ENC 6257, Sec. 0W61 (91946)–Visual Technical Communication (3 credits)

Fall 2019 Syllabus

Instructor: Sonia Stephens
Office location: TCH 256A
E-mail: sonia.stephens@ucf.edu (preferred method)
Meeting date/time: WWW
Phone number: (407) 823-5596 (dept. office)
Skype: soniahstephens (by appointment)
Office hours: Tue 2:30-4:00, Wed 1:30-2:45, or by appointment either in person or via Skype.

Course Description
In this course, we will explore how to represent technical and professional information in visual formats. Visual technical communication includes charts, maps, tables, and diagrams, as well as full-page informational graphics that seamlessly blend text and visuals to tell complex data-based stories. This course will cover contemporary scholarship on visual technical communication and teach you to use digital tools to produce graphics.

We will begin with a broad introduction to the principles of graphic design and practice producing effective graphics that complement the text elements of documents. We will then study the rhetorical dimensions of visual design and learn to develop information graphics that inform or persuade audiences about complex technical or scientific topics. Throughout the course, we will consider the ethical responsibilities of visual technical communicators, and focus on developing visuals that help audiences find the information that they need for decision-making and deep individual exploration. The course concludes with a project in which you will plan, research, and create a full-page informational graphic on a technical or scientific topic of your choice.

Course Objectives:
• Learn about key visual genres for technical and scientific communication.
• Understand how to assess the decision-making and data exploration needs of different audiences.
• Practice gathering information, summarizing it, organizing it, and arranging it visually in ways that are appropriate for specific audiences and contexts.
• Examine contemporary scholarship of visual technical communication.
• Use digital tools to create graphics that inform and persuade.
• Learn about potential ethical issues in visual communication.

Required Texts:
• Matthew Butterick. *Butterick’s Practical Typography.* Matthew Butterick, 2014. (online at http://practicaltypography.com/) Note: while this is a free resource, I encourage you to give the author a small payment ($9) in the spirit of collegial ethics and supporting a design professional who is sharing his expertise.
• Additional journal articles will be accessed through our Webcourses site.

Required Resources:
• MS Excel or other spreadsheet software. Excel is free to all UCF students through UCF Apps. While you may use another application, I strongly encourage using Excel because: 1) it is ubiquitous in the workplace, and 2) some activities are based on Excel and its features and capabilities.
• Vector graphics software. I recommend Inkscape, a free open-source program. Adobe Illustrator (part of the Creative Cloud suite) is the industry standard, and if you have access to it you can use it instead. However, I recognize that its high cost may be prohibitive if you will only need it for this course. I will base class activities on Inkscape.
• Note: UCF students have free access to video tutorials on Lynda.com (register at lyndacampus.aa.ucf.edu). I strongly recommend using these tutorials if you are unfamiliar with the software that we will be using.

Course Policies

**Participation and late work:** I expect regular virtual “attendance.” It is very important that you check in several times a week and complete work and respond to messages promptly. Prolonged periods of inactivity on our course website (i.e., not logging in and using the site to access materials, read modules, or complete assignments) will penalize your final grade. Excessive inactivity may lead to automatic failure. In a web-based course, “attendance” also includes meeting the deadlines for turning in assignments.

I expect professionalism in online discussions. Sexist, racist, homophobic, or other derogatory remarks will not be tolerated. My top priority is to provide a safe environment for learning.

All assignments are due by the announced date and time except in the event of a medical or personal emergency, or for one of the following three reasons, which you should notify me about ahead of time:
- Religious holiday (please notify me during the first week of class)
- Authorized UCF/academic events (e.g., athletics, presenting work at an academic conference)
- Legal obligations (e.g., jury duty)

If you have a family or other personal emergency, notify me as soon as possible. Notifying me of a situation or problem after the fact prevents me from making alternative arrangements. If you are a deployed active duty military student and will need an accommodation for this, contact me as soon as possible to discuss your circumstances.

For non-excused late work, 10% (one letter grade) will be deducted for each 24-hour period late until a grade of F is reached.

If you have a family emergency or other unforeseen happening during the semester, notify me as soon as you can. Notifying me of a situation or problem after the fact makes it difficult for me to make alternative arrangements.

**E-mail do's & don’ts:** We will primarily be communicating via email. I encourage you to email me with any questions or concerns that you have. Webcourses allows you to select how often you want notifications of communication to be sent to your regular KnightsMail account. I suggest that you set it to send you notifications of Webcourses email and class announcements right away, so you can read and reply to them in a timely fashion.

Use common-sense e-mail etiquette to demonstrate your professionalism: e.g., include a salutation, use full sentences and capitalization, and be sure to sign your name. Any email with an attachment and blank body will be deleted due to security concerns.

**Financial aid activity:** In order to document that you began this course for UCF's financial aid reporting, please complete the introductory discussion post by the first Friday of the course at 5 p.m. (or as soon as possible when you add the course). Failure to do so will result in a delay in the disbursement of your financial aid.
**Academic honesty:** All work must be original by the student. Undocumented use of another’s words, ideas, data, images, or other media is plagiarism, as is allowing someone else to write or edit your work for you. We will spend some time during the course discussing issues of attribution as they relate to being inspired by another designer’s style or specific graphical examples.

