



BBA (BUSINESS ANALYTICS)

CURRICULUM AND SYLLABUS

**UNDERGRADUATE PROGRAMME UNDER
CHOICE BASED CREDIT AND SEMESTER SYSTEM (CBCSS)**

TO BE INTRODUCED FROM 2023 ADMISSION

SACRED HEART COLLEGE (AUTONOMOUS), THEVARA

KOCHI, KERALA, 682013

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BBA (Business Analytics)

1. PREFACE

The program BBA (Business Analytics) is a three-year bachelor's level program available in the domain of Business Analytics. The program provides useful techniques and skills related to analytics. BBA (Business Analytics) also trains students for acquiring experience and knowledge regarding various analytical tools. Business analytics is generally based on statistical analysis and data mining. It involves the usage of a certain set of metrics to analyse the past performance of any organization or company in order to carry out further planning. Students will learn about performance management, business metrics and delivery, data visualization, etc.

Some important topics which will be covered in this course are Data Environment, Data management, Data visualization, Big Data Analytics and Data Mining. The course will also provide a comprehensive combination of managerial and technical knowledge that will help the students to tackle future challenges. Students who are interested in handling data and research-related activities are ideal candidates for this course.

2. RATIONALE FOR THE PROGRAM

Business Analytics course in Sacred Heart College is intended to empower professionals employed in the areas of Finance, Analytics, Economics, Statistics, Computer Science, Mathematics, IT, Marketing Research and Commodity markets.

The implementation of Business Analytics has developed across all businesses and operations, including Web/E-commerce, Information Technology, Law Enforcement, Human Resource Management, Banking, Insurance, Healthcare, and Biotechnology. An aspiring Business Analysts professional can get a safe career in one of the above said sectors.

PROGRAMME OBJECTIVES AND OUTCOMES

Programme Objectives

1. To gain an understanding of how managers use business analytics to formulate and solve business problems and to support managerial decision making.
2. To become familiar with the processes needed to develop, report, and analyze business data.

3. To learn how to use and apply Excel and Excel add-ins to solve business problems.
4. Select, understand and apply appropriate analytical tools in the analysis of quantitative and qualitative data from a variety of business scenarios.
5. To use software package for data analysis; understand data gathering and input considerations; and be able to analyze and interpret output (graphs, tables, mathematical models, etc.)
6. To know considerations in collecting data and selection of appropriate analysis tools; and knows how to report results in a fair, objective and unbiased manner.
7. To enable all students to recognize, understand and apply the language, theory and models of the field of business analytics
8. To foster an ability to critically analyze, synthesize and solve complex unstructured business problems
9. To encourage an aptitude for business improvement, innovation and entrepreneurial action among students
10. To encourage the sharing of experiences to enhance the benefits of collaborative learning among students

Undergraduate Programme Outcomes (POs)

PO1	Critical Thinking and Deep Domain Knowledge
PO2	Effective Communication
PO3	Contribute to Nation Building
PO4	Care for the Environment
PO5	Ethical Values
PO6	Global Perspective

Programme Specific Outcomes

After completion of the BBA in Business Analytics program, the students will be able to:	
PSO1	Apply the knowledge of management principles and practices to solve business problems.
PSO2	Identify and describe complex business problems in terms of analytical models.
PSO3	Apply appropriate analytical methods to find solutions to business problems that achieve stated objectives.
PSO4	Translate results of business analytic projects into effective courses of action.
PSO5	Demonstrate ethical decision-making in structured or unstructured and ambiguous situations.
PSO6	Communicate technical information to both technical and non-technical audiences in speech, in writing, and graphically.
PSO7	Exhibit effective collaboration and leadership skills.
PSO8	Acquire cognitive, technical and interpersonal

3. REGULATIONS FOR CHOICE BASED CREDIT AND SEMESTER SYSTEM (CBCSS) FOR UNDER GRADUATE PROGRAMMES -2022

Preamble

Sacred Heart College, Thevara became an autonomous college under Mahatma University Kottayam in 2014. The college revised the choice-based credit and semester system (CBCSS) for undergraduate programmes in 2015-16. The Academic Council which met on 20-09-2021 approved the proposals of the various Boards of Studies for revising the syllabi of the undergraduate programmes from 2022-23 admissions onwards and the regulations for CBCSS. The revised regulations are as follows

TITLE

These regulations shall be called “SACRED HEART COLLEGE THEVARA REGULATIONS FOR CREDIT AND SEMESTER SYSTEM 2022”

SCOPE

Applicable to all programmes of the college with effect from 2022 admissions, except otherwise approved by the Academic Council of the College

DEFINITIONS

- **‘Programme’** means the entire course of study and examinations.
- **‘Duration of Programme’** means the period of time required for the conduct of the programme. The duration of undergraduate programmes shall be 6 semesters, the post-graduate programme shall be of 4 semesters and M Phil programmes shall be 2 semesters.
- **‘Semester’** means a term consisting of a minimum of 90 working days, inclusive of examination, distributed over a minimum of 18 weeks of 5 working days, each with 5 contact hours of one-hour duration
- **‘Course’** means a segment of subject matter to be covered in a semester. Each Course is to be designed variously under lectures / tutorials / laboratory or fieldwork/ study tour /seminar / project / practical training/assignments/evaluation etc. to meet effective teaching and learning needs.
- **‘Common Course I’** means a course that comes under the category of courses for English and **‘Common Course II’** means additional language, a selection of both is compulsory for all students undergoing undergraduate programmes(Model I)
- **‘Core course’** means a course in the subject of specialization within a degree programme.

- **‘Complementary Course’** means a course which would enrich the study of core courses.
- **‘Open course’** means a course outside the field of his/her specialization, which can be opted by a student.
- **‘Additional core course’** means a compulsory course for all undergraduate students (as per the UGC directive) to enrich their general awareness.
- The U.G. programmes shall include (a) Common courses (b) Core courses (c) Complementary Courses (d) Open Course (e) Study tour and (f) Internship for selected programmes.
- **‘Additional Course’** is a course registered by a student over and above the minimum required courses.
- **‘Credit’ (Cr)** of a course is the numerical value assigned to a course according to the relative importance of the content of the syllabus of the programme.
- **‘Extra credits’** are additional credits awarded to a student over and above the minimum credits required for a programme for achievements in co-curricular activities carried out outside the regular class hours OR curricular activities/courses completed for value addition, as directed by the College/ department. It is the numerical value assigned to Club activities, social service, Internship, etc. which is not added with the total academic credits of the students. Additional credit components
 - Talent & career club activity (optional)
 - Social service (mandatory)
 - Internship for BBA, Commerce, Communication and Computer applications (mandatory).
 - Internship (desirable for other programmes).
 - Add on courses (optional)
- **‘Programme Credit’** means the total credits of the UG Programme.
- **‘Programme Elective course’** Programme Elective course means a course, which can be chosen from a list of electives and a minimum number of courses is required to complete the programme.
- **‘Programme Project’** Programme Project means a regular project work with stated credits on which the student undergoes a project under the supervision of a teacher in the parent department / any appropriate Institute in order to submit a dissertation on the project work as specified.
- **‘Internship’** is on-the-job training for professional careers.
- **‘Plagiarism’** Plagiarism is the unreferenced use of other authors’ material in dissertations and

is a serious academic offense.

- **‘Tutorial’** Tutorial means a class to provide an opportunity to interact with students at their individual level to identify the strengths and weaknesses of individual students.
- **‘Seminar’** seminar means a lecture by a student expected to train the student in self-study, collection of relevant matter from the books and Internet resources, editing, document writing, typing, and presentation.
- **‘Evaluation’** means every course shall be evaluated by 25% continuous (internal) assessment and 75% end course/end semester (external) assessment.
- **‘Repeat course’** is a course that is repeated by a student for having failed in that course in an earlier registration.
- **‘Audit Course’** is a course for which no credits are awarded
- **‘Department’** means any teaching Department offering a course of study approved by the college / Institute as per the Act or Statute of the University.
- **‘Parent Department’** means the Department which offers a particular UG/PG programme.
- **‘Department Council’** means the body of all teachers of a Department in a College.
- **‘Faculty Advisor’** is a teacher nominated by a Department Council to coordinate the continuous evaluation and other academic activities undertaken in the Department.
- **‘College Co-ordinator’** means a teacher from the college nominated by the College Council to look into the matters relating to CBCS-PG System.
- **‘Letter Grade’** or simply ‘Grade’ in a course is a letter symbol (O, A, B, C, D, etc.) which indicates the broad level of performance of a student in a course.
- Each letter grade is assigned a **‘Grade point’** (GP) which is an integer indicating the numerical equivalent of the broad level of performance of a student in a course.
- **‘Credit point’** (CP) of a course is the value obtained by multiplying the grade point (GP) by the Credit (Cr) of the course $CP=GP \times Cr$.
- **‘Semester Grade point average’** (SGPA) is the value obtained by dividing the sum of credit points (CP) obtained by a student in the various courses taken in a semester by the total number of credits taken by him/her in that semester. The grade points shall be rounded off to two decimal places. SGPA determines the overall performance of a student at the end of a semester.
- **‘Cumulative Grade point average’** (CGPA) is the value obtained by dividing the sum of credit points in all the courses taken by the student for the entire programme by the total number of credits and shall be rounded off to two decimal places.

- **‘Grace Marks’** means marks awarded to course/s, as per the orders issued by the college from time to time, in recognition of meritorious achievements in NCC/NSS/Sports/Arts and cultural activities.

ATTENDANCE

Being a regular college, physical presence in regular activities, especially, classes and exams, is mandatory for the students. However, if a student secures 75% of attendance s/he is eligible to appear for the exams, provided there are no other impediments like disciplinary proceedings, malpractice records, etc.

- A maximum of 5 marks (5%) for a course is given for attendance
- Absence: A student found absent for one hour in the forenoon or afternoon session is deprived of the attendance for the entire session as far as eligibility for the final exam is concerned.
- The hour related calculation in a course is meant for awarding marks for the course concerned.
- Late entry: A student is supposed to be in time in the class. Late arrival related treatment is left to the discretion of the individual teacher. However, as a norm, a late-arriving student may be permitted to the class, if it is not inconvenient or distraction to the class as such; though attendance MAY NOT BE GIVEN.
- Late arrival beyond 5 minutes is treated as ABSENCE; though the teacher may consider permitting the student to sit in the class.
- Leave: A student has to formally report his/her absence with reasons either in advance or immediately after the absence of obtaining an approved leave. This applies to all sorts of leave – medical, on duty or other.
- The student is supposed to report in prescribed format on the very next day of the absence; however, up to a week’s time is permitted. Afterward, leave applications will not be considered.
- The student has to retain a copy/section of the approved leave form and produce the same as proof, in case there is any confusion regarding the leave sanctioning. In the absence of such proof, the claims will not be entertained.
- Duty Leave: A student representing the college in sports, arts, social service or academic matters, has to get sanction from the class teacher concerned and submit the leave application form duly endorsed by the teacher concerned & the class teacher and submit it to the faculty Dean (or Vice-Principal). The same will be forwarded by the Dean/Vice Principal for attendance entry. SPORTS: The approval of the Department of Physical Education and the class teacher is required. The time limit for submission mentioned above is applicable in the case of duty leave as well.
- CONDONATION: a student may have the privilege of condonation of attendance shortage (up to a maximum of 10 days) on the basis of genuineness of the grounds of absence (medical

reasons or college duty), duly recommended by the department. This is not a matter of right. It is a matter of privilege based on the principal's discretion and the good conduct of the student on the campus. A student of the UG programme may have a maximum of two such opportunities and that of PG programmes only one opportunity.

