

# **ANL203 Analytics for Decision-Making**

**Level:** 2

**Credit Units:** 5 Credit Units

**Language:** ENGLISH

**Presentation Pattern:** EVERY SEMESTER

## **Synopsis:**

ANL203 Analytics for Decision-Making aims to equip students with the knowledge and skills to discern how different analytics techniques can be used to generate useful information for decision-making. The course introduces various analytical techniques like visualization, statistics, data mining, text mining and forecasting. Cases will be used extensively and students will also be exposed to some of the software used in selected analytical techniques.

## **Topics:**

- Overview of Big Data
- Hadoop vs traditional databases to support Big Data
- CRISP-DM [Cross-Industry Process for Data Mining] framework
- Statistics
- Visualisation and reporting for organisations
- Concept of association analysis and its use in decision-making
- Concept of clustering and its use in decision-making
- Concept of predictive modelling and its use in decision-making
- Use of text mining to support decision-making
- Overview of Data Government Framework

## **Textbooks:**

Dan Murray: Tableau Your Data by Dan Murray John Wiley & Sons  
ISBN-13: 9781119001218

Dan Murray: Tableau Your Data by Dan Murray John Wiley & Sons  
ISBN-13: 9781119001218-AA

**Learning Outcome:**

- Define the characteristics of big data.
- Explain the potential benefits and challenges of using Big Data.
- State the differences between Hadoop and the traditional databases in supporting Big Data.
- Discuss the similarities and differences between different analytical techniques to derive information for decision-making.
- Match the relevant software used to execute different analytical techniques.
- Recommend the appropriate analytics techniques to derive useful information to support decision-making for a variety of business problems.
- Apply the CRISP-DM [Cross-Industry Process for Data Mining] framework to facilitate a structured approach in implementing an analytics project.
- Identify the critical success factors in ensuring successful application of analytics for decision-making.

| <b>Continuous Assessment Component</b> | <b>Weightage (%)</b> |
|--|----------------------|
| PRE-COURSE QUIZ                        | 2                    |
| PRE-CLASS QUIZ                         | 2                    |
| PRE-CLASS QUIZ                         | 2                    |
| PARTICIPATION                          | 6                    |
| GROUP BASED ASSIGNMENT                 | 23                   |
| CLASS TEST                             | 15                   |
| <b>Sub-Total</b>                       | <b>50</b>            |

| <b>Examinable Component</b> | <b>Weightage (%)</b> |
|-----------------------------|----------------------|
| ECA-REPORT                  | 40                   |
| ECA-POWERPOINT              | 10                   |
| <b>Sub-Total</b>            | <b>50</b>            |

**Weightage Total** **100**