

# **ANL307 Predictive Modelling**

**Level:** 3

**Credit Units:** 5 Credit Units

**Language:** ENGLISH

**Presentation Pattern:** EVERY SEMESTER

## **Synopsis:**

ANL307 Predictive Modelling aims to equip students with the skills and knowledge in developing predictive models to solve business problems. The course covers important concepts (such as issues in model construction, evaluation, selection and deployment) that underpin the proper development of useful models. Last but not least, the course also covers applications of predictive modelling using cloud services.

## **Topics:**

- Introduction to Predictive Modelling
- Applications of Predictive Modelling
- Model Construction and Evaluation
- Model Selection
- Logistic Regression for making predictions
- Decision Trees: CHAID and CART
- Decision Trees: QUEST and C5.0
- Artificial Neural Networks
- Ensemble Models
- Random Forest
- Support Vector Machine (SVM)
- Applying Predictive Analytics on Cloud Services

## **Textbooks:**

Max Kuhn (Author), Kjell Johnson (Author): Applied Predictive Modeling 1st ed. 2013, Corr. 2nd printing 2016 Edition by Max Kuhn (Author), Kjell Johnson (Author) Springer  
ISBN-13: 9781461468486

**Learning Outcome:**

- Discuss various conceptual and practical aspects of applying predictive modelling
- Appraise the application of predictive modelling
- Compare different techniques for predictive modelling
- Construct predictive models using appropriate analytics software
- Evaluate the performance of predictive models
- Analyse, interpret and deploy the results or outputs of predictive models

**Assessment Strategies (Daytime Class):**

Components	Description	Weightage Allocation (%)
Overall Continuous Assessment	PRE-COURSE QUIZ 1	2
	PRE-CLASS QUIZ 1	2
	PRE-CLASS QUIZ 2	2
	PARTICIPATION 1	6
	TUTOR-MARKED ASSIGNMENT 1	18
	GROUP BASED ASSIGNMENT 1	20
Overall Examinable Components	Written Exam	50
<b>Total</b>		<b>100</b>

**Assessment Strategies (Online Class):**

Components	Description	Weightage Allocation (%)
Overall Continuous Assessment	PRE-CLASS QUIZ 1	2
	PRE-CLASS QUIZ 2	2
	PRE-COURSE QUIZ 1	2
	DISCUSSION BOARD 1	10
	GROUP BASED ASSIGNMENT 1	10
	PARTICIPATION 1	6
	TUTOR-MARKED ASSIGNMENT 1	18
Overall Examinable Components	Written Exam	50
<b>Total</b>		<b>100</b>