- RE-ADMISSION – a student whose attendance is inadequate will have to discontinue the studies. Such students, whose conduct is good, maybe re-admitted with the approval of the governing council, on the basis of recommendation from the department, and assurance from the student and the guardian regarding good conduct and compliance in academic and discipline matters. For this, the prescribed re-admission fee has to be paid.

As a condition for re-admission, the student should have cleared all academic arrears or should have appeared for the exams in which he/she is having an arrear (if the results are not out), and should have fulfilled all academic assignments prescribed by the department for compensating for his lack of attendance.

- UNAUTHORISED ABSENCE & REMOVAL FROM ROLLS: A student absent from the classes continuously for 10 consequent days without intimation or permission shall be removed from the rolls, and the matter intimated to the student concerned. On the basis of the recommendation of the department concerned, the re-admission process may be permitted by the principal.

PROGRAMME REGISTRATION

- A student shall be permitted to register for the programme at the time of admission.
- A UG student who registered for the programme shall complete the same within a period of 12 continuous semesters from the date of commencement of the programme.

PROMOTION

- A student who registers for the end semester examination shall be promoted to the next semester. However, in extreme circumstances, a student having sufficient attendance who could not register for the end semester examination may be allowed to register notionally by the principal with the recommendation of the Head of the department concerned and, by paying the prescribed fee.

PROGRAMME STRUCTURE FOR BBA (Business Analytics)

A	Programme Duration	6 Semesters
B	Minimum credits required from common courses	8
c	Minimum credits required from Core courses including Management Project	84
d	Minimum credits required from Complementary courses	19
e	Minimum credits required from Open course	03
f	Minimum credit required from Practical	6
g	Total Credits required for successful completion of the Programme	120
h	Club activity (desirable)	01
i	Social service (mandatory)	01
j	One Internship (mandatory)	01
k	Minimum attendance required	75%

EXAMINATIONS

- All the End Semester Examinations of the college will be conducted by the Controller of Examination. The principal will be the Chief Controller of Examinations. An examination committee consists of the Chief Controller of Examinations, Controller of Examinations, Additional Chief Superintendent, Deans, IQAC Coordinator and other faculty members nominated by the Principal will act as an advisory body of the matters relating to the conduct of examinations

EVALUATION AND GRADING

The evaluation scheme for each course

- Continuous Internal Evaluation (CIA) and
- End Semester Examination (ESE)

The internal to external assessment ratio shall be 2:3 for all core and complementary courses, for common courses and open course the ratio shall be 1:3. Both internal and external evaluation shall be carried out in the marking system and the marks are to be rounded to the nearest integer.

Continuous Internal Assessment (CIA)/ Continuous Assessment: The internal evaluation shall be based on predetermined transparent system involving periodic written tests, assignments,

seminars/viva/field survey and attendance in respect of theory courses and based on written tests, lab skill/records/viva and attendance in respect of practical courses. The marks assigned to various components for internal evaluation are as follows

Components of Internal Evaluation (for Core and Complementary courses)

	Components	Marks
i.	Quiz / Seminar / Presentations / Industry visit	5
ii	Assignment	5
iii	Attendance	5
iv	Experiential learning* / project	15
v	Two Test papers(2x5)	10
	Total	40

i. Assignments: Every student shall submit one assignment as an internal component for every course.

Components	Marks
Punctuality	1
Content	2
Conclusion	1
Reference/Review	1
Total	5

ii. Seminar: The seminar lecture is expected to train the student in self-study, collection of relevant matter from the books and Internet resources, editing, document writing, typing, and presentation.

iii Attendance

% Of attendance	Mark
Above 90%	5
Between 85 and below 90	4
Between 80 and below 85	3
Between 76 and below 80	2
75%	1

iv Class Tests: Every student shall undergo two class tests as an internal component for every course.

a. End Semester Examination (ESE): The End Semester Examination in theory courses shall be conducted by the college with question papers set by external experts/ question bank. The evaluation of the answer scripts shall be done by the examiners based on a well-defined scheme of evaluation given by the question paper setters/Prepared as per the direction of the Chairman, Board of Examiners. The evaluation of the End Semester Examinations shall be done immediately after the examination preferably through the centralized valuation.

b. Project

Project work is a part of the syllabus of most of the programmes offered by the college.

The guidelines for doing projects are as follows:

- i. Project work shall be completed by working outside the regular teaching hours.
- ii. Project work shall be carried out under the supervision of a teacher in the concerned department or an external supervisor.
- iii. A candidate may, however, in certain cases be permitted to work on the project in an industrial / Research Organization/ Institute on the recommendation of the Supervisor.
- iv. There should be an internal assessment and external assessment for the project work in the ratio 1:3
- v. The external evaluation of the project work consists of the valuation of the dissertation (project report) followed by the presentation of the work and viva voce.
- vi. The mark and credit with the grade awarded for the program project should be entered in the grade card issued by the college.

c. Practical - Practical is a part of the syllabus and each semester has 18 hours of lab and towards the end of each even semester combined practical exam is proposed for the two semester

d. Internship – one month internship is proposed in the semester break after 4th semester and there will be one additional credit will be rewarded on submission of the certificate issued by the authorized person from the organization where the internships is done along with the internship report in the specified format

Components of Internal Evaluation for Projects

Components	Marks
Topic/Area selected	5
Experimentation/Data collection	10
Punctuality-Regularity	5
Compilation	5
Content	10
Presentation	5
Total	40

e. Comprehensive Viva-voce

Comprehensive Viva-voce shall be conducted at the end of the programme, which covers questions from all courses in the programme as per the syllabus.

f. Grade and Grade Points

For all courses (theory & practical), Letter grades and grade point are given on a 10-point scale based on the total percentage of marks, (CIA+ESE) as given below: -

Percentage of Marks	Grade	Grade Point (GP)
95 and above	S Outstanding	10
85 to below 95	A+ Excellent	9
75 to below 85	A Very Good	8
65 to below 75	B+ Good	7
55 to below 65	B Above Average	6
45 to below 55	C Average	5
40 to below 45	D Pass	4
Below 40	F Fail	0
	Ab Absent	0

Grades for the different semesters and overall programme are given based on the corresponding SGPA/CGPA as shown below:

SGPA/CGPA	Grade
Equal to 9.5 and above	<i>S Outstanding</i>
Equal to 8.5 and below 9.5	<i>A+ Excellent</i>
Equal to 7.5 and below 8.5	<i>A Very Good</i>
Equal to 6.5 and below 7.5	<i>B+ Good</i>
Equal to 5.5 and below 6.5	<i>B Above Average</i>
Equal to 4.5 and below 5.5	<i>C Average</i>
Equal to 4.0 and below 4.5	<i>D Pass</i>
Below 4.0	<i>F Failure</i>

A separate minimum of 30% marks each for internal and external (for both theory and practical) and an aggregate minimum of 40% are required for a pass for a UG programme. A candidate who has not secured minimum marks/credits in internal examinations can re-do the same registering along with the end semester examination for the same semester, subsequently. A student who fails to secure a minimum marks/grade for a pass in a course can be permitted to write the examination along with the next batch.

After the successful completion of a semester, Semester Grade Point Average (SGPA) of a student in that semester is calculated using the formula given below. For the successful completion of the semester, a student should pass all courses and score at least the minimum CGPA grade 'D'. However, a student is permitted to move to the next semester irrespective of her/his SGPA.

Credit Point (CP) of a course is calculated using the formula

$CP = Cr \times GP$, where Cr = Credit; GP = Grade point

Semester Grade Point Average (SGPA) of a Semester is calculated using the formula

$SGPA = TCP/TCr$, where

TCP = Total Credit Point of that semester = $\sum n CP_i$;

$TCr = \text{Total Credit of that semester} = \sum n \text{ Cri}$

Where n is the number of courses in that semester

Cumulative Grade Point Average (CGPA) of a Programme is calculated using the formula

$$CGPA = \frac{\sum (SGPA \times TCr)}{\sum TCr}$$

SGPA / CGPA shall be rounded off to two decimal Places.

To ensure transparency of the evaluation process, the internal assessment marks awarded to students in each course in a semester shall be published on the notice board/website at least one week before the commencement of the external examination. There shall not be any chance for improvement for internal mark.

The course teacher and the faculty advisor shall maintain the academic record of each student registered for the course which shall be forwarded to the controller of examinations through the Head of the Department and a copy should be kept in the department for at least two years for verification.

Registration for the examination

- All students admitted in a programme with remittance of prescribed fees are eligible for the forthcoming semester examinations.
- Online application for registration to the various End Semester Examinations shall be forwarded to the CE along with prescribed fee for each course in the prescribed format.
- The eligible candidates who secure the prescribed minimum attendance of the total duration of the course and possess other minimum qualifications prescribed in the regulations for each course shall be issued the hall tickets. The hall ticket shall be downloaded by the students from the college website.
- The mode of fee remittance shall be through the prescribed bank.

Supplementary Examinations

Candidates who failed in an examination can write the supplementary examination conducted by the College along with regular examinations.

Improvement of Examination

A candidate can improve his/her marks once by appearing again for the examination with the subsequent batch with the remittance of a prescribed fee. In such cases, the better of the two marks shall be taken as the marks awarded to him.

Internal assessment marks shall be carried over to the subsequent semester examination. There shall not be any provision for improving internal assessment marks.

Promotion to the Next Higher Semester

A candidate shall be eligible for promotion from one semester to the next higher semester if,

- He/she secures a minimum of 75 % attendance and registered for the End Semester Examination of the programme for which he/she is studying.
- His / her progress of study and conduct are satisfactory during the semester completed, as per the assessments recorded by the course teachers and the Head of the Department concerned.

3. 14 Certificates

- Degree certificates are issued by the Mahatma Gandhi University, Kottayam as per the act and statutes of the University on the submission of the consolidated mark/scorecards of the students by the College.
- A consolidated mark / scored card shall be issued to the candidates after the publication of the results of the final semester examination taken by the candidate. A Course Completion Certificate with classification shall be issued to students till the provisional certificate is issued by the university.

