COURSE TITLE

Digital Applications 2

LENGTH

One Semester
Grades 9-12

DEPARTMENT

Business Education
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SCHOOL

Rutherford High School

DATE

September 10, 2018

Initial BOE Approval Date (Born on): 1/2/2018

Digital Applications 2

I.   Introduction/Overview/Philosophy

Digital Applications 2 is designed to develop advanced skills in word processing, spreadsheet, and slideshow technologies. Students will become familiar with basic and advanced formatting techniques in spreadsheets and word processing, professional email etiquette, presentation skills, and using timesaving features on various platforms such as Microsoft and Google. These software systems will be learned using a hands-on, activity-based approach that will emphasize problem-solving and real-world applications, including public speaking. This course is intended for all students because it is imperative that all students build a solid understanding of the advanced software applications used in higher education and industry.

II.   Objectives

- Students will effectively use basic and advanced functions of documents, spreadsheets, and presentation software to relay information in a well-composed, organized, and illustrative manner.
- Students will become aware of the importance of professional communication in personal and professional environments.
- Students will gain experience in interpersonal, group, and public communication.
- Students will practice delivery of professional and personal speeches using visual aids to enhance a presentation.
- Students will a variety of platforms to complete similar tasks.

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

  A. File Management
1. Save a file properly
2. Name and organize files
3. Search and sort files

  B. Word Processing Documents
1. Key/compose letterhead, business letters, faxes, brochures, reports, etc. following all rules of grammar, spelling, punctuation and formatting
2. Compose email using proper email etiquette
3. Submit assignment via email using attachments
4. Design signs, personalized stationery and certificates
5. Design forms, including interactive forms
6. Create labels
7. Create calendars of events

  C. Word Processing Features
1. Create templates and documents using templates

2. Use print preview, modify print settings, and print visually appealing products
3. Change page orientation
4. Change margins
5. Insert page numbers
6. Insert header/footers
7. Create and enhance tables
8. Insert and edit section breaks, column breaks, and page breaks
9. Insert hyperlinks
10. Utilize draw features to create organizational charts, brochures, newsletters, etc.
11. Use find/replace
12. Insert, edit, and enhance images

D. Email Features and Etiquette
1. Send an email using proper etiquette
   a. Appropriate subject
   b. Proper grammar, spelling, and punctuation
   c. Use appropriate greeting and closing
2. Include attachments
3. Use cc and bcc
4. Organize email
5. Use advanced features, such as labeling, filtering, and canned responses

E. Presentation Design and Skills
1. Plan and build a presentation
2. Modify a presentation
   a. Add slides of different layout and delete slides
   b. Change text attributes, slide template layout, master slides, bullet style, slide order
   c. Add transitions between slides
   d. Use hidden slides
   e. Insert images, being cognizant of copyright law
   f. Insert a table
   g. Embed a video, shapes, diagrams, tables
   h. Insert hyperlinks
3. View in different modes - presentation, with/without outline, etc.
4. Print utilizing different settings

F. Public Speaking
1. Practice effective speaking, listening, and nonverbal skills
2. Handle conversations, interviews, routine communication, and dealing with differences
3. Participate effectively in teams by solving problems in groups
4. Analyze audiences and adjust to the needs of an audience
5. Prepare visual aids

G. Spreadsheet Features
1. Spreadsheet Introduction
   a. Explore the spreadsheet work area
   b. Enter text, numbers and values
   c. Save a workbook

        d.   Enter a formula
        e.   Prepare a worksheet for printing
        f.   Print a worksheet

2. Modify a Worksheet
        a.   Open an existing workbook
        b.   Use auto-fill
        c.   Insert and delete rows and columns
        d.   Copy and move cell contents
        e.   Use autosum and other automatic functions
        f.   Use relative and absolute formulas
        g.   Spell-check a worksheet

3. Format a Worksheet
        a.   Format numbers
        b.   Align cell contents
        c.   Format font
        d.   Add borders and change color
        e.   Use format painter
        f.   Freeze panes
        g.   Show/hide rows, columns, and sheets

4. Formulas/Functions
        a.   Analyze data with SUM, AVERAGE, MAX, MIN, and COUNT
        b.   Use IF to display messages
        c.   Use IF to calculate
        d.   Use NOW to display the current date
        e.   Use pivot tables
        f.   Use conditional formatting

5. Charts
        a.   Identify common chart types and features
        b.   Modify and enhance charts
             i.   Change the chart type
             ii.   Chart non-adjacent data series
             iii. Modify chart formats
             iv. Add, Reorder and Delete a data series

6. Multi-sheet Workbooks
        a.   Copy data from another application
        b.   Insert, move and rename worksheets
        c.   Edit multiple worksheets simultaneously
        d.   Subtotal data
        e.   Link worksheets
        f.   Use a worksheet to solve a problem

