

Secaucus
Board of
Education

Advanced Computer Concepts

Course Code 7222

Business Department



Born on January 2017

Aligned to the NJSL - Technology (2014), 21st Century Life & Career Standards (2014), Mathematics (2016), and ELA (2016)

Approved by the Secaucus Board of Education on January 19, 2017

District Equity Statement

The Board of Education directs that all students enrolled in the schools of this district shall be afforded equal educational opportunities in strict accordance with the law. No students shall be denied access to or benefit from any educational program or activity or from a co-curricular or athletic activity on the basis of the student's race, color, creed, religion, national origin, ancestry, age, marital status, affectional or sexual orientation, gender, gender identity or expression, socioeconomic status, or disability. The Board directs the Superintendent to allocate faculty, administrators, support staff members, curriculum materials, and instructional equipment supplies among and between the schools and classes of this district in a manner that ensures equivalency of educational opportunity throughout this district. The school district's curricula in the following areas will eliminate discrimination, promote mutual acceptance and respect among students, and enable students to interact effectively with others, regardless of race, color, creed, religion, national origin, ancestry, age, marital status, affectional or sexual orientation, gender, gender identity or expression, socioeconomic status, or disability:

1. School climate/learning environment
2. Courses of study, including Physical Education
3. Instructional materials and strategies
4. Library materials
5. Software and audio-visual materials
6. Guidance and counseling
7. Extra-curricular programs and activities
8. Testing and other assessments.

Excerpt from Secaucus Board of Education, Policy 5750, Edited September 2016

Course Description

Advanced Computers covers advanced concepts in Microsoft Word, Excel and PowerPoint. Applied Computer Concepts is a prerequisite for this course. Students will create professional newsletters, generate form letters and directories, and be able to link Word and Excel documents. The Excel unit is very advanced where students will discuss formulas, functions, formatting and Web Queries. They will be able to integrate with the Personal Financial Literacy classes and check stock through the use of queries. Financial functions, data table and amortization schedules will also be covered in Excel, along with creating, sorting and querying a table. Creating templates and working with multiple worksheets and workbooks is also part of the Excel unit. PowerPoint presents the use of SmartArt diagrams and images and information graphics. Presentation skills are also defined in this course and prepares students for life after high school.

Interdisciplinary Connections

21st Century Life and Careers - Career Ready Practices:

Career Ready Practices should be taught and reinforced in all career exploration and preparation programs with increasingly higher levels of complexity and expectation as a student advances through a program of study.

- ❖ CRP1. Act as a responsible and contributing citizen and employee.
- ❖ CRP2. Apply appropriate academic and technical skills.
- ❖ CRP3. Attend to personal health and financial well-being.
- ❖ CRP4. Communicate clearly and effectively and with reason.
- ❖ CRP5. Consider the environmental, social and economic impacts of decisions.
- ❖ CRP6. Demonstrate creativity and innovation.
- ❖ CRP7. Employ valid and reliable research strategies.

- ❖ CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
- ❖ CRP9. Model integrity, ethical leadership and effective management.
- ❖ CRP10. Plan education and career paths aligned to personal goals.
- ❖ CRP11. Use technology to enhance productivity.
- ❖ CRP12. Work productively in teams while using cultural global competence

NJSLS – Mathematics:

- ❖ G-CO.12 Make formal geometric constructions with a variety of tools and methods (compass and straightedge, string, reflective devices, paper folding, dynamic geometric software, etc.). Copying a segment; copying an angle; bisecting a segment; bisecting an angle; constructing perpendicular lines, including the perpendicular bisector of a line segment; and constructing a line parallel to a given line through a point not on the line.
- ❖ G-MG.3 Apply geometric methods to solve design problems (e.g., designing an object or structure to satisfy physical constraints or minimize cost; working with typographic grid systems based on ratios).

NJSLS – ELA:

- ❖ RST.11-12.1. Accurately cite strong and thorough evidence from the text to support analysis of science and technical texts, attending to precise details for explanations or descriptions.
- ❖ RST.11-12.3. Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.
- ❖ RST.11-12.4. Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to *grades 11-12 texts and topics*.

