COURSE TITLE

Applied Computer Concepts

LENGTH

Half-Year
Grades 9-12

DEPARTMENT

Business Education
Barbara O'Donnell, Supervisor

SCHOOL

Rutherford High School

DATE

Spring 2017

Applied Computer Concepts

I.   Introduction/Overview/Philosophy

This course is designed to enhance students' computer application, keyboarding, and presentation/public speaking skills. It is designed around project-based activities applying word processing, spreadsheets, databases, and electronic presentations, as well as e-mail and Internet applications.

This course emphasizes the use of computer software as a problem-solving tool. The course activities provide students with the opportunity to build their computer and keyboarding skills as they build their communication, mathematics, problem-solving, and interpersonal skills. The material presented will aid the student in understanding that the subjects studied at school are not isolated in a particular classroom. Students will practice and apply language arts, social studies, and mathematics skills in a variety of situations while incorporating computer technology.

The material presented will also prepare students for the type of computer situations that will be encountered outside the classroom. Today's workers often utilize several different types of software to complete a job. Students in this course will use more than one application software and will learn to select the best type of software for accomplishing a task.

In addition, emphasis will be placed on developing students' abilities to become effective speakers by creating and delivering effective oral presentations. Public speaking is an important real-life skill because it is one of the most effective forms of communication. The clear presentation of ideas enables those thoughts to take on a life of their own, and effective leaders depend on their speaking skills to inform, persuade, and motivate. Students who take this course will learn how to overcome initial anxiety to present their thoughts in a direct and convincing manner. They will learn to develop their own style so that they are comfortable speaking in a variety of situations. As a part of their presentations, they will be required to develop audio-visual aids to support their speeches.

II.   Objectives

After completing this course, the student will demonstrate the ability to:
●   key, compose and format business letters, memos, and emails.
●   submit assignments and correspond with the teacher using proper email etiquette.
●   format meeting agendas and minutes.
●   design and format flyers.
●   create and format tables.
●   create and format forms.
●   prepare table of contents pages.
●   create labels.
●   create organizational management charts.
●   create and manipulate ruled tables.
●   design certificates, calendars, and brochures.

- create, design, and format newsletters.
- key and format reports utilizing styles.
- create internal and external hyperlinks.
- create, sort, and edit data files.
- build a worksheet with formulas and functions (including SUM, AVERAGE, MAX, MIN, COUNT, IF, IFCOUNT, financial, and nested functions).
- edit a worksheet, adding and deleting rows, columns, and records.
- sort data, add comments, freeze panes.
- insert a hyperlink into a worksheet.
- copy worksheet data to a word processing document.
- build multiple worksheets in a workbook.
- name, insert, and move worksheets.
- link data on multiple worksheets.
- embed and edit spreadsheets in a word processing document.
- record and run macros.
- create and analyze charts.
- sort lists.
- enter and edit data in a database.
- search and sort a database.
- create and edit layouts/reports in a database.
- calculate sub-summary and grand summary.
- calculate average, max and min in the database.
- search for information on the internet.
- plan and build a presentation using storyboards.
- create a presentation in outline view.
- modify a presentation.
- insert a sound clip.
- create hyperlinks in presentations.
- create speaker's notes.
- enhance a presentation with clip art, draw objects, color, backgrounds, charts, tables, and multimedia effects.
- create handouts and other visuals.
- give effective oral presentations.
- show improvement in keyboarding ability.

III.   Course Outline

Note: this outline will not be completed in any particular order. Rather, the topics will be covered through projects that integrate a variety of topics

     I.   Keyboarding
          A. Practice keyboarding technique
          B. Participate in individualized skill-building practice
          C. Improve keyboarding speed and/or accuracy based on individual skill and assessment level
          D. Utilize keyboard shortcuts to improve keyboarding speed
     II.   Word Processing

    A. Key/compose memos, letterhead, letters, reports, etc. following all rules of grammar, spelling, punctuation and formatting
    B. Compose email to interact with the teacher using proper email etiquette
    C. Submit assignment via email using attachments
    D. Use proofreader's marks to edit documents
    E. Create and enhance tables
    F. Develop agendas and schedules
    G. Design signs, personalized stationery and certificates
    H. Compose memos and email
    I. Design forms, including interactive forms
    J. Update and sort data files
    K. Create labels
    L. Create calendars of events
    M. Design organizational charts
    N. Type and properly format reports
    O. Create a brochure
    P. Create fax cover sheets

III. Spreadsheets
    A. Format columns and rows
    B. Add and sort records
    C. Create hypertext links
    D. Add and delete records
    E. Enter values, formulas, and functions
    F. Prepare e-mail/reports with spreadsheets
    G. Create a workbook with multiple worksheets
    H. Link data on multiple worksheets
    I. Create templates
    J. Create charts
    K. Create a worksheet from a table
    L. Apply logical functions
    M. Use What-If analysis
    N. Embed worksheets in word processing documents
    O. Create comments and macros
    P. Sort data

IV. Database
    A. Create and enter data
    B. Edit fields and sort records
    C. Run queries and print reports
    D. Create reports
    E. Create grouped reports from a query
    F. Create and modify forms

V. Presentation Graphics
    A. Plan and build a presentation
        a) Organize, storyboard, and edit the presentation content
        b) Create master slides, title slides, multi-level bulleted slides, and closing slides