7. Sort and Filtering a Worksheet
        a.   Use a worksheet list as a database
        b.   Sort records on the contents of one and more than one fields
        c.   Use Autofilter with one and multiple conditions

H. Build a Website Portfolio
  1. Utilize simple, free web design software

2. Add and restructure pages
3. Insert images, videos, calendars, and other media
4. Embed academic and professional examples of work
5. Publish and share the portfolio

I. Integrate Applications
1. Link/Embed spreadsheet data, presentations and word processing within one another
2. Understand the benefits of linked applications

New Jersey Student Learning Standards

CAREER READY PRACTICES

CRP1   Act as a responsible and contributing citizen and employee

Career-ready individuals understand the obligations and responsibilities of being a member of a community, and they demonstrate this understanding every day through their interactions with others. They are conscientious of the impacts of their decisions on others and the environment around them. They think about the near-term and long-term consequences of their actions and seek to act in ways that contribute to the betterment of their teams, families, community and workplace. They are reliable and consistent in going beyond the minimum expectation and in participating in activities that serve the greater good.

CRP2   Apply appropriate academic and technical skills

Career-ready individuals readily access and use the knowledge and skills acquired through experience and education to be more productive. They make connections between abstract concepts with real-world applications, and they make correct insights about when it is appropriate to apply the use of an academic skill in a workplace situation.

CRP4   Communicate clearly and effectively and with reason.

Career-ready individuals communicate thoughts, ideas, and action plans with clarity, whether using written, verbal, and/or visual methods. They communicate in the workplace with clarity and purpose to make maximum use of their own and others' time. They are excellent writers; they master conventions, word choice, and organization, and use effective tone and presentation skills to articulate ideas. They are skilled at interacting with others; they are active listeners and speak clearly and with purpose. Career-ready individuals think about the audience for their communication and prepare accordingly to ensure the desired outcome.

CRP6   Demonstrate creativity and innovation

Career-ready individuals regularly think of ideas that solve problems in new and different ways, and they contribute those ideas in a useful and productive manner to improve their organization. They can consider unconventional ideas and suggestions as solutions to issues, tasks or problems, and they discern which ideas and suggestions will add greatest value. They seek new methods, practices, and ideas from a variety of sources and seek to apply those ideas to their own workplace. They take action on their ideas and understand how to bring innovation to an organization.

CRP 7   Employ valid and reliable research strategies
Career-ready individuals are discerning in accepting and using new information to make decisions, change practices or inform strategies. They use reliable research process to search for new information. They evaluate the validity of sources when considering the use and adoption of external information or practices in their workplace situation.

CRP8   Utilize critical thinking to make sense of problems and persevere in solving them
Career-ready individuals readily recognize problems in the workplace, understand the nature of the problem, and devise effective plans to solve the problem. They are aware of problems when they occur and take action quickly to address the problem; they thoughtfully investigate the root cause of the problem prior to introducing solutions. They carefully consider the options to solve the problem. Once a solution is agreed upon, they follow through to ensure the problem is solved, whether through their own actions or the actions of others.

CRP9   Model integrity, ethical leadership and effective management
Career-ready individuals consistently act in ways that align personal and community-held ideals and principles while employing strategies to positively influence others in the workplace. They have a clear understanding of integrity and act on this understanding in every decision. They use a variety of means to positively impact the directions and actions of a team or organization, and they apply insights into human behavior to change others' action, attitudes and/or beliefs. They recognize the near-term and long-term effects that management's actions and attitudes can have on productivity, morals and organizational culture.

CRP11   Use technology to enhance productivity
Career-ready individuals find and maximize the productive value of existing and new technology to accomplish workplace tasks and solve workplace problems. They are flexible and adaptive in acquiring new technology. They are proficient with ubiquitous technology applications. They understand the inherent risks-personal and organizational-of technology applications, and they take actions to prevent or mitigate these risks.

CRP12   Work productively in teams while using cultural global competence
Career-ready individuals positively contribute to every team, whether formal or informal. They apply an awareness of cultural difference to avoid barriers to productive and positive interaction. They find ways to increase the engagement and contribution of all team members. They plan and facilitate effective team meetings.

STANDARD 8.1: EDUCATIONAL TECHNOLOGY: ALL STUDENTS WILL USE DIGITAL TOOLS TO ACCESS, MANAGE, EVALUATE, AND SYNTHESIZE INFORMATION IN ORDER TO SOLVE PROBLEMS INDIVIDUALLY AND COLLABORATE AND TO CREATE AND COMMUNICATE KNOWLEDGE.
8.1.12.A.1 Create a personal digital portfolio which reflects personal and academic interests, achievements, and career aspirations by using a variety of digital tools and resources.
8.1.12.A.2 Produce and edit a multi-page digital document for a commercial or professional audience and present it to peers and/or professionals in that related area for review.

