

SEMESTER-VI B.Com (Hons.)

DSC- 6.1 : BUSINESS ANALYTICS

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
DSC -6.1: Business Analytics	4	2	0	2	Pass in Class XII with Mathematics/Accountancy	Studied Business Statistics (DSC-4.1)

Learning Objectives

This course aims to introduce the learners to business intelligence and analytics which includes describing business data, analysing the data using various statistical tools for creating predictive models and making inferences for solving business problems and for providing assistance in business decision making.

Learning outcomes

After completion of the course, the learners will be able to:

1. Describe skills for computation and aggregation of data using spreadsheets.
2. Analyse data with the help of pivot tables and pivot charts.
3. Analyse data using R packages and interpret the results.
4. Compare linear regression models using spreadsheet & r and interpret the results.
5. Examine textual data analysis using R

SYLLABUS OF DSC-6.1

Unit 1: Introduction (3 hours)

Data and Data Science; Data analytics and data analysis, Classification of Analytics, Application of analytics in business, Types of data: nominal, ordinal, scale; Big Data and its characteristics, Applications of Big data. Challenges in data analytics.

Unit 2: Data Preparation, Summarisation and Visualisation Using spreadsheet (6 hours)

Data Preparation and Cleaning, Sort and filter, Conditional formatting, Text to Column, Removing Duplicates, Data Validation, identifying outliers in the data, covariance and correlation matrix, Moving Averages, Finding the missing value from data; Summarisation; Visualisation: scatter plots, line charts, histogram, etc., Pivot Tables, pivot charts and interactive dashboards.

Unit 3: Getting started with R (6 hours)

Introduction to R, Advantages of R, Installation of R Packages, Importing data from spreadsheet files, Commands and Syntax, Packages and Libraries, Data Structures in R - Vectors, Matrices, Arrays, Lists, Factors, Data Frames, Conditionals and Control Flows, Loops, Functions, and Apply family.

Unit 4: Descriptive Statistics Using R (6 hours)

Importing Data file; Data visualisation using charts: histograms, bar charts, box plots, line graphs, scatter plots. etc; Data description: Measure of Central Tendency, Measure of Dispersion, Relationship between variables: Covariance, Correlation and coefficient of determination.

Unit 5: Predictive and Textual Analytics (9 hours)

Simple Linear Regression models; Confidence & Prediction intervals; Multiple Linear Regression; Interpretation of Regression Coefficients; heteroscedasticity; multi-collinearity.

Basics of textual data analysis, significance, application, and challenges. Introduction to Textual Analysis using R. Methods and Techniques of textual analysis: Text Mining, Categorization and Sentiment Analysis.

Note:

The General-Purpose Software referred in this course will be notified by the University Departments every three years. If the specific features, referred to in the detailed course above, are not available in that software, to that extent it will be deemed to have been modified.

Practical Exercises (60 hours):

The learners are required to:

1. Showcase their understanding of the basics of Spreadsheet: Organizing data with Spreadsheet – Performing simple computations and aggregations using Spreadsheet - Working with Summing and other Reporting functions in Spreadsheet - Working with pivot tables and charts -using Spreadsheet for Data Analytics: Power Query - Power Pivot - Power view - Power Map - Building tips – Display tips - Keyboard shortcuts – Mouse shortcuts - Standardized layouts - Understanding table-based and spreadsheet-based layouts.
2. Showcase their understanding of data cleansing techniques using External Data – Searching and Combining Data with Power Query: Getting started with Power Query - Know the Environment tabs and toolbars - Access new or existing reports - Importing and combining data from databases, web, files - Splitting and aggregating data - Discovering and Analyzing Data with Power Pivot: Database concepts - Loading Data into Power Pivot - using Power Query and Power map add-ins - Designing Pivot Table reports - Filtering data – Creating Custom functions and formulas - Formatting Pivot Tables - Managing Power Pivot Data - Setting Connection properties - Managing Data sources - Configuring Pivot Table Options, Preparation of Histograms - Pareto charts – Boxplots - Treemap and Sunburst charts.

3. Create Linear Regression Models using Spreadsheet; Interpretation of results. Applying tests for heteroscedasticity and multicollinearity.
4. Read datasets into R - Export data from R - Manipulate and Process Data in R -use functions and packages in R - Demonstrate with a Case Study to perform basic analytics using R.
5. Use R for analysing textual data; Data loading into Python; Pre-processing and Text Clean up; Generating a TF-IDF (Term Frequency Inverse Document Frequency) Matrix; Data Clustering; visualisation & Reporting.