3.15. Award of Degree

The successful completion of all the courses with 'D' grade shall be the minimum requirement for the award of the degree.

3. 16. Monitoring

There shall be a Monitoring Committee constituted by the principal consisting of faculty advisors, HoD, a member from the teaching-learning evaluation committee (TLE) and the Deans to monitor the internal evaluations conducted by the college. The Course teacher, Class teacher, and the Deans should keep all the records of the internal evaluation, for at least a period of two years, for verification.

Every Programme conducted under the Choice Based Credit System shall be monitored by the College Council under the guidance of IQAC Coordinator, Controller of Exams, academic deans and HoDs.

3.17. Grievance Redressal Mechanism

In order to address the grievances of students regarding Continuous internal assessment (CIA), a three-level Grievance Redressal mechanism is envisaged. A student can approach the upper level only if the grievance is not addressed at the lower level.

Level 1: At the level of the concerned course teacher

Level 2: At the level of a department committee consisting of the Head of the Department, a coordinator of internal assessment for each programme nominated by the HoD and the course teacher concerned.

Level 3: A committee with the Principal as Chairman, Dean of the Faculty concerned, HOD of the department concerned and one member of the Academic council nominated by the principal every year as member

Course Matrix for BBA

SL. No.	Common Courses	Credits
1	English I	4
2	English II	4
	TOTAL	8

SL. No.	Complementary Courses	Credits
1	Business Environment analysis	4
2	Business mathematics and quantitative techniques	4
3	Business Communication	3
4	Cost Accounting	4
5	Strategic Management	4
	TOTAL	19

SL. No.	Core Courses	Credits
1	Business Accounting	4
2	Business Statistics	4
3	Managerial Economics	4
4	Principles and methodology of Management	3
5	Entrepreneurship, Business models and Industry analysis	4
6	Essential Statistics for Business Analytics	4
7	Human Resource Management	3
8	Marketing Management	4
9	Business Information System	3
10	Business Analytics Tools	4
11	Financial Management	4
12	DBMS	4
13	Digital Marketing analytics	4
14	Business intelligence and Data Visualization	4
15	Research methodology	3
16	New Technology in Business -Business transformation using AI and analytics	4.

17	Business Analytics for decision making	4
18	Business Ethics and Environmental values	4
19	Application of Business Analytics	4
20	Supply Chain Management	4
21	Data mining and Machine learning	4
22	Management project	4
	TOTAL	84

SL No	Open Course	Credits
1.	Any of the Open Course offered by the college	3
	TOTAL	3

SL No	Credit Details of Course	Credits
1	Common Course	8
2	Complementary Course	19
3	Core Course Including Project	84
4	Open Course	3
5	Practical	6
	TOTAL	120

SEMESTER – 1						
No.	Course Code	Title of the Course	Subject type	Subject section	Number of credits	Total hours
1		English Paper: 1	Theory	Common Course	4	90s
2		Business Accounting	Theory	Core Course	4	90
3		Business Statistics	Theory	Core Course	4	90
4		Business Environment Analysis	Theory	Complementary	4	90
5		Managerial Economics	Theory	Core Course	4	72
6		Practical – Using Excel for decision making (practical exam will be conducted in the even semester end)	Practical			18
TOTAL					20	450

SEMESTER – 2						
No.	Course Code	Title of the Course	Subject type	Subject section	Number of credits	Total hours
1		English Paper II	Theory	Common	4	90
2		Principles and Methodology of Management	Theory	Core	3	72
3		Business mathematics and quantitative techniques	Theory	Complementary	4	90
4		Entrepreneurship, Business models and Industry analysis	Theory	Core	4	90
5		Essential Statistics for Business Analytics	Theory	Core	4	90
		Analysis using r (Practical exam for 1 and 2 semesters)	Practical		2	18
TOTAL					21	450

SEMESTER – 3						
No.	Course Code	Title of the Course	Subject type	Subject section	Number of credits	Total hours
1		Human Resource Management	Theory	Core	3	90
2		Marketing Management	Theory	Core	4	90
3		Business Communication	Theory	Complementary	3	72
4		Business Information System	Theory	Core	3	90
5		Business Analytics Tools	Theory	Core	4	90
6		Practical – Data Analysis using SQL(Practical exam will be conducted in the even semester end)	Practical			18
					17	450

SEMESTER – 4						
No.	Course Code	Title of the Course	Subject type	Subject section	Number of credits	Total hours
1		Financial Management	Theory	Core	4	90
2		DBMS	Theory	Core	4	90
3		Digital Marketing analytics	Theory	Core	4	90
4		Business intelligence and Data Visualization	Theory	Core	4	90
5		Cost Accounting	Theory	Complementary	4	72
		Practical – Data visualization using power BI (practical exam for 1 and 2 semesters)			2	18
		Total			22	450

SEMESTER – 5						
No.	Course Code	Title of the Course	Subject type	Subject section	Number of credits	Total hours
1		Research Methodology	Theory	Core	3	90
2		Open Course (Investment Management) Financial Planning	Theory	Open	3	72
3		New Technology in Business -Business transformation using AI and analytics	Theory	Core	4	90
4		Business analytics for decision making	Theory	Core	4	90
5		Business Ethics and Environmental values	Theory	Core	4	90
		Practical – Data visualization using Tableau and KNIME (practical exam for 1 and 2 semesters)				18
		Total			18	450

SEMESTER – 6						
No.	Course Code	Title of the Course	Subject type	Subject section	No. of credits	Total hours
1		Strategic Management	Theory	Complementary	4	90
2		Application of Business Analytics	Theory	Core	4	90
3		Supply Chain Management	Theory	Core	4	90
4		Data mining and machine learning	Theory	Core	4	90
5		Management project	Practical	Core	4	72
		Practical – Data analysis using Python (practical exam for 1 and 2 semesters)			2	18
		Total			22	450

SEMESTER 1

Course Code	
Title of the course	Business Accounting
Semester	1
No of Credit	4
Number of Contact Hours	90

UNIT 1: Introduction to Accounting and Accounting Principles

Introduction of accounting: Origin -meaning, definition-need importance-functions - limitations-accounting principles-Generally accepted accounting principles-accounting equation- double entry system.

UNIT 2: Journal, Ledger, Trial Balance and Cash Book

Introduction, Journal, Rules of Debit and Credit, Compound Journal Entry, Opening Entry, Ledger, Posting, Rules Regarding Posting, Advantages of Ledger, Trial balance, Errors of Omission, Errors of Principle, Rectification of Errors, Preparation of Trial Balance, Preparation of Cash book (single column, double column and triple column)

Unit 3: Trading, Profit/Loss account and Balance sheet

Introduction to Final accounts: Preparation of Trading account- Profit and Loss Account- Balance Sheet: Asset, Liabilities and Profit/ Loss Appropriation.

Unit 4: Cash flow /Fund flow analysis

Funds Flow Analysis – Funds From Operation, Sources and Uses of Funds, Preparation of Schedule of Changes In Working Capital and Funds Flow Statements – Uses And Limitations - Cash Flow Analysis – Cash From Operation – Preparation of Cash Flow Statement – Uses and Limitations – Distinction Between Funds Flow and Cash Flow

Unit 5 Modern Accounting System

Accounting Information System -Traditional accounting information system -Automated accounting information system Elements of Automated Accounting Information System Input and output of Automated Accounting Information System Accounting information system cycle -Revenue to cash cycle. Purchasing and expenditures cycle. Production cycle. -Human resources and payroll cycle. -Financing cycle.-Fixed asset cycle (property, plant, and equipment).-General ledger and reporting systems.

Textbook:

1. S. N. Maheshwari and S. K. Maheshwari, Financial Accounting, 5th Edition, Vikas Publishing House, Sixth Edition, 2018.

References:

1. R. L. Gupta and V. K. Gupta. Financial Accounting: Fundamentals, 5th edition, Sultan, Chand Publishers, 2016.
2. Thomas R. Ittelson, Financial Statements: A Step-by-Step Guide to Understanding and Creating Financial Reports, 1st edition, New Age International, 2017
- 3.

SEMESTER 1

Course Code	
Title of the course	Business Statistics
Semester	1
No of Credit	4
Number of Contact Hours	90

Syllabus Content

Unit 1 - Introduction & Organization of Data

- Definition of Statistics – Functions - Limitations - Scope of statistics in Business - Industry and Economics - Concept of Data, Variable population, Sample - Concept of Classification of data – Types - Frequency distributions- Tabulation of Data
- Parts of table - Requisites of a good table - Analysis of Uni-Variate Data

Unit 2 -Measures of Central Tendency

- Introduction, Types of Central Tendency Measures, qualities of good measure of Central tendency - Arithmetic mean – Computation using Direct shortcut and step-deviation method, problems -on missing frequencies (one or two), properties of AM, problems on combined Mean,- corrected Mean - Weighted AM – Simple problems of Weighted AM - Median – computation for raw data, discrete and continuous data, problems on missing - frequencies - Mode – computation of mode for raw data, discrete and continuous data – for Uni-modal -distribution, problems on Grouping and analysis table

Unit 3 -Measures of Dispersion

Introduction, Types of dispersion measures – concept absolute and relative measures - Qualities of good measure of dispersion - Range – Concept and simple problems - Quartile deviation – computation of QD and its coefficient for raw, discrete and continuous -data- Standard Deviation – Computation of SD and its coefficient for raw, discrete and continuous data

Unit – 4 Set Theory

Definition – Different types of sets – Properties of Set- subset – power set – Operations on sets and Cartesian product of two sets – Venn diagram – De Morgan’s law

Unit – 5 Probability

Introduction – Addition rule of probability – Multiplication rules – conditional probability
– bayes theorem

Textbook

1. Sancheti D. C. & Kapoor V. K., Business Mathematics, Eleventh Edition, Sultan Chand & Sons, 2012

SEMESTER 1

Course Code	
Title of the course	Business Environment analysis
Semester	1
No of Credit	4
Number of Contact Hours	90

Unit 1 An overview of Business environment:

Meaning and definition, objectives, importance and uses of study of business environment. Environmental analysis – Meaning, process of environmental analysis, limitations of environmental analysis, environmental factors – The Micro environment of business and the macro environment of business

Unit 2 Economic Environment:

Meaning – characteristics of Indian economy – features affecting economy - impact of Liberalization Privatization & Globalization of Indian Business. Monetary policy – Meaning, objectives - fiscal policy – Meaning, objectives, budget and its importance – EXIM policy – meaning objectives – Industrial policy – meaning, objectives (Latest Policy Measures

Unit 3 Political Environment:

Meaning, political institutions, The constitution of India, the preamble – The fundamental rights – The relationship between business and government – responsibilities of business towards government, - Responsibilities towards government – responsibilities of government towards business, extent of state intervention in business

Unit 4 Technological, Social and Natural Environment:

Technological Environment – Meaning and definition, components of technology, feature of technology, Impact of Technology – Features of Technology – Impact of technology – Limitations in technological development – Current trends in t of society – Culture - elements of culture, business and culture – Natural environment -

Meaning of Natural environment – Natural environment and its impact on business. technological environment. Social and cultural environment - Meaning and definition

Unit 5 Legal Environment

Committee on competition Law and Policy 2000 – Competition Commission of India – Competition Act 2000 – Comparison with MRTP Act – Information technology Act 2000 – Cyber Regulations Appellate Tribunal – Cyber offences.