8.1.12.A.3 Collaborate in online courses, learning communities, social networks or virtual worlds to discuss a resolution to a problem or issue.

8.1.12.A.4 Construct a spreadsheet workbook with multiple worksheets, rename tabs to reflect the data on the worksheet, and use mathematical or logical functions, charts and data from all worksheets to convey the results.

8.1.12.A.5 Create a report from a relational database consisting of at least two tables and describe the process, and explain the report results.

8.1.12.D.1 Demonstrate appropriate application of copyright, fair use and/or Creative Commons to an original work.

8.1.12.D.2 Evaluate consequences of unauthorized electronic access (e.g., hacking) and disclosure, and on dissemination of personal information.

III.   Proficiency Level

This course is open to grades 9-12.

IV.   Methods of Assessment

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

V.   Grouping

There are no prerequisites for this course.

VI.   Articulation/Scope & Sequence/Time Frame

This is a one semester course.

VII.   Resources

Resources include but are not limited to:

Teacher generated classwork and project assignments.

The teacher will use the Internet and other sources to find and build quality assignments to meet the curriculum guidelines, state standards, and students' needs.

Other Resources:
Business Math Using Excel by Sharon Burton and Nelda Shelton, Thomson South-Western
DDC Learning Computer Applications by Lisa Bucki, Pearson Education Inc.

DDC Learning Word Processing by Lisa Bucki, Pearson Education Inc.
DDC Learning Spreadsheets by Lisa Bucki, Pearson Education Inc.
Olinzock, Arney, et. al. *Integrated Business Projects* Thompson South-Western Publishing
Second Edition

VIII.   Suggested Activities

Integrate computer technology/applications with other academic assignments and incorporate public speaking using the computer as a visual device. Integrate research into formulating and designing projects utilizing advanced word processing and spreadsheet techniques. Utilize modern technologies to complete real world tasks. Aid students in being responsible digital citizens.

IX.   Methodologies

The following methods of instruction are suggested: group projects, demonstration, independent student class work, and class presentations.

X.   Interdisciplinary Connections

This course incorporates real-world math, reading, writing, speaking, listening and design skills using digital applications. The course follows the 21st Century Framework; incorporating life and career skills, the 4 C's (critical thinking, collaboration, communication, and creativity), and information, media and technology skills. The skills learned can be transferred in the use of assignments and projects across the curriculum.

XI.   Differentiating Instruction for Students with Special Needs: Students with Disabilities, Students at Risk, 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.

Differentiating in this course includes but is not limited to:

Differentiation for Support (ELL, Special Education, Students at Risk)
- Peer mentoring on problems
- Preferential seating
- Differentiated teacher feedback on assignments
- Tiered assignments
- Re-teaching and review
- Modification of content and student products

- Authentic assessments
- Teacher modeling
- Step by step instructions
- Questioning to check for understanding
- Real-world problems and scenarios
- References and videos posted online

Differentiation for Enrichment

- Tiered assignments
- Higher-order thinking skills
- Student-driven
- Real-world problems and scenarios
- Encourage student to revise and improve assignments
- Enhanced expectations for independent study

XII.   Professional Development

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

XII.   Curriculum Map/Pacing Guide

Unit Topic	Time Allocated	Differentiating Instruction for Students with Disabilities, Students at Risk of School Failure, English Language Learners, & Gifted & Talented Students	Standards	Assessments
Managing Files • Google Drive • Computer Hard Drive/ Student Server	1 week	*For Support:* • Teacher modeling • Step by step instructions • Real-world problems and scenarios • Preferential seating *For Enhancement:* • Real-world problems and scenarios	*Standards:* CRP2, CRP11	*Formative Assessment:* Teacher will check student files to make sure they are organized. *Summative Assessment:* Quiz: Hands-on to assess knowledge of menu toolbars, Google Drive settings and file organization.
Spreadsheets using Excel and Google Sheets • Create a spreadsheet • Move within a spreadsheet • Print a spreadsheet • Enter information in a spreadsheet • Work with formulas and functions • Format a spreadsheet • Enhance spreadsheets with automatic formats • Sort, filter and edit lists • Work with multi-sheet workbooks • Use a Pivot Table • Create, modify, and enhance charts • Set up print options	7 weeks	*For Support:* • Peer mentoring on problems • Differentiated teacher feedback on assignments • Re-teaching and review • Modification of content and student products • Authentic assessments • Teacher modeling • Step by step instructions • Questioning to check for understanding • Real-world problems and scenarios • References and videos posted online • Preferential seating *For Enhancement:* • Higher-order thinking skills • Real-world problems and scenarios • Encourage student to revise and improve assignments • Enhanced expectations for independent study	*Standards:* CRP2, CRP11 8.1.12.A.2, 8.1.12.A.4, 8.1.12.A.5	*Formative Assessment:* Classwork practice activities of all tasks in spreadsheets covered in unit topic. Google forms for vocabulary review. *Summative Assessment:* Quiz – students will be able to use a blank spreadsheet to answer forced-choice questions and solve problems. Project – students will be put in a real-life business situation to create and compile spreadsheets to solve problems for their company.

