Presidency School of Management

Master of Business Administration

MBA (Business Analytics)

Program Regulations and Curriculum

2025-2027

Based on Choice Based Credit System (CBCS)
and Outcome Based Education (OBE)

Regulations No.: PU/AC-26.22/PSOM19/MBL/2025-27

Resolution No 26.22 of the 26th Meeting of the Academic Council held on 25th July 2025, and ratified by the Board of Management in its 27th Meeting held on 28th July, 2025.

July-2025

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PART A – PROGRAM REGULATIONS AND CURRICULUM

1. Vision & Mission of the University and the School / Department:

1.1 Vision of the University:

To be a Value-driven Global University, excelling beyond peers and creating professionals of integrity and character, having concern and care for society.

1.2 Mission of the University:

- Commit to be an innovative and inclusive institution by seeking excellence in teaching, research and knowledge-transfer.
- Pursue Research and Development and its dissemination to the community, at large.
- Create, sustain and apply learning in an interdisciplinary environment with consideration for ethical, ecological and economic aspects of nation building.
- Provide knowledge-based technological support and services to the industry in its growth and development.
- To impart globally-applicable skill-sets to students through flexible course offerings and support industry's requirement and inculcate a spirit of new-venture creation.

1.3 Vision of the School:

To inspire and develop responsible leaders who generate meaningful and lasting impact on businesses, communities, and society

1.4 Mission of the School:

Our mission is to provide students with the knowledge, skills, and ethical foundation needed to lead with integrity and drive sustainable change in business and society

2. Preamble to the Program Regulations and Curriculum

This is the subset of Academic Regulations and it is to be followed as a requirement for the award of Master of Business Administration (MBA) Degree.

The Curriculum is designed to take into the factors listed in the Choice Based Credit System (CBCS) with focus on Social Project Based Learning, Industrial Training, and Internship to enable the students to become eligible and fully equipped for employment in industries, choose higher studies or entrepreneurship.

In exercise of the powers conferred by and in discharge of duties assigned under the relevant provision(s) of the Act, Statutes and Academic Regulations of the University, the Academic Council hereby makes the following Regulations.

3. Short Title and Commencement:

a. These Regulations shall be called the Master of Business Administration (MBA-Business Analytics) Program Regulations and Curriculum 2025-2027.
b. These Regulations are subject to, and pursuant to the Academic Regulations.
c. These Regulations shall be applicable to the ongoing Master of Business Administration (MBA-Business Analytics) Programs of the 2025-2027 batch, and to all other Master of Business Administration (MBA-Business Analytics) Programs which may be introduced in future.
d. These Regulations shall supersede all the earlier Master of Business Administration (MBA-Business Analytics) Program Regulations and Curriculum, along with all the amendments thereto.
e. These Regulations shall come into force from the Academic Year 2025-2026.

4. Definitions

In these Regulations, unless the context otherwise requires:

a. *"Academic Calendar" means the schedule of academic and miscellaneous events as approved by the Vice Chancellor;*
b. *"Academic Council" means the Academic Council of the University;*
c. *"Academic Regulations" means the Academic Regulations, of the University;*
d. *"Academic Term" means a Semester or Summer Term;*
e. *"Act" means the Presidency University Act, 2013;*
f. *"AICTE" means All India Council for Technical Education;*
g. *"Basket" means a group of courses bundled together based on the nature/type of the course;*
h. *"BOE" means the Board of Examinations of the University;*
i. *"BOG" means the Board of Governors of the University;*
j. *"BOM" means the Board of Management of the University;*
k. *"BOS" means the Board of Studies of a particular Department/Program of Study of the University;*
l. *"CGPA" means Cumulative Grade Point Average as defined in the Academic Regulations;*
m. *"Clause" means the duly numbered Clause, with Sub-Clauses included, if any, of these Regulations;*
n. *"COE" means the Controller of Examinations of the University;*
o. *"Course In Charge" means the teacher/faculty member responsible for developing and organizing the delivery of the Course;*
p. *"Course Instructor" means the teacher/faculty member responsible for teaching and evaluation of a Course;*
q. *"Course" means a specific subject usually identified by its Course-code and Course-title, with specified credits and syllabus/course-description, a set of references, taught by some teacher(s)/course-instructor(s) to a specific class (group of students) during a specific Academic Term;*
r. *"Curriculum Structure" means the Curriculum governing a specific Degree Program*

offered by the University, and, includes the set of Baskets of Courses along with minimum credit requirements to be earned under each basket for a degree/degree with specialization/minor/honors in addition to the relevant details of the Courses and Course catalogues (which describes the Course content and other important information about the Course). Any specific requirements for a particular program may be brought into the Curriculum structure of the specific program and relevant approvals should be taken from the BOS and Academic Council at that time.

s. *"DAC" means the Departmental Academic Committee of a concerned Department/Program of Study of the University;*

t. *"Dean" means the Dean / Director of the concerned School;*

u. *"Degree Program" includes all Degree Programs;*

v. *"Department" means the Department offering the degree Program(s) / Course(s) / School offering the concerned Degree Programs / other Administrative Offices;*

w. *"Discipline" means specialization or program of MBA Degree Program;*

x. *"HOD" means the Head of the concerned Department;*

y. *"L-T-P-C" means Lecture-Tutorial-Practical-Credit – refers to the teaching – learning periods and the credit associated;*

z. *"MOOC" means Massive Open Online Courses;*

aa. *"MOU" means the Memorandum of Understanding;*

bb. *"NPTEL" means National Program on Technology Enhanced Learning;*

cc. *"Parent Department" means the department that offers the Degree Program that a student undergoes;*

dd. *"Program Head" means the administrative head of a particular Degree Program/s;*

ee. *"Program Regulations" means the Master of Business Administration (MBA) Degree Program Regulations and Curriculum, 2025-2027;*

ff. *"Program" means the Master of Business Administration (MBA) Degree Program;*

gg. *"PSOM" means the Presidency School of Management;*

hh. *"Registrar" means the Registrar of the University;*

ii. *"School" means a constituent institution of the University established for monitoring, supervising and guiding, teaching, training and research activities in broadly related fields of studies;*

jj. *"Section" means the duly numbered Section, with Clauses included in that Section, of these Regulations;*

kk. *"SGPA" means the Semester Grade Point Average as defined in the Academic Regulations;*

ll. *"Statutes" means the Statutes of Presidency University;*

mm. *"Sub-Clause" means the duly numbered Sub-Clause of these Program Regulations;*

nn. *"Summer Term" means an additional Academic Term conducted during the summer break (typically in June-July) for a duration of about eight (08) calendar weeks, with a minimum of thirty (30) University teaching days;*

oo. *"SWAYAM" means Study Webs of Active Learning for Young Aspiring Minds.*

pp. *"UGC" means University Grants Commission;*

qq. *"University" means Presidency University, Bengaluru; and*

rr. *"Vice Chancellor" means the Vice Chancellor of the University.*

5. Program Description:

The Master of Business Administration (MBA-Business Analytics) Program Regulations and Curriculum 2025-2027 are subject to, and, pursuant to the Academic Regulations. These Program Regulations shall be applicable to the following ongoing Master of Business Administration (MBA-Business Analytics) Programs of 2025-2027 offered by the Presidency School of Management (PSOM):

1. Master of Business Administration (MBA)
   1.1 Master of Business Administration (FinTech)
   1.2 Master of Business Administration (Applied Artificial Intelligence)
2. Master of Business Administration (Business Analytics)
3. Master of Business Administration (Digital Marketing)
4. Master of Business Administration (Marketing & Finance)
5. Master of Business Administration (Banking & Finance Management)

5.1 These Program Regulations shall be applicable to other similar programs, which may be introduced in future.

5.2 These Regulations may evolve and get amended or modified or changed through appropriate approvals from the Academic Council, from time to time, and shall be binding on all concerned.

5.3 The effect of periodic amendments or changes in the Program Regulations, on the students admitted in earlier years, shall be dealt with appropriately and carefully, so as to ensure that those students are not subjected to any unfair situation whatsoever, although they are required to conform to these revised Program Regulations, without any undue favor or considerations:

6. Minimum and Maximum Duration:

6.1 Master of Business Administration (MBA-Business Analytics) Degree Program is a Two-Year, Full-Time Semester based program. The minimum duration of the MBA-Business Analytics Program is two (02) years and each year comprises of two academic Semesters (Odd and Even Semesters) and hence the duration of the MBA-Business Analytics program is four (04) Semesters.

6.2 A student who for whatever reason is not able to complete the Program within the normal period or the minimum duration (number of years) prescribed for the Program, may be allowed a period of two years

beyond the normal period to complete the mandatory minimum credits requirement as prescribed by the concerned Program Regulations and Curriculum. In general, the permissible maximum duration (number of years) for completion of Program is 'N' + 2 years, where 'N' stands for the normal or minimum duration (number of years) for completion of the concerned Program as prescribed by the concerned Program Regulations and Curriculum.

6.3 The time taken by the student to improve Grades/CGPA, and in case of temporary withdrawal/re-joining (Refer to Clause 16.1 of Academic Regulations), shall be counted in the permissible maximum duration for completion of a Program.

6.4 In exceptional circumstances, such as temporary withdrawal for medical exigencies where there is a prolonged hospitalization and/or treatment, as certified through hospital/medical records, women students requiring extended maternity break (certified by registered medical practitioner), and, outstanding sportspersons representing the University/State/India requiring extended time to participate in National/International sports events, a further extension of one (01) year may be granted on the approval of the Academic Council.

6.5 The enrolment of the student who fails to complete the mandatory requirements for the award of the concerned Degree (refer Section 19.0 of Academic Regulations) in the prescribed maximum duration (Sub-Clauses 18.1 and 18.2 of Academic Regulations), shall stand terminated and no Degree shall be awarded.

7. Program Educational Objectives (PEO)

After two years of successful completion of the program, the graduates shall be:

PEO1: Industry ready graduates having high integrity, social responsibility & leadership capabilities.

PEO2: Enhanced with analytical skills and design thinking approach to solve business problems.

PEO3: Able to foster entrepreneurial mind set through creativity and innovation.

PEO4: Enabled graduates to engage in and benefit from lifelong learning.

8. Program Outcomes (PO) and Program Specific Outcomes (PSO)

8.1 Program Outcomes (PO)

On successful completion of the Program, the students shall be able to:

PO1: An ability to lead themselves and others to achieve organizational goals contributing effectively to a team environment.
PO2: An ability to integrate functional knowledge and apply managerial skills in changing business environment.
PO3: An ability to identify real life problems in different management functions and solve them through strategic planning, critical thinking and innovation.
PO4: An ability to identify and evaluate business ideas and opportunities.
PO5: An ability to make data driven decisions and effectively communicate to different stakeholders.
PO6: An ability to evaluate and integrate ethical and societal considerations when making business decisions.
PO7: An ability to demonstrate commitment to continuous learning.

8.2 Program Specific Outcomes [PSOs]:

On successful completion of the Program, the students shall be able to:
On successful completion of the Master of Business Administration (MBA-Business Analytics) program from Presidency University, the student shall possess:

PSO1 Analyze and interpret complex data sets to inform strategic business decisions.

PSO2 Apply quantitative techniques to analyze business problems, predict trends, and derive actionable insights.

PSO3 Utilize predictive and prescriptive analytics to forecast future business outcomes and recommend actions that optimize business processes and outcomes.

PSO4 Integrate analytics into business strategies to drive innovation, improve customer experiences, and optimize operational performance.

PSO5 Apply ethical principles in the collection, analysis, and use of data, ensuring compliance with legal and regulatory standards.

9. Admission Criteria (as per the concerned Statutory Body)

The University admissions shall be open to all persons irrespective of caste, class, creed, gender or nation. All admissions shall be made on the basis of merit in the qualifying examinations; provided that forty percent of the admissions in all Programs of the University shall be reserved for the students of Karnataka State and admissions shall be made through a Common Entrance Examination conducted by the State Government or its agency and seats shall be allotted as per the merit and reservation policy of the State Government from time to time**.** The admission criteria to the MBA Program is listed in the following Sub-Clauses:

9.1 An applicant must have a graduation degree in any field from a recognized university with a minimum of 50% marks in the qualifying examination for the general category or 45% marks for SC/ST and other reserved categories and must have appeared in any national or state-level entrance examination such as CAT, XAT, MAT, CMAT, ATMA, or KMAT.

9.2 Reservation for the SC / ST and other backward classes shall be made in accordance with the directives issued by the Government of Karnataka from time to time.

9.3 Admissions are offered to Foreign Nationals and Indians living abroad in accordance with the rules applicable for such admission, issued from time to time, by the Government of India.

9.4 Candidates must fulfil the medical standards required for admission as prescribed by the University.

9.5 If, at any time after admission, it is found that a candidate had not in fact fulfilled all the requirements stipulated in the offer of admission, in any form whatsoever, including possible misinformation and any other falsification, the Registrar shall report the matter to the Board of Management (BOM), recommending revoking the admission of the candidate.

9.6 The decision of the BOM regarding the admissions is final and binding.

10. Transfer of student(s) from another recognized University to the 2nd year (3rd Semester) of the MBA-Business Analytics Program of the University

A student who has completed the 1st Year (i.e., passed in all the Courses / Subjects prescribed for the 1st Year) of the MBA-Business Analytics Two-Year Degree Program from another recognized University, may be permitted to transfer to the 2nd Year (3rd Semester) of the MBA-Business Analytics Program of the University as per the rules and guidelines prescribed in the following Sub-Clauses:

6.1

6.2

10.1.1 The student shall submit the Application for Transfer along with a non-refundable Application Fee (as prescribed by the University from time to time) to the University no later than July of the concerned year for admission to the 2nd Year (3rd Semester) MBA-Business Analytics Program commencing on August on the year concerned.