If you are caught plagiarizing, depending on the severity, you will fail the assignment. You also risk automatically failing the course, disciplinary referral to the appropriate dean, and possible expulsion from UCF. See the UCF Rules of Conduct (osc.sdes.ucf.edu/process/roc) for more information. Material written for this course may be submitted to Turnitin.com at my discretion.

**Course Accessibility Statement:** UCF is committed to providing reasonable accommodations for all persons with disabilities. This syllabus is available in alternate format upon request. Students with disabilities who need accommodations in this course must contact the professor at the beginning of the semester to discuss needed accommodations. None will be provided until the student has met with the professor to request them. Students who need accommodations must be registered with Student Accessibility Services, Ferrell Commons 7F Room 187, phone (407) 823-2371, sas@ucf.edu.

**Copyright:** The materials used for this course may contain copyright-protected materials. These items are being used with regard to the Fair Use doctrine in order to enhance the learning environment. The use of these materials is strictly reserved for this online classroom environment and your use only.

**Mandatory reporting and UCF Cares:** As a professor, I have a mandatory reporting responsibility. If you share information with me about sexual misconduct or crimes that may have occurred on campus, I am required to contact the appropriate UCF student support agency. If you prefer to remain anonymous and are seeking resources or support for yourself, a friend, or a classmate, you can visit UCFCares.com for free services and information about a variety of student concerns. You can reach a UCFCares staff member at ucfcares@ucf.edu or call (407) 823-5607 between 8am and 5pm. If you are in immediate distress, UCF offers counselors 24/7 at (407) 823-2811 (then press #5).

**Campus Safety:** Most campus emergencies primarily affect courses that meet in person, but the following policies apply to students in online courses. In case of emergency, call 911. To stay informed about emergency situations, sign up for UCF text alerts at my.ucf.edu (“Student Self Service” > “Personal Information” > “UCF Alert”). If you have a special need related to emergency situations, please email me or talk to me during office hours. Consider viewing this UCF video about active shooter situations: goo.gl/ygJkjy (shortened link).

**University Writing Center:** The UWC is available for all students to assist with writing. See http://uwc.ucf.edu for details.

*Note: Changes to the syllabus or course schedule will be made at my discretion and will be announced via this site.*

**Grading**

Your grade will be determined by the following:

- **Participation & professionalism (3%):** Overall promptness and professionalism in responding to email, participating in class discussions, etc.
- **Software skills activities (10%):** During the first half of the course, we will do several activities to practice software skills.
- **Online discussions (16%):** Most weeks, we will have online discussions about class readings and example visualization projects. You will generally post an initial response, and then thoughtfully respond to at least one classmate’s post later by a specified date.
• Project #1 (15%): Completion of a visualization project and short project reflection (3% for a draft and peer feedback; 12% for finished project).
• Project #2 (15%): Completion of a visualization project and short project reflection (3% for a draft and peer feedback; 12% for finished project).
• Final project proposal (9%): Describe your plan for your final project, including topic, audience, format, and data sources.
• Final visualization project (18%): You will research and construct a full-page information visualization using data of your choice (3% for a draft and peer feedback; 15% for finished project).
• Final project reflection paper (14%): This will be a 2000-2250 word paper describing the design process and rationale for your project.

Grade Scale (%): 94-100 = A    93-90 = A-    89-87 = B+    86-83 = B    82-80 = B-    79-77 = C+    76-73 = C    72-70 = C-  69-67 = D+  66-63 = D  62-60 = D-  >60 = F
No Incompletes or extra credit will be given in this course.

Written Grading Standards:
• An A text is exceptional. It is professional and reflects the writer's careful consideration of audience and purpose. It contains the required elements of the assignment, is written in an appropriate and engaging style, is arranged in a logical manner, is memorable, and its delivery is visually appealing. It is free of mechanical errors.
• A B text is strong. It contains all required elements of the assignment and reflects consideration of the rhetorical situation. It is generally above average in terms of the criteria mentioned above, but falls short of excellence in one or more category. It has only minor mechanical errors.
• A C text is competent. It contains all required elements of the assignment. It is generally average in terms of the major criteria listed above. It has a few mechanical errors.
• Low C or D work is weak. It does not include the required elements of the assignment and it falls below average in terms of one or more of the major criteria.
• F work fails in terms of one or more of these criteria.
## Class schedule (subject to change)

<table>
<thead>
<tr>
<th>Week 1</th>
<th>Aug 26-30</th>
</tr>
</thead>
</table>
| • **Course introduction**  
• Read: Dragga & Voss; Lancaster  
• Discuss: Course introduction  
• Do: Introduction to Inkscape (or alternative)  
• Drop/swap deadline 8/29; Add deadline 8/30 |