Unit Topic	Time Allocated	Differentiating Instruction for Students with Disabilities, Students at Risk of School Failure, English Language Learners, & Gifted & Talented Students	Standards	Assessments
Google Sites • Create a site • Tailor to a specific audience to create a professional site • Add, edit, enhance pages • Insert multimedia files • Share and Publish	2 weeks	*For Support:* • Peer mentoring on problems • Differentiated teacher feedback on assignments • Tiered assignments • Authentic assessments • Teacher modeling • Step by step instructions • Teacher generated review sheet • Real-world problems and scenarios • References and videos posted online • Preferential seating *For Enhancement:* • Tiered assignments • Higher-order thinking skills • Student-driven • Real-world problems and scenarios • Encourage student to revise and improve assignments • Enhanced expectations for independent study	*Standards:* CRP2, CRP4, CRP6, CRP7, CRP9, CRP11 8.1.12.A.1, 8.1.12.A.2, 8.1.12.A.4, 8.1.12.D.1, 8.1.12.D.2	*Formative Assessment:* Students will create an all about me website to illustrate their knowledge of tools and techniques. *Summative Assessment:* Students will create a website for a small business to demonstrate their use of tools, techniques, and professionalism. Benchmark – students will create a simple website, embed a spreadsheet they completed for the assessment.

Unit Topic	Time Allocated	Differentiating Instruction for Students with Disabilities, Students at Risk of School Failure, English Language Learners, & Gifted & Talented Students	Standards	Assessments
Word Processing using Word and Google Docs • Create various types of professional documents (letters, labels, brochures, newsletters, faxes, organizational charts) • Create, modify, enhance tables • Insert and format graphics into a document	7 weeks	*For Support:* • Peer mentoring on problems • Preferential seating • Differentiated teacher feedback on assignments • Authentic assessments • Teacher modeling • Step by step instructions • Real-world problems and scenarios • References and videos posted online *For Enhancement:* • Real-world problems and scenarios • Encourage student to revise and improve assignments • Enhanced expectations for independent study	*Standards:* CRP1, CRP2, CRP11 8.1.12.A.2, 8.1.12.A.5,	*Formative Assessment:* Classwork practice activities of all tasks in word processing covered in unit topic. Google forms for vocabulary review. *Summative Assessment:* Quiz – students will be able to use a blank word processing document to answer forced-choice questions and solve problems. Project – students will be put in a real-life business situation to create and compile documents to accomplish tasks for their company.

Unit Topic	Time Allocated	Differentiating Instruction for Students with Disabilities, Students at Risk of School Failure, English Language Learners, & Gifted & Talented Students	Standards	Assessments
Presentation Software Using PowerPoint and Google Slides • Insert and reorder slides • Use themes available and download new themes • Insert transitions and animation • Embed a video • Insert, edit, and enhance images following copyright laws **Integration of Platforms** Integrating word processing, spreadsheet, and presentation data for analysis.	3 weeks	*For Support:* • Preferential seating • Differentiated teacher feedback on assignments • Tiered assignments • Re-teaching and review • Modification of content and student products • Authentic assessments • Teacher modeling • Step by step instructions • Questioning to check for understanding • Real-world problems and scenarios • References and videos posted online *For Enhancement:* • Tiered assignments • Higher-order thinking skills • Student-driven • Real-world problems and scenarios • Enhanced expectations for independent study	*Standards:* CRP1, CRP2, CRP4, CRP6, CRP8, CRP9, CRP11, CRP12 8.1.12.A.1, 8.1.12.A.2, 8.1.12.A.3, 8.1.12.A.4, 8.1.12.A.5, 8.1.12.D.1, 8.1.12.D.2	*Formative Assessment:* Students work with a partner of their choice to create a slideshow to illustrate computer crimes and copyright law. *Summative Assessment:* Benchmark Project – Students will choose a research topic of their choice to create a slideshow presentation. It will be a culmination of the course content. The class presentation will integrate word processing, spreadsheet, and presentation data for analysis.