# East Penn School District
## Secondary Curriculum

A Planned Course Statement
for
**Microsoft Excel**

Course #  __627__                           Grade(s)          __9-12__

Department:  Computer and Business Applications

Length of Period (mins.)__41__      Total Clock Hours:          _____

Periods per Cycle: __6__                    Length of Course (yrs.)  __.5__

Type of Offering:   _____ required   __√__ elective

Credit:  __.5__

Adopted:  __6/8/09__

Developed by:
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**Description of Course**


**Course Title:**  Microsoft Excel


**Description:**   This course will provide students with the knowledge required to create spreadsheets using Microsoft Excel and will include fundamental and advanced techniques.  Upon successful completion of the course, students will be prepared to complete the **Microsoft Certification Application Specialist Exam**.  In the business and education community, job applicants with this certification are recognized as proven experts using Microsoft Excel.

**Goals:**
- To familiarize the student with the features of Microsoft Excel
- To teach the skills necessary to take the Microsoft Application Specialist exam
- Students will learn how to create and manipulate data, format data and content, create and modify formulas, present data visually, collaborate on and secure data using Microsoft Excel.


 **Requirements:**  None


**Text:**  Schultz, C. Jacqueline and Linda Wooldridge, iCheck Express, Microsoft Excel 2007, Real World Applications.  Glencoe/McGraw-Hill, 2009


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### Key to Levels of Achievement (Listed with each learning objective)

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|---|---|
| Awareness (A): | Students are introduced to concepts, forms, and patterns. |
| Learning (L): | Students are involved in a sequence of steps and practice activities which involved further development and allow evaluation of process. |
| Understanding (U): | Students demonstrate ability to apply acquired concepts and skills to individual assignments and projects on an independent level. |
| Reinforcement (R): | Students maintain and broaden understanding of concepts and skills to accomplish tasks at a greater level of sophistication. |

| Unit | Num | Objective | Level | Content | Evaluation | Standard |
|---|---|---|---|---|---|---|
| **Excel Basics** | 1 | Students will:<br>♦ Identify parts of the Excel screen<br>♦ Open and close workbooks<br>♦ Name and save a workbook<br>♦ Insert and edit cell contents<br>♦ Calculate a sum<br>♦ Print a worksheet | A, L | • Textbook illustrations<br>• Handout illustrating Excel screen<br>• Classroom discussion<br>• Textbook activities<br>• Student use of computer | • Teacher observation<br>• Grading of completed activities<br>• Written quizzes/tests<br>• Oral questions<br>• Microsoft Certified Application Specialist Test | 2b, 3b, 3d, 4c, 6a, 6b<br><br>3.7.10 (D) |
| **Create Data and Content** | 2 | Students will:<br>♦ Enter, edit, clear, find, and replace cell contents<br>♦ Use AutoSum, AVERAGE, MIN, and MAX functions<br>♦ Use Cut, Copy, and Paste<br>♦ Use the Fill handle tool<br>♦ Insert, modify, and remove hyperlinks | L | • Teacher explanation<br>• Instructor demonstrations using projected screen image and/or CrossTec SchoolVue Software<br>• Student use of computer<br>• Textbook activities<br>• Handouts | • Teacher observation<br>• Grading of completed activities<br>• Written quizzes/tests<br>• Microsoft Certified Application Specialist Test | 1a, 1d, 2b, 2d, 4a, 4c, 5c, 6a, 6b<br><br>3.7.10 (D) |
| **Format Data and Content** | 3 | Students will:<br>1. Change font, font size, font style, and font color<br>2. Convert text to columns<br>3. Apply cell and table styles<br>4. Modify the size of rows and columns<br>5. Hide and unhide rows, columns, and worksheets<br>6. Change horizontal and vertical alignment<br>♦ Insert, move, and modify SmartArt graphics | L | • Teacher explanation<br>• Instructor demonstrations using projected screen image and/or CrossTec SchoolVue Software<br>• Student use of computer<br>• Textbook activities<br>• Handouts | • Teacher observation<br>• Grading of completed activities<br>• Written quizzes/tests<br>• Microsoft Certified Application Specialist Test | 1a, 1c, 2b, 3d, 4c, 5c, 6a, 6b<br><br>3.7.10 (D) |
| **Analyze Data** | 4 | Students will:<br>♦ Filter and sort data<br>♦ Write, edit, and use formulas<br>♦ Use absolute, relative, and mixed references<br>♦ Create, modify, and position diagrams<br>♦ Create, modify, and position charts | L | • Teacher explanation<br>• Instructor demonstrations using projected screen image and/or CrossTec SchoolVue Software<br>• Student use of computer<br>• Textbook activities<br>• Handouts | • Teacher observation<br>• Grading of completed activities<br>• Written quizzes/tests<br>• Microsoft Certified Application Specialist Test | 1a, 3b, 3c, 4d, 6b<br><br>3.7.10 (D) |