SEMESTER 1

Course Code	
Title of the course	Managerial Economics
Semester	1
No of Credit	4
Number of Contact Hours	72

Course Objectives:

- The objective of this subject is to acquaint the student with the basic Principles, tools and techniques of Economics and application of the same in the competitive business world

Course Outcomes:

- Demonstrate an appreciation of key economic principles for better business choices.
- Ability to understand demand, supply laws and Demand forecasting for making crucial business decisions.
- Analyse the theories of consumption, marginal rate Substitution to consumer buying.
- Identify the various market structures and entry barriers.

Unit 1: Introduction to Business Economics

Meaning & Definition, Features of Managerial Economics, Scope of Managerial Economics, Objectives and practical uses of Managerial Economics, Role and Responsibilities of Business Economist to modern Business Management.

Unit 2: Theory of Demand and Demand Forecasting

Meaning- determinants - demand schedule - demand curve, Law of Demand- exceptions- shifts in demand and movements in demand, Elasticity of demand- meaning- types, Price elasticity of demand- meaning-degrees-measurement: Total outlay- Point Method, Income elasticity of demand, Cross elasticity of demand, Demand Forecasting- Meaning- levels- objective, Method of estimation-Survey Method and Statistical method, Forecasting for a new product

Unit 3: Theory of Consumption

Consumption - meaning, features –types, Role of consumer under open and closed economy, Theory of consumer Behaviour, Cardinal Approach: Gossen's first law and second law, Concept of consumer surplus, Ordinal approach – Hicks and Allen model, Meaning of ICA properties - consumer's equilibrium, Concept of MRS– substitution effect- Income effect -price effects, Concept of Engle's law

Unit 4: Theory of Production and Cost

Meaning of production function- classification- fixed factors-variable factors, Law of variable proportion, Concept of Iso-quant and Iso-cost - producer's equilibrium, Managerial equilibrium- MRTS- optimal combination, Economies of scale- meaning- Internal and External economies of scale, Supply- meaning- determinants, Law of supply, Cost: Meaning- concepts-Computation of costs.

Unit 5: Market Structure

Revenue: Meaning- classification, Perfect competition- meaning- features- equilibrium price determination simultaneous changes in demand and supply – importance of time elements- short run and long run equilibrium, Imperfect competition – Monopoly- meaning- features- short and long run equilibrium – price and output determination under Discriminating Monopoly, Oligopoly- meaning – features-kinked demand curve, Duopoly- meaning- features

Textbook

1. D. N. Dwivedi, Essentials of Business Economics, Vikas Publishing House, New Delhi, Eighth edition, 2016.
2. H L Ahuja, Managerial Economics , S.Chand Publishing , Ninth Edition, 2017

References

1. Keith Weight , Allen, Managerial Economics, Theory, Applications, and cases, Viva Books, 7th revised edition, 201
2. Suma Damodaran , Managerial Economics, Oxford University Press, Second Edition, 2010
3. Koutsoyiannis , A., Modern Micro Economics, Macmillan Press Ltd, 2008.

SEMESTER 2

Course Code	
Title of the course	Principles and Methodology of Management
Semester	2
No of Credit	3
Number of Contact Hours	72

UNIT 1: Introduction to Management

Nature and scope of management process, definition of management-management: a science, an art or profession-Scientific management, administrative management, human relations management. Contributions of Taylor, Fayol, Max Webber, Gilberth, Gantt, Chester Bernard, Elton Mayo, Peter Drucker

Unit 2: Planning and Decision-making

Definition, meaning, Importance, steps in planning, characteristics types of plans - objectives, strategies, policies, procedures, rules, programmes and Budgets, Relationship between planning and controlling, limitations of planning.

Decision making - definition, meaning, objectives, steps in rational decision making, Types of decisions, Difficulties in decision making

Unit 3: Organizing

Meaning importance, process of organizing, organizations structure, Types of organization structure - line organizations, line and staff organizations, Functional organization, committees.

Delegation of authority, significance of delegation, process of delegation.

Centralization & decentralization of authority.

Unit 4: Staffing

Meaning and importance staffing- manpower planning, recruitment, selection, training and development

Unit 5: Directing and Controlling

Meaning & Importance of Directing – Leadership-Motivation- Communication-Co-ordination- Meaning and importance of controlling, control process, budgetary and non-budgetary controls

Textbooks

1. Management: A Global, Innovative, and Entrepreneurial Perspective, Heinz Weihrich; Mark Cannice; Harold Koontz, Tata McGraw-Hill Education, 2013
2. Management Fundamentals: Concepts, Applications, Skill Development 8th Edition, Robert Lussier, 2018

Reference Books

1. L. M. Prasad., "Principles and Practice of Management", Sultan Chand & Sons, 2015
2. R. Srinivasan and S. A. Chunawalla., "Management: Principles and Practice", Himalaya Publications, 2014.
3. P. C. Tripathi and P. N. Reddy., "Principles of Management", Tata McGraw Hill, 2015

SEMESTER 2

Course Code	
Title of the course	Business Mathematics and Quantitative techniques
Semester	2
No of Credit	4
Number of Contact Hours	90

Unit 1: Set theory

Modern theory in mathematics, definition, elements and types of sets, operations on sets a.

Unit 1: Algebra-1

Number system-Natural numbers, prime numbers, integers, rational and irrational numbers, Ratio, proportion and variation Sequences - Arithmetic progression ,nth term and sum to n terms of A.P- Geometric progression, nth term, sum to n terms and sum to infinity of G.P

Unit 2: Algebra-2

Permutations- Combinations- Logarithm- Compound interest and depreciation

Unit 3: Matrices

Matrices, matrix operations, Determinant of a square matrix (expansions only) and Rank of a matrix. Inverse of square matrix (problems only). Solution of system of linear equations using matrices

Unit 4; Linear Programming problem

LPP Introduction – important definition – formation of a Linear Programming problem – graphical method – simplex method – Applications of LPP

Unit 5: Network models

Network models and simulation. Network models for project analysis CPM;
Network construction and time analysis; cost time trade off, PERT – problem

Semester 2

Course Code	
Title of the course	Entrepreneurship, Business models and Industry analysis
Semester	2
No of Credit	4
Number of Contact Hours	90

Unit 1: Introduction to Entrepreneurship

To make the students understand about entrepreneurs and different classifications. Entrepreneur and entrepreneurship - Definition; traits and features; classification; Entrepreneurs; Women entrepreneurs; Role of entrepreneur in Entrepreneurs in India.

Unit 2: Entrepreneurial development programme

Create awareness about EDP. Entrepreneurial development programme concept; Need for training; phases of EDP; curriculum & contents of Training Programme; Support systems, Target Groups; Institutions conducting EDPs in India and Kerala.

Unit 3: Different Types of Business models

Subscription model - Bundling model – Freemium model - Razor blades model – product to service model – crowd sourcing model – leasing model – Franchise model – Distribution model – One for one model – manufacturing model

Unit 4: Institutions supporting small business enterprise

To identify different Discuss opportunities in small business. Small business Enterprise - Identifying the Business opportunity in various sectors - formalities for setting up of a small business enterprise - Institutions supporting small business enterprise - EDII (Entrepreneurship Development Institute of India), SIDO (Small Industries Development Organization NSIC (National small Industries Corporation Ltd. (CNSIC) NIESBUD (National Institute for Entrepreneurship and small Business Development) Sickness in small business enterprise causes and remedies.

Unit 5: Industry Analysis

Different types of industry analysis – Porters 5 force model – PEST analysis – SWOT analysis

Text book

1. Dorden and Natarajan ,Entrepreneurship Development, Himalaya Publication

Reference

1. Poornima M.Charantimath, Entrepreneurship Development, Pearson Publication 2012

Semester 2

Course Code	
Title of the course	Essential Statistics for Business analytics
Semester	2
No of Credit	4
Number of Contact Hours	90

ESSENTIAL STATISTICS FOR BUSINESS ANALYTICS

Unit 1: Sampling and Confidence intervals 12 Hrs.

Introduction to Sampling - Sampling Theory - Sampling Distribution - Using probabilistic Sampling Techniques - Estimating Sampling Errors and Confidence Intervals - Sampling Error and Non- Sampling Error - Central Limit Theorem - Case Study on Sampling Techniques

Unit 2: Hypothesis testing 14 Hrs.

Introduction to Null Hypothesis - Alternate Hypothesis - Testing Hypothesis for Large Samples - Test for Single Proportion - Test for Difference of Proportions - Testing Hypothesis for Small Samples - T-test - Applications of T-test - P-test - Calculating Analysis of Variance - Two-Way Factorial ANOVA - Multivariate Analysis of Variance - Performing Chi-Square Test - Applications of the C2 Test - Testing the Goodness of Fit - Case Study on Hypothesis Testing with Excel

Unit 3 - Correlation and Regression

Correlation – Meaning & Types -Spearman’s Rank correlation, Karl Pearson’s co efficient of correlation, Probable error - Concurrent deviation method -Analysis of Bi Variate Data- Regression - Regression – Meaning - Regression lines - • Properties of Regression lines and regression coefficient • Related problems on regression lines and Regression coefficient

Unit 4 - Time Series Analysis

Objectives and uses of Time series analysis - Components of Time series - Measurement of Trend by Moving averages method and Least squares method to Linear.- Analysis of Bi Variate Data.

Unit – 5 Interpolation

Introduction – graphic Method of Interpolation – Parabolic – curve method – Newton’s method – for Equal intervals – Binomial expansion method- Lagrange interpolation formula

Suggested Readings:

- Statistics for Big Data for Dummies; Alan Anderson, David Semmelroth; ISBN 9788126558223
 - Data Mining and Business Intelligence (Includes Practicals); S.K. Shinde, Uddagiri Chandrasekhar; 789351197188
 - Applied Business Statistics, 7ed, ISV (Author- Ken Black)
 - Statistical Analysis with Excel For Dummies, 4th Edition; Joseph Schmuller; ISBN: 978-1-119- 27116-1
 - Excel Statistics: A Quick Guide (Paperback)by Neil J. [HYPERLINK "https://www.amazon.com/s/ref%3Drdr_ext_aut?_encoding=UTF8&index=books&field-author=Neil%20J.%20Salkind"](https://www.amazon.com/s/ref%3Drdr_ext_aut?_encoding=UTF8&index=books&field-author=Neil%20J.%20Salkind) [HYPERLINK "https://www.amazon.com/s/ref%3Drdr_ext_aut?_encoding=UTF8&index=books&field-author=Neil%20J.%20Salkind"](https://www.amazon.com/s/ref%3Drdr_ext_aut?_encoding=UTF8&index=books&field-author=Neil%20J.%20Salkind)Salkind
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SEMESTER 3

Course Code	
Title of the course	Human Resource Management
Semester	3
No of Credit	3
Number of Contact Hours	90

Unit-1 Introduction to Human Resource Management (14Hours)

Meaning - definitions, objectives, and importance of HRM, functions of HRM—managerial functions – operative functions – nature and scope of HRM – HR manager. Role, qualification, and qualities.

