

# Job Description

---

<b>Job Title:</b>	Data Analyst
<b>Department:</b>	Faculty of Engineering, Dean's Office
<b>Reports To:</b>	Director, Strategic Initiatives and Integrated Planning
<b>Jobs Reporting:</b>	None
<b>Salary Grade:</b>	USG 10
<b>Effective Date:</b>	June 2023

---

## **Primary Purpose**

Under the direction and guidance of the Director, Strategic Initiatives and Integrated Planning (“Director”), the Data Analyst (DA) is responsible for the development of databases, models, analyses, and reporting as well as communicating the results of analyses internal and external to the Faculty of Engineering. The Data Analyst will proactively contribute to providing data, advice, analytical and planning support to the Senior Leadership of the Faculty of Engineering to inform policy development, strategic planning, financial planning, decision-making and priority-setting.

## **Key Accountabilities**

### **Data Analysis and Support**

- Develops and prepares analytical models, reports and relevant data visualizations (including dashboards, graphs, presentations and web applications) to inform evidence-based decision-making at the University.
- Supports the implementation of the Waterloo Budget Model and the Engineering Budget Model, prepares analysis, and facilitates financial transactions (e.g. budget transfers) as required
- Supports indicator development and ongoing reporting for the Faculty of Engineering for operational and strategic measures.
- Analyzes trends and patterns in university performance over time using various benchmarks and comparative data
- Prepares annual and customized reports and presentations for senior leadership and university governance bodies, including monitoring student enrolment, retention and graduation rates, student survey outcomes, etc.
- Prepares standard and customized reports and accountability submissions to external bodies, such as Engineers Canada.

### **Institutional Data Management**

- Ensures that Faculty data is accurate, consistent, properly maintained and shared in compliance with relevant privacy protection, confidentiality and other ethical principles.
- Identifies and addresses data integrity/reliability issues and uses data cleaning processes to achieve required data quality standards.
- Works with large data sets to perform data mining and complete statistical analyses.
- Transforms, synthesizes, and cleanses data: identifies opportunities to reduce duplication and errors and to ensure consistency in data; identifies data integrity issues and proposes data cleansing processes to develop clear and consistent data quality standards.
- Designs and develops user interfaces for accountability reporting using web applications and best practices in data visualization, for example, PowerBI
- Helps lead the adoption and standardization of new data analysis tools and techniques, in partnership with stakeholders across campus.
- Works in partnership with the Director to automate data administrative processes as applicable.

# Job Description

## **Communication**

- Develops accurate graphs, reports, dashboards and presentations to convey complex information in an understandable and compelling manner.
- Creates business/analytical models and related user interfaces that allow stakeholders to self-serve and explore planning parameters.
- Ensures data and information is placed into the proper context by combining Faculty of Engineering data with both qualitative and quantitative environmental/external data and appropriate narrative.
- Communicates with technical and non-technical users to gather data and data system requirements, reporting requirements, consolidate and document technical data requirements, transform data into visualizations, and assist with project planning.
- Ensures timely communication of data to internal and external users as appropriate.
- Serves on University, and as appropriate, non-University committees and groups, offering data and analytical expertise and fostering data information sharing and collaborative approaches on a variety of projects.
- Liaises with other departments within Engineering and campus-wide, providing data, support and expertise to inform decision making
- Develops compelling narratives through data analysis; supports marketing and advancement initiatives

## **Evaluation, Reporting and Planning**

- Uses various quantitative and qualitative research methods to administer surveys, develop sampling procedures, analyze survey results, or to gather and analyze data for special requests.
- Maintains data to evaluate the Faculty's progress towards strategic goals and priorities, and/or routine monitoring of institutional performance.
- Develops and maintains databases; creates standard operating procedures for data maintenance and storage with appropriate documentation.
- Works with the Director to support the preparation of the annual Faculty of Engineering budget.
- Support to enrolment planning and forecasting initiatives in relation to both short and long range planning efforts, revenue projections, and resource allocation decisions.

## **Leadership, Relationships and Collaboration**

- Maintain current knowledge of best practices across all domains of the role, in the post-secondary sector and beyond, to effectively advise Faculty leadership.
- Research new tools, systems, and practices to recommend improvements across all domains of the role
- Develop and nurture effective relationships with offices and individuals across the Faculty and University involved in the development, provision, maintenance, and use of data systems and tools and in the interpretation and implementation of operational policies and guidelines.
- Understand the needs of each stakeholder group in order to assess and scope projects fully and to make recommendations on timelines and priorities for each.
- Communicate effectively with multiple, varied clients (senior leadership, faculty members, and staff) to understand needs, scope projects and project terms, update progress, and present findings.

\*All employees of the University are expected to follow University and departmental health and safety policy, procedures and work practices at all times. Employees are also responsible for the completion of all health and

# Job Description

safety training, as assigned. Employees with staff supervision and/or management responsibilities will ensure that assigned staff abide by the above, and actively identify, assess and correct health and safety hazards, as required.

## Required Qualifications

### **Education**

- Bachelors degree in Statistics, Economics, Computer Science, Social Science Research, or a combination of equivalent experience and education

### **Experience**

- 3+ years of demonstrated experience with mathematical, statistical and analytical methods, such as regression analysis and significance testing working with large and complex data sets
- 3+ years of project management experience

### **Knowledge/Skills/Abilities**

- Superior data management, manipulation, interpretation, and analysis skills.
- Excellent written and verbal skills for procedural documentation and demonstrated experience with report writing.
- Ability to work independently and as part of a team.
- Ability to manage large workloads and prioritize competing deadlines.
- Taking initiative and be proactive.
- Knowledge and capabilities of a variety of reporting and data visualization tools, such as Power BI.
- Knowledge and capabilities of Sharepoint and other web development applications
- Advanced Excel capabilities.
- Ability to apply, identify and use a combination of quantitative and qualitative research methods.

## Nature and Scope

- **Contacts:** Broadly based, across Faculty and across Campus; ability to influence and motivate others, and to address potentially sensitive matters
- **Level of Responsibility:** The position is responsible and accountable for the overall results of this area
- **Decision-Making Authority:** Responsible and accountable for establishing the priorities for projects as assigned and addressing the changes requested by consulting with the Director, or relevant working groups as appropriate.
- **Physical and Sensory Demands:** Minimal, typical for administrative position in office environment
- **Working Environment:** Minimal exposure to disagreeable conditions typical of an office position