<table>
<thead>
<tr>
<th>Week 2</th>
<th>Sep 2-6</th>
</tr>
</thead>
</table>
| • **Data display I**  
• Read: Few Ch 1 (Introduction); Cairo Ch 1 (From Information to Wisdom), Ch 2 (Visualization as a Technology)  
• Discuss: Dear Data  
• Do: Inkscape–page layout and the grid  
• Holiday: 9/2 |

<table>
<thead>
<tr>
<th>Week 3</th>
<th>Sep 9-13</th>
</tr>
</thead>
</table>
| • **Data display II**  
• Read: Few Ch 2 (Simple Statistics to Get You Started), Ch 3 (Differing Roles of Tables and Graphs), Ch 4 (Fundamental Variations in Tables)  
• Discuss: Tables and charts  
• Do: Excel–spreadsheets, descriptive stats |

<table>
<thead>
<tr>
<th>Week 4</th>
<th>Sep 16-20</th>
</tr>
</thead>
</table>
| • **Data storytelling: theory**  
• Read: Cairo Ch 3 (The Beauty Paradox: Art and Communication), Ch 4 (The Complexity Challenge: Presentation and Exploration)  
• Discuss: Data-driven storytelling  
• Do: Excel–making charts |

<table>
<thead>
<tr>
<th>Week 5</th>
<th>Sep 23-27</th>
</tr>
</thead>
</table>
| • **Perception and cognition**  
• Read: Few Ch 5 (Visual Perception and Graphical Communication); Cairo Ch 5 (The Eye and the Visual Brain), Ch 6 (Visualizing for the Mind), Ch 7 (Images in the Head)  
• **Draft project 1 & peer review discussion** |

<table>
<thead>
<tr>
<th>Week 6</th>
<th>Sep 30-Oct 4</th>
</tr>
</thead>
</table>
| • **Data display III**  
• Read: Few Ch 6 (Fundamental Variations of Graphs), Ch 7 (General Design for Communication), Practice in selecting tables and graphs  
• **Project 1 Due** |

<table>
<thead>
<tr>
<th>Week 7</th>
<th>Oct 7-11</th>
</tr>
</thead>
</table>
| • **Tables & type**  
• Read: Few Ch 8 (Table Design), Practice in table design; Butterick (selections)  
• Discuss: Rhetoric and text  
• Do: Inkscape–charts |

<table>
<thead>
<tr>
<th>Week 8</th>
<th>Oct 14-18</th>
</tr>
</thead>
</table>
| • **Graph design I**  
• Read: Few Ch 9 (General Graph Design), Ch 10 (Component Level Graph Design)  
• Discuss: Misleading graphs  
• Do: creating tables/graphs from data sources |

<table>
<thead>
<tr>
<th>Week 9</th>
<th>Oct 21-25</th>
</tr>
</thead>
</table>
| • **Graph design II**  
• Read: Few Ch 11 (Displaying Many Variables at Once), Ch 12 (Silly Graphs that are Best Forsaken), Practice in graph design  
• Discuss: graphical stories  
• **Draft project 2 & peer review discussion** |

<table>
<thead>
<tr>
<th>Week 10</th>
<th>Oct 28-Nov 1</th>
</tr>
</thead>
</table>
| • **Data storytelling: practice**  
• Read: Few Ch 13 (Telling Compelling Stories with Numbers), Ch 14 (The Interplay of Standards and Innovation); Cairo Ch 8 (Creating Information Graphics)  
• Discuss: Final project thoughts  
• Withdrawal deadline 11/1  
• **Project 2 due** |
<table>
<thead>
<tr>
<th>Week 11</th>
<th>Nov 4-8</th>
</tr>
</thead>
</table>
| • **Interactive graphics**  
  • Read: Cairo Ch 9 (The Rise of Interactive Graphics); Segel & Heer  
  • Discuss: Interactive graphics |

<table>
<thead>
<tr>
<th>Week 12</th>
<th>Nov 11-15</th>
</tr>
</thead>
</table>
| • **Ethical perspectives**  
  • Read: Evergreen; Hepworth & Church  
  • Discuss: Ethical issues in data visualization  
  • **Project proposal due**  
  • Holiday: 11/11 |

<table>
<thead>
<tr>
<th>Week 13</th>
<th>Nov 18-22</th>
</tr>
</thead>
</table>
| • **Maps and rhetoric**  
  • Read: Propen; Eichberger  
  • Discuss: Maps and rhetoric |

<table>
<thead>
<tr>
<th>Week 14</th>
<th>Nov 25-29</th>
</tr>
</thead>
</table>
| • **Maps and narrative**  
  • Read: Bodenhamer; Hayman et al.  
  • Discuss: Narrative mapping  
  • Holiday 11/27 - 11/29 |

<table>
<thead>
<tr>
<th>Week 15 + exam week</th>
<th>Dec 2-11</th>
</tr>
</thead>
</table>
| • **Perspectives on visual technical communication**  
  • Draft final project & peer review discussion (due 12/2)  
  • Final project and reflection paper assignments due (12/9) |