- ❖ RST.11-12.5. Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas
- ❖ RI.11-12.4 Determine the meaning of words and phrases as they are used in the text, including figurative and connotative meanings; analyze the impact of specific word choices on meaning and tone, including words with multiple meanings or language that is particularly fresh, engaging, or beautiful. (Include Shakespeare as well as other authors.)
- ❖ W.11-12.6 Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.
- ❖ SL.11-12.4 Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks.
- ❖ SL.11-12.5 Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.

Course Modifications (ELLs, Special Education, Gifted and Talented)

The course instructor will determine, with the assistance of guidance counselors, teacher assistant/aides, and/or special education teachers, what modifications will be made for his/her students. Such examples of modifications can include, but not be limited to:

- Extended time as needed
- Modification of tests and quizzes
- Preferential seating
- Alternative/Formative assessment (projects)
- Effective teacher questioning (ranging from simple recall to higher order critical thinking questions)

- Supplemental materials
- Cooperative learning
- Teacher tutoring
- Peer tutoring
- Differentiated Instruction

<p>Unit: Microsoft Office 2007 – Advanced Concepts and Techniques – Unit 1 – Word</p>		
<p>NJSLS - 8.1 Educational Technology – All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaboratively and to create and communicate knowledge. Strands: A. Technology Operations and Concepts <i>8.1.12.A.2</i>; C. Communication & Collaboration <i>8.1.12.C.1</i> – D. Digital Citizenship <i>8.1.12.D.2</i> 8.2 Technology Education, Engineering, and Design – All students will develop an understanding of the nature and impact of technology, engineering, technological design, and the designed world as they relate to the individual, global society, and the environment. – Strands: A. Nature of Technology: Creativity and Innovation - <i>8.2.12.A.1</i></p>		
Essential Questions	Enduring Understandings	Activities, Investigation, and Student Experiences
<p>How do I create a sales proposal using Microsoft Word?</p> <p>How do I perform mail merge tasks and sort data records?</p> <p>How do I create a professional newsletter geared towards a specific audience?</p>	<ul style="list-style-type: none"> ● Creating a title page. ● Change theme colors ● Border a paragraph ● Format characters ● Shade a paragraph ● Clear formatting ● Insert SmartArt graphic ● Create a watermark ● Insert an existing document in an open document ● Customize theme fonts ● Create header different from previous section ● Edit and format table ● Sum columns ● Create character style ● Apply quick style ● Draw a table ● Distribute table rows ● Sort data records ● Address and print mailing labels 	<p>To assist in meeting this standard, students may:</p> <ul style="list-style-type: none"> ● Participate in student assisted lesson utilizing the step-by-step process ● Students discuss and perform lesson together ● Engage in Discussion of terminology ● Review previous lessons ● Student-driven assignments ● Generate reinforcement projects ● Generate reinforcement labs ● Generate reinforcement case studies ● Ability to utilize time management skills

- Merge all data records to a directory
- Modify table properties
- Identify main document for form letters
- Change theme colors and fonts
- Working with shapes and drawing canvas
- Apply shape style
- Create a data source
- Enter records
- Compose the main document for the form letters
- Merge fields
- Insert IF field
- Content controls
- Field codes
- Merge form letters
- Address and print mailing labels
- Merge data records to directory
- Convert text to table
- Sort text
- Create a nameplate on the first page of the newsletter
- Determine the content of the body of the newsletter
- Format the first page of the body of the newsletter
- Create a pull-quote on the first page of the newsletter

	<ul style="list-style-type: none"> ● Create the nameplate on the second page of the newsletter ● Format the second page of the newsletter ● Print the newsletter ● Bind and distribute the newsletter 	
<p>Assessments</p>	<p>Teacher Resources: Microsoft Office – Advanced Concepts and Techniques by Shelly Cashman</p>	
<p>To show evidence of meeting this standard, students may: Complete Chapter reinforcement questions, Interactive Projects, Interactive Case Studies, and Final Word Project</p>		
<p>Equipment Needed</p>		
<p>Equipment Needed: PC, Interactive Whiteboard, Office 2007, Office 2007 – Advanced Concepts and Techniques</p>		
<p>Interdisciplinary Connections</p>		
<p>Apply knowledge, principles, and/or values to English, reading, writing and Business.</p>		