      B. Create a presentation in Outline View
          a) View the outline feature
          b) Outline the presentation content
          c) Import an existing outline into a presentation
      C. Modify a presentation
          a) Insert and delete text
          b) Add and delete slides
          c) Change text attributes, slide template layout, master slides, bullet style, slide order
          d) Copy a slide from another presentation
          e) Create a build effect
          f) Add transitions between slides
          g) Set slide timings
          h) Add hidden slides
      D. Enhance a presentation with Clip Art
          a) Add clip art graphics
          b) Add text to a clip art object
          c) Add clip art to geometric shapes
          d) Create an object build with clip art
          e) Create special effects with graphics
      E. Enhance a presentation with draw objects, color, and backgrounds
          a) Add draw objects
          b) Add borders
          c) Change the color of objects
          d) Add distinct backgrounds
      F. Enhance a presentation with charts and tables
          a) Add an organizational chart
          b) Add a table
          c) Create bar, pie, and line charts
          d) Link spreadsheet data to a chart
      G. Create handouts and other visuals
          a) Use outlines and handouts
          b) Prepare audience handouts and speaker notes
          c) Prepare slide in other visual formats
      H. Add multi-media effects
          a) Add sound
          b) Add movies
          c) Add podcasts
VI.   Public Speaking
      A. Practice effective speaking, listening, and nonverbal skills
      B. Handle conversations, interviews, routine communication, and dealing with differences
      C. Participate effectively in teams by solving problems in groups
      D. Analyze audiences and adjust to the needs of an audience
      E. Research topics
      F. Prepare visual aids
      G. Gain confidence in delivering formal and informal presentations

New Jersey Student Learning Standards
CAREER READY PRACTICES
CRP1   Act as a responsible and contributing citizen and employee.
CRP2   Apply appropriate academic and technical skills.
CRP4   Communicate clearly and effectively and with reason
CRP5   Consider the environmental, social and economic impacts of decisions.
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

TECHNOLOGY
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.
> Strand A. Technology Operations and Concepts
> Strand B. Creativity and Innovation
> Strand C. Communication and Collaboration
> Strand D. Digital Citizenship
> Strand F. Critical Thinking, Problem Solving, and Decision-Making

21ST CENTURY LIFE AND CAREERS
Standard 9.2: Career Awareness, Exploration, and Preparation
> Strand C: Career Preparation

Standard 9.3: Career and Technical Education
> 9.3.12.BM.1 Business Management and Administration: Utilize mathematical concepts, skills and problem solving to obtain necessary information for decision   making in business.

IV.   Proficiency Level

This course is open to grades 9-12.

V.   Methods of Assessment

- Class Participation
- Individual class work and projects
- Teacher made tests and quizzes
- Group work (classwork assignments and projects)
- Oral presentations

VI.   Grouping

There are no prerequisites for this course.

VII.   Articulation/Scope & Sequence/Time Frame

This is a half-year course.

VIII.   Resources

Resources include but are not limited to:
Olinzock, Arney, et. al. *Integrated Business Projects* Thompson South-Western Publishing Second Edition 2005.

Teacher generated classwork and project assignments

IX.   Methodologies

The following methods of instruction are suggested: lecture, demonstration, short-term projects, and long-term projects.

X.   Suggested Activities

Integrate computer technology/applications with other academic assignments and incorporate public speaking using the computer as a visual device.

XI.   Interdisciplinary Connections

This course incorporates real-world math, reading, writing, speaking, listening and design skills using computer applications. These skills learned can be transferred in the use of assignments and projects across the curriculum.

XII.   Differentiating Instruction for Students with Special Needs: Students with Disabilities, English Language Learners, and Gifted & Talented Students

Differentiating instruction is a flexible process that includes the planning and design of instruction, how that instruction is delivered, and how student progress is measured. Teachers recognize that students can learn in multiple ways as they celebrate students' prior knowledge. By providing appropriately challenging learning, teachers can maximize success for all students.

Examples of Strategies and Practices that Support:

Students with Disabilities
- Use of visual and multi-sensory formats
- Use of assisted technology
- Use of prompts
- Modification of content and student products
- Testing accommodations
- Authentic assessments

Gifted & Talented Students
- Adjusting the pace of lessons

- Curriculum compacting
- Inquiry-based instruction
- Independent study
- Higher-order thinking skills
- Interest-based content
- Student-driven
- Real-world problems and scenarios

English Language Learners
- Pre-teaching of vocabulary and concepts
- Visual learning, including graphic organizers
- Use of cognates to increase comprehension
- Teacher modeling
- Pairing students with beginning English language skills with students who have more advanced English language skills
- Scaffolding
  - •word walls
  - •sentence frames
  - •think-pair-share
  - •cooperative learning groups

XIII. Professional Development

The teacher will continue to improve expertise through participation in a variety of professional development opportunities.

Curriculum Map

Class	September/February	October/March	November/April
APPLIED COMPUTER CONCEPTS	**Word Processing** ● Business organization ● Proofreading ● Compose business letters Compose memos ● Compose reports ● Compose emails ● Compose agendas ● Compose schedules ● Create labels	**Word Processing** ● Create organizational charts ● Compose forms **Presentation Software** ● Organize, storyboard and edit a presentation ● Create, enhance, and modify a presentation **Internet** ● Searching ● Choose appropriate research	**Presentation Software** ● Create, enhance, and modify a presentation ● Photoshop to edit pictures/clip art **Word Processing** ● Create a newsletter
	December/May	**January/June**	
	Spreadsheets ● Format spreadsheets ● Formulas ● Calculate payroll ● Create a budget worksheet **Word Processing** ● Create a brochure	**Culminating project and presentation**	