Unit-2 Human resource planning, Recruitment, and Selection (14 Hours)

Meaning and importance of human resource planning, benefits of human resource planning, Meaning of recruitment, selection, placement and training Methods of Recruitment and Selection. - Uses of tests in selection, Problems involved in placement.

Unit-3 Training, Induction and HRM Strategies (15 Hours)

Meaning of Training and Induction, Objective and purpose of induction, Need for training, benefits of training, Identification of training needs, methods of training. HRM Strategies - Human capital – emotional quotient –mentoring.

Unit-4 Promotion and Transfers (14 Hours)

Meaning of promotion-Purposes and types – promotion policy – bases of promotion – seniority v/s merit– transfer, need –purposes –types of transfers- demotion –causes of demotion.

Unit-5 Performance Appraisal and compensation (15 Hours)

Meaning - objectives of performance appraisal, 360-degree appraisal, other methods of performance appraisal and limitations. Principles - techniques of wage fixation, job evaluation, compensation -meaning of compensation, objectives, and importance of compensation.

Text Books

1. Gary Dessler and Biju Varkey, Human Resource Management, Pearson, 2017.

2. Seema Sanghi, Human Resource Management, Vikas Publishing Pvt Ltd, 2014.

References

1. P. Subba Rao, Human Resource Management, Himalaya Publishing House, 2018
2. C.B.Gupta. (2014). Human Resource Management. Sultan Chand and sons, 2017
3. V.S.P.Rao, Human Resource Management, Excel Books, Third Edition(2010)

SEMESTER 3

Course Code	
Title of the course	Marketing Management
Semester	3
No of Credit	4
Number of Contact Hours	90

Unit-1 Introduction to Marketing Management (14 Hours)

Introduction – Meaning and nature of marketing management, objectives, and importance of marketing management, marketing concepts. Consumer Needs, Wants, and Consumer Insights: Introduction, Needs and Wants, Using Needs/Wants Insight in Marketing, Benefits Sought By Consumers, The Impact of Emotional Benefits, Consumer Insight, Possible Sources of Insights, Using Insights, Finding and Developing an Insight, The Role of an Insight in Product Development and Marketing.

Unit-2 Segmentation Targeting and Positioning (STP) (14 Hours)

Market Segmentation and Product Positioning: Introduction, Market Segmentation, Market Targeting, Target Market Strategies, Product Positioning and Differentiation, Choosing a Differentiation and Positioning Strategy, Changing the Product Positioning, USPs

Unit-3 Marketing Mix: Product and Price (15 Hours)

Products and Services: Introduction, Levels of Product and Services, Classifications, Product and Service Decisions. Branding, New Product Development and Product Life Cycle (PLC), Services Marketing: The Nature and Characteristics of a Service, Marketing Strategies for Service Firms. Pricing: Introduction - factors influencing pricing decisions and Pricing Strategies.

Unit-4 Marketing Mix: Promotion (15 Hours)

Marketing Communication, Integrated Marketing Communications (IMC), and Promotion Mix Strategies – Push and Pull Strategy. Advertising and Public Relations, Personal Selling and Sales Promotion, Sales Promotion - Trade Shows, Trade Sales Promotion, Consumer Sales Promotion. Publicity and direct marketing - Direct Marketing, Benefits of Direct Marketing, Direct Marketing Channels, Public and Ethical Issues in Direct Marketing.

Unit-5 Marketing Mix: Place (Distribution Channel) (14 Hours)

Distribution Channels: Introduction, Type of Marketing Channel, Channel Motivation,

Importance of Channel of Distribution, Multiple Channels Distribution, Retail, Levels of Service, Corporate Retailing, The New Retail Environment. New trends in the area of marketing.

Textbook :

1. Philip Kotler, Kevin Lane Keller. Marketing Management, 15th Edition, Pearson,2017
2. Ramaswamy and Namakumari. (2005). Marketing Management, Sage publication India Pvt Ltd, Sixth Edition, 2018.

Reference

1. Arun Kumar and Meenakshi. Marketing Management. Vikas Publishing House, 2016
2. William M Pride and O C Ferrell. Marketing, South-western Publishing, 17th Edition, 2013

SEMESTER 3

Course Code	
Title of the course	Business Communications
Semester	3
No of Credit	3
Number of Contact Hours	72

BUSINESS COMMUNICATION

Unit-1 Communication in Business (14)

Introduction, Communication Process, Essentials of Business Communication, Barriers to Business Communication

Unit-2 Methods, Models and Theories of Communication (15)

Models of communication, Shannon's Model of the Communication Process, Derivative Models of the Communication Process, New Model of the Communication Process, Defining Communication Theories. Types of Communication: Verbal Communication, Nonverbal Communication, Types of Communication Based on Style and Purpose

Unit-3 English Grammar (14)

Remedial English - I: Parts of Speech (Nouns, Pronouns, Adjectives, Verbs, Adverbs, Prepositions, Conjunctions, and Interjections) Reading Skills – II: Sentences, Subject-Verb Agreement, Active and Passive Voice, Direct and Indirect Speech

Unit-4 Business Correspondence (15)

Communication in an Organization: Types of Communication Meetings, Memo, Circulars, and Notices. Business Correspondence: General Rules for All Business Correspondence, Guidelines for the Basic Cover Letter, Guidelines for Information Interviewing, Networking Letters, Guidelines for Thank You Letters, Guidelines for Job Offer, Acceptance Letters, Guidelines for Letters Declining a Job Offer, Style in Business Correspondence

Unit-5 Business Report Writing (14)

Cover Letters, Business Report Writing, The purpose of statistical studies, sample of business correspondence.

5. Textbook

1. Gibson, J W, and Hodgetts R M. Business Communication: Skills and Strategies. Harper and Row

6. References

1. Bovee C L and Thill J V. (2009). Business Communication Today, (10th ed.). McGraw Hill.

2. Hall J A and Kapp M L (1992). Nonverbal Communication in Human Interaction,(3rd ed.). Holt Rinehart and Winston.

3. Business Communication. ICMR Publications

Semester 3

Course Code	
Title of the course	Information System for Business
Semester	3
No of Credit	3
Number of Contact Hours	90

Course Curriculum:

Unit 1 Introduction to Information Technology & MIS (15 Hours)

Different Computer System configurations, transaction Processing Systems. Network distributed system. Decision of information technology for MIS Concept under MIS: Decision making Principles and process of decision making, types and systems of decision making. Method and tools of decision making. Principles of rationality, Utility, Risk and its application in decision making. Herbert Simon Model and law of Requisite Variety Management of Risk and Decision making)

Unit 2 Definition and Difference Between data information (14 Hours)

Relevance of information to decision making. Source and types of information. Quality of information. Perfect Information and value of additional Information. Application of communication Model and Concept of Human as information Processor)

Unit 3 Relevance of Information in MIS Systems (14 hours)

System Definition- Types of systems. Use of Control Principle in system Design. Open-Closed Deterministic and Probabilistic System. Use of feedback Principle for control. Method of Handling Complex System. Relevance of Choice of Systems in MIS Integration of Organization Systems and Information Systems.)

Unit 4 Assessing Information Needs of Organization (14 Hours)

Need to analyze Information needs at Organizations as a whole. Methods and Tools for Assessing Information needs. Relating Organizational goals, Objectives and targets to Information needs. Breaking Information needs by function.)

Unit 5 Departments and its Users (15 Hours)

Relations to Nature, Type, Quantity and Quality of Information to Type of Decision, its Impact on the Decision of Information to type of Decision, its impact on the Decision Maker. Information Modeling and Business Orientation. Information Model and its Integration with Data Processing System)

Text Book(s)

1. Management Information Systems, Davis Olson, McGraw Hill. Latest Edition

6. References

1. Management Information Systems, W. S. Jawadekar Tata, Pearson, Latest Edition

2. Management Information Systems, Milind Oke Everest Publishing House, Latest Edition

Semester 3

Course Code	
Title of the course	Business Analytics Tools
Semester	3
No of Credit	4
Number of Contact Hours	90

Unit 1: Monetizing data to drive business decisions

Need for data driven decision making - Solving the business problem using Analytics - Overview of Analytical cycle and Hierarchy of information user - The Complete BA professional - Understand BA roles and Responsibilities - Identify the Popular BA Tools.

Unit 2: Organizing data with Excel

Formatting cells- Using the Ribbon to Format Numbers - Using the Format Cells Dialog Box - Add a Border, background Color - Change the Font, Font Size, Font Color - Formatting input data- Understanding Dates and Times - Format Percentages, Fractions, In Scientific Notations - Format as Text Bold, Underline, or Italicize - Formatting worksheet- Align Data, Rotate Data, Wrap Text, Merge and Center - Apply a Style, Using Format Painter, Clear Formats - Structuring the workbook - Cut, Copy, and Paste Cells - Using Live Preview with Paste, Paste from the Office Clipboard, Insert or Delete - Find and Replace Information - Change the Name of a Worksheet, Change Column Widths or Row Heights, Hide Columns or Rows, Hide a Worksheet - Move or Copy a Worksheet - Freeze Worksheet Titles - Hide Gridlines, Headings, or the Formula Bar.

Unit 3: 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 - Query data from SQL - Working in the Select Part of an SQL Query - Managing SQL commands - Managing Tables

Unit 4: Performing computations and aggregations using Excel

Understanding formulas - Calculate with an Operator - Calculate Using a Function and Cell Addresses - Create an Array Formula using the Sum, Average, Count, Min, and Max Functions

- Managing formulas in Excel- Create a Formula that Refers to Another Worksheet - Understanding Relative and Absolute Cell Addresses - Edit Formulas, Name Cells and Ranges - Define and Display Constants - Create Formulas That Include Names - Check Formulas for Errors, Trace Precedents and Dependents - Introduction to functions in Excel - Understanding the Function Wizard - Round a Number - Create a Conditional Formula - Calculate a Conditional Sum - Calculate a Conditional Count - Find the Square Root - Using VLOOKUP and index- Retrieve Column or Row Numbers - Using VLOOKUP - Using Index: Match, Search and Text-based functions in Excel. Determine the Location of a Value Using INDEX - Perform Date and Time Calculations Using inbuilt financial functions in Excel- Calculate Future Value, Present Value - Calculate Loan Payments, Principal or Interest, Interest Rate - Calculate the Internal Rate of Return - Calculate Straight-Line Depreciation

- Calculate Declining Balance Depreciation - Calculate Sum-of-the-Years-Digits Depreciation; Exploring inbuilt statistical functions and tools- Calculate an Average - Calculate a Conditional Average - Calculate the Median or the Mode - Calculate Rank.