Unit: Microsoft Office 2007 – Advanced Concepts and Techniques – Unit 1 – Integration		
<p>NJSLS - 8.1 Educational Technology – All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaboratively and to create and communicate knowledge. Strands: A. Technology Operations and Concepts 8.1.12.A.2; C. Communication & Collaboration 8.1.12.C.1 – D. Digital Citizenship 8.1.12.D.2</p> <p>8.2 Technology Education, Engineering, and Design – All students will develop an understanding of the nature and impact of technology, engineering, technological design, and the designed world as they relate to the individual, global society, and the environment. – Strands: A. Nature of Technology: Creativity and Innovation - 8.2.12.A.1</p>		
Essential Questions	Enduring Understandings	Activities, Investigation, and Student Experiences
How do I link an Excel worksheet and chart to a Word document?	<ul style="list-style-type: none"> ● Create a document with links ● Open and re-format a memo ● Link the Excel worksheet and chart to the memo ● Edit the Excel worksheet and update the Word document ● Prepare the memo to be e-mailed to users ● Determine how to copy the object ● Be sure files are virus-free 	<p>To assist in meeting this standard, students may:</p> <ul style="list-style-type: none"> ● Participate in student assisted lesson utilizing the step-by-step process ● Students discuss and perform lesson together ● Engage in Discussion of terminology ● Review previous lessons ● Student-driven assignments ● Generate reinforcement projects ● Generate reinforcement labs ● Generate reinforcement case studies ● Ability to utilize time management skills
Assessments		Teacher Resources: Microsoft Office – Advanced Concepts and Techniques by Shelly Cashman
To show evidence of meeting this standard, students may: Complete Chapter Interactive Projects		
Equipment Needed		
Equipment Needed: PC, Interactive Whiteboard, Office 2007, Office 2007 – Advanced Concepts and Techniques		
Interdisciplinary Connections		

Apply knowledge, principles, and/or values to English, reading, writing and Business.	
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Unit: Microsoft Office 2007 – Advanced Concepts and Techniques – Unit 2 – Excel		
NJSLS - 8.1 Educational Technology – All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaboratively and to create and communicate knowledge. Strands: A. Technology Operations and Concepts 8.1.12.A.2; C. Communication & Collaboration 8.1.12.C.1 – D. Digital Citizenship 8.1.12.D.2 8.2 Technology Education, Engineering, and Design – All students will develop an understanding of the nature and impact of technology, engineering, technological design, and the designed world as they relate to the individual, global society, and the environment. – Strands: A. Nature of Technology: Creativity and Innovation - 8.2.12.A.1		
Essential Questions	Enduring Understandings	Activities, Investigation, and Student Experiences
<p>How do I apply function formulas and Web Queries in Excel?</p> <p>How do I create a loan payment calculator with data table and amortization schedule in Excel?</p> <p>How do I create a sales rep table in Excel?</p> <p>How do I create a profit potential worksheet with a cone chart in Excel?</p> <p>How do I add a SmartArt and images to a worksheet in Excel?</p>	<ul style="list-style-type: none"> ● Entering titles into Worksheet ● Entering portfolio data ● Entering formulas ● Smart tags and Option buttons ● Using Average, Max and Min functions ● Copy to non-adjacent cells ● Changing Theme ● Apply conditional formatting ● Check spelling ● Previewing and printing worksheet ● Displaying and printing formulas ● Import external data from a web source using a web query ● Create and format the loan payment calculator section and use the payment function ● Create and format a data table that includes the interest rate schedule 	<p>To assist in meeting this standard, students may:</p> <ul style="list-style-type: none"> ● Participate in student assisted lesson utilizing the step-by-step process ● Students discuss and perform lesson together ● Engage in Discussion of terminology ● Review previous lessons ● Student-driven assignments ● Generate reinforcement projects ● Generate reinforcement labs ● Generate reinforcement case studies ● Ability to utilize time management skills