| Manage Workbooks | 5 | Students will:<br>♦ Use a template<br>♦ Organize worksheets<br>♦ Split, freeze, hide, and arrange workbooks<br>♦ Save and preview worksheets as Web pages<br>♦ Set up pages for printing<br>♦ Rename folders and convert files to different formats | L | • Teacher explanation<br>• Instructor demonstrations using projected screen image and/or CrossTec SchoolVue Software<br>• Student use of computer<br>• Textbook activities<br>• Handouts | • Teacher observation<br>• Grading of completed activities<br>• Written quizzes/tests<br>• Microsoft Certified Application Specialist Test | 1a, 1c, 1d, 2b, 2d, 3d, 4a, 4b, 4c, 5a, 5c, 6a, 6b, 6d<br><br>3.7.10 (D) |
| --- | --- | --- | --- | --- | --- | --- |
| Advanced Data Organization | 6 | Students will:<br>♦ Create and modify list ranges<br>♦ Create advanced filters<br>♦ Create subtotals and grand totals<br>♦ Group and outline data<br>♦ Apply data validation<br>♦ Circle invalid data<br>♦ Remove duplicate values<br>♦ Name a cell range | L | • Teacher explanation<br>• Instructor demonstrations using projected screen image and/or CrossTec SchoolVue Software<br>• Student use of computer<br>• Textbook activities<br>• Handouts | • Teacher observation<br>• Grading of completed activities<br>• Written quizzes/tests<br>• Microsoft Certified Application Specialist Test | 1c, 3d, 4a, 4d, 6a |
| Advanced Data Analysis | 7 | Students will:<br>♦ Use a PivotTable and PivotChart<br>♦ Modify text formatting and text content using formulas<br>♦ Perform What-If Analysis<br>♦ Use conditional logic in a formula<br>♦ Display and print formulas<br>♦ Use LOOKUP and Reference functions | L | • Teacher explanation<br>• Instructor demonstrations using projected screen image and/or CrossTec SchoolVue Software<br>• Student use of computer<br>• Textbook activities<br>• Handouts | • Teacher observation<br>• Grading of completed activities<br>• Written quizzes/tests<br>• Microsoft Certified Application Specialist Test | 1a, 1c, 3d, 4a, 4b, 4c, 4d, 6a |
| Advanced Data Formatting | 8 | Students will:<br>♦ Create custom formats<br>♦ Use conditional formatting<br>♦ Change the brightness and contrast of a picture<br>♦ Resize and rotate a graphic<br>♦ Format parts of a chart | L | • Teacher explanation<br>• Instructor demonstrations using projected screen image and/or CrossTec SchoolVue Software<br>• Student use of computer<br>• Textbook activities<br>• Handouts | • Teacher observation<br>• Grading of completed activities<br>• Written quizzes/tests<br>• Microsoft Certified Application Specialist Test | 1a, 1b, 1c, 3d, 4c, 6a, 6b |

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|---|---|---|---|---|---|---|
| **Advanced Collaboration** | 9 | Students will:<br>♦ Add protection to cells and workbooks<br>♦ Set passwords<br>♦ Share workbooks<br>♦ Track, accept, and reject changes<br>♦ Merge workbooks versions<br>♦ Use digital signatures | L | • Teacher explanation<br>• Instructor demonstrations using projected screen image and/or CrossTec SchoolVue Software<br>• Student use of computer<br>• Textbook activities<br>• Handouts | • Teacher observation<br>• Grading of completed activities<br>• Written quizzes/tests<br>• Microsoft Certified Application Specialist Test | 1c, 2a, 2b, 2c, 6a, 6b |
| **Advanced Data Management** | 10 | Students will:<br>♦ Import and export data<br>♦ Publish data as a Web page<br>♦ Create a template for repeated use<br>♦ Consolidate data<br>♦ Modify workbook properties<br>♦ Save workbooks in a macro-enabled format<br>♦ Create and run a macro | L | • Teacher explanation<br>• Instructor demonstrations using projected screen image and/or CrossTec SchoolVue Software<br>• Student use of computer<br>• Textbook activities<br>• Handouts | • Teacher observation<br>• Grading of completed activities<br>• Written quizzes/tests<br>• Microsoft Certified Application Specialist Test | 1c, 1d, 2a, 2d, 3b, 3c, 4c, 6c |

## National Educational Technology Standards and Performance Indicators for Students

The Nets are divided into the six broad categories that are listed below.

1. **Creativity and Innovation**
   Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology.  Students:

   a. apply existing knowledge to generate new ideas, products, or processes.
   b. create original works as a means of personal or group expression.
   c. use models and simulations to explore complex systems and issues.
   d. identify trends and forecast possibilities.

2. **Communication and Collaboration**
   Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others.  Students:

   a. interact, collaborate, and publish with peers, experts or others employing a variety of digital environments and media.
   b. communicate information and ideas effectively to multiple audiences using a variety of media and formats.
   c. develop cultural understanding and global awareness by engaging with learners of other cultures.
   d. contribute to project teams to produce original works or solve problems.

3. **Research and Information Fluency**
   Students apply digital tools to gather, evaluate, and use information.  Students:

   a. plan strategies to guide inquiry.
   b. locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media.
   c. evaluate and select information sources and digital tools based on the appropriateness to specific tasks.
   d. process data and report results.

**4.    Critical Thinking, Problem-Solving, and Decision-Making**
Students use critical thinking skills to plan and conduct research, manage projects, solve problems and make informed decisions using appropriate digital tools and resources.  Students:

a.  identify and define authentic problems and significant questions for investigation.
b.  plan and manage activities to develop a solution or complete a project.
c.  collect and analyze data to identify solutions and/or make informed decisions.
d.  use multiple processes and diverse perspectives to explore alternative solutions.

**5.    Digital Citizenship**
Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior. Students:

a.  advocate and practice safe, legal, and responsible use of information and technology.
b.  exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity.
c.  demonstrate personal responsibility for lifelong learning.
d.  exhibit leadership for digital citizenship.

**6.    Technology Operations and Concepts**
Students demonstrate a sound understanding of technology concepts, systems and operations.  Students:

a.  understand and use technology systems.
b.  select and use applications effectively and productively.
c.  troubleshoot systems and applications.
d.  transfer current knowledge to learning of new technologies.