Unit 5: Working with pivot tables and charts

Formatting data in table- Create and format table, use sort and filter - Introducing Pivot Tables - Create a Pivot Table - Modify a Pivot Table Layout - Summarize Pivot Table Values - Working with Pivot Tables - Create a Pivot Table calculated Field - Group the Rows or Columns in a Pivot Table - Apply styles to Pivot Table - Filter a Pivot Table - Sort a Pivot Table - Retrieve Values from a Pivot Table - Using Slicer - Charting data - Create and add chart details - Create a Combination Chart - Change the Chart Type - Add or Remove Chart Data - Add Sparklines - Working with types of Charts, Trend line, Histograms, Bar and Pie Charts - Creating Pivot chart. 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

Suggested Readings:

1. Excel 2016 for Dummies; Greg Harvey; ISBN: 9788126558964
2. Microsoft Excel Power Pivot & Power Query for Dummies; Michael Alexander; ISBN: 9788126562305
3. Microsoft Excel Formulas & Functions for Dummies, 4ed; Ken Bluttman; ISBN:

9788126559466

4. Excel Data Analysis: Your visual blueprint for creating and analysing data, charts and PivotTables, 3rd Edition; Denise Etheridge; ISBN: 978-1-118-03623-5
5. Monetizing Your Data: A Guide to Turning Data into Profit-Driving Strategies and Solutions; Andrew Roman Wells, Kathy Williams Chiang; ISBN: 978-1-119-35625-7
6. Excel 2016 for Beginners: A Step by Step Guide for Beginners...by Elite Tech
HYPERLINK "https://www.amazon.com/dp/1719271321/ref%3Drdr_ext_tmb"
HYPERLINK "https://www.amazon.com/s/ref%3Drdr_ext_aut?_encoding=UTF8&index=books&field-author=Elite%20Tech%20Academy"
HYPERLINK "https://www.amazon.com/s/ref%3Drdr_ext_aut?_encoding=UTF8&index=books&field-author=Elite%20Tech%20Academy"Academy
7. Excel Pivot Table Champion: How to Easily Manage and Analyze Giant Databases with Microsoft Excel Pivot Tables (Excel Champions)Paperback – March 8, 2019 by Henry E. Mejia
HYPERLINK "https://www.amazon.com/Henry-E.-Mejia/e/B07DJ1PGDG/ref%3Ddp_byline_cont_book_1"
HYPERLINK "https://www.amazon.com/Henry-E.-Mejia/e/B07DJ1PGDG/ref%3Ddp_byline_cont_book_1"Mejia
8. Microsoft Excel Practical Formulae: From Basic Data Analysis to Advanced Formulae Manipulation (Learn Excel Visually Journey Book 3) Kindle Edition by Diane Griffiths
HYPERLINK "https://www.amazon.in/Diane-Griffiths/e/B00JAK665O/ref%3Ddp_byline_cont_ebooks_1"
HYPERLINK "https://www.amazon.in/Diane-Griffiths/e/B00JAK665O/ref%3Ddp_byline_cont_ebooks_1"Griffiths

SEMESTER 4

Course Code	
Title of the course	Financial Management
Semester	4
No of Credit	4
Number of Contact Hours	90

Unit 1: Introduction to Financial Management and Cost of Capital

Meaning and Evolution, Significance and Goals, Functions of a Financial Manager, Cost of Capital-Meaning, Cost of debt, preference and equity capital, weighted average cost of capital.

Unit 2: Cash Flow Statement and Leverages

Cash Flow Statement (AS-3)– Meaning, uses and preparation. Leverages – Operating leverage, financial leverage and Combined leverage, EPS analysis.

Unit 3: Investment Decision

Capital Budgeting – Meaning, evaluation of proposals – Payback period, NPV, ARR, IRR, Accept/reject decisions.

Unit 4: Management of Working Capital

Working Capital Policy - Overall Considerations-Importance of Working Capital Management, Operating Cycle Concept, Forecasting, Working Capital Requirement, Estimation of Working Capital.

Unit 5: Dividend Policy and Capital Structure

Meaning of dividend policy, factors influencing dividend policy, forms of dividend. Meaning of Capital Structure – Optimal capital structure – factors determining capital structure.

Text Books

1. Khan M. Y. and Jain P. K. , Financial Management 7th Edition, McGraw Hill Education, 2017

2. M. Pandey, Financial Management, 11th edition, Vikas Publishing House, 2016
3. Prasanna Chandra. Financial Management Theory and Practice. (9th ed.). McGraw Hill, 2017

Reference Books

1. Aswath Damodaran , Corporate Finance, Theory and Practice, Wiley , Second Edition, 2007
2. Michael C. Erhardt and Eugene F. Brigham. Corporate Finance. (1st ed.). South-Western Pub, 2008
3. Richard A. Brealey, Stewart Myers and Franklin Allen. (2013). Principles of corporate finance. (11th ed.). McGraw Hill.

Semester 4

Course Code	
Title of the course	DBMS
Semester	4
No of Credit	4
Number of Contact Hours	90

DBMS

Unit – 1 Introduction

Introduction and applications of DBMS, Purpose of data base, Data, Independence, Database System architecture- Levels, Mappings, Database, users and DBA DATABASE DESIGN: Database Design Process, ER Diagrams - Entities, Attributes, Relationships, Constraints, keys, extended ER features, Generalization, Specialization, Aggregation, Conceptual design with the E-Rmodel.

Unit 2 : The Relational Model

Introduction to the relational model, Integrity constraints over relations, Enforcing integrity constraints, Querying relational data, Logical database design: E-R to relational, Introduction to views, Destroying/altering tables and views. RELATIONAL ALGEBRA AND CALCULUS: Preliminaries, relational algebra operators, relational calculus - Tuple and domain relational calculus, expressive power of algebra and calculus.

Unit 3 : SQL

Basics of SQL, DDL, DML,DCL, structure – creation, alteration, defining constraints – Primary key, foreign key, unique, not null, check, IN operator, Functions - aggregate functions, Built-in functions – numeric, date, string functions, set operations, sub-queries, correlated sub-queries, Use of group by, having, order by, join and its types, Exist, Any, All , view and its types. transaction control commands – Commit, Rollback, Save point, cursors, stored procedures, Triggers

Unit 4 – Schema refinement and normal forms

Introduction to schema refinement, functional dependencies, reasoning about FDs. Normal forms: 1NF, 2NF, 3NF, BCNF, properties of decompositions, normalization, schema refinement in database design, case studies.

Unit 5 Transaction management

Transaction concept, transaction state, implementation of atomicity and durability, concurrent executions, Serializability, recoverability, implementation of isolation, transaction definition in SQL, testing for Serializability. CONCURRENCY CONTROL AND RECOVERY SYSTEM: Concurrency control, lock based protocols, time-stamp based protocols, validation based protocols, multiple granularity. Recovery system - failure classification, storage structure, recovery and atomicity, log- based recovery, shadow paging, buffer management, failure with loss of non-volatile storage, advanced recovery techniques, remote backup systems. OVERVIEW OF STORAGE AND INDEXING: Tree structured indexing - intuition for tree indexes, indexed sequential access method (ISAM), B+ Trees - a dynamic tree structure. TEXT BOOKS: 1. Raghurama Krishnan, Johannes Gehrke , Database Management Systems, 3rd edition, Tata McGraw Hill, New Delhi,India. 2. Elmasri Navate, Fundamentals of Database Systems, Pearson Education,India. REFERENCE BOOKS: 1. Abraham Silberschatz, Henry F. Korth, S. Sudarshan (2005), Database System Concepts, 5th edition, McGraw-Hill, New Delhi,India. 2. Peter Rob, Carlos Coronel (2009), Database Systems Design, Implementation and Management, 7th edition.

SEMESTER 4

Course Code	
Title of the course	Digital Marketing Analytics
Semester	4
No of Credit	4
Number of Contact Hours	90

Unit 1: Introduction to Web Marketing and SEO

The Significance of Web Marketing, Internal Measures for SEO, Link Building, Introduction to Web Marketing Tools, SEO Analytics, Web Analytics, Google analytics

Unit 2: Display Network

Advertising on Display Networks, Image Advertising, Mobile Advertising, Video Advertising, YouTube Advertising,

Unit 3: Social Media Advertising

Creating Effective Content, Do and Dont's for Social Media, Analysing Target Audience, Social media Analytics.

Unit 4: E-Mail Marketing

Creating E-mail Campaigns, Effective strategies for E-mail Marketing, E mail marketing analytics

Unit 5: Mobile Marketing

Key Mobile Marketing Concepts, Mobile Devices, SMS Strategy, Mobile Advertising, Mobile Apps, Mobile analytics

Textbook

1. Damian Ryan, Understanding Digital Marketing: Marketing Strategies for Engaging the Digital Generation, Kogan Page; 3 edition, 2014

Reference

1. Eric Morrow, Shannon Chirone, Digital Marketing for Everyone: Connect With Your Customers, Grow Your Business & Demystify Social Media, Create Space Independent Publishing Platform, 2012

Semester 4

Course Code	
Title of the course	Business Intelligence and Data Visualization
Semester	4
No of Credit	4
Number of Contact Hours	90

Unit 1 Introduction

Introduction -What is data visualization? - The data visualization process- Filtering & processing - Translation & visual representation - Perception & interpretation -Why is data visualization so important in reports and statements? - key aspects of reports and statements

Unit 2 : Trends in data Visualization

Trends in Data Visualization—Storytelling-Trends in Data Visualization—Interactive Graphics - Visualization Designers -Why Use Data Visualization? -How Do You Incorporate the Visualization Process into Practice?

Unit 3 – Types of Data

Different types of data - Quantitative (numeric) -Discrete – Continuous - Qualitative (categorical)- Ordinal -Categorical- Data relationships -Ranking -Deviation-Correlation-Distribution- Partial and total relationships -Nominal comparisons -Series over time

Unit 4: Storytelling for social and market communication

stories that use data to communicate insights -simple sequences for telling a story: - Influencing people’s emotions by telling a story (drawing in their attention) - Persuading them through benefits that cover specific needs (benefits/engagement) - Moving on to concrete steps (call to action).