10.1.2 The student shall submit copies of the respective Marks Cards / Grade

Sheets / Certificates along with the Application for Transfer.

10.1.3 The transfer may be provided on the condition that the Courses and Credits completed by the concerned student in the 1st Year of the MBA-Business Analytics Two Degree Program from the concerned University, are declared equivalent and acceptable by the Equivalence Committee constituted by the Vice Chancellor for this purpose. Further, the Equivalence Committee may also prescribe the Courses and Credits the concerned students shall have to mandatorily complete, if admitted to the 2nd Year of the MBA Program of the University.

10.1.4 The Program allotted to the student concerned shall be the decision of the University and binding on the student.

11.Change of Program

A student admitted to a particular Program of the MBA-Business Analytics Program will normally continue studying in that Program till the completion of the program. However, the University reserves the right to provide the option for a change of Program, or not to provide the option for a change of Program, at the end of 1st Year of the MBA-Business Analytics Program to eligible students in accordance with the following rules and guidelines: framed by the University from time to time.

11.1 Normally, only those students, who have passed all the Courses prescribed for the 1st Year of the MBA. Program and obtained a CGPA of not less than 6.00 at the end of the 2nd Semester, shall be eligible for consideration for a change of Program.

11.2 Change of Program, if provided, shall be made effective from the commencement of the 3rd Semester of the MBA Program. There shall be no provision for change of Program thereafter under any circumstances whatsoever.

11.3 The student provided with the change of Program shall fully adhere to and comply with the Program Regulations of the concerned Program of the MBA Program, the Fee Policy pertaining to that Program of the MBA Program, and, all other rules pertaining to the changed Program existing at the time.

11.4 Change of Program once made shall be final and binding on the student. No student shall be permitted, under any circumstances, to refuse the change of Program offered.

11.5 The eligible student may be allowed a change in Program, strictly in order of *inter se* merit, subject to the conditions given below:

11.5.1 The actual number of students in the 3rd Semester in any particular Program to which the transfer is to be made, should not exceed the intake fixed by the University for the concerned Program;

11.5.2 The actual number of students in any Program from which transfer is being sought does not fall below 75% of the total intake fixed by the University for the concerned Program.

11.5.3 The process of change of Program shall be completed within the first five days of Registration for the 3rd Semester of the MBA-Business Analytics Program.

12. Specific Regulations regarding Assessment and Evaluation – including the Assessment Details of NTCC Courses, Weightages of Continuous Assessment and End Term Examination for various Course Categories

12.1 The academic performance evaluation of a student in a Course shall be according to the University Letter Grading System based on the class performance distribution in the Course.

12.2 Academic performance evaluation of every registered student in every Course registered by the student is carried out through various components of Assessments spread across the Semester. The nature of components of Continuous Assessments and the weightage given to each component of Continuous Assessments (refer Clause 0) shall be clearly defined in the Course Plan for every Course, and approved by the DAC.

12.3 Format of the End-Term examination shall be specified in the Course Plan.

12.4 Grading is the process of rewarding the students for their overall performance in each Course. The University follows the system of Relative Grading with statistical approach to classify the students based on the relative performance of the students registered in the concerned Course except in the following cases:

- Non-Teaching Credit Courses (NTCC)
- Courses with a class strength less than 30

Absolute grading method may be adopted, where necessary with prior approval of concerned DAC.

Grading shall be done at the end of the Academic Term by considering the aggregate performance of the student in all components of Assessments prescribed for the Course. Letter Grades (Clause 8.10 of Academic Regulations) shall be awarded to a student based on her/his overall performance relative to the class performance distribution in the concerned Course. These Letter Grades not only indicate a qualitative assessment of the student's performance but also carry a quantitative (numeric) equivalent called the Grade Point.

12.5 Assessment Components and Weightage

Table 12.5.1: Assessment Components and Weightage for different category of Courses

Theory Courses - Weightage - 60: 40						
Continuous Assessment* - 35%				Midterm	End term	Total
Assessment 1	Assessment 2	Assessment 3	Assessment 4	25%	40%	100%

Lab/CA Courses - Weightage - 75: 25					
Continuous Assessment* - 75%				End term	Total
Practice Assessment 1	Practice Assessment 2	Practice Assessment 3	Practice Assessment 4	Assessment & Viva 25%	100%

Minimum 03 assessments.

Skill based Courses like Industry Internship, Capstone project, Research Dissertation, Integrative Studio, Interdisciplinary Project, Summer / Short Internship, Social Engagement / Field Projects, Portfolio, and such similar Non-Teaching Credit Courses, where the pedagogy does not lend itself to a typical L-T-P-C structure.

Guidelines for the assessment components for the various types of Courses, with recommended weightages, shall be specified in the concerned Program Regulations and Curriculum / Course Plans, as applicable.

The exact weightages of Evaluation Components shall be clearly specified in the concerned PRC and respective Course Plan.

Normally, for Practice/Skill based Courses, without a defined credit structure (L–T–P-C) [NTCC], but with assigned Credits (as defined in Clause 5.2 of the Academic Regulations), the method of evaluation shall be based only on Continuous Assessments. The various components of Continuous Assessments, the distribution of weightage among such components, and the method of evaluation/assessment, shall be as decided and indicated in the Course Plan/PRC. The same shall be approved by the respective DAC.

12.6 Minimum Performance Criteria:

12.6.1 Theory only Course and Lab/Practice Embedded Theory Course

A student shall satisfy the following minimum performance criteria to be eligible to earn the credits towards the concerned Course:

a. A student must obtain a minimum of 30% of the total marks/weightage assigned to the End Term Examinations in the concerned Course.

b. The student must obtain a minimum of 40% of the AGGREGATE of the marks/weightage of the components of Continuous Assessments, Mid Term Examinations and End Term Examinations in the concerned Course.

12.6.2 Lab/Practice only Course and Project Based Courses

The student must obtain a minimum of 40% of the AGGREGATE of the marks/weightage of all assessment components in the concerned Course.

12.6.2.1 A student who fails to meet the minimum performance criteria listed above in a Course shall be declared as "Fail" and given "F" Grade in the concerned Course. For theory Courses, the student shall have to re-appear in the "Make-Up Examinations" as scheduled by the University in any subsequent semester, or, re-appear in the End Term Examinations of the same Course when it is scheduled at the end of the following Semester or Summer Term, if offered. The marks obtained in the Continuous Assessments (other than the End Term Examination) shall be carried forward and be included in computing the final grade, if the student secures the minimum requirements (as per Clause 12.6.1, 12.6.2 of Academic Regulations in the "Make-Up Examinations" of the concerned Course. Further, the student has an option to re-register for the Course and clear the same in the summer term/ subsequent semester if he/she wishes to do so, provided the Course is offered.

13 Additional clarifications - Rules and Guidelines for Transfer of Credits from MOOC, etc. – Note: These are covered in Academic Regulations.

The University allows students to acquire credits from other Indian or foreign institutions and/or Massive Open Online Course (MOOC) platforms, subject to prior

approval. These credits may be transferred and counted toward fulfilling the minimum credit requirements for the award of a degree. The process of transfer of credits is governed by the following rules and guidelines:

14

13.1 The transfer of credits shall be examined and recommended by the Equivalence Committee (Refer ANNEXURE B of Academic Regulations) and approved by the Dean - Academics.

13.2 Students may earn credits from other Indian or foreign Universities/Institutions with which the University has an MOU, and that MOU shall have specific provisions, rules and guidelines for transfer of credits. These transferred credits shall be counted towards the minimum credit requirements for the award of the degree.

13.3 Students may earn credits by registering for Online Courses offered by *Study Web of Active Learning by Young and Aspiring Minds* (SWAYAM) and *National Program on Technology Enhanced Learning* (NPTEL), or other such recognized Bodies/ Universities/Institutions as approved by the concerned BOS and Academic Council from time to time. The concerned School/Parent Department shall publish/include the approved list of Courses and the rules and guidelines governing such transfer of credits of the concerned Program from time to time. The Rules and Guidelines for the transfer of credits specifically from the Online Courses conducted by SWAYAM/ NPTEL are as stated in the following Sub-Clauses:

13.3.1 A student may complete SWAYAM/NPTEL/other approved MOOCs as mentioned in Clause (as per academic regulations) and transfer equivalent credits to partially or fully complete the mandatory credit requirements of Discipline Elective Courses and/or the mandatory credit requirements of Open Elective Courses as prescribed in the concerned Curriculum Structure. However, it is the sole responsibility of the student to complete the mandatory credit requirements of the Discipline Elective Courses and the Open Elective Courses as prescribed by the Curriculum Structure of the concerned Program.

13.3.2 SWAYAM/NPTEL/ other approved MOOCs as mentioned in Clause (as per academic regulations) shall be approved by the concerned Board of Studies and placed.

13.3.3 Parent Departments may release a list of SWAYAM/NPTEL/other approved MOOCs for Pre-Registration as per schedule in the Academic Calendar or through University Notification to this effect.

13.3.4 Students may Pre-Register for the SWAYAM/NPTEL/other approved MOOCs in the respective Departments and register for the same Courses as per the schedule announced by respective Online Course Offering body/institute/ university.

13.3.5 A student shall request for transfer of credits only from such approved Courses as mentioned in Sub-Clause, 13.3.2 above.

13.3.6 SWAYAM/NPTEL/other approved MOOCs Courses are considered for transfer of credits only if the concerned student has successfully completed the SWAYAM/NPTEL/other approved MOOCs and obtained a certificate of successful/satisfactory completion.

13.3.7 A student who has successfully completed the approved SWAYAM/NPTEL/ other approved MOOCs and wants to avail the provision of transfer of equivalent credits, must submit the original Certificate of Completion, or such similar authorized documents to the HOD concerned, with a written request for the transfer of the equivalent credits. On verification of the Certificates/Documents and approval by the HOD concerned, the Course(s) and equivalent Credits shall have forwarded to the COE for processing of results of the concerned Academic Term.

13.3.8 The credit equivalence of the SWAYAM/NPTEL/other approved MOOCs are based on Course durations and/or as recommended by the Course offering body/institute/university. The Credit Equivalence mapped to SWAYAM/ NPTEL approved Courses based on Course durations for transfer of credits is summarized in Table shown below. The Grade will be calculated from the marks received by the Absolute Grading Table in the academic regulations.

Table 13.3.2: Durations and Credit Equivalence for Transfer of Credits from SWAYAM-NPTEL/ other approved MOOC Courses

Sl. No.	Course Duration	Credit Equivalence
1	4 Weeks	1 Credit
2	8 Weeks	2 Credits
3	12 Weeks	3 Credits

13.3.9 The maximum permissible number of credits that a student may request for credit transfer from MOOCs shall not exceed 20% of the mandatory

minimum credit requirements specified by the concerned Program Regulations and Curriculum for the award of the concerned Degree.

13.3.10 The University shall not reimburse any fees/expense; a student may incur for the SWAYAM/NPTEL/other approved MOOCs.

13.4 The maximum number of credits that can be transferred by a student shall be limited to forty percent (40%) of the mandatory minimum credit requirements specified by the concerned Program Regulations and Curriculum for the award of the concerned Degree. However, the grades obtained in the Courses transferred from other Institutions/MOOCs, as mentioned in this Section, shall not be included in the calculation of the CGPA.

PART B - PROGRAM STRUCTURE

14 Structure/Component with Credit Requirements Course Baskets and Minimum Basket Wise Credit Requirements:

MBA (**Business Analytics**) Program Structure (2025-2027) totalling to 102 credits. Table 14.1.3 summarizes the type of baskets, number of courses under each basket and the associated credits that are mandatorily required for the completion of the Degree.

Table 14.1.3: MBA (Marketing and Finance) Dual Specialization Program Structure 2025-2027: Summary of Mandatory Courses and Minimum Credit Contribution from various Baskets

Sl. No.	Baskets			Credit Contribution
1	PROGRAM CORE (PC)			52
2	SPECIALIZATION TRACK (ST)	ST1	TRACK-CORE (STC1)	8
			TRACK-ELECTIVE (STE1)	12
3	PRACTICE (PR)			10
	Total Credits			**102 (Minimum)**

15. Minimum Total Credit Requirements of Award of Degree:

As per the AICTE guidelines, a minimum of 102 credits is required for the award of a Master of Business Administration (MBA-Business Analytics) degree.

16. Other Specific Requirements for Award of Degree, if any, as prescribed by the Statutory Bodies.

16.1 The award of the Degree shall be recommended by the Board of Examinations and approved by the Academic Council and Board of Management of the University**.**

16.2 A student shall be declared to be eligible for the award of the concerned Degree if she/he:

a. Fulfilled the Minimum Credit Requirements and the Minimum Credits requirements under various baskets;

b. Secure a minimum CGPA of 5.00 in the concerned Program at the end of the Semester/Academic Term in which she/he completes all the requirements for the award of the Degree as specified in Sub-Clause a of Academic Regulations**;**

c. No dues to the University, Departments, Hostels, Library, and any other such Centers/ Departments of the University; and

d. No disciplinary action is pending against her/him.

PART C - CURRICULUM STRUCTURE/LIST

17. Curriculum Structure – Basket Wise Course List (not Semester Wise) List of Courses Tabled – aligned to the Program Structure (Course Code, Course Name, Credit Structure

(LTPC), Contact Sessions, Course Basket, Type of Skills etc., as applicable).