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| | <ul style="list-style-type: none">● Create and format the amortization schedule and use the present value and future value functions● Create and test print areas in the worksheet● Check the formulas in the worksheet● Determine which cells to protect and unprotect in the worksheet● Create and format a sales rep table● Sort the sales rep table● Display subtotals by grouping the sales rep● Obtain answers to questions about the sales reps using a variety of methods to query the sales rep table● Extract records from the table based on given criteria● Create and format the template● Add a worksheet to the workbook● Reference data on other worksheets● Create a clustered cone chart and add WordArt to the chart● Print the worksheet with proper page breaks | |
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	<ul style="list-style-type: none"> ● Create a workspace and consolidate data by linking workbooks ● Choose the type of graphic to use for the organization chart. ● Determine the contents and layout of the organization chart ● Specify the formatting of the organization chart ● Obtain the image to be used in the worksheet ● Determine placement and formatting for the image. 	
<p>Assessments</p>		<p>Teacher Resources: Microsoft Office – Advanced Concepts and Techniques by Shelly Cashman</p>
<p>To show evidence of meeting this standard, students may: Complete Chapter reinforcement questions, Interactive Projects, Interactive Case Studies, and Final Excel Project</p>		
<p>Equipment Needed</p>		
<p>Equipment Needed: PC, Interactive Whiteboard, Office 2007, Office 2007 – Advanced Concepts and Techniques</p>		
<p>Interdisciplinary Connections</p>		
<p>Apply knowledge, principles, and/or values to English, reading, writing and Business.</p>		

Unit: Microsoft Office 2007 – Advanced Concepts and Techniques – Unit 3 – PowerPoint

NJSLS - 8.1 Educational Technology – All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaboratively and to create and communicate knowledge. Strands: A. Technology Operations and Concepts 8.1.12.A.4, 8.1.12.D.2
 F. Critical Thinking, Problem Solving, and Decision-Making 8.1.12.F.2 - **8.2 Technology Education, Engineering, and Design** – All students will develop an understanding of the nature and impact of technology, engineering, technological design, and the designed world as they relate to the individual, global society, and the environment. Strands: A. Nature of Technology: Creativity and Innovation– 8.2.12.A.1, 8.2.12.B.3 CCCS: RST.11.12.1, RST.11.12.4

Essential Questions	Enduring Understandings	Activities, Investigation, and Student Experiences
<p>How do I create a presentation with custom backgrounds and SmartArt diagrams in PowerPoint? How do I create a presentation with a chart, table and hyperlinks in PowerPoint?</p>	<ul style="list-style-type: none"> ● Use WordArt in moderation ● Choose an appropriate SmartArt layout ● Consider the verbal message to accompany your slides ● Be certain you have permission to modify clips ● Use left-brain/right-brain content concepts ● Create a new presentation from an outline created in Word ● Format slide master backgrounds ● Format pictures by applying styles and effects ● Insert and format SmartArt graphics ● Change clip art elements. ● Format a picture by applying an effect. ● Create a table and a chart 	<p>To assist in meeting this standard, students may:</p> <ul style="list-style-type: none"> ● Participate in student assisted lesson utilizing the step-by-step process ● Students discuss and perform lesson together ● Engage in Discussion of terminology ● Review previous lessons ● Student-driven assignments ● Generate reinforcement projects ● Generate reinforcement labs ● Generate reinforcement case studies ● Ability to utilize time management skills

	<ul style="list-style-type: none"> ● Change the document theme color scheme ● Find and replace words ● Run a slideshow with action buttons and hyperlinks ● Select appropriate fonts ● Choose outstanding hyperlink text or images ● Consider function of the graphic and use appropriately ● Choose an appropriate chart style ● Obtain information for the graphic from credible sources ● Test your visual elements 	
<p>Assessments</p>	<p>To show evidence of meeting this standard, students may: Complete Chapter reinforcement questions, Interactive Projects, Interactive Case Studies, and Final Cumulative Project</p>	<p>Teacher Resources: Microsoft Office – Advanced Concepts and Techniques by Shelly Cashman</p>
<p>Equipment Needed</p>	<p>Equipment Needed: PC, Interactive Whiteboard, Office 2007, Office 2007 – Advanced Concepts and Techniques</p>	
<p>Interdisciplinary Connections</p>	<p>Apply knowledge, principles, and/or values to English, reading, writing and Business.</p>	