Three key elements

Narrative -Visualization -Data -Data + Narrative -Visualization + Data -Narrative + isualization - Data + Visualization + Narration = Successfully using our data to tell a story, wield influence, and effect the desired change -A basic recipe for storytelling in your presentations and final reports -Find the story in your data.-Define the perspective.-Create a hierarchy -Organize.

Plot.-Use data to anchor your narrative -Design principles -Review, review, review -Be familiar with your content and respect your audience-Keep it short and sweet.

Suggested Readings:

- Excel Dashboards & Reports for Dummies, 2ed (Author - Michael Alexander (Frisco); ISBN: 978- 1- 118-84242-3
- Microsoft Data Analytics for Dummies; Jared Decker, Brian Henry, Rob Sickorez; ISBN: 978-1- 119- 69636-0
- Tableau for Dummies; Molly Monsey, Paul Sochan; ISBN: 978-1-119-13483-1
- Data Visualization For Dummies, Mico Yuk, Stephanie Diamond; ISBN: 978-1-118-50292-1
- Excel Data Analysis: Your visual blueprint for creating and analysing data, charts and PivotTables, 3rd Edition; Denise Etheridge, ISBN: 978-1-118-03623-5
- Storytelling with Data: A Data Visualization Guide for Business Professionals by Cole Nussbaumer [HYPERLINK "https://www.amazon.in/s/ref%3Drdr_kindle_ext_aut?_encoding=UTF8&index=books&field-author=Cole%20Nussbaumer%20Knaflic&search-alias=digital-text"](https://www.amazon.in/s/ref%3Drdr_kindle_ext_aut?_encoding=UTF8&index=books&field-author=Cole%20Nussbaumer%20Knaflic&search-alias=digital-text) Knaflic
- Storytelling with Data: A Data Visualization Guide for Business Professionals
- High Impact Data Visualization in Excel with Power View, 3D Maps, Get & Transform and Power BI 2nd ed. Edition by Adam [HYPERLINK "https://www.amazon.com/Adam-Aspin/e/B07DR9VYTK/ref%3Ddp_byline_cont_book_1"](https://www.amazon.com/Adam-Aspin/e/B07DR9VYTK/ref%3Ddp_byline_cont_book_1) [HYPERLINK "https://www.amazon.com/Adam-Aspin/e/B07DR9VYTK/ref%3Ddp_byline_cont_book_1"](https://www.amazon.com/Adam-Aspin/e/B07DR9VYTK/ref%3Ddp_byline_cont_book_1) Aspin
- Data Visualization & Presentation With Microsoft Office 1st Edition (Paperback)by Valerie M. [HYPERLINK "https://www.amazon.com/s/ref%3Drdr_ext_aut?_encoding=UTF8&index=books&field-author=Valerie%20M.%20Sue"](https://www.amazon.com/s/ref%3Drdr_ext_aut?_encoding=UTF8&index=books&field-author=Valerie%20M.%20Sue) Sue, [HYPERLINK "https://www.amazon.com/s/ref%3Drdr_ext_aut?_encoding=UTF8&index=books&field-author=Matthew%20T.%20Griffin"](https://www.amazon.com/s/ref%3Drdr_ext_aut?_encoding=UTF8&index=books&field-author=Matthew%20T.%20Griffin) Matthew T. [HYPERLINK "https://www.amazon.com/s/ref%3Drdr_ext_aut?_encoding=UTF8&index=books&field-author=Matthew%20T.%20Griffin"](https://www.amazon.com/s/ref%3Drdr_ext_aut?_encoding=UTF8&index=books&field-author=Matthew%20T.%20Griffin) [HYPERLINK "https://www.amazon.com/s/ref%3Drdr_ext_aut?_encoding=UTF8&index=books&field-author=Matthew%20T.%20Griffin"](https://www.amazon.com/s/ref%3Drdr_ext_aut?_encoding=UTF8&index=books&field-author=Matthew%20T.%20Griffin)

Semester -4

Course Code	
Title of the course	Cost Accounting
Semester	4
No of Credit	4
Number of Contact Hours	72

Unit 1: Nature and Scope of Cost accounting:

Meaning, importance & limitations of cost accounting, Costing- An Aid to management, distinction between Cost and Financial accounting, Costing system- characteristics of an ideal costing system, steps for installation, difficulties while installation and how to overcome these difficulties, role of cost accountant.

Unit 2:Cost:

Cost Analysis, Concepts, Cost Classification, cost sheet and One unit costing.

Unit 3 : Material Control:

techniques of material control i.e. Level Setting, Economic Order Quantity, JIT Inventory System, ABC Analysis, VED Analysis, Perpetual Inventory System and FNSD Analysis. Material Purchase and Storage.

Unit 4 : Methods of valuing Material Issues:

Cost Price Methods- FIFO, LIFO, Average Cost, Inflated Price, Specific Price, Base Stock and HIFO. Market Price Method- Replacement Price, Realisable Value. Standard Price Methods- Current Standard Price and Base Standard Price.

Unit 5 : Labour Cost:

Meaning, labour turnover, Job Analysis, Job Evaluation, Merit Rating, Time Keeping, Idle Time and Overtime.

Textbooks and References

Cost Accounting – Theory and Problems, Maheshwari, S.N and Mittal, S. N. (2009)

Cost Accounting, Rajasekaran, (2010), 1st ed, Pearson Education.

Cost Accounting Principles and Practice, Jain, I. C & Nigam, B.M.L

Cost Accounting Text and Problems by M. C. Shukla, T. S .Grewal and M. P. Gupta – S Chand

SEMESTER 5

Course Code	
Title of the course	Research Methodology
Semester	5
No of Credit	3
Number of Contact Hours	90

UNIT 1: Research methodology (14 Hours)

Research, meaning, objectives, significance. Research process- different steps, criteria for good research. Types of research, descriptive, analytical, applied, fundamental, quantitative, qualitative, empirical and conceptual, Criteria of good research. Meaning. Research, meaning, objectives, significance. Research process- different steps, criteria for good research. Types of research descriptive, analytical, applied, fundamental, quantitative, qualitative, empirical and conceptual.

UNIT 2: Selection of research problem (14 Hours)

What is a Research Problem?, defining the research problem, selecting the problem, Sources techniques involved in defining a problem. Sources-technique involved in defining a problem.

UNIT 3: Research design (14 Hours)

Meaning-need, features of a good design, concepts-elements, Sampling design - Steps, Criteria of selecting a sampling procedure-sampling process, different types of sample designs. Meaning-need, concepts-elements Sampling design-steps criteria of selecting a sampling procedure-sampling process

UNIT 4: Types of data (15 Hours)

Primary data -meaning-advantages-disadvantages-methods of collecting primary data-sources.

Secondary data- meaning, advantages disadvantages-sources. Selection of Appropriate method for

data collection. Meaning-advantages-disadvantages-methods of collecting primary data-sources.

Secondary data- meaning, advantages disadvantages-sources.

UNIT 5: Interpretation (15 Hours)

Meaning-techniques-of interpretation. Report writing-significance types of reports; (technical and popular) steps-layout-oral presentation. Mechanics of writing a research report. Meaning techniques-of interpretation. Report writing-significance types of reports; (technical and popular)

steps-layout-oral presentation.

Textbook

1. Research Methodology, Methods and techniques, C.R.Kothari and Gaurav Garg, New Age International Publishers, 2019.

References

1. Research Methodology, Ranjith Kumar, Pearson, 2nd edition, 2014
2. Research Methodology: Concepts and Cases, Deepak Chawla and Neena Sondhi, Vikas Publishing House, Second Edition, 2016

SEMESTER 5

Course Code	
Title of the course	(Open)
Semester	5
No of Credit	3
Number of Contact Hours	72

Semester 5

Course Code	
Title of the course	New Technology in Business – Business Transformation using AI and Analytics
Semester	5
No of Credit	4
Number of Contact Hours	90

Unit 1: Business Process Analysis

Robotic Process Automation (RPA) - Benefits of Robotic Process Automation - Limitations of Robotic Process Automation

Unit 2: Artificial Intelligence (AI)

Artificial intelligence -Weak AI Strong AI -Considerations in Instituting Artificial Intelligence

Unit 3: Cloud Computing

Cloud computing - Software as a Service (SaaS) -Benefits of Cloud Computing, SaaS, PaaS, and IaaS -Limitations, Costs, and Risks of Cloud Computing, SaaS, PaaS, and IaaS

Unit 4: Block Chain -Types

Bitcoin and Other Cryptocurrencies -Smart Contracts -Benefits and limitations

Unit 5: Industry 4.0

Industry 4.0 -IOT -Cyber Attacks – Types -Defences Against Cyberattack
Defences against Cyber Attacks -Cyber Security

Suggested Readings:

- AI and Analytics: Accelerating Business Decisions; Sameer Dhanrajani; ISBN: 9788126573035
- Big Data MBA: Driving Business Strategies with Data Science; Bill Schmarzo; ISBN: 978-1-119-18111-8

SEMESTER 5

Course Code	
Title of the course	Business Analytics for Decision making
Semester	5
No of Credit	4
Number of Contact Hours	90

Unit 1. Introduction to fundamental concepts of business analytics

Introduction to Business Data Analytics: Definition -Data Analytics as a Movement, Data Analytics as a Decision-making Paradigm -Data Analytics as a Set of Practices and Technologies - Business Data Analytics Objectives - Why Are Business Analytics Important Role of Business Analytics -Types of analytics methods: Business Analysis and Business Data Analytics -What Are Descriptive Analytics -What Are Predictive Analytics? -Diagnostic Analytics What Are Prescriptive Analytics?

Unit 2 Business Data Analytics Process

Business Data Analytics Process:-Identify the Research Questions -Source Data -Analyse Data -Interpret and Report Results -Business Decision Making-The Art of Data Science: Volume, Velocity, Variety

Unit 3: Decision making data and information

Decision making Functions of Management -Planning -Organizing and coordinating Leading and motivating -Controlling process -Informed decision -Decision Making Within the Organization -Operational or transactional -Tactical decision -Strategic decisions - Types of Decision -Programmed decision -Non programmed decision

Unit 4 : Data and information

Source of data -Internal Sources of Data -External Sources of Data-Primary and Secondary Data-The Problems of Using Secondary Data-Sources of Secondary Data -collection data - Direct observation -Direct inspection-Written questionnaire
Personal interviewing-Abstraction from record or published statistics

Unit 5 : Sampling and sampling designs

Populations and samples – why sample? -Practically-Time-Cost-Errors-Destructive

Small population-Accuracy-The selection of a sample-Random Sampling- Completeness -
Accuracy -Random Sample Designs -simple random sample design -stratified random
sampling -systematic sample design -multi-stage sample design -cluster sampling design -
Non Random Sample Designs- Quota sampling
Judgmental sampling -Statistical Investigations and Surveys-information requirement for
effective decision making -quality of information
Exploring data deriving information Storing and structuring data -The organization of
data-Tabulation -The interpretation of tables-Designing a table-ordering data ranking -
Stem – and- leaf-frequency distribution-Grouped frequency distribution
Cumulative frequency distribution-Percentiles -Relative and percentage -frequencies -
Presenting information pictorially-Charts and diagrams to display category data-
pictograms-bar charts – simple, compound and component-pie charts -Construction of
charts and diagram -Interpretation of charts and diagrams
Diagrams to display non category data -The histogram -Frequency polygon
Cumulative frequency polygon or ogive -Box plot

SEMESTER 5

Course Code	
Title of the course	Business Ethics and Environment Values
Semester	5
No of Credit	4
Number of Contact Hours	90

Course Curriculum:

Unit -1 Introduction to Ethics and Values (16 Hours)

Nature of Business Ethics and Values, Significance and types of values, Ethics and Religion, Culture and Ethics, Social culture and Individual Ethics, Factors Influencing Business Ethics, Ethics as strategy, Ethics of Great Philosophers – Albert.Z.Carr, Aristotle, Niccolo Machiavelli, Karl Marx, Sun Tzu: The art of war of Sun Tzu, Might-equals-right approach of Karl Marx.