Table 17.1.4: MBA (Business Analytics) Program Structure 2025-2027
Program Core (PC)

S. NO.	BASKET	COURSE CODE	COURSE NAME	L	T	P	C
1	PC	FIN4111	Financial Accounting and Reporting	3	1	0	4
2	PC	GMM4117	Corporate Finance	3	1	0	4
3	PC	GMM4111	Managerial Economics	2	1	0	3
4	PC	ENG4001	Global Business Communication	2	0	2	3
5	PC	GMM4113	Business Strategy and Corporate Transformation	2	1	0	3
6	PC	GMM4114	Business Law and Regulatory Compliance	3	0	0	3
7	PC	GMM4115	Corporate Governance, Ethics and Social Responsibility	2	1	0	3
8	PC	GMM4118	Entrepreneurship and Innovation Management	2	1	0	3
9	PC	MKT4111	Marketing Management - Theories and Practices	2	1	0	3
10	PC	MKT4113	Digital Marketing	2	1	0	3
11	PC	OBH4111	Human Behaviour in Organizations	2	1	0	3
12	PC	GMM4120	Human Capital Management	2	1	0	3
13	PC	OPS4111	Production, Operations and Logistics Management	2	1	0	3
14	PC	QNT4111	Applied Business Statistics	2	0	2	3
15	PC	QNT4114	Applied Data Analysis and Visualization	1	1	2	3
16	PC	GMM4119	Business Research Methods	2	1	0	3
17	PC	QNT4115	Fundamentals of Business Analytics	1	0	2	2
16	PC	PPS4010	Corporate Readiness Program-I*	0	0	2	0
17	PC	PPS4011	Corporate Readiness Program-II**	0	0	2	0
						Total	52

*Mandatory Non Credit Course

Table 17.1.5: List of Elective Courses under various Specializations/Stream Basket:

SPECIALIZATION TRACK							
TRACK CORE – BUSINESS ANALYTICS							
Sl. No.	**Course Basket**	**Course Code**	**Course Name**	**L**	**T**	**P**	**C**
1	STC	QNT5133	Programming for Business Analytics	2	1	2	4
2	STC	QNT5135	Data Story Telling	2	1	2	4
3	STC	QNT5123	Predictive Analytics and Business Forecasting	3	0	2	4
4	STC	QNT5124	Data Mining and Intelligent Decision Making	3	0	2	4
						Total	**16**
TRACK ELECTIVE – BUSINESS ANALYTICS							
List of Specialization Track Electives Courses- Minimum of 24 credits is to be earned by the student in particular track							
Sl. No.	**Course Basket**	**Course Code**	**Course Name**	**L**	**T**	**P**	**C**
1	STE	QNT5113	Computer Vision Tools for Business	2	0	2	3
2	STE	QNT5114	AI and Machine Learning for Business Applications	2	0	2	3
3	STE	QNT5115	Data Architecture and Database Systems	2	0	2	3
4	STE	QNT5116	Deep Learning Techniques and Applications	2	0	2	3
5	STE	QNT5117	HealthTech and Pharma Analytics	2	0	2	3
6	STE	QNT5118	Analytics-Driven Supply Chain Optimization	2	0	2	3
7	STE	QNT5119	Text Analytics and Natural Language Processing	2	0	2	3
8	STE	QNT5120	MarTech and AdTech in Practice	2	0	2	3
9	STE	QNT5125	BFSI Analytics	2	0	2	3
10	STE	QNT5126	Retail Marketing Analytics	2	0	2	3
11	STE	QNT5127	IoT and Sensor Data Analytics	2	0	2	3
12	STE	QNT5128	FinTech and Blockchain Analytics	2	0	2	3
13	STE	QNT5129	Strategic HR Analytics	2	0	2	3
14	STE	QNT5130	Digital and Social Media Analytics	2	0	2	3
15	STE	QNT5131	Risk and Fraud Analytics	2	0	2	3
16	STE	QNT5132	Business Intelligence and Visualization	2	0	2	3

Table 17.1.6: MBA-(Business Analytics) Program Structure 2025-2027: Practice (PR)							
S. NO.	**BASKET**	**COURSE CODE**	**COURSE NAME**	**L**	**T**	**P**	**C**
1	PR	INT7111	Summer Internship Project	-	-	-	4
2	PR	CRP7111	Capstone Research Project	-	-	-	6
Total							**10**

18 Practical/Skill based Courses-Internships/Thesis/Dissertation/Capstone Project Work/Portfolio/Mini project:

Practical / Skill based Courses like internship, project work, capstone project, research project / dissertation, and such similar courses, where the pedagogy does not lend itself to a typical L-T-P-C Structure as defined in Clause 5.1 of the Academic Regulations, are simply assigned the number of Credits based on the quantum of work / effort required to fulfill the learning objectives and outcomes prescribed for the concerned Courses. Such courses are referred to as Non-Teaching Credit Courses (NTCC). These Courses are designed to provide students with hands-on experience and skills essential for their professional development. These courses aim to equip students with abilities in problem identification, root cause analysis, problem-solving, innovation, and design thinking through industry exposure and project-based learning. The expected outcomes are first level proficiency in problem solving and design thinking skills to better equip MBA post graduates for their professional careers. The method of evaluation and grading for the Practical / Skill based Courses shall be prescribed and approved by the concerned Departmental Academic Committee (refer Annexure A of the Academic Regulations). The same shall be prescribed in the Course Handout.

18.1 Internship

A student may undergo an internship for a period of 4-6 weeks in an industry / company or academic / research institution during the Semester Break between 2nd and 3rd Semesters, subject to the following conditions:

18.1.1 The Internship shall be in conducted in accordance with the Internship Policy prescribed by the University from time to time.

18.1.2 The number of Internships available for the concerned Academic Term. Further, the available number of internships shall be awarded to the

students by the University on the basis of merit using the CGPA secured by the student. Provided further, the student fulfils the criteria, as applicable, specified by the Industry / Company / research institution providing the Internship, as stated in Sub-Clause 2.6.1.2 above.

18.1.3 A student may opt for Internship in an Industry / Company / research institution of her / his choice, subject to the condition that the concerned student takes the responsibility to arrange the Internship on her / his own. Provided further, that the Industry / Company or academic / research institution offering such Internship confirms to the University that the Internship shall be conducted in accordance with the Program Regulations.

18.1.4 A student selected for an Internship in an industry / company or academic / research institution shall adhere to all the rules and guidelines prescribed in the Internship Policy of the University.

18.2 Dissertation

A student may opt to do a Research Project / Dissertation for a period of 6-8 weeks in an Industry / Company or academic / research institution or the University Department(s) as an equivalence of Capstone Project, subject to the following conditions:

18.2.1 The Research Project / Dissertation shall be approved by the concerned HOD and be carried out under the guidance of a faculty member.

The student may do the Research Project / Dissertation in an Industry / Company or academic / research institution of her / his choice subject to the above-mentioned condition (Sub-Clause 2.6.4.1). Provided further, that the Industry / Company or academic / research institution offering such Research Project / Dissertation confirms to the University that the Research Project / Dissertation work will be conducted in accordance with the Program Regulations and requirements of the University.

19 List of Elective Courses under various Specializations/Stream Basket:

Table 19.1.7: List of Elective Courses under various Specializations/Stream Basket:

SPECIALIZATION TRACK							
TRACK CORE – BUSINESS ANALYTICS							
Sl. No.	**Course Basket**	**Course Code**	**Course Name**	**L**	**T**	**P**	**C**
1	STC	QNT5133	Programming for Business Analytics	2	1	2	4
2	STC	QNT5135	Data Story Telling	2	1	2	4
3	STC	QNT5123	Predictive Analytics and Business Forecasting	3	0	2	4
4	STC	QNT5124	Data Mining and Intelligent Decision Making	3	0	2	4
5	STC	QNT5134	Database Management	2	1	2	4
						Total	**16**
TRACK ELECTIVE – BUSINESS ANALYTICS							
List of Specialization Track Electives Courses- Minimum of 24 credits is to be earned by the student in particular track							
Sl. No.	**Course Basket**	**Course Code**	**Course Name**	**L**	**T**	**P**	**C**
1	STE	QNT5113	Computer Vision Tools for Business	2	0	2	3
2	STE	QNT5114	AI and Machine Learning for Business Applications	2	0	2	3
3	STE	QNT5115	Data Architecture and Database Systems	2	0	2	3
4	STE	QNT5116	Deep Learning Techniques and Applications	2	0	2	3
5	STE	QNT5117	HealthTech and Pharma Analytics	2	0	2	3
6	STE	QNT5118	Analytics-Driven Supply Chain Optimization	2	0	2	3
7	STE	QNT5119	Text Analytics and Natural Language Processing	2	0	2	3
8	STE	QNT5120	MarTech and AdTech in Practice	2	0	2	3
9	STE	QNT5125	BFSI Analytics	2	0	2	3
10	STE	QNT5126	Retail Marketing Analytics	2	0	2	3
11	STE	QNT5127	IoT and Sensor Data Analytics	2	0	2	3
12	STE	QNT5128	FinTech and Blockchain Analytics	2	0	2	3
13	STE	QNT5129	Strategic HR Analytics	2	0	2	3
14	STE	QNT5130	Digital and Social Media Analytics	2	0	2	3
15	STE	QNT5131	Risk and Fraud Analytics	2	0	2	3
16	STE	QNT5132	Business Intelligence and Visualization	2	0	2	3
17	STE	QNT5136	Applied Marketing Analytics	2	0	2	3
18	STE	QNT5137	Financial Data Analytics	2	0	2	3

22. Recommended Semester Wise Course Structure / Flow including the Program / Discipline Elective Paths / Option

Table 22.1.8 List of MBA (Business Analytics) Courses (Proposed)							
MBA (Business Analytics)							
S.NO	**BASKET**	**COURSE CODE**	**SEMESTER I**	**L**	**T**	**P**	**C**
1	PC	QNT4111	Applied Business Statistics	2	0	2	3
2	PC	ENG4001	Global Business Communication	2	0	2	3
3	PC	FIN4111	Financial Accounting and Reporting	3	1	0	4
4	PC	OBH4111	Human Behaviour in Organizations	2	1	0	3
5	PC	GMM4111	Managerial Economics	2	1	0	3
6	PC	OPS4111	Production Operations and Logistics Management	2	1	0	3
7	PC	MKT4111	Marketing Management - Theories and Practices	2	1	0	3
			Total Credits (7 Courses)				**22**
S.NO	**BASKET**	**COURSE CODE**	**SEMESTER II**	**L**	**T**	**P**	**C**
1	PC	GMM4119	Business Research Methods	2	1	0	3
2	PC	QNT4114	Applied Data Analysis and Visualization	1	1	2	3
3	PC	MKT4113	Digital Marketing	2	1	0	3
4	PC	GMM4117	Corporate Finance	3	1	0	4
5	PC	GMM4120	Human Capital Management	2	1	0	3
6	PC	QNT4115	Fundamentals of Business Analytics	1	0	2	2
7	STC1	QNT5133	Programming for Business Analytics	2	1	2	4
8	STC2	QNT5135	Data Story Telling	2	1	2	4

9	PC	PPS4010	Corporate Readiness Program-I*	0	0	2	0
			Total Credits (7 Courses)				**26**
S.NO	**BASKET**	**COURSE CODE**	**SEMESTER III**	**L**	**T**	**P**	**C**
1	PC	GMM4113	Business Strategy and Corporate Transformation	2	1	0	3
2	PC	GMM4114	Business Law and Regulatory Compliance	3	0	0	3
3	STC3	QNT5123	Predictive Analytics and Business Forecasting	3	0	2	4
4	STC4	QNT5124	Data Mining and Intelligent Decision Making	3	0	2	4
5	STE		STE1	2	0	2	3
6	STE		STE2	2	0	2	3
7	STE		STE3	2	0	2	3
8	STE		STE4	2	0	2	3
9	PR	INT7111	Summer Internship Project	-	-	-	4
10	PC	PPS4011	Corporate Readiness Program-II*	0	0	2	0
			Total Credits (9 Courses)				**30**
S.NO	**BASKET**	**COURSE CODE**	**SEMESTER IV**	**L**	**T**	**P**	**C**
1	PC	GMM4115	Corporate Governance, Ethics and Social Responsibility	2	1	0	3
2	PC	GMM4118	Entrepreneurship and Innovation Management	2	1	0	3
3	STE		STE5	2	0	2	3
4	STE		STE6	2	0	2	3
5	STE		STE7	2	0	2	3
6	STE		STE8	2	0	2	3
7	PR	CRP7111	Capstone Research Project	-	-	-	6

			Total Credits (7 Courses)				**24**
Grand Total			**102 Credits**				

- **Mandatory Non Credit Course**

23. Course Catalogue of all Courses Listed including the Courses Offered by other School / Department and Discipline / Program Electives

Course Catalogues of MBA (Business Analytics) Program

1st Semester

Course Code: QNT4111	**Course Title: Applied Business Statistics** **Type of Course: Program Core**	**L – T – P – C**	**2– 0 – 2 – 3**
Version No.	1.0		
Course Pre-requisites	Basic Understanding of Statistics		
Anti-requisites	NIL		
Course Description	This course offers a foundational understanding of statistics for business applications. Topics include measures of location and variation, correlation and regression, probability concepts, and key probability distributions such as binomial, Poisson, and normal. Emphasis is placed on data analysis, interpretation, and decision-making under uncertainty using real-world business scenarios.		

