# Course Syllabus

**Visual Analytics DSBA 5122**

Fall 2022, 12:00-2:45pm Mondays, Center City 1101

**Instructors:** Wenwen Dou, [wdou1@uncc.edu](mailto:wdou1@uncc.edu); Doug Hague, [dhague@uncc.edu](mailto:dhague@uncc.edu)

**Teaching Assistant:** Ronak Choksi, [rchoksi2@uncc.edu](mailto:rchoksi2@uncc.edu)

Proposed schedule

<table>
<thead>
<tr>
<th>Date/Time</th>
<th>Topic</th>
<th>Assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>8/22/2022</td>
<td>Introduction to visual analysis and analytical storytelling</td>
<td></td>
</tr>
<tr>
<td>8/29/2022</td>
<td>Introduction to R and ggplot</td>
<td>ggplot Assignment</td>
</tr>
<tr>
<td>9/5/2022</td>
<td>Labor Day – No Classes</td>
<td></td>
</tr>
<tr>
<td>9/12/2022</td>
<td>Effective visuals - Color, Tableau tutorial I</td>
<td>Tableau Assignment</td>
</tr>
<tr>
<td>9/19/2022</td>
<td>Effective visuals – Reducing clutter, Tableau tutorial II</td>
<td></td>
</tr>
<tr>
<td>9/26/2022</td>
<td>Developing your story (theory), Developing your story (example)</td>
<td>Flipgrid video recording</td>
</tr>
<tr>
<td>10/3/2022</td>
<td>Cognitive aspects of visualization, Multi-dimensional Visualization</td>
<td>Midterm presentations</td>
</tr>
<tr>
<td>10/10/2022</td>
<td>Student Recess – No Classes</td>
<td></td>
</tr>
<tr>
<td>10/17/2022</td>
<td>IEEEVIS Conference 2022</td>
<td></td>
</tr>
<tr>
<td>10/24/2022</td>
<td>Midterm Presentations</td>
<td>Case study writeup instructions out</td>
</tr>
<tr>
<td>10/31/2022</td>
<td>Case study discussions</td>
<td>Hiring by machines</td>
</tr>
</tbody>
</table>
- Assignments are small problem sets designed to reinforce the concepts learned in the lectures.
  - Participation (5pts) - Share two or more visualizations and storytelling examples of your choice with the class.
  - R ggplot2 Assignment (10pts) - visualization exercise with ggplot in R.
  - Tableau assignment (10pts) – Creating visualizations in Tableau
  - Flipgrid video recording assignment (10pts) - video record a short presentation to understand your style and areas for improvement
  - Lessons learned from attending a session in the IEEE Visualization Conference (5pts)
  - Case study write up (10pts) - read a case study about "Hiring by Machine" and writing down your thoughts before discussions in class
  - Vega-lite assignment (10pts) - Embed Vega-lite visualizations in a webpage.
  - Extra Credit Assignment*: 5 extra credit
    *The extra credit assignment is a user study you volunteer to participate.

- Mid-term Presentation (15pts) – Combining visualization and analytical storytelling to convey a clear message
  - Final Project (20pts) – Developing visualizations on a real-world dataset with a tool of your choice (R/ggplot, Tableau, Vega-lite, Python, D3.js, etc.)
Visualization and analytical storytelling demo/presentation (10pts)
Final project report (10pts)

**Schedule Subject to Change:** The standards and requirements set forth in this plan may be modified by the course instructor. Notice of such changes will be made in advance and by announcement in class.

**Textbook (recommended but not required)**

  Links to an external site.
  Links to an external site.

**Supplemental Reading**


**Visualization Blogs**

- Visualizing data by Andy Kirk: [visualisingdata.com](http://visualisingdata.com)
- FLOWINGDATA by Nathan Yau: [https://flowingdata.com/](https://flowingdata.com/) The Tutorials section provides good examples for developing data visualizations.
- KANTAR Information is Beautiful Awards: [https://www.informationisbeautifulawards.com](https://www.informationisbeautifulawards.com) Annual awards celebrate excellence and beauty in data visualizations, infographics, interactives & information art

**Grading Policy**

- Grading Scale:
  - A (Excellent) = 90.00% – 100.00%
• B (Good) = 80.00% – 89.99%
• C (Fair) = 70.00% – 79.99%
• D (Passing) = 60.00% – 69.99%
• U (Failing) = below 60%

Faculty may ask students to produce identification at examinations and may require students to demonstrate that graded assignments completed outside of class are their own work.