**Topic 2:**
Application software for text, graphics, and media

- Common user-interface features
- Common productivity features such as global control of format
- Named styles, tables of contents, indexes
- Creating and exporting graphics

**Application software**

- **Document preparation:** E.g., word processing, desktop publishing, web design
- **Spreadsheet:** Decision support with reusable cell-based formulas – VisiCalc (1970s-80s), Lotus 1-2-3, Excel
- **Presentation:** Slide preparation; e.g., PowerPoint
- **Database:** Information management, e.g., Access, Oracle
- Music, video editing, entertainment
- **Business:** horizontal (see above) and vertical market (vertical for specialization, e.g., dental-office management software)
Learning applications

- **Methods:** clicking around, blazing away, watching others
- When stuck, start over
- Focus on task to accomplish, not on means
- **Form follows function** — task dictates software behavior, similar apps have similar features, hence reuse your knowledge
- **Debugging:** overcoming erroneous results

Word-processing concepts

- boldface
- bullet
- character attribute
- document
- document layout
- export
- font
- form follows function
- highlight
- indent
- insert picture
- italic
- keep together
- keep with next
- landscape
- margin
- multi-column text
- multi-window view
- new page
- numbered list
- operating system
- outline format
- page header/footer
- pagination
- paragraph format
- picture box
- point size
- portrait
- print preview
- print queue
- program
- retrieve
- save
- scroll bar
- search
- search and replace
- sort
- spell checking
- style
- table
- table of contents
- text box
- text editing
- text file
- text formatting
- underline
- undo
- space before/after
- word count
**Word processing**

- Text editing and formatting
- Screen views
- Output to printer
- Storage/retrieval
- Export (.txt, .html)
- OCR input
- *Tools*: speller, macros, word count, drawing, table of contents
- Menu structure of MS Word

**Levels of text formatting**

- Document layout
- Section (with heading)
- Paragraph (technically, in Word, any text terminated with *Enter*; basic element for application of named styles)
- Sentence, line, word
- Character (font, color, style, super/subscript, strikeout)
Other elements

- Headings
- Bullets
- Numbered lists
- Outline text
- Page headers, footers, numbering (examples of *global control* of formatting)
- Tables
- Pictures
- Embedded documents (e.g., spreadsheet)

Document and paragraph formatting

- Document: layout (margins)
- Multi-column
- Paragraph
  - Indent (including hanging, first-line)
  - Vertical spacing before or after
  - Keep together, keep with next
  - Bullet
  - Enumeration
  - Left, center, right, justified
Named styles

- *Named style*: A standard format that is reusable because it may be invoked by name
- *Examples*: titles, subheads, paragraphs, bulleted text
- *Advantage*: Changing the definition of a style causes new definition to be applied to each instance where style is used
- A style may be associated with a function key for easy application
- If “Header 1” style is used, can generate automatic table of contents in MS Word

Tables of contents, indexes, tables

- To generate table of contents in MS Word, choose *Insert / Reference / Index and tables / Table of contents*
- To insert an index, mark each entry (highlight, ctrl-shift-X, see MS Word Help), then *Insert / Reference / Index and tables / Index*
- A *table* may be inserted (Table / Insert) or created by converting from text
Character formatting

- **Font**: a named design for a set of letters and other characters (e.g., Arial, Times)
- **Style**: ital, bf, underline, strikeout, superscript, subscript
- **Color**
- **Size**
- Word, sentence, line are formatted as groups of characters

Editing

- Cursor vs. mouse pointer
- Move cursor by character, word
- Select text by drag, double click
- Delete, insert, copy
- Undo
- Search, search/replace
- Spell check
- New page, new column
- Styles (editing enables global control)
Screen and printer output

- User controls zoom, window size, use of multiple windows
- Print view shows pages as they will appear on printer
- Printing controls
  - Device
  - Page selection
  - Number of copies
  - Orientation
  - Paper size

Storage, retrieval, capture

- *File Open, Save, SaveAs*
- Export to
  - HTML
  - `.txt`
  - `.rtf` (Rich Text)
  - `.pdf` (with Acrobat Pro)
- Text may be copied from many other applications, e.g., browser, by copying
- OCR enables capture of printed text
Presentation-graphics concepts

animate         outline view
design template  slide footer
design view      slide master view
drawing tools    slide number
.GIF file        slide-sorter view
handout format
handout master view

Global control of format

• In PowerPoint, *Master slide view* controls format of all slides
• Slide footers and numbering are controlled via master view
• *Templates* also enable control of master view (*Format / Slide layout*)
• Slide Sorter view enables getting overview of a slide show
Including graphics in documents

- Images with .gif, .wmf, .bmp, .tif formats may be inserted into Word, PowerPoint, other documents.
- Drawing tools and apps (e.g., line, oval, rectangle tools; WordArt in PPT; MS Paint) enable creation of editable vector graphics such as logos.
- A PowerPoint slide may be saved in graphical format and inserted into a document or slide show (*File / Save As* with file type: .GIF).

Discussion questions

1. What are attributes of an effective slide presentation?
2. How can a word-processor document be formatted to communicate well?
3. What are some features of your word-processing or presentation app that enable flexibility?
4. Compare MS Office with OpenOffice, Star Office, or some other office suite.
References