Course Outcomes	On successful completion of this course the students shall be able to: • CO1: Describe the data using descriptive statistics. • CO2: Solve business related problems involving probabilities. • CO3: Solve business related problems using probability distributions. • CO4: Test hypotheses using relevant testing procedures.			
Course Objective:	The course aims to: 1. Analyze business data using measures of central tendency, dispersion, correlation, and regression. 2. Apply probability concepts, including conditional probability and Bayes' theorem, to assess risk and uncertainty. 3. Use discrete and continuous probability distributions to support data-driven business decision-making.			
Module 1	**Measures of Location and Variation**	**Lecture, Tutorial**	**Understand**	**[L7 + P7 :14 Sessions]**
Measures of Location and Variation: Measures of Location – mean, median and mode, weighted mean and geometric mean, quartiles and percentiles, (grouped and ungrouped data) their relative merits and demerits. Measures of variation – range, interquartile range for Standard deviation, variance and coefficient of variation (grouped and ungrouped data). Dataset1https://datahub.io/core/pharmaceutical-drug-spending#data-files Dataset2https://datahub.io/core/s-and-p-500-companies-financials Dataset3https://www.kaggle.com/datasets/stealthtechnologies/employee-attrition-dataset Dataset4https://www.kaggle.com/datasets/gagandeep16/car-sales Data in the above data sets will be analyzed using Microsoft Excel/ Excel add-in Megastat				
Module 2	**Probability, Random Variable and Probability Distributions:**	**Lecture, Tutorial**	**Application**	**[L8 + P8:16 Sessions]**
Introduction to Probability. Random variable – Discrete and Continuous random variable. Expected value and variance of a discrete random variable. Covariance - Applications. Probability distributions – discrete and continuous. Probability mass function and probability density functions. Discrete distributions – Binomial distribution, Poisson distribution – mean, variance and computation of probabilities. Continuous distributions -normal distribution – properties and computation of probabilities. Introduction to uniform and exponential distributions.				
Module 3	**Testing of Hypothesis**	**Lecture, Tutorial**	**Application**	**[L8 + P8:16 Sessions]**
Concept of population, sample, parameter and statistic. Introduction to sampling distributions. Hypothesis - Null and alternative hypothesis. Type I and Type II errors, level of significance. Test for single mean – (Z and t test). Test for single proportion. Test for two				

means (Z and t test) paired t test. Test for single and two variances (Chi square and F test) Test for independence of attributes (Chi square test) One way ANOVA (F test)
Dataset1https://datahub.io/core/pharmaceutical-drug-spending#data-files
Dataset2https://datahub.io/core/s-and-p-500-companies-financials
Dataset3https://www.kaggle.com/datasets/stealthtechnologies/employee-attrition-dataset
Dataset4https://www.kaggle.com/datasets/gagandeep16/car-sales
Data in the above data sets will be analyzed using Microsoft Excel/ Excel add-in Megastat

Module 4	Correlation and Regression	Lecture Method	Analysis	[L7 + P7:14 Sessions]

Correlation- definition, scatterplot, Karl Pearson coefficient of correlation, t test for the correlation coefficient, Spearman rank correlation coefficient for data with repeated and non-repeated ranks. **Regression** – Simple linear regression, least squares method, standard error of the estimate, coefficient of determination, t test for regression coefficient, multiple regression.
Dataset1https://datahub.io/core/pharmaceutical-drug-spending#data-files
Dataset2https://datahub.io/core/s-and-p-500-companies-financials
Dataset3https://www.kaggle.com/datasets/stealthtechnologies/employee-attrition-dataset
Dataset4https://www.kaggle.com/datasets/gagandeep16/car-sales
Data in the above data sets will be analyzed using Microsoft Excel/ Excel add-in Megastat

Targeted Application & Tools that can be used: NA

Project work/Assignment:

- **Self-learning** – The Students will learn about computing quartiles and percentiles for ungrouped data
- **Peer Learning:** Students who have understood the topic will solve the problems on the board thereby giving confidence to others to learn the concepts
- **Case Study**: Students will be given small case lets to solve the problems

- Text Book:
- T1. Anderson D R, Sweeny D J, Williams T A, Camm J D, Cochran J J, Fry M J and Ohlmann JW (2019), Statistics for Business and Economics,14th edition Cengage learning, New Delhi.

References:

- **R1.** Levine D M, Stephan D F, Szabat K A (2016) Statistics for Managers, 7th edition, New Delhi
- **R2.** Ken Black (2010) Business Statistics for Contemporary Decision Making, 6th ed. John Wiley and sons, New Delhi

Online Resources:

https://profiletree.com/online-business-statistics/

Articles:

- https://ug.its.edu.in/sites/default/files/Business%20Statistics.pdf
- https://www.ijert.org/research/role-of-statistics-on-business-research-IJERTV2IS100524.pdf

Multimedia (Videos):

- https://www.youtube.com/watch?v=pdH4YYoOdt4&list=PLEHGYFbPuuMG-0ueLQAgjLTVkLneJpIFJ

Case Studies:

- DiGiorno Pizza: Introducing a Frozen Pizza to Compete with Carry-Out

Catalogue prepared by	Dr. Jayakrishna Udupa
Recommended by the Board of Studies on	BOS NO: 18th held on 6th June 2025
Date of Approval by the Academic Council	26th Academic Council Meeting held on 25th July 2025

Course Code: ENG4001	**Course Title: Global Business Communication** **Type of Course: Program Core**	**L**	**T**	**P**	**C**
		2	**0**	**2**	**3**
Version No.	1.0				
Course Pre-requisites	None				
Anti-requisites	**Nil**				
Course Description	This course equips the business graduates/ students with advanced communication competencies necessary for impactful business presence. It focuses on strategic business communication, cultural awareness, active listening, persuasive writing, personal branding, and business presentation skills. Through experiential activities, case-based learning, and digital tools, learners develop the confidence and executive presence to lead in diverse business environments.				
Course Objective	1. Integrate DEI principles and intercultural competencies into leadership and organizational communication to build inclusive practice. 2. Apply strategic listening, writing, and speaking techniques to produce clear, purpose-fit messages across channels. 3. Analyze communication processes and cultural/contextual factors to diagnose barriers and select evidence-based remedies. 4. Create a distinctive personal brand and digital presence aligned with career goals using visual and narrative tools. 5. Deliver structured, engaging, audience-centred business presentations in in-person and virtual settings.				

<table>
<tr><td>Course Out Comes</td><td colspan="3">On successful completion of the course the students shall be able to:

• CO1 Apply cross cultural and DEI frameworks to real workplace scenarios.
• CO2 - Evaluate the clarity, tone, and effectiveness of emails, memos, and minutes, and justify revisions with evidence.
• CO3 - Develop a coherent personal-brand portfolio that includes a clear branding statement and an optimised digital profile.
• CO4 - Deliver audience-specific business presentations with logical structure, sound visual design, and confident Q&A.</td></tr>
<tr><td colspan="4">Course Content</td></tr>
<tr><td>Module 1</td><td>Foundations of Business Communication</td><td>Assessment 1 - Quiz</td><td>Analyze 15 Sessions (Theory and Practice included)</td></tr>
<tr><td colspan="4">Role of communication in an organization – Components – Process – Direction
Diversity, Equity, and Inclusion: Concepts & Challenges - Hofstede’s theory
Cultural Capital and Communication Barriers: Language, Accent, Cultural Codes, Diversity and impediments to cross-cultural Communication
Media Choices, and social media communication

Activities:
Communication Audit: Analyse communication flow and barriers in organizations using case study.
Cultural Simulation Exercise: Role-play scenarios demonstrating communication challenges across different cultural dimensions (Hofstede framework).
Media Choice Matrix: Students evaluate different media for business communication situations and justify their choices.</td></tr>
<tr><td>Module 2</td><td>Strategic Listening and Writing for Business Impact</td><td>Assessment 2 Business Email, MoM</td><td>Apply 12 Sessions (Theory</td></tr>
</table>

			and Practice included)
Listening in Business Contexts- As a strategic tool - Emotional Intelligence and Listening Business Writing Essentials - Principles of Effective Writing (Based on Harvard Business Essentials) - Planning and Drafting Techniques - Business emails, memos, circulars and MoM AI and Business Writing **Activities**: Listening Lab**:** Peer-reviewed listening journals based on simulated team meetings or client interactions. Writing Clinic**:** Rewrite poorly written emails and memos with justification based on Harvard principles. AI Integration Task**:** Use AI tools (e.g., Grammarly, ChatGPT, or MS Editor) to revise and optimize business writing, followed by reflection on the role of AI.			
Module 3	**Personal Brand Development**	Assessment 3 – Personal Branding Portfolio	Apply 15 Sessions (Theory and Practice included)
Need and Power of Personal Branding - Know Thyself – Crafting Your Brand Core Building a Digital Presence – LinkedIn and Beyond - Managing Your Online Reputation Living the Brand – Resume, Interviews, and Networking Visual Identity and Personal Branding Design **Activities** Brand Core Workshop: Create a personal branding statement and vision board. LinkedIn Sprint: Optimize LinkedIn profiles, active engagement and solicit feedback. Mock Networking Event: Simulated interviews and elevator pitches with branding feedback.			
Module 4	Business Presentation	Assessment 4 -Elevator Pitch	Apply 18 Sessions (Theory and Practice included)
Foundations of Business Presentations - Structuring for Impact – Inclusion of Visual Aids and Slide Design - Handling Q&A and			

Audience Engagement Types of Business Presentations - Elevator Pitches and Investor Pitches -Sales Presentations and Product Launches, Strategic and Boardroom Presentations - Virtual and Hybrid Presentation Skills **Activities** Mini Project: Students choose a business idea, prepare a pitch deck, and present it. Slide Design Challenge: Redesign poor slides for clarity and visual appeal using Canva or PowerPoint. Presentation Lab: Practice virtual and in-person presentations with video-based peer evaluation.
Targeted Application & Tools for usage Grammarly**, Ethical use of** ChatGPT, and Microsoft Editor for AI-aided business writing practice) Purdue OWL (Online Writing Lab), Microsoft PowerPoint / Google Slides / Canva
Project work/Assignment: Mention the Type of Project assignment proposed for this course Quiz, Business Email, MoM, Personal Branding Portfolio, Elevator Pitch Presentation
Textbook: Cardon, P. W. (2021). *Business Communication: Developing Leaders for a Networked World* (4th ed.). McGraw-Hill Education. Lesikar, V. R., & Flatley, M. (2017). *Business Communication: Making Connections in a Digital World* (11th ed.). Tata McGraw Hill. Bovee, C. L., & Thill, J. V. (2018). *Business Communication Today* (14th ed.). Pearson.
References: Hofstede, G. (2011). *Dimensionalizing Cultures: The Hofstede Model in Context*. Online Readings in Psychology and Culture. Goleman, D. (1995). *Emotional Intelligence*. Bantam Books. Harvard Business Review. (n.d.). Articles on *Listening as a Leadership Tool*. Schawbel, D. (2012). *Me 2.0: Build a Powerful Brand to Achieve Career Success*. Kaplan Publishing. Montoya, P., & Vandehey, T. (2008). *The Brand Called You*. McGraw-Hill. Barrett, D. J. (2021). *Leadership Communication* (5th ed.).

McGraw-Hill.	
Catalogue prepared by	Dr. Pritha Sanyal
Recommended by the Board of Studies on	BOS NO: 18th held on 6,June,2025
Date of Approval by the Academic Council	Academic Council Meeting No. 26th held on 25,July,2025

Course Code: FIN4111	**Course Name: Financial Accounting and Reporting**	**L-T-P-C**	**3**	**1**	**0**	**4**
Version No.	1.0					
Course Pre-requisites	Basic understanding of business transactions and accounting principles.					
Anti-requisites	NIL					
Course Description	This course introduces the fundamental concepts and processes of accounting, leading to the preparation and interpretation of financial statements. It equips students with tools for cost computation and control through techniques like budgetary control, marginal costing, and variance analysis. By integrating financial, cost, and management accounting, the course develops essential skills for informed managerial decision-making.					
Course Outcomes	**CO1:** Describe the accounting process. *(Understand)* **CO2:** Prepare corporate financial statements. *(Apply)* **CO3:** Analyze financial statements for business decisions. *(Analyze)* **CO4:** Construct budgets for cost control. *(Apply)* **CO5:** Evaluate marginal costing and variance analysis for managerial decisions. *(Analyze)*					
Course Objectives:	The course aims to help students understand the core principles of financial accounting, learn the preparation of financial statements and disclosures, apply accounting standards in real-world contexts, and develop practical skills in Excel and Power BI for effective accounting and reporting.					
Module 1	**Mechanics of**	Lecture		Understand	13	

