

## **CALL FOR INSTRUCTORS**

### **Business Intelligence and Data Analytics**

#### **Position Summary:**

The Division of Continuing Studies is interested in developing long-term relationships with superior instructors who have high professional standards, excellent communication skills, enthusiasm and a commitment creating learning experiences immersed in adult education principles.

We are seeking professionals who desire the opportunity to share their knowledge and experience in the field of business intelligence and data analytics with mid-career professionals from across diverse sectors and industry. Our students are seeking the knowledge and skills to expand their career options to enhance their current knowledge, skills and abilities.

We are seeking a team of instructors for five non-credit, professional development courses, using two different delivery modalities:

#### **Essential Functions:**

- Develops and provides students with an approved Division of Continuing Studies syllabus based on the provided course description and learning outcomes, including detailed assignment dates, descriptions, rubrics, schedule and list of readings and resources.
- Organizes, prepares, and regularly revises and updates all course material.
- Uses appropriate technological options for course-related software.
- Models effective oral and written communications that engage the students, provide clarity, and provide a rich learning environment for participants.
- Ensure all content delivered corresponds with overall course learning outcomes.
- Demonstrates consistency and fairness in the preparation and grading of submitted work and ensures that feedback is timely.

#### **Preferred Requirements**

- Demonstrated subject matter experience and expertise in the field of business intelligence or data analytics;
- Undergraduate degree in a related field (Computer Science, Mathematics, Engineering, Statistics, etc.); Master's preferred
- Instructional experience; experience with adult or non-traditional learners is considered an asset;
- Excellent communication and facilitation skills.

**Course Descriptions and Learning Outcomes are included on pages 2, 3 and 4 of this posting.**

Kindly submit a CV together with a Letter of Intent to, Nancy Aubut, Senior Program Coordinator at [bidacoord@uvic.ca](mailto:bidacoord@uvic.ca).

## **BIDA301 Business Intelligence and Data Analytics Fundamentals**

Prerequisites: None

Become proficient in fundamentals of Business Intelligence and Data Analytics. This course will provide the framework for you to understand, use and evaluate a variety of techniques and skills in analyzing data sets and making appropriate interpretations of the data.

Upon completion of this course, you will be able to:

- Explain the fundamentals of business intelligence and data analytics.
  - Describe the abilities and limitations of Excel in Data Analytics.
  - Evaluate different techniques and tools that can be used in Business Intelligence and Data Analytic activities.
  - Describe the differences and applications of descriptive and inferential statistics.
  - Appropriately apply fundamental statistical logic to data interpretation.
  - Apply fundamental data analytic heuristics.
  - Effectively make insights from data.
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## **BIDA302 Data Analytics Coding Fundamentals**

Prerequisites: None

In this course you will develop the fundamentals of coding and scripting for Data Analytics. You will develop the ability to script and code for basic tasks in Data Analytics in common data analytic tools such as R, Python, and Excel. This will allow you to import and export data appropriately and perform fundamental data manipulations and to automate basic analysis elements.

Upon completion of this course, you will be able to perform the following basic tasks in R, Python, and Excel:

- Perform basic data manipulations
  - Create variables
  - Apply key concepts of variables, constants and functions
  - Calculate descriptive statistics
  - Perform basic logical formula functions
  - Group and ungroup data
  - Data Importing
  - Data Exporting
  - Extract and combine data
  - Create what-if scenarios
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## **BIDA404 Data Visualization and Reporting**

Prerequisites:

- Basic coding in R or Python;
- plus Formulas in Excel; OR
- BIDA301 Business Intelligence and Data Analytics Fundamentals or BIDA302 Data Analytics Coding Fundamentals

Develop your skills in Data Visualization and Reporting. Learn how to use common industry reporting and visualization tools such as Excel, Tableau, PowerBi and Shiny. You will also learn how to evaluate strengths and weaknesses of various data representation techniques and the fundamentals of dashboard design for various types of monitoring, analyzing and reporting.

Upon completion of this course, you will be able to:

- Recognize the difference in purpose between real-time reporting, scheduled reporting and on-demand reporting.
- Evaluate different strengths and weaknesses of various data representation techniques and demonstrate how these representations assist with decision-making.
- Apply heuristics to 'report design' based on need.
- Apply BI fundamentals of goals, objectives, measures, metrics, KPIs, performance statistics.
- Apply judgment to data visualization regarding ethical concerns and practices.
- Perform the following basic tasks in Excel, PowerBI, Shiny, Tableau and Python:
  - Import cleaned and compiled data;
  - Perform conditional formatting functions;
  - Present data in usable charts, graphs and tables to enable effective interpretation; and
  - Create dashboards and reports to meet specific user needs.

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## **BIDA405 Data Analytics Provisioning, Importing, Extracting and Manipulation**

Prerequisites:

- Basic coding in R or Python;
- plus Formulas in Excel; OR
- BIDA301 Business Intelligence and Data Analytics Fundamentals

Advance your skills in Data Analytics Provisioning and Manipulation. Learn how to import, extract, scrape, clean, compile, manipulate and export data in common industry tools such as R, Python and JavaScript. Learn how to construct scripts to solve problems and apply safeguards to data for privacy and security in a data analytics framework.

Upon completion of this course, you will be able to:

- Construct complex scripts in R, Python and JavaScript to solve problems.
  - Apply appropriate safeguards for data privacy and security.
  - Perform the following basic tasks in R, Python, and JavaScript as appropriate:
    - Import and export data
    - Clean data
    - Compile data
    - Extract data
    - Manipulate data
    - Prepare data for visualization and reporting
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## **BIDA406 Predictive Data Analytics and Modelling**

Prerequisites:

- Proficient coding in R, Python and JavaScript;

or

- BIDA405 Data Analytics Provisioning, Importing, Extracting and Manipulation

plus

- BIDA301 Business Intelligence and Data Analytics Fundamentals
- BIDA404 Data Visualization and Reporting recommended

Learn how to advance your data analytic skills to modelling. Using standard, industry-accepted informatics tools, you will design and create descriptive, diagnostic and predictive models. Learn how to translate stakeholder needs into model designs and understand the ethical implications of the analytical models you use.

Upon completion of this course, you will be able to:

- Use data analytic and presentation tools to model problems with moderate to advanced complexity.
- Create predictive analytic techniques for simple to moderate data relationships.
- Compare diagnostic and predictive models.
- Analyze data using a diagnostic model.
- Explain forms of time series models and strengths and weaknesses of each.
- Create a time series model for a case study.
- Differentiate the ethical implications of modeling and predictive analytics.
- Assess stakeholder needs in modelling and predictive analytic designs.