Suggested Readings:

- Alexander, M., Decker, J., & Wehbe, B. (2014). *Microsoft business intelligence tools for spreadsheet analysis*. New Jersey, United States: Wiley.
- Giri, A., & Paul, P. (2021). *Applied marketing analytics: using spss (modeler, statistics and amos graphics)*. Delhi, India: PHI Learning Pvt. Ltd.
- Kumar, D. U. (2017). *Business analytics: the science of data driven decision making*. New Jersey, United States: Wiley.
- McKee, A. (2003). *Textual analysis: a beginner's guide*. (1st ed.). London, United Kingdom: Sage Publication.
- Motwani, B. (2019). *Data analytics with r*. New Jersey, United States: Wiley.
- North, M. (2012). *Data mining for the masses*. Athens, Georgia: Global Text Project.
- Ohri, A (2012). *R for business analytics*. Springer.
- Paul, T. (2011). *R cookbook*. New York, United States: O Reilly Media.
- Provost, F., & Fawcett, T. (2013). *Data science for business*. New York, United States: O'Reilly Media.
- Rao, P. H. (2013). *Business analytics—an application focus*. Delhi, India: PHI Learning Private Limited.

Note: Suggested readings will be updated by the Department of Commerce and uploaded on the Department's website.

Discipline Specific Core Course- 6.2 (DSC-6.2): Corporate Governance

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
DSC-6.2: Corporate Governance	4	3	1	0	Pass in Class XII with Mathematics/ Accountancy	NIL

Learning Objectives

The course aims to develop critical thinking ability and provide knowledge of corporate governance, its procedures, techniques in accordance with current legal requirements and professional standards.

Learning outcomes

After completion of the course, learners will be able to:

1. Describe the concept and significance of corporate governance in a business setup.
2. Analyse the role of the board of directors.
3. Discuss important dimensions in corporate governance.
4. Analyse global corporate failures; understand international codes and its implications.
5. Discuss corporate governance regulatory framework in India.
6. Assess and analyse the problems of corporate governance in Indian Inc.

SYLLABUS OF DSC-6.2

Unit 1: Conceptual Framework of Corporate Governance (9 hours)

Corporate Governance: Meaning, significance and principles; Management and corporate governance; Theories of Corporate Governance: Agency Theory, Stewardship theory, Stakeholder Theory, Resource Dependency Theory, Managerial Hegemony Theory; Models of Corporate Governance; Art of Governance as per Kautilya's Arthashastra.

Unit 2: Recent Issues and Challenges of Corporate Governance (9 hours)

Board structure and Directors; Role of Board; Board Committees and their functions; Insider Trading; Whistle Blowing; Shareholders Activism; Role of institutional investors; Class Action suits. CSR and Corporate Governance. Concept of Gandhian Trusteeship.

Unit 3: Global Corporate Failures and International Codes (9 hours)

BCCI (United Kingdom), Maxwell (United Kingdom), Enron (USA), World.Com (USA), Vivendi (France), Lehman Brothers; Sir Adrian Cadbury Committee 1992, SOX 2002, OECD Principles of Corporate Governance.

Unit 4: Corporate Governance Regulatory Framework in India (9 hours)

Regulatory framework in India: Kumar Mangalam Birla (1999), NR Narayana Murthy Committee (2005), Relevant provisions of Companies Act, 2013, SEBI: Listing Obligations and Disclosure Requirements Regulations (LODR), 2015 and Uday Kotak Committee (2017).

Unit 5: Corporate Failures and Scams in India (9 hours)

Satyam Computer Services Ltd, Kingfisher Airlines, PNB Heist, IL&FS Group Crisis; ICICI Bank, Yes Bank; Common Governance Problems in various corporate failures in India and abroad.

Exercises:

The learners are required to:

1. Identify and analyse corporate governance models followed by companies incorporated in India and abroad.
2. Analyse Board composition and Board committees of different companies; Analyse cases on the topic of Whistle blowing/ Shareholder activism/ Insider trading.
3. Critically analyse global corporate governance failure and identify corporate governance issues therein.
4. Identify corporate governance issues and concerns raised in context of Indian companies and their implications (from published sources newspapers or websites).
5. Comment on the latest corporate governance regulatory framework in India.
6. Critically analyse major corporate governance failure to suggest common governance problems in Indian context.

Suggested Readings:

- *A handbook of corporate governance*. (2022). (3rd ed.). Institute of Directors. Delhi, India: IOD Publishing.
- Das, S. C. (2021). *Corporate governance in India: An evaluation*. (4th ed.). Delhi, India: PHI Learning Pvt. Ltd..
- Goel, S. (2019). *Corporate governance: principles and practices* (1st ed., Vol. 1). Noida, India: McGraw-Hill.
- Sharma, J. P. (2018). *Corporate governance, business ethics and csr: with case studies and major corporate scandals*. Delhi, India: Ane Books.
- Soloman, J. (2021). *Corporate governance and accountability*. (5th ed.). United States: Wiley
- Tricker, B., & Tricker, R. I. (2015). *Corporate governance: principles, policies, and practices*. United States: Oxford University Press.
- Tricker, B. (2020). *Elements in corporate governance*. United Kingdom: Cambridge University Press.

Additional Resources

- Mallin, C. A. (2019). *Corporate governance*. Oxford, United Kingdom: Oxford University Press.
- Rani, D. G., & Mishra, R. K. (2017). *Corporate governance: theory and practice*. India: Excel Books.

Note: Suggested readings will be updated by the Department of Commerce and uploaded on the Department's website.

Latest amendments to the regulations shall be referred.