	Financial Accounting	Method		Sessions
Introduction to Accounting, Branches of Accounting, Generally Accepted Accounting Principles, Accounting Entries, Accounting equation, Recording and processing of financial transactions, Preparation of Trial Balance, Introduction to IFRS ,BRS, Depreciation Accounting– Causes – Methods of Calculating Depreciation – Straight Line Method, Diminishing Balance Method (Use the excel sheet for problem solving). **Practical Problem:-** Accounting Entries ,Ledger, Trial Balance, BRS, Depreciation				
Module 2	**Preparation of Corporate Financial Statements**	Participative Learning	Apply	13 Sessions
Financial Statements, its components, Preparation of Corporate Financial Statements (IND-AS-1) - Statement of Profit and Loss, and Balance sheet with basic adjustments Notes to Accounts, Statement of changes in equity, Statement of Cash Flow by indirect method (IND-AS-7). **Practical Problem:-** Statement of Profit and Loss, and Balance sheet with basic adjustments Notes to Accounts, Cash FlowStatement				
Module 3	**Analysis and interpretation of Financial Statements**	Group Discussion	Analyze	11 Sessions
Horizontal and Vertical Analysis of Balance sheet and income statement ,Ratio analysis- Liquidity, Profitability, Solvency, Turnover and Market test ratios,. (Use the excel sheet for problem solving). **Practical Problem:-** Analysis of Balance sheet and income statement, Common Size, Trend and Comparative Analysis				
Module 4	**Product costing and budgetary control**	Skill based Learning	Apply	13 Sessions
Cost and its classification, preparation of cost sheet in manufacturing industry, budgetary control- preparation of Cash budget and Flexible budget. (Use the excel sheet for problem solving). **Practical Problem:-** Cash budget and Flexible budget				
Module 5	**CVP Analysis**	Experiential Learning	Mini Project	10 Sessions
CVP Analysis – Marginal costing-uses and limitations, Assumption calculation of Contributions, P/V Ratio, Break- Even Point, Margin of Safety, Uses of Marginal Costing in business Decision, Material and Laboure variances. (Use the excel sheet for problem solving). **Practical Problem; -** Marginal costing- Material and Laboure				

variances
Project work/ assignment: Prowess database will be used for interpretation of Financial Statement.
1. CA 1 – Quiz 2. CA 2 – Assignment 3. CA 3 – Presentation 4. CA 4 – Case Study
Textbook (T1) Weygandt, J. J., Kimmel, P. D., & Mitchell, J. E. (2024). Accounting principles (15th ed.). Wiley. https://www.amazon.com/Accounting-Principles-Jerry-J-Weygandt/dp/1394254792 **Reference Books** • Dhamija, S. (2023). Financial accounting for managers (4th ed.). Pearson India. https://link.ebrpl.com/portal/2On1dr-Vbrg • Atrill, P., & McLaney, E. J. (n.d.). Accounting and finance for non-specialists (11th ed.). Pearson. • Maheswari, S. N., & Maheswari, A. (n.d.). A textbook of accounting for management (4th ed.). Vikas Publishing House [P] Ltd.

Catalogue prepared by	Dr. Sunil M Rashinkar
Recommended by the Board of Studies on	BOS NO: 18th held on 6,June,2025
Date of Approval by the Academic Council	Academic Council Meeting No. 26th held on 25,July,2025

Code: OBH4111	**Course Title: Human Behaviour in Organizations**	**L**	**T**	**P**	**C**
		2	**1**	**0**	**3**
Version No.	1.0				
Course Pre-requisites	**Nil**				
Anti-requisites	**Nil**				

Course Description	This course explores how individuals, teams, and organizational structures shape workplace behavior and performance. Designed for MBA students, it blends theory with practical learning to build critical skills in motivation, perception, leadership, communication, decision-making, and change management. Through case studies, discussions, and projects, students gain practical insights into managing people, fostering collaboration, and applying behavioral principles to real-world business challenges. The course prepares future leaders to navigate complex organizational dynamics with clarity, empathy, and strategic impact.			
Course Objective	This course is designed to improve the learners' **EMPLOYABILITY SKILLS** by using **PARTICIPATIVE LEARNING** techniques			
Course Out Comes	On completion of this course, the student will be able to: **CO1 : Understand** the foundational concepts of individual and group behavior in organizations, including motivation, perception, and attitude formation. **CO2 : Apply** behavioral theories to analyze workplace scenarios and recommend strategies for improving team dynamics, communication, and leadership effectiveness. *CO3 :* **Analyze** behavioural challenges in organisations, integrating insights from DM , Conflict Resolution and Change management **CO4 : Evaluate** organizational practices and culture through case studies to assess their impact on employee performance and change readiness and overall organisational effectiveness			
Course Content:				
Module 1	Introduction to Human Behavior in Organization		Assessment 1 - Quiz	8 sessions
Topics: Importance of Organization Behavior, Evolution & Historical Developments, Management Roles & Skills, Discipline that contribute to OB. Ethical Behaviors in organizations, Challenges and Opportunities of OB - Workforce Diversity, Inclusion, Globalization, Managing Virtual Workforce Tutorial: Recent Developments in managing diverse workforces / Latest articles or blogs of relevance				
Module 2	Individual Behaviours- Perceptions, Attitudes Personality & Learning		Assessment 2 – Assignment	12 sessions

Perception: Meaning, Factors affecting Perceptions, Perception process. Attitudes – Definition, Key elements of attitudes, Attitudes and related concepts (Values, opinion, belief and ideology), Characteristics of attitudes, Attitude formation, Attitude measurement, Changing attitudes. Personality: MBTI, Big Five, 16PF, Type 'A' Type 'B', Eric Fromm, Karen Horney Learning & reinforcement, Classical & Operant conditioning, shaping of behaviour, Defense Mechanism Emotions and Emotional intelligence (Application)				
Module 3	Motivation Concepts and its Applications		Assessment 3 – Case Analysis	12 sessions
Motivation: Meaning, Classic & Contemporary Theories of Motivation: Hierarchy of Needs Theory, Two-Factor Theory, McClelland's Theory of Needs, Self-determination Theory, Expectancy theory, Goal Setting Theory; Using Extrinsic Rewards & Intrinsic Rewards to Motivate Employees. (Analyze)				
Module 4	Group Behaviour and Leadership		Assessment 4 – Report Writing	13 sessions
Group Behavior: Defining and Classifying Groups, Stages of Group Development, Group Decision Making: Groups Versus the Individual, Group Decision-Making Techniques. Differences Between Groups and Teams, Types of Teams, Creating Effective Teams Leadership: concept, contingency and contemporary theories of leadership. Leadership Prospective: Charismatic leadership, Transactional and Transformational leadership, Servant Leadership. Organization Development and Organization Change (Evaluate)				
Targeted Application & Tools that can be used: Role Plays, Psychometric tests and analysis, personality test scales.				
Project work/Assignment: Mention the Type of Project /Assignment proposed for this course				
Project/ Assignment: (Participative learning) **Assesment1: Quiz on Relevant concepts of the course** **Assessment -2**: **Individual Written Assignment** Review the given article mentioned in the link below and submit assignment. (Kindly note: Student should visit PU library and access the online resources for the same and incorporate the assignment as well as attach the photo of log in and log out in person in the end of the assignment file.) **Assesment-3**: **Case study**: Analyse the case given in link below and identify issue in the given situation and provide possible solutions. (Student needs to visit PU library to access the online Resources to access the case study provided and attach the photo of Login and Logout time in the end of the assignment) **Assessment -4: Report Writing:** Identify any one MNC of IT sector and bring out the various activities and strategies followed in that organization with reference to Team Work Culture and submit a report. (Kindly note: Student should visit PU library and access the online resources for				

the same and incorporate the assignment as well as attach the photo of log in and log out in person in the end of the assignment file.)

Text Book : T1- *Robbins*, S. P., & Judge, T. A. (2025). *Organizational behavior* (19th ed.). Pearson Education. VitalSource

References :

- R1 – *Luthans*, F., Luthans, B. C., & Luthans, K. W. (2021). *Organizational behavior: An evidence-based approach* (14th ed.). Information Age Publishing. VitalSource.
- R2- Sanket Sunand Dash (2021). Organizational Behavior, Thirteenth Edition, Wlley India Pvt. Ltd.

Research and Articles:

Working with Millennials: Using Emotional Intelligence and Strategic Compassion to Motivate the Next Generation of Leaders

1.You don't have to be Expert: Increase productivity by increasing EQ

https://research-ebsco-com-presiuniv.knimbus.com/c/n5guci/search/details/hgnfiabbuj?db=e000xww

2. People are your Resources: Focus on others to get what you want

https://research-ebsco-com-presiuniv.knimbus.com/c/n5guci/search/details/hgnfiabbuj?db=e000xww

Case studies:

1. Influence of Manager's Leadership Style on Employees' Performance

https://www.researchgate.net/publication/374741033_CASE_STUDIES_IN_ORGANIZATIONAL_BEHAVIOUR

2. Influence of Leadership among Problematic Workers in Oil Palm Plantation Sector

https://www.researchgate.net/publication/374741033_CASE_STUDIES_IN_ORGANIZATIONAL_BEHAVIOUR

Catalogue prepared by	Dr. B. Anupama
Recommended by the Board of Studies on	BOS NO: 18th held on 6,June,2025
Date of Approval by the Academic Council	Academic Council Meeting No. 26th held on 25,July,2025

<table>
<tr><td rowspan="2">Course Code: GMM4111</td><td rowspan="2">Course Title: Managerial Economics</td><td>L</td><td>T</td><td>P</td><td>C</td></tr>
<tr><td>2</td><td>1</td><td>0</td><td>3</td></tr>
<tr><td>Version No.</td><td colspan="5">1</td></tr>
<tr><td>Course Pre-requisites</td><td colspan="5">Nil</td></tr>
<tr><td>Anti-requisites</td><td colspan="5">Nil</td></tr>
<tr><td>Course Description</td><td colspan="5">This course explores the application of economic principles to managerial decision-making in a business context. By blending microeconomic theory with practical tools, students learn how to analyze demand, production, costs, pricing, and market structures. The course also addresses the influence of macroeconomic conditions, risk, and government policies on managerial decisions. Through case studies and applications, students gain the ability to apply economic reasoning to real-world business challenges.</td></tr>
<tr><td>Course Objective</td><td colspan="5">This course is designed to improve the learners' EMPLOYABILITY SKILLS by using PARTICIPATIVE LEARNING techniques</td></tr>
<tr><td rowspan="5">Course Out Comes</td><td colspan="5">On completion of this course, the student will be able to:</td></tr>
<tr><td colspan="5">CO1: Understand and explain the principles of managerial economics and their application in business decision-making. (Understand)</td></tr>
<tr><td colspan="5">CO2: Apply demand and supply analysis, forecasting methods, and elasticity concepts to solve managerial problems. (Apply)</td></tr>
<tr><td colspan="5">CO3: Analyze production and cost relationships to recommend strategies for efficiency and profitability. (Analyze)</td></tr>
<tr><td colspan="5">CO4: Evaluate pricing and output decisions across different market structures, considering risks, uncertainties, and government interventions. (Evaluate)</td></tr>
<tr><td colspan="6">Course Content:</td></tr>
<tr><td>Module 1</td><td colspan="2">Introduction to Managerial Economics</td><td colspan="2">Assessment 1 - Quiz</td><td>10 sessions</td></tr>
</table>

Topics: Nature, scope, and significance of managerial economics in decision-making. Relationship of managerial economics with microeconomics, macroeconomics, and functional areas of management. Fundamental economic concepts: scarcity, choice, opportunity cost, marginal analysis, and time perspective. Role of managerial economics in modern business strategy. Factors of Production and Circular flow of Economy			
Production function: short-run and long-run. Law of variable proportions returns to scale, and isoquants. Cost concepts: fixed, variable, total, average, marginal, opportunity costs. Short-run and long-run cost curves, learning curve, economies and diseconomies of scale. Applications of cost analysis in managerial decision-making (break-even analysis, make-or-buy decisions).			
Tutorial: Recent Developments in managing diverse workforces / Latest articles or blogs of relevance			
Module 2	**Demand and supply Forecasting**	Assessment 2 – Assignment	15 sessions
Demand analysis: law of demand, determinants of demand, exceptions to the law of demand. Elasticity of demand: price, income, and cross elasticity – managerial uses and applications. **Demand forecasting:** qualitative and quantitative techniques (survey methods, moving averages, regression analysis, econometric models). Business applications of demand forecasting: production planning, pricing, and marketing strategies. Case study discussions on forecasting errors and their managerial implications. **Supply Analysis:** Law of Supply – Price elasticity of supply **Price Equilibrium**			
Module 3	**Market Structures and Pricing Decisions**	Assessment 3 – Project/Report Writing	12 sessions
Market Structures and characteristics **Price-output decisions under different market structures:** Perfect competition – equilibrium in short run and long run. Monopoly – price discrimination, profit maximization. Monopolistic competition – product differentiation, selling costs. Oligopoly – collusive and non-collusive models (Cournot, Bertrand, Kinked Demand Curve). **Pricing practices:** cost-plus pricing, transfer pricing, penetration pricing, skimming strategy, pricing in the digital economy. Government intervention and regulation in pricing and competition. Decision-making under risk and uncertainty: expected value analysis, decision trees.			
Module 3	**Macroeconomics**	Assessment 4	08

		–Scenario Analysis Assignment	sessions
Macroeconomic issues and concepts – The Circular Flow of Income – Concepts of National Income and its Measurement Business Cycle Indicators – Leading – Lagging – Coincident Indicators **Output & Income:** Income generated from this production, including wages, salaries, profits, and rent. **Employment & Unemployment:** factors that influence unemployment rates, such as labor market dynamics, economic growth, and government policies **Inflation & Deflation:** meaning, Types - Consumer Price Index – Wholesale Price Index – Index of Industrial Production (IIP), impact on purchasing power and economic stability. **National Income Estimation process:** Gross National Savings – Gross Capital Formation– Gross domestic Product – Gross National Income – Gross National Product – Net Domestic Product- Net Domestic Income – Net National Income – National Income			
Targeted Application & Tools that can be used:			
Case Study Analysis – Application of demand forecasting, pricing strategies, and production decisions in real companies.			
Quantitative Tools – Regression analysis, break-even analysis, cost-volume-profit analysis, decision trees, and elasticity measurement.			
Forecasting Software / Tools – Excel, SPSS, R, or other statistical packages for demand forecasting and data analysis.			
Simulation Exercises – Market structure simulations (monopoly, oligopoly pricing decisions) to understand competitive behavior.			
Business Reports & Presentations – Students prepare decision-focused reports analyzing cost structures, pricing policies, or market entry strategies.			
Project work/Assignment: Mention the Type of Project /Assignment proposed for this course			
Project/ Assignment:			
(Participative learning)			
1. Assessment 1 – Quiz (Module 1: Introduction to Managerial Economics)			
Ø Short quiz on core concepts: scarcity, opportunity cost, marginal analysis, and role of managerial economics in decision-making.			
Ø Objective: Test foundational understanding.			
2. Assessment 2 – Assignment (Module 2: Demand and			

