The University of Washington is proud to be one of the nation's premier educational and research institutions. UW Professional & Continuing Education, delivered by Continuum College (UWC²), offers certificate programs and degrees to working professionals in the evenings, weekends and online. UWC² has a range of outstanding opportunities for instruction and curriculum development for the three courses within the:

**CERTIFICATE IN DATA ANALYTICS: TOOLS FOR DECISION MAKING**

The certificate program is designed for professionals who have completed at least one college-level statistics course and have basic SQL skills to access, join, view and model data. While the minimum requirement for students is two years of professional work experience, many have significant experience working with database systems, doing analysis or writing code.

In this program, students master the essentials of the data analysis process. They gain fluency in statistics, Excel, Power BI, Azure Machine Learning Studio and R programming and apply these tools using data from multiple sources to find insights, build dashboards and make predictions. Students graduate prepared to do data analytics at a departmental or functional application level.

**FOUR FORMATS**

This program is offered in four formats:

- **Online, self-paced** – Students start any time and move through at their own pace with up to 4 months to complete each course. There are no class meetings or fixed deadlines.
- **Online, group-paced** – Students start and finish program as a group with opportunities to interact with instructors and classmates through real-time office hours, discussion boards and projects. Assignments have fixed deadlines.
- **Classroom** – Students attend class in downtown Seattle or Bellevue one night a week.
- **Classroom, accelerated** – Students move through the program more quickly, generally with two class meetings per week.

**INSTRUCTIONAL ROLES**

There are three types of roles available. All roles are part-time and designed to accommodate professionals who work during business hours. Please see tables below for specific openings.
• **Course Instructor** – Share and grow your skills by teaching a set curriculum in any one of four formats described above.

• **Instructional Assistant** – Develop your knowledge and experience by serving as an instructional assistant to coach and teach students online or in the classroom.

### COURSE TOPICS AND JOB OPENINGS

**Course 1: Data Analysis Essentials**

<table>
<thead>
<tr>
<th>Topics</th>
<th>Current Job Openings</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Data analysis processes to select, wrangle and explore data and draw conclusions</td>
<td><strong>Instructional Assistant</strong></td>
</tr>
<tr>
<td>• Key practices for turning business questions into addressable data analysis questions</td>
<td>Self-paced online</td>
</tr>
<tr>
<td>• Programming syntax and practices to acquire, wrangle, visualize and analyze data</td>
<td>Oct 2018-April 2019</td>
</tr>
<tr>
<td>• Core statistical methods and measures for analysis</td>
<td><strong>Instructor</strong></td>
</tr>
<tr>
<td>• Basics of drawing conclusions, predicting outcomes and classifying data</td>
<td>Classroom</td>
</tr>
<tr>
<td></td>
<td>Oct-Dec 2018</td>
</tr>
<tr>
<td><strong>How Course is Taught</strong></td>
<td><strong>Instructor</strong></td>
</tr>
<tr>
<td>• Use advanced features of Microsoft Excel, Jupyter Notebooks and R programming with latest packages</td>
<td>Classroom accelerated</td>
</tr>
<tr>
<td>• Import and wrangle data using SQL &amp; R programming</td>
<td>Feb-Mar 2019</td>
</tr>
<tr>
<td>• Visualize and analyze data with R programming</td>
<td><strong>Instructional Assistant</strong></td>
</tr>
<tr>
<td>• Test hypothesis and use inferential statistics</td>
<td>Self-paced online</td>
</tr>
<tr>
<td>• Create basic machine learning regression and classification models using R programming</td>
<td>Dec 2018-April 2019</td>
</tr>
</tbody>
</table>

**Course 2: Data Visualization Essentials**

<table>
<thead>
<tr>
<th>Topics</th>
<th>Current Job Openings</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Data preparation processes and techniques for visualization</td>
<td><strong>Instructional Assistant</strong></td>
</tr>
<tr>
<td>• Methods of visual discovery, pattern recognition, and analysis for large data sets</td>
<td>Self-paced online</td>
</tr>
<tr>
<td>• User adoption and design-thinking principles for effective visual design</td>
<td>Dec 2018-April 2019</td>
</tr>
<tr>
<td>• Visual storytelling practices using charts and infographics</td>
<td><strong>Instructor</strong></td>
</tr>
<tr>
<td>• How to create dashboards and scorecards to power ongoing organizational effectiveness</td>
<td>Seattle Classroom</td>
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<tr>
<td></td>
<td>Jan-Mar 2019</td>
</tr>
<tr>
<td><strong>Instructor</strong></td>
<td><strong>Instructor</strong></td>
</tr>
<tr>
<td>Classroom accelerated</td>
<td>Bellevue Classroom –</td>
</tr>
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<td></td>
<td>Jan-Mar 2019</td>
</tr>
</tbody>
</table>
How Course is Taught

- Use advanced analytical features and add-ins of Microsoft Excel and Power BI to create data visualization and infographics
- Write basic code and statistical functions using R Programming to wrangle and visually explore data
- Build dashboards with supporting data model using SQL, R and Power BI for final project

Instructor
Group-paced online
Mar-Jun 2019

Instructor
Seattle Classroom accelerated
Mar-Apr 2019

Instructional Assistant
Seattle Classroom accelerated
Mar-Apr 2019

Course 3: Data Mining & Predictive Analytics Essentials

<table>
<thead>
<tr>
<th>Topics</th>
<th>Current Job Openings</th>
</tr>
</thead>
</table>
| • Essential data mining and machine learning concepts  
• Methods of regression, cluster and decision tree analysis  
• Unsupervised and supervised learning models  
• Intermediate R program skills utilizing latest packages and features | Instructor  
Self-paced online  
Feb – Aug 2019  

Instructional Assistant  
Self-paced online  
Feb – June 2019  

Instructor  
Seattle Classroom  
Mar - June 2019  

Instructor  
Seattle Classroom accelerated  
May - June 2019  

Instructional Assistant  
Seattle Classroom accelerated  
May - June 2019  

How Course is Taught

- Use Microsoft Azure Machine Learning Studio to do predictive analytics using machine learning models
- Write R and SQL code to complete data mining and predictive analytics projects

SKILLS AND EXPERIENCE REQUIRED

- 3 or more years of experience with the tools and languages listed in the respective course descriptions applied to data analytics that have made an impact on an organization
- Demonstrated knowledge and skill in statistical analysis (through education and/or profession)
- For course 2, additional subject matter expertise and experience in data visualization required
- For course 3, additional machine learning and data mining expertise and experience required
- Undergraduate degree required, advance degree preferred, in a relevant field
- Teaching experience desired
- Legal authorization to work and receive compensation in the United States

Note: Instructional Assistants do not need as many years of experience as indicated above.
APPLY

Interested applicants should send a resume or LinkedIn profile and letter of interest describing relevant experience, preferred course and role to the Program Manager, Lalitha Subramanian, lalithas@uw.edu.

The University of Washington is a leader in environmental stewardship & sustainability, and committed to becoming climate neutral.

The University of Washington is an equal opportunity, affirmative action employer. To request disability accommodation in the application process, contact the Disability Services Office at 206-543-6450 / 206-543-6452 (tty) or dso@uw.edu.