Discipline Specific Core Course- 6.3 (DSC-6.3): Goods and Services Tax (GST) and Customs Law

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
DSC 6.3 – Goods & Services Tax (GST) and Customs Law	4	3	1	0	Pass in Class XII with Mathematics/Accountancy	Nil

Objective:

The course aims to impart knowledge of principles and provisions of GST and Customs Law, the important legislation dealing with the indirect tax system in India; and to enable the students to apply the same practically.

Learning Outcomes:

After completion of the course, learners will be able to:

1. Analyse the rationale of Goods and Services Tax (GST), constitutional amendment carried out to install GST in India and comprehend the composition and working of GST council
2. Interpret the meaning of supply under GST law, differentiate between intra-state and inter-state supply, provisions related to place of supply, time of supply and compute the value of supply.
3. Evaluate the utilization of input tax credit and the provisions of reverse charge mechanism.
4. Analyse various returns under GST and payment of taxes.
5. Evaluate the concepts of Customs Act, various custom duties and computation of the

assessable value for charging customs duty.

SYLLABUS OF DSC-6.3

Unit 1: Structure, Registration and Exemptions (9 hours)

Constitutional framework of indirect taxes before GST; Rationale for GST; Structure of GST (SGST, CGST, UTGST & IGST); GST Council; GST Network; State compensation mechanism.

Registration; Exemptions from GST.

Unit 2: Levy and Collection of GST (16 hours)

Scope of 'Supply'; Nature of supply: Inter-State, Intra-State; Classification of goods and services.

Composite and Mixed supplies; Composition levy scheme; Place of supply; Time of supply; Value of supply.

Unit 3: Input Tax Credit and Reverse Charge Mechanism (9 hours)

Eligible and ineligible input tax credit; Apportionments of credit and blocked credits; Tax credit in respect of capital goods; Availability of tax credit in special circumstances; Reverse Charge Mechanism.

Unit 4: Tax Invoice, Returns and Payment of Tax (7 hours)

Tax Invoice, Credit and debit notes, and e-Way bills; Returns; Payment of taxes; Taxability of e-Commerce.

Unit 5: Customs Law (4 hours)

Basic concepts, Territorial waters and High seas; Types of custom duties; Valuation.

Note: In case of any subsequent notifications/amendments regarding GST or customs law by the government, the syllabus would be updated accordingly.

Exercises:

The learners are required to:

1. Discuss relevant provisions of the CGST Act, IGST Act, GST (Compensation to States) Act and Constitution (One Hundred and First Amendment) Act from the official website of Government of India.
2. Refer relevant notifications and circulars from the official website of Government of India to differentiate between intra-state and inter-state supply and provisions related to place of supply.
3. Illustrate the utilization of input tax credit and the provisions of reverse charge mechanism.
4. Identify the eligible and ineligible tax credit under various circumstances.
5. Study cases related to utilization of input tax credit.
6. Enlist the process of returns under GST and payment of taxes.
7. Illustrate computation of the assessable value for charging customs duty with hands-on exercise.
8. Gather information available under the heading 'Popular help topics' on the official website of the Government of India.

Suggested Readings:

- Ahuja, G., & Gupta, R. (2023). *GST & customs law*. Delhi, India: Flair Publications Pvt. Ltd.
- Babbar, S., Kaur, R., & Khurana, K. (2020). *Goods and services tax (GST) and customs law*. (5th ed.). Delhi, India: Scholar Tech Press.
- Balachandran, V. (2023). *Indirect taxation. Goods and service tax and customs law*. (19th ed.). Delhi, India: Sultan Chand & Sons.
- Balachandran, V. (2023). *Textbook of GST & customs law*. (2nd ed.). Delhi, India: Sultan Chand & Sons.
- Bansal, K. M. (2023). *GST & customs law*. Delhi, India: Taxmann Publication.
- Gupta, S.S. (2020). *GST- how to meet your obligations*. Delhi, India: Taxmann Publications.
- Mittal, N. (2022). *Goods & services tax and customs law*. Delhi, India: Cengage Learning India Pvt. Ltd.
- Sahi, S. (2019). *Concept building approach to goods and services tax (gst), & customs law*. Delhi, India: Cengage Learning India Pvt. Ltd.
- Singhanian, V. K., & Singhanian, M. (2021). *Students' guide to income tax. (university ed.)*. Delhi, India: Taxmann Publications Pvt. Ltd.

Additional Readings:

- Gupta, S. S. (2017). *GST how to meet your obligations*. (13th ed., Vol. 3). Delhi, India: Taxmann Publication.
- Bansal, K. M. (2023). *GST & customs law*. Delhi, India: Taxmann Publication.
- Sisodia, P. (2018). *Bharat's handbook on goods & services tax (gst)*. Delhi, India: Bharat Law House.
- *The Constitution (One hundred and First Amendment) Act, 2016.*
- *The Central Goods and Services Tax Act, 2017.*
- *The Integrated Goods and Services Tax Act, 2017.*
- *The Union Territory Goods and Services Tax Act, 2017.*
- *The Goods and Services Tax (Compensation to States) Act, 2017.*
- *Vastu and Sevakar Vidhan, by Government of India.*

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