Forecasting)
Ø Assignment: Select a product/service and prepare a demand forecast using secondary data. Apply elasticity concepts and discuss managerial implications.
Ø Objective: Apply demand analysis tools to a practical scenario.
3. Assessment 3 – Case Study (Module 3: Production and Cost Analysis)
Ø Case study: Analyze cost structures of a manufacturing/service firm. Identify fixed vs. variable costs, apply break-even analysis, and suggest ways to reduce costs.
Ø Objective: Strengthen decision-making based on production and cost analysis.
4. Assessment 4 – Project/Report Writing (Module 4: Market Structures and Pricing Decisions)
Ø Project: Study an industry (e.g., telecom, airlines, e-commerce) and analyze its market structure. Evaluate pricing strategies used by leading firms and recommend an optimal strategy.
Ø Objective: Integrate concepts of market structure, pricing, and government policies into a real-world context.
Text Books:
T1 – Paul G. Keat & Philip K. Y. Young 2022). *Managerial Economics: Economic Tools for Business Decisions* (9th ed.). Pearson Education.
T2 – Varshney R. L. & Maheshwari K. L. (2021). *Managerial Economics*. Sultan Chand & Sons.
References :
1. R1 – Luthans, F., Luthans, B. C., & Luthans, K. W. (2021). Organizational behavior: An evidence-based approach (14th ed.). Information Age Publishing. VitalSource.
2. R2- Sanket Sunand Dash (2021). Organizational Behavior, Thirteenth Edition, Wlley India Pvt. Ltd.
Research and Articles:
1. "The elasticity of demand and its role in consumer behaviour determination: A comparative analysis of Europe and the USA". *Scientific Bulletin of Mukachevo State University, Series 'Economics' (2024)*
Examines how price elasticity varies across products like oil, milk, and chicken in Europe and the U.S., offering insights into consumer behavior and managerial pricing decisions.
Access via ResearchGate: ResearchGate
2. "The Impact of Big Data on Economic Forecasting and Policy Making" *EAJournals.org, 2022*

Explores how big data enhances forecasting accuracy and supports strategic decision-making—essential for Module 2 on demand forecasting.	
Read more: EA Journals	
3. "Sustainable Competitive Advantage in Emerging Markets: Innovations and Strategies"	
Gurpreet Singh & Sandeep Vij (2020). Discusses tailored strategies enabling firms in emerging markets to maintain a competitive edge—helpful for understanding cost leadership and market positioning.	
Access via ResearchGate: ResearchGate	
4. "A Step-by-Step Guide to Real-Time Pricing", *Harvard Business Review*, *November–December 2023*	
Provides actionable insights into implementing AI-powered pricing models—highly relevant to Module 4's focus on pricing strategies.	
Read the article: Harvard Business Review	
5. "The Future of Economic Forecasting with AI and Big Data Integration" *Charles James*, *ResearchGate (2024)*. Reviews how AI and unstructured data are revolutionizing forecasting methods—directly applicable to modern demand forecasting techniques.	
Access via ResearchGate: ResearchGate	
Catalogue prepared by	Dr. Bipasha Maity
Recommended by the Board of Studies on	BOS NO: 18th held on 6,June,2025
Date of Approval by the Academic Council	Academic Council Meeting No. 26th held on 25,July,2025

Course Code: QPS4111	**Course Title: Production Operations and Logistics Management**	**L**	**T**	**P**	**C**
		2	**1**	**0**	**3**
Version No.	2.0				
Course Pre-requisites	**Nil**				
Anti-requisites	**Nil**				
Course Description	This course provides an in-depth understanding of production operations and logistics management in business environments. Students will explore core operational processes, supply chain strategies, inventory management, and logistics optimization				

<table>
<tr><td></td><td colspan="4">to enhance efficiency and profitability. Through real-world case studies and interactive learning methods, students will gain practical insights into managing production systems and designing effective logistics solutions, preparing them for strategic roles in operations management.</td></tr>
<tr><td>Course Objective</td><td colspan="4">This course is designed for SKILL DEVELOPMENT of the learner by using PROBLEM SOLVING techniques.</td></tr>
<tr><td>Course Out Comes</td><td colspan="4">Upon completing this course, students will be able to:
1. Analyze production and logistics challenges using key operational theories.
2. Evaluate supply chain performance with industry-specific metrics.
3. Develop efficient logistics solutions that optimize cost and resources.
4. Apply problem-solving strategies to improve production workflows.</td></tr>
<tr><td>Course Content:</td><td colspan="4"></td></tr>
<tr><td>Module 1</td><td>Introduction to Production Operations</td><td></td><td>Assessment 1 - Quiz</td><td>11 Hours</td></tr>
<tr><td colspan="5">This module lays the foundation for understanding production systems and operations management. Students will explore:
• Types of Production Systems – Job production, batch production, mass production, and continuous production.
• Operations Strategy – Aligning production processes with business goals.
• Productivity and Efficiency – Techniques to measure and improve performance.
• Technology in Operations – Role of automation, robotics, and AI in modern production.</td></tr>
<tr><td>Module 2</td><td>Supply Chain and Inventory Management</td><td></td><td>Assessment 2 – Case Study</td><td>11 Hours</td></tr>
<tr><td colspan="5">This module delves into supply chain dynamics and inventory control methods to optimize operations. Topics include:
- Demand Forecasting – Methods like time series analysis and regression models.
- Inventory Management – Economic Order Quantity (EOQ), Just-In-Time (JIT), and Vendor-Managed Inventory (VMI).
- Lean & Agile Supply Chains – Strategies for minimizing waste and improving responsiveness.</td></tr>
</table>

<table>
<tr><td colspan="5">- Supply Chain Risk Management – Handling disruptions and building resilient networks.</td></tr>
<tr><td>Module 3</td><td>Logistics and Distribution Strategies</td><td></td><td>Assessment 3 – Case Analysis</td><td>11 Hours</td></tr>
<tr><td colspan="5">In this module, students will explore efficient logistics models to ensure seamless flow of goods and services. Key areas include:
- Transportation Modes – Road, rail, air, and sea; comparative advantages.
- Network Optimization – Designing distribution channels for cost and service efficiency.
- Warehouse Management – Layout design, automation, and performance metrics.
- Technological Advancements – Blockchain, IoT, and AI-driven logistics solutions.</td></tr>
<tr><td>Module 4</td><td>Optimization in Production and Logistics</td><td></td><td>Assessment 4 – Mini Project Students will work on a mini-project, applying optimization techniques to solve a production or logistics problem in a real-world scenario.</td><td>12 Hours</td></tr>
<tr><td colspan="5">This module focuses on improving operations using analytical tools and emerging trends. Topics covered:
• Process Improvement Methodologies – Six Sigma, Kaizen, and Total Quality Management (TQM).
• Data-Driven Decision Making – Using analytics for production planning.
• Sustainability in Logistics – Green supply chain initiatives and carbon footprint reduction.
• Future of Operations Management – AI, predictive modelling, and smart factories.</td></tr>
<tr><td colspan="5">Targeted Application & Tools that can be used:
Project work/Assignment: Students will develop a logistics optimization model for a real-world business case, integrating production efficiency techniques</td></tr>
<tr><td colspan="5">Project work/Assignment: Mention the Type of Project /Assignment proposed for this course</td></tr>
<tr><td colspan="5">Web Resources:
• Supply Chain Digital: www.supplychaindigital.com
• Logistics Management Magazine: www.logisticsmgmt.com
• MIT Supply Chain Research: www.mit.edu/supplychain</td></tr>
</table>

Sample Data Set: Real-time industry data on supply chain optimization and logistics modelling will be provided for case study analysis.
• **Text Book:** Chopra, S., & Meindl, P. (2021). *Supply Chain Management: Strategy, Planning, and Operations*. Pearson.
References: • Russell, R.S., & Taylor, B.W. (2020). *Operations Management: Creating Value Along the Supply Chain*. Wiley. • Christopher, M. (2016). *Logistics and Supply Chain Management*. Pearson.

Catalogue prepared by	Shivaprasad S
Recommended by the Board of Studies on	BOS NO: 18th held on 6,June,2025
Date of Approval by the Academic Council	Academic Council Meeting No. 26th held on 25,July,2025

Course Code: MKT4111	**Course Title: Marketing Management - Theories and Practices – Theories & Practices**	**L**	**T**	**P**	**C**
		2	**1**	**0**	**3**
Version No.	1.0				
Course Pre-requisites	**Nil**				
Anti-requisites	**Nil**				
Course Description	This course intends to provide the student with necessary knowledge and skills to excel in the field of marketing. This course explores the five philosophies applied in this digital era: along with the marketing mix - product development, pricing strategies, promotion, and distribution channels. The theoretical concepts are applied to understand and solve the marketing challenges through a combination of lectures, case studies, and hands-on exercises is expected to provide students the essential skills in marketing. On completion of this course students would have acquired the capacity to critically think, identify marketing issues, draft marketing plans, draw data-driven decisions.				
Course Objective	This course is designed to improve the learners Skill Development by using Participation techniques.				
Course Out Comes	**On successful completion of the course the students shall be able to:** **CO 1: Illustrate the i**mportance of Marketing management and consumer behaviour for Segmentation, Targeting & Positioning decisions. (Understanding) **CO 2: Develop** Product launching strategies. (Applying) **CO 3: Examine** the significance of appropriate pricing & distribution decisions for product success. (Analyzing) **CO 4: Evaluate** the right use of promotion & technology for realizing a positive ROI. (Evaluating)				

Course Content:				
Module 1	**Concepts of Marketing**	Assignment using E Library (Participative Learning)	Assessment 1 - Quiz	12 Sessions
Topics: Concept of Marketing, Needs, Wants and Demand, Nature & Importance of Marketing, 5 Philosophies of Marketing Management , Marketing Mix, Marketing Environment – Macro and Micro Environment. Factors influencing Consumer Behaviour, Consumer Buying Decision Process, Market Segmentation and Bases of segmentation, Targeting Strategies, Concept of Positioning.				
Module 2	**Product**	Assignment (Participative Learning)	Assessment 2 – Assignment	09 Sessions
Topics: Product – Meaning, Product Mix – Product Line, Length and Depth, Product Line Analysis & Decisions, New Product Development - Product Life Cycle (PLC) – PLC Strategies, Product vs. Brand, Benefits of Branding, Brand Equity, Fifth 'P' - Packaging and Labelling.				
Module 3	**Price & Place**	Case study (Participative Learning)	Assessment 3 – Case Analysis	12 Sessions
Topics: Pricing – Importance of Pricing, Setting the Price, Pricing Objectives, and Steps in Pricing, Types of Pricing. Practice exercises in pricing. Place - Marketing Channels and their roles, Functions of a channel partner, Types of channels, Levels, Channel Design decisions, Channel Conflict: Reasons and resolution.				
Module 4	**Promotion & Technology**	Assignment (Participative Learning)	Assessment 4 – Mini Project	12 Sessions
Topics: Promotion Mix - Advertising, Sales Promotion, Events & Experiences, Direct Marketing and Public Relations & Publicity, Personal Selling – Pros & Cons. Integrated Marketing Communications (IMC) – Traditional & Digital media, social media - Steps in Promotional Planning - Media Planning, Budgeting, Ad Campaign development. Managing consumer journey & experiences using technology – concepts & use cases.				
Project work/Assignment: Module 1 Sample Assignment 1: Project Work: Collect Advertisements (from Newspapers) pertaining to the various forms of Segmentation, classify them, and make a presentation, with appropriate justification. Module 2 -Sample Assignment 2: Identify 5 products / brands which are in the different Life Cycle Stages of PLC and suggest appropriate Marketing strategies for them. Module 3 - Sample Assignment: Analyze the difference in Distribution channels - FMCG versus / Consumer durables / Services Module 4 - Sample Assignment : Identify the Digital and Social Media Marketing strategies adopted by any company of your choice.				
Web Resources: (**Kindly note: Student should visit PU library and access the online resources for the same and**				

incorporate in the assignments)

Research Articles in Journals

- The Impact of Market Environments on Marketing Relationships
  https://www.researchgate.net/publication/257206982_The_Impact_of_Market_Environments_on_Marketing_Relationships

- PLC strategies of Amul
  https://mentormecareers.com/product-life-cycle-of-amul/?srsltid=AfmBOopV3fmKT77X3eO6bsuYHJ9jNieKliMlRYM1Rhg5hwqT1JFrxRYg

- Ranjan Bandyopadhyay, Bipithalal Balakrishnan Nair, "Marketing Kerala in India as God's Own Country! for tourists' spiritual transformation, rejuvenation and well-being", Journal of Destination Marketing & Management, Volume 14.
  https://www.sciencedirect.com/science/article/abs/pii/S2212571X18303779

- HUL Integrated Annual Report 2024-25

  https://www.hul.co.in/files/hul-integrated-annual-report-2024-25.pdf

Case Studies:

- The Coca-Cola brand positioning strategy, segmentation and targeting

  https://fabrikbrands.com/branding-matters/brand-strategy/coca-cola-brand-positioning-strategy-segmentation-and-targeting/
- Nestle' Maggi: Pricing and repositioning a recalled product
  https://www.scribd.com/document/406890984/Group-6-Nestle-s-Maggi-Pricing-repositioning-a-recalled-product-docx
- Tourism Promotion through the Internet (Websites): (Jordan as a Case Study)
  https://www.researchgate.net/publication/228414318_Tourism_Promotion_through_the_Internet_Websites_Jordan_as_a_Case_Study

- Cybermediation in Auto Distribution: Channel Dynamics and Conflicts
  https://onlinelibrary.wiley.com/doi/full/10.1111/j.1083-6101.2000.tb00347.x

- Understanding Customer Experience Throughout the Customer Journey

  https://www.jstor.org/stable/44134974?refreqid=fastly-default%3Aafda1f1b4caed3bf330641c66c9d6444&seq=3

Videos:

- Marketing Management – Core concepts
  https://youtu.be/65MQnEMf-uI?si=go-RM8wy59QTba0T

- Understanding the Marketing Mix
  https://www.youtube.com/watch?v=d0NMSqeKpVs

• Product Life Cycle https://www.youtube.com/watch?v=GjQRON8LF9g
Text Book **T1:** Philip Kotler, Kevin Lane Keller, Alexander Chernav. (2022). Marketing Management. Pearson Education. 16th edition.
References **R1**: David A. Aaker and Christine Moorman. (2023). Strategic Market Management. Wiley Publisher. 12th edition. **R2:** Tapan K. Panda. (2022). Marketing Management: Text and Cases. Taxmann Publications. 3rd Edition.

