# 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>
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</thead>
<tbody>
<tr>
<td>8/22/2022</td>
<td>Introduction to visual analysis and analytical storytelling</td>
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<tr>
<td>8/29/2022</td>
<td>Introduction to R and ggplot</td>
<td>ggplot Assignment</td>
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<tr>
<td>9/5/2022</td>
<td>Labor Day – No Classes</td>
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<tr>
<td>9/12/2022</td>
<td>Effective visuals - Color, Tableau tutorial I</td>
<td>Tableau Assignment</td>
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<tr>
<td>9/19/2022</td>
<td>Effective visuals – Reducing clutter, Tableau tutorial II</td>
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<tr>
<td>9/26/2022</td>
<td>Developing your story (theory), Developing your story (example)</td>
<td>Flipgrid video recording</td>
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<td>10/3/2022</td>
<td>Cognitive aspects of visualization, Multi-dimensional Visualization</td>
<td>Midterm presentations instruction out</td>
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<tr>
<td>10/10/2022</td>
<td>Student Recess – No Classes</td>
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<tr>
<td>10/17/2022</td>
<td>IEEEVIS Conference 2022</td>
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<tr>
<td>10/24/2022</td>
<td>Midterm Presentations</td>
<td>Case study writeup instructions out</td>
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<tr>
<td>10/31/2022</td>
<td>Case study discussions</td>
<td>Hiring by machines</td>
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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)


Supplemental Reading


Visualization Blogs

- Visualizing data by Andy Kirk: visualisingdata.com
- FLOWINGDATA by Nathan Yau: https://flowingdata.com/. The Tutorials section provides good examples for developing data visualizations.
- KANTAR Information is Beautiful Awards: 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.*