Unit -2 Ethical Decision Making (14 Hours)

Ethical Decision Making, Difficulties in Ethical Decision Making, Power and Politics in organizations: Bases and sources of power, Coalitions, Managing Ethics: Ethics codes – Comparison of codes of Ethics, Codes of Conduct, Codes of Practice, Ethics Programs, Kohlberg’s Study and Business Ethics, Laws of Enforcing Ethical Conduct: Laws and Ethics, Justice –Theory of Natural Law, Law as a guide to Moral Choice, the Role of the Government of India in Enforcing Ethical Behaviour.

Unit-3 Ethics in Marketing and Accounting (14 Hours)

Ethics in Marketing –Product relative ethics, Competition Relative Ethics: Advertising as a process of competitive strategy, Piracy and predatory as a strategic choice, Ethics in Finance Accounting and Reporting, Insider Trading.

Unit - 4 Handling Diverse Environments (14 Hours)

Etiquette in a Diverse Business Environment, Working in a Diverse Environment, Respecting Physical Differences, Dealing with Specific Disabilities, Respecting Racial and Ethnic Differences, Respecting Gender Differences, Handling Conflicts Introduction, Workplace Dynamics, Handling Problem Personalities, Managing Conflicts, Business Communication and Other Etiquette, Etiquette at Major Events, Travel Etiquette, Women Travellers.

Unit-5 Ecosystems (14 Hours)

Concept of an ecosystem, Structure and function of an ecosystem, Producers, consumers and decomposers, Energy flow in the ecosystem, Ecological succession, Food chains, food webs and

ecological pyramids, Introduction , types, characteristic features, structure and function of the

following ecosystem - Forest ecosystem, Grassland ecosystem, Desert ecosystem, Aquatic ecosystem (ponds, streams, lakes, rivers, oceans, estuaries)

5. Textbook:

1. A.C.Fernando, Business Ethics - An Indian Perspective, Pearson Education India, 2009
2. Andrew Crane , Dirk Matten, Business Ethics , Oxford University Press, 2003

6. References:

1. Utkarsh Majumdar and Namrata Rana, Balance: Responsible Business for the Digital Age, Westland Publications Pvt Ltd, 2018
2. Larry Johnson & Bob Phillips, Absolute Honesty: Building a Corporate Culture That Values Straight Talk and Rewards Integrity, AMACOM, 2003
3. Paul J. Zak and Michael C. Jensen, Moral Markets: The Critical Role of Values in the Economy, Princeton University Press, 2008
4. Daniel Freidman, Morals and Markets: An Evolutionary Account of the Modern World, Palgrave Macmillan, 2008

SEMESTER 6

Course Code	
Title of the course	Strategic Management
Semester	6
No of Credit	4
Number of Contact Hours	90

Unit 1: Introduction to Strategic Management

Introduction to Strategic Management, Concept of Corporate Strategy, Strategic Management Process, The 7-S Framework, Corporate Policy and Planning in India.

Unit 2: Environmental Scanning

Environmental Scanning, Industry Analysis, The synthesis of External Factors, External Factors Analysis Summary (EFAS), Internal Scanning, Value Chain Analysis, Synthesis of Internal Factors, Internal Factors Analysis Summary (IFAS)

Unit 3: Strategy Formulation

Strategy Formulation, Strategic Factors Analysis Summary (SFAS), Business Strategy, Corporate Strategy, Functional Strategy, Strategic Choice.

Unit 4: Strategy Implementation

Strategy Implementation, Organization Structure, Corporate Culture, Diversification, Mergers and Acquisitions, Turnaround strategies, Portfolio strategy

Unit 5: Evaluation and control of strategies

Evaluation and control of strategies-strategic control-standard-benchmarking-cost benefit analysis-performance gap analysis-responsibility centres. Other Strategic Issues, Small and Medium Enterprises, Non- Profit Organizations.

Text book

1. Robert A Pitts and David Lei, Strategic Management, 4th Edition Cengage Learning, 2006.

References

1. Francis Chrunilam, Strategic Management, Himalaya publications, Mumbai.
2. K.Govindabhat, Strategic Management, Himalaya Publications, Mumbai.

Semester 6

Course Code	
Title of the course	Applications of Business Analytics
Semester	6
No of Credit	4
Number of Contact Hours	90

Unit I: Getting Started with Python 8 Hrs.

Installing Python, Basic input and output, Variables and assignments, Identifiers, Objects, Numeric types: Floating-point, Arithmetic expressions, Python expressions, Division and modulo”, Unit basics, Math Unit, Representing text, String basics, List and Set basics, Common data types summary, Type conversions, Binary numbers, String formatting

Unit II: Working with Loops and Functions 14 Hrs.

If-else branches, Equality and relational operators, Boolean operators and expressions, identity operators, Code blocks and indentation, Conditional expressions Loops, While loops, For loops, Nested loops, Break and continue, Loop else, User-defined function basics, Returning values from functions, Reasons for defining functions, Function arguments

Unit III: Using Python to Handle Data and Exploratory analytics in Python 14 Hrs. Important packages in Python, Data handling in Python, Data cleaning and Treatment, Performing Descriptive statistics in Python, using graphs and plots in python, performing various descriptive statistics in Python-central tendency measure, graphical measures, hypothesis testing, Using graphs and plots in python

Unit IV: Performing Regression in Python 12 Hrs.

Basics of linear regression, Working with simple linear regression, Multiple regression, model building, Non-linear regression, Line estimation, Application of regression and logistic regression models

Unit V: Solving Problems using Decision Trees 12 Hrs

Principles of Decision trees, Building Decision trees, Cart, C5.0 and CHAID trees, Prediction by decision trees, Applications of Decision Trees, Model selection and cross validation, Model overfitting and underfitting, Validation techniques- Holdout validations, Tenfold CV, Bootstrap

Suggested Readings:

- Python for Data Science for Dummies; John Paul Mueller, Luca Massaron; ISBN: 9788126557394
- Core Python Programming, 2ed; Dr.R. Nageswara Rao; ISBN: 9789386052308
- Machine Learning using Python; Manaranjan Pradhan, U Dinesh Kumar; ISBN: 9788126579907
- Machine Learning (in Python and R) For Dummies; John Paul Mueller, Luca Massaron; ISBN: 9788126563050

SEMESTER 6

Course Code	
Title of the course	Supply Chain Management
Semester	6
No of Credit	4
Number of Contact Hours	90

SUPPLY CHAIN MANAGEMENT

Unit 1: Introduction to SCM

SCM, Definition, Objectives, Evolution, need, issues involved in developing SCM framework, Types. SCM activities, constituents, organisation.

Unit 2: Supply chain integration

Supply chain integration, stages, barriers to internal integration, achieving excellence in SCM, dimensions of supply chain excellence, forces influencing SCE Emotions, physical and financial supply chains, checklist for excellence.

Unit 3: Purchasing and supply management

Purchasing and supply management, introduction, importance, objectives, purchasing process, purchasing and other functions, purchasing and integrated logistics, interfaces, types of purchases, purchasing partnerships, material sourcing, just in time purchasing.

Unit 4: Outsourcing in SCM

Outsourcing in SCM, meaning, need, outsourcing risks, outsourcing process, outsourcing in SCM, new opportunities in SCM outsourcing, myths of SCM outsourcing.

Unit 5: Performance measurement in SCM

Performance measurement in SCM, meaning, advantages of performance measures, the benefits of performance measurement, measuring SCM, supplier performance measurement, parameters choosing suppliers.

Text book

1. David J Bloomberg, Stephen LeMay, Logistical Management, Prentice Hall of India Pvt Ltd.

References

1. K.Govindabhat, Supply chain Management, Himalaya Publications, Mumbai.

Semester 6

Course Code	
Title of the course	Data mining and Machine learning
Semester	6
No of Credit	4
Number of Contact Hours	90

Unit 1: Global Outlook on Analytics Industry

Global Outlook on Analytics Industry -Increasing significance of analytics as part of the IT BPM Industry-Analytics Industry Solutions-Analytics Outsourcing Market-Components of Analytics Industry-Vertical and Horizontal mapping -Driving Source of Analytics Industry -Major Technology Drivers for the industry -Challenges

Unit 2 Application Data Analytics in Business

Marketing Analytics -HR Analytics -Text Analytics -Supply chain Analytics -Sentimental Analysis-Web Analytics -Social Media Analytics-Sports Analytics-Retail Analytics-Location Analytics -Customer Analytics -Operation Analytics -Education Analytics

Unit 3 Big Data

What is big data - Deriving Value, Technology and Concepts - Characteristics of Big data – Applications of Big data in management

Unit 4: Machine Learning

Machine Learning for Business Analytics

Unit 5: Business Intelligence Data Mining

Introduction Business Intelligence, Concepts and applications- Pattern Recognition Data Processing Chain -Data Mining – Gathering and selection, data Cleaning and preparation -Outputs of data Mining -Evaluating data Mining -Data Mining Techniques Tools and Platforms -Data Mining Best Practices

SEMESTER 6

Course Code	
Title of the course	Management Project
Semester	6
No of Credit	4
Number of Contact Hours	72

Course Objectives:

The aim of the course - management project is meant to give the students a comprehensive exposure to the real business world in terms of the professional challenges as well as the personal aspects of etiquette, language, teamwork and overall effectiveness as operating managers.

EVALUATION PARAMETERS

Criteria	Marks
Registration of the Project plan	20 Marks
Mid-review report	20 Marks
Final Report	40 Marks
Viva – Voce	20 Marks
Total	100 Marks

Practical :- Each semester will have 18 hours of lab work and one practical assessment which will be given 1 credit for successful completion .

Internship :- One month internship is proposed in the semester break in the 4th semester.

Successful completion of the internship with certificate and report will be given 1 credit