Catalogue prepared by	Dr. Mohamad Imrozuddin
Recommended by the Board of Studies on	BOS NO: 18th held on 6,June,2025
Date of Approval by the Academic Council	Academic Council Meeting No. 26th held on 25,July,2025

2nd Semester

Course Code: GMM4119	**Course Title: Business Research Methods** **Type of Course: School Core & Theory only**	**L-T- P-C**	**2**	**1**	**0**	**3**
Version No.	1.0					
Course Pre-requisites	Business Statistics (MBA 1007)					
Anti-requisites	NIL					
Course Description	Business Research Methods provides the theoretical and practical framework to conduct research in Business. It consists of modules, which cover the fundamentals of the Business Research Process. The course enables discussion on different research designs that would be appropriate in different business scenarios. The data analysis sections deals with the relevant statistical tools required to analyze the data which would help in effective decision making.					
Course Outcomes	On successful completion of the course, the students shall be able to: 1. Apply the relevant business research methods for solving business research problems. [Application Level] 2. Use appropriate data collection methods to carry out business research. [Application Level] 3. Employ suitable measurement techniques and sampling designs to elicit data. [Application Level] 4. Analyze the data using appropriate statistical tools. [Analysis Level]					
Course Objectives	Objective of this course is to enhance Skill Development using Experiential Learning methods.					

Course Content:				
Module 1	Introduction to Business Research Methods	Assignment	Review Literature	9 Hours
Topics: Role of business research – applied and basic business research – managerial value of business research. Theory building – research concepts, constructs, propositions, variables and hypotheses – the scientific method of conducting research. The business research process – types of business research – exploratory, descriptive and causal. Stages in the research process. Review of literature. Problem definition process, research objectives, questions and hypotheses. The research proposal.				
Module 2	Data Collection Methods and Qualitative Research	Mini-Project	Data Collection and Data Analysis	12 Hours
Topics: Primary data – survey research – errors in survey research – survey research methods. Personal interviews – telephone interviews – self-administered questionnaires. Observation methods. Secondary data – advantages, disadvantages and sources. Qualitative research – uses, orientations to qualitative research. Techniques in qualitative research – Focus group interview, depth interviews. Conversations, semi-structured interviews				
Module 3	Measurement Concepts, Questionnaire design and Sampling	Assignment	Conceptual Knowledge	12 Hours
Topics: Introduction – variables – constructs - measurement scales – nominal, ordinal, interval and ratio. Criteria for good measurement – reliability and validity. Attitude measurement – attitude rating scales – Likert scale, semantic differential. Measuring behavioral intention – ranking, sorting. Questionnaire design – Basic considerations – wording questions – guidelines for constructing questions – questionnaire layout – pretesting and revision. Sampling – population, sample, sampling frame, sampling units, sampling and non – sampling errors. Non – probability sampling – convenience, judgment, quota and snowball sampling. Probability sampling – simple random sampling, systematic sampling, stratified sampling.				
Module 4	Data Analysis and report writing	Mini-project	Data Analysis	12 Hours
Topics: Testing of hypothesis – test for two means – known variances and unknown but equal variances, paired t test, test for two proportions. Chi square test for independence of attributes. Introduction to multivariate data analysis. Report writing – report format – parts of the report.				
Targeted Application & Tools that can be used: Business research methods is applied to different areas of the management. The broad areas of applications are marketing research, financial markets, behavioural economics, human resources, etc. &Professionally Used Software: MS-Excel/SPSS/Minitab/R				
Project work/Assignment:				

Project/Assignment: Mini-Project on the primary or secondary data collection techniques for the application of suitable statistical models. Assignment 1: Students are required to write a Literature Review Assignment based on any two to three related literature on their research topic of interest. Assignment 2: Students are required to construct the Questionnaire in align with the Problem identification/Research questions and Hypothesis formulation on their research topic of interest. Assignment 3: Written Assignment/Quiz on Research Process or Sampling techniques.	
Text Books 1. Zikmund, W. G., Babin, B, J., Carr, J.C. & Griffin, M., Business Research Methods: A South Asian Perspective. Delhi: Cengage Learning, Edition 9, 2012.	
References 1. Kothari, C. R. & Garg, G. Research Methodology, Methods and Techniques. New Age International Publishers, Multi-Colour Edition, 2019. 2. Anderson, Sweeney, Williams, Camm and Cochran. Statistics for Business and Economics. Delhi: Cengage Learning., 2016.	
Catalogue prepared by	Dr. Jayakrishna Udupa H
Recommended by the Board of Studies on	BOS NO:
Date of Approval by the Academic Council	Academic Council Meeting

Course Code: QNT4114	**Course Title: Applied Data Analysis and Visualization**	**L – T – P – C**	**1– 1 – 2 – 3**
Version No.	1.0		
Course Pre-requisites	NIL		
Course Description	This course introduces students to applied data analysis using spreadsheets and visualization tools to support managerial decision-making. It emphasizes the use of formulae, functions, pivot tables, and dashboards to analyze and interpret business data. Students will learn to apply statistical and financial techniques for forecasting, reporting, and optimization. The course integrates practical lab exercises with real-world datasets to build problem-solving skills. By the end, students will be able to create effective visualizations and analytical models for business impact.		

<table>
<tr><td>Course Outcomes</td><td colspan="4">On successful completion of this course the students shall be able to:
CO1: Apply spreadsheet operations to manage, format, and organize business datasets for effective analysis.
CO2: Analyze business problems using formulas and functions to derive insights from quantitative and qualitative data.
CO3: Evaluate data through advanced charts, pivot tables, and dashboards to support informed managerial decision-making.
CO4: Create business solutions by integrating advanced Excel tools (Power Query, PowerPivot, VBA) to design models for forecasting and analytics applications.</td></tr>
<tr><td>Course Objective:</td><td colspan="4">To develop students' ability to apply data analysis and visualization techniques using spreadsheets and advanced Excel tools for effective problem-solving and data-driven business decision-making.</td></tr>
<tr><td>Module 1</td><td>Introduction to Data Analysis and Spreadsheets</td><td>Lecture, Lab</td><td>Apply</td><td>15 hrs</td></tr>
<tr><td colspan="5">Introduction to data analysis, introduction to spreadsheets and excel, entering and editing worksheet data, performing basic worksheet operations, working with excel ranges and tables, formatting worksheets.</td></tr>
<tr><td>Module 2</td><td>Formulae and Functions</td><td>Lecture, Lab</td><td>Analyze</td><td>15 hrs</td></tr>
<tr><td colspan="5">Introducing formulae and functions, formulae for mathematical and text operations, formulae for handling dates and time, formulae for matching and lookup, formulae for statistical analysis, formulae for financial analysis, array formulas, error-free formulae.</td></tr>
<tr><td>Module 3</td><td>Data Visualization, Management and Analysis</td><td>Lecture, Lab</td><td>Evaluate</td><td>15 hrs</td></tr>
<tr><td colspan="5">Getting started with excel charts, creating sparkline graphics, advanced charting techniques, dashboarding and implementing excel dashboarding best practices, introducing pivot tables and pivot charts, analyzing data with pivot tables, analyzing data using goal seeking and solver, analyzing data with the analysis tool pack.</td></tr>
<tr><td>Module 4</td><td>Applying analytics to achieve Business impact</td><td>Lecture, Lab</td><td>Create</td><td>15 hrs</td></tr>
</table>

Introduction to PowerPivot and power query, business application of power pivot and query, automating excel using VBA, business application of VBA, business data management applications, customer analytics applications, demand forecasting applications, capstone project

Targeted Application & Tools that can be used: Microsoft Excel

Project work/Assignment:

- **Quiz (Module 1: Introduction to Data Analysis and Spreadsheets)**
  Students will take a quiz on Excel basics, worksheet operations, ranges, and data formatting.
- **Individual Assignment (Module 2: Formulae and Functions)**
  Apply formulas and functions (mathematical, text, statistical, lookup, financial) on a given dataset to perform meaningful analysis and submit a written assignment with results.
- **Case Study (Module 3: Data Visualization, Management and Analysis)**
  Analyze a business case dataset using PivotTables, charts, and dashboards. Identify patterns, trends, and provide managerial insights through visualization.
- **Project / Report Writing (Module 4: Applying Analytics to Achieve Business Impact)**
  Capstone group project: Develop an Excel dashboard integrating Power Query, PowerPivot, Solver, or VBA. Submit a report demonstrating how the solution can support decision-making in business areas such as sales, HR, marketing, or finance.

- Text Books:

- T1. Mount, G. (2024). *Modern data analytics in Excel*. Wiley.
- T2 Fortino, A. (2024). *Data visualization for business decisions*. Packt Publishing.

References:

1. **R1:** McKinney, W. (2022). *Python for data analysis: Data wrangling with pandas, NumPy, and Jupyter* (3rd ed.). O'Reilly Media.
2. **R2:** Gibson, G. (2024). *Essential data science and analytics with R and Python*. Springer.
3. **R3:** Arab, I. (2024). *Marketing analytics dashboards design*. Routledge.
4. **R4:** Castro, L. N. de. (2025). *Exploratory data analysis: Descriptive analysis, visualization, and dashboard design*, Taylor & Francis.
5. Baley, I., & Veldkamp, L. (2025). *The data economy: Tools and applications*. Princeton University Press.

Web pages

1. https://sites.google.com/view/narayanasrikanthreddy/home/student-home-page/mba-1st-sem
2. https://support.microsoft.com/en-gb/office/keyboard-shortcuts-in-excel-1798d9d5-842a-42b8-9c99-9b7213f0040f
3. https://www.linkedin.com/pulse/data-analysis-project-excel-dashboard-anusha-srivastava

PU library E –resource

https://www-sciencedirect-com-presiuniv.knimbus.com/journal/journal-of-computational-mathematics-and-data-science

Catalogue prepared by	**Dr. Varalakshmi Dandu**
Recommended by the Board of Studies on	BOS NO: 18th held on 6th June 2025

Date of Approval by the Academic Council	26th Academic Council Meeting held on 25th July 2025

Course Code: MKT4113	**Course Title: Digital Marketing** **Type of Course: Program Core** **Theory Only Course**	**L-T- P- C**	**2**	**1**	**0**	**3**
Version No.	1.0					
Course Pre-requisites	Marketing Management MS Office Social Media exposure					
Anti-requisites	NIL					
Course Description	Digital media is hip and happening. This course is for students who wish to learn digital marketing in a short time frame. The course will enable digital marketers to prepare digital marketing strategy. It will also provide an opportunity to understand the tools and techniques and hence the 'how' of digital marketing. This course will give a panoramic view of various digital and social media marketing mediums that businesses can use for escalating growth. It will give deep insights into the art and science of search engine optimization, search engine marketing, social media marketing, Email marketing & Mobile marketing. It will enable deep understanding of key social media such as Facebook, Instagram, LinkedIn, YouTube, Google+, Blogs and Twitter. This course will give insights into how to increase engagement, leads and conversions. The highlight of the course is that participants get to run live campaigns in groups and hence learn by doing. The course provides a good blend of strategy as well as execution.					
Course Outcomes	On successful completion of this course the students shall be able to: CO 1) Explain the functioning of a Search Engine and the importance of Search Engine Optimization (Comprehension) CO 2) Apply the concept of Search Engine Marketing in creating a digital Ad Campaign (Application) CO 3) Illustrate the use of social media in effective digital marketing campaign (Application) CO 4) Identify the opportunities of email and Mobile Marketing to leverage the power of mobile devices (Application)					
Course Objective:	The course aims at SKILL DEVELOPMENT with respect to Marketing Strategies with PARTICIPATIVE learning activities.					
Module 1	Search Engine Optimization (SEO)	Assignment using E Library (Participative Learning)	Article: Global Marketing for the Digital Age	15 Hours		
Topics: Introduction to Digital Marketing, Importance of Search Engine, How Search Engine works, Web Crawler / Spider, Search Engine Algorithm (Page Rank Algorithm), Understanding the SERP, Organic Search Results and SEO, Keywords - Keyword Theory and Research, Choosing the Right Keywords, Keyword Research Tools, SEO Process, On-Page and Off-Page Optimization.						
Module 2	SEM and DDA	Assignment (Participative Learning)	Case Study - Pepperfry.com: Marketing to Manage Customer Experience	10 Hours		

