



## SYMBIOSIS INTERNATIONAL (DEEMED UNIVERSITY)

(Established under section 3 of the UGC Act 1956)

Re - accredited by NAAC with 'A' Grade

Founder: Prof. Dr. S. B. Mujumdar, MSc, Ph.D. (Awarded Padma Bhushan and Padma Shri by President of India)

### Sub Committee - Specialization for Curriculum Development

**Course Name :** Business Analytics  
**Course Code :** T3665  
**Faculty :** Computer Studies  
**Programme Type :** PG

**Course Credit :** 4  
**Course Level :** 4  
**Sub-Committee (Specialization) :** Computer Concepts and Theories  
**Batch :** 2021

**Learning Objectives :**

- To understand the basics of business Analytics
- To identify the challenges in BA.
- To understand various applications of data science
- To evaluate the impacts of data science along with BA

Books Recommended :	Book	Author	Publisher
	. Pattern Recognition and Machine Learning.	Bishop, C	Springer, NY: New York
	An Introduction to Statistical Learning with Applications in R	1. James, Witten, Hastie and Tibshirani	WSU Bookstore
	Data Science for Business - What You Need to Know about Data Mining and Data-Analytic Thinking,	Provost and Fawcett,	O?"REILLY

Course Outline :	Sr. No.	Topic	Hours
	1	<b>Course Overview, how data-analytics thinking is transforming different industries and affecting people?"s life; graphical showcase, typical machine learning problems (regression, classification, ranking, clustering, dimensionality reduction); typical OR m</b>	10
	2	<b>Working with more forms of data: temporal, geospatial, text and image data , Using R and Power BI to explore &amp; visualize data</b>	10
	3	<b>Bayesian Decision Process, Other Classification Methods, Predictive to Prescriptive ? Optimization Modeling</b>	10
	4	<b>Principles for Data Visualization &amp; Business Analytics Communication</b>	10
	5	<b>Review of Statistical Concepts, Calculus and Linear Algebra , Probability, random variables, mean, variance, normal distribution, distribution of sample mean, t-distribution, Continuous Function, Differentiation, Integration, Chain Rule, Vector, Norm, Inn</b>	10
	6	<b>Multiple Linear Regression and Model Diagnostics, The importance and desirability of linear models, basic assumptions, coefficient estimation, partition of sums of squares, R-Square, Analysis of Variance, Multicollinearity, VIF, effect of missing/omitted</b>	10

**Pre Requisites :**

Basics of Analytics  
Lecture & Discussion  
Case analysis  
Article analysis  
Quizzes  
Project presentation

**Evaluation :**

Assignment  
Class test  
Quiz  
Presentation  
Project

**Pedagogy :**

Lectures  
Quiz  
Case Study

**Expert :**

Mr. Shirish Joshi, Associate Professor, SICSR