internship, as part of a capstone project, or as career preparation. A key focus for this course is on web design.

8C110 Professional Communication (R)**0.5 credit****Gr: 9-12**

Prerequisite: None

Description: Professional Communications blends written, oral, and graphic communication in a career-based environment. Careers in the global economy require individuals to be creative and have a strong background in computer and technology applications, a strong and solid academic foundation, and a proficiency in professional oral and written communication. Within this context, students will be expected to develop and expand the ability to write, read, edit, speak, listen, apply software applications, manipulate computer graphics, and conduct Internet research.

8K400 Raster-Based Geographical Information Technology (R)**1 credit****Gr: 11-12****8K405 Raster-Based Geographical Information Technology (DC) D**

Prerequisite: None; Recommended Prerequisites: Principles of Information Technology or any Business and Industry Endorsement Principles course and Business Computer Information Management I

Description: [SHS only] Students will study local problems and acquire information including images or aerial photographs, process the data and merge it with vector data. Students will plan, conduct and present solutions for locally based problems while working with the private sector, business and local government.

8K210 Spatial Technology and Remote Sensing (R)**1 credit****Gr: 10-12**

Prerequisite: None; Recommended Prerequisites: Principles of Information Technology or any Business and Industry Endorsement Principles course and Business Computer Information Management I

Description: [SHS only]. This course provides students with instruction in Geographic Information Systems (GIS) and Remote Sensing (RS) technology. Students will participate in applied learning activities with emphasis placed on planning, conducting and presenting special projects dealing with the GIS/RS tools and data.

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High School Course Guide



Information Technology

8D110 Touch System Data Entry - Keyboarding (R)

0.5 credit

Gr: 9-12

8D115 Touch System Data Entry - Keyboarding (DC) ⓓ

Prerequisite: None

Description: In Touch System Data Entry, students apply technical skills to address business applications of emerging technologies. Students enhance reading, writing, computing, communication, and reasoning skills and apply them to the business environment. Students will need to apply touch system data entry for production of business documents.

8K970 Web Technologies (R) (Spring)

1 credit

Gr: 9-12



Prerequisite: Computer Programming I

Description: In Web Technologies, students will learn to make informed decisions and apply the decisions to the field of IT. Students will implement personal and interpersonal skills to prepare for a rapidly evolving workplace environment. The knowledge and skills acquired and practiced will enable students to successfully perform and interact in a technology-driven society. Students will enhance reading, writing, computing, communication, and critical thinking and apply them to the IT environment. Students will focus on designing and creating for the World Wide Web.

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