Topics: Introduction to Search Engine Marketing (SEM), Pay per Click (PPC) – Key Concepts, Benefits, Goals, and Google Ad Words ranking formula, SEO vs. SEM, Google Ad Words Account & Campaign, Keyword match types. Digital Display Advertising (DDA): Platforms, DDA Terminologies, DDA Key Stakeholders and Digital Ad Creation Process, Types of Display Ads, Remarketing.				
Module 3	Social Media Marketing	Project (Experiential Learning)	Promote a Business Page in Social Media	10 Hours
Topics: Social Media Marketing – Introduction, Classification of Social Media Tools, Importance, Media Types and three key players, Social Media Channels (Facebook, LinkedIn, Twitter, YouTube, Google+), Blogs, Social Media goals. Approaches to Social Media Marketing – Implementation – Listening, Pages, Publishing, Events, Groups, Jobs, Advertising.				
Module 4	Email & Mobile Marketing	Assignment (Participative Learning)	Case Study - The Vanca: Reworking Digital Marketing Strategy	10 Hours
Topics: Email Marketing – Definition, four stage process, Database & Subscriber Management, Design and Delivery of email, Tools. Mobile Marketing: Opportunities, Challenges, Desktop Websites vs. Mobile Website, Characteristics of effective mobile sites, Advantages of Mobile Sites and Mobile Apps, Advantages of Mobile Apps, SMS Marketing, and SMS Campaign Development Process. Introduction to Affiliate and Content Marketing.				
Targeted Application & Tools that can be used: NA				
Project work/Assignment: Project Work: Create a dummy company of any product / service of your choice and use the various social media marketing platforms to promote it. Assignment 1: Marketing Innovation Strategies: Interactive Learning along with a live group project. Assignment 2: Identify the Digital and Social Media Marketing strategies adopted by any company of your choice.				
Text Book: T1: The Art of Digital Marketing by Ian Dodson of Digital Marketing Institute. T2: Puneet Singh Bhatia; Fundamentals of Digital Marketing, Pearson				
References R1: The Google Story by David A. Vise, Pan R2: Social Media Marketing by Tracy Tuten and Michael Solomon, Sage, 2015 Online Resources: https://presiuniv.knimbus.com/user#/home Articles: Tse, A. (2000), "Strategic Marketing for the Digital Age", Journal of Consumer Marketing, Vol. 17 No. 4, pp. 358-372. Link: https://www-emerald-com-presiuniv.knimbus.com/insight/content/doi/10.1108/jcm.2000.17.4.358.1/full/html Fortin, D.R. (2000), "Global Marketing for the Digital Age", Journal of Consumer Marketing, Vol. 17 No. 4, pp. 358-372. Link: https://www-emerald-com-presiuniv.knimbus.com/insight/content/doi/10.1108/jcm.2000.17.4.358.2/full/html				

Alsukaini, A.K.M., Sumra, K., Khan, R. and Awan, T.M. (2022), "New trends in digital marketing emergence during pandemic times", International Journal of Innovation Science, Vol. ahead-of-print No. ahead-of-print. Link: https://www-emerald-com-presiuniv.knimbus.com/insight/content/doi/10.1108/IJIS-08-2021-0139/full/html Multimedia (Videos): Digital Marketing and You – TED Talk by Ankit Srivastava https://www.youtube.com/embed/cBA-itmpR84 Social Media Marketing for Small Business https://www.youtube.com/embed/wtZWt4YzQPU Case Studies: The Vanca: Reworking Digital Marketing Strategy By: Jones Mathew; Banasree Dey, Indisn School of Business (ISB), Link: https://hbsp.harvard.edu/download?url=%2Fcatalog%2Fsample%2FW17158-PDF-ENG%2Fcontent&metadata=e30%3D GiveIndia: On the Net for a Cause By: Sanjeev Tripathi, Shashank Bhasker, Indian School of Business (ISB), Link: https://hbsp.harvard.edu/download?url=%2Fcatalog%2Fsample%2FW16048-PDF-ENG%2Fcontent&metadata=e30%3D Pepperfry.com: Marketing to Manage Customer Experience By: Gaganpreet Singh; Sandeep Puri; Sanjit Kumar Roy, Ivey Publishing, Link: https://hbsp.harvard.edu/download?url=%2Fcatalog%2Fsample%2FW17332-PDF-ENG%2Fcontent&metadata=e30%3D Radio Mirchi: Marketing Strategy for the Bangalore Market By: Anand Kumar Jaiswal, IIM-Ahmedabad, Link:https://hbsp.harvard.edu/download?url=%2Fcatalog%2Fsample%2FA00108-PDF-ENG%2Fcontent&metadata=e30%3D Maruti Suzuki India Limited: Marketing By: Dr. Sanjeev Prashar, Richard Ivey School of Business, Link: https://hbsp.harvard.edu/download?url=%2Fcatalog%2Fsample%2FW13012-PDF-ENG%2Fcontent&metadata=e30%3D

Catalogue prepared by	Dr. Chithambar Gupta V
Recommended by the Board of Studies on	BOS NO: held on
Date of Approval by the Academic Council	Academic Council Meeting No.

Course Code: GMM4117	**Course Title: Corporate Finance Course: Program Core Theory only**		**L-T- P- C**	**3**	**1**	**0**	**4**
Version No.							
Course Pre-requisites	Sound knowledge of Bank balance sheet and Basic mathematics.						
Anti-requisites	NIL						

<table>
<tr><td>Course Description</td><td colspan="5">This course enables the students to understand the roles and responsibilities of financialmanagers in connection with investment, financing and dividend decisions. This course focuses on the various metrics of investment analysis, measurement of cost of capital, identifying the optimum capital structure, managing working capital, linkage between long- term and short-term source of finance, dividend distribution, company valuation and merger & acquisition. This course helps the students to understand how efficiently companies should manage their finance to enhance the company value.</td></tr>
<tr><td>Course Outcomes</td><td colspan="5">On successful completion of this course, the students shall be able to:</td></tr>
<tr><td>Course Objective</td><td colspan="5">1.
2. Know the fundamentals of Finance
3. Analyze the basics of Time value & Capital budgeting Decisions
4. Apply to basic corporate financing decisions</td></tr>
<tr><td>Course Content</td><td colspan="5"></td></tr>
<tr><td>Module 1</td><td>Investment Decisions/Capital Budgeting</td><td>Experiential Learning</td><td></td><td>Lecture</td><td>15 Hours</td></tr>
<tr><td colspan="6">Time Value of money, Risk & Return, Investment criteria – Accounting Rate of return – Pay Back Period - Net present value –Internal Rate of Return – Profitability Index - Capital rationing - Capital investment process.</td></tr>
<tr><td>Module 2</td><td>Securities Valuation and Cost of Capital</td><td>Experiential Learning</td><td></td><td>Lecture and Discussion</td><td>15 Hours</td></tr>
<tr><td colspan="6">Cost of capital – Cost of equity – Cost of Debt –Cost of Preference Shares – Cost of Retained Earnings- Securities Valuation: Equity and Bond Valuation- Discounted Dividend Model Approach-Project risk – valuation by certaintyequivalents - weighted average cost of capital – Adjusted present value.</td></tr>
<tr><td>Module 3</td><td>Dividend Decisions and Pay- outs</td><td>Experiential Learning</td><td></td><td>Participative Learning</td><td>15 Hours</td></tr>
<tr><td colspan="6">Dividend policy and stock value: Factors influencing dividend policy –Dividend policy models: Traditional position-Miller and Modigliani position; Bonus Shares, Stock Splits, Bonus Shares, -Stock Repurchases-Financial Strategy for growth – Financial Distress – Corporate Restructuring.</td></tr>
<tr><td>Module 4</td><td>Management of Working Capital</td><td>Experiential Learning</td><td></td><td>Lecture and Presentation</td><td>15 Hours</td></tr>
<tr><td colspan="6">Working Capital- Meaning, Need, Determinants - Working Capital Cycle - Estimation of working capital need – Working capital investment and financing policies – Cash management – Marketable securities management - Accounts Receivables management – Inventory management and financing.</td></tr>
<tr><td colspan="6">Books
1. Corporate Finance, by Stephen A. Ross, Randoloh W. Westerfield, Jeffrey Jaffe, Bradford D Jordan, Ram Kumar Kakani, 11e, The McGraw-Hill Education.</td></tr>
<tr><td colspan="6">References
1. Principles of Corporate Finance, Richard A. Brealey, Stewart C. Myers, Franklin Allen & Pitabas Mohanty.
2. Fundamentals of Corporate Finance, Jonathan Berk, Peter Demarzo and Jarrad</td></tr>
</table>

Harford, Pearson Publications.

Course Code: GMM4120	**Course Title: Human Capital Management** **Type of Course: Program Core**	**L**	**T**	**P**	**C**
		2	**1**	**0**	**3**
Version No.	2.0				
Course Pre-requisites	**NIL**				
Anti-requisites	**Nil**				
Course Description	This course provides a comprehensive understanding of Human Capital Management with a strategic and practical orientation. It examines the evolution from traditional HRM to HCM, emphasizing workforce planning, talent acquisition, and the use of digital HR technologies. The course covers training and development, performance and potential management, and career growth practices to enhance employee capability. It also focuses on compensation management, employee retention, and attrition management in the Indian context. The course further introduces industrial relations, labour codes, dispute resolution mechanisms, and collective bargaining, enabling learners to manage employment relations effectively in contemporary organizations.				
Course Objective	This course is designed to improve the learners' EMPLOYABILITY SKILLS by using PARTICIPATIVE LEARNING techniques.				
Course Out Comes	**CO1:** Explain Human Capital Management concepts and digital HR practices to workforce planning and talent acquisition. (Blooms Level: Understand) **CO2:** Apply training, development, and performance management systems to improve employee capability. (Blooms Level: Apply) **CO3:** Implement compensation planning and retention strategies to reduce employee attrition. (Blooms Level: Apply)				

	CO4: Examine labour laws and industrial relations mechanisms in managing employment relations. (Blooms Level: Analyse)			
Course Content:				
Module 1	**Introduction to HCM and Procuring Human Capital**	Assessment	Quiz	12 Sessions
Topics: **Introduction to Human Capital Management:** Meaning, Scope, Importance, and Functions of HCM; Evolution from HRM to HCM; David Ulrich Model, Contemporary Trends – Workforce Diversity, Hybrid Work, Gig Workforce; Role of Digital HR – Social Media, Artificial Intelligence, Machine Learning, People Analytics, Metaverse, and Robotic Process Automation in HCM. Green HRM. **Procuring Human Capital:** Job Analysis – Meaning and Importance; Job Description and Job Specification; Human Resource Planning – Importance and Process; Talent Acquisition and Recruitment – Sources; Selection – Methods, Interviews, Tests, and Test Validity; Employee Orientation and Socialization.				
Module 2	**Training, Development and Performance Management**	Assessment	Report Writing	12 Sessions
Training and Development: Concept and Types of Training; Training Need Assessment; On-the-Job and Off-the-Job Training Methods; Executive Development; Job Crafting and Career Development. **Performance and Potential Management:** Objectives of Performance Management; Methods of Performance and Potential Appraisal; Post-Appraisal Feedback; Issues and Challenges in Performance Appraisal. . [Blooms level :Apply]				
Module 3	**Compensation Management and Employee Retention**	Assessment	Case Study Analysis	11 Sessions
Compensation Administration: Concept and Objectives of Compensation Planning; Strategic Role of Compensation in Human Capital Management; Job Evaluation Methods;				

Wage and Salary Surveys; Pay Structure and Compensation Components in India; Factors Influencing Compensation; Incentives and Variable Pay; Fringe Benefits and Employee Benefits.

Employees' Retention: Concept and Importance of Employee Retention; Employee Attrition – Meaning, Types, and Causes; Calculation of Attrition Rate; Impact of Attrition on Organizational Performance; Role of Engagement, Career Growth, Compensation, and Work-Life Balance in Managing Attrition; Retention Strategies.

[Blooms level :Apply]

Module 4	**Industrial Relations and Labour Codes**	Assessment	Group Presentation	10 Sessions

Concept, objectives, industrial disputes, and changing employment relations in India. Labour Code framework with emphasis on the Industrial Relations Code—trade union recognition, strikes and lockouts, standing orders, and workforce flexibility. Industrial disputes settlement machinery: bipartite, conciliation, and adjudicatory mechanisms. Collective bargaining process and the evolving role of trade unions in the post-Labour Code environment.

[Blooms level: Analyse]

Targeted Application & Tools that can be used:

- Fundamental exposure to the qualitative and quantitative surveys techniques in**: People, Performance and HR Strategy.**
- Professionally Used Software: Microsoft excel, SPSS, R software, and qualitative techniques, Tableau, Microsoft Power BI, Skill Assessment Platforms.

Project work/Assignment: Mention the Type of Project /Assignment proposed for this course:

Assessment 1 – Quiz - Quiz related to the basic concepts HCM and Procuring Human Capital

Assessment 2 – Complete one online course given in the certification section of course plan and submit the certificate.

Assessment 3 - Case Study Analysis - Students to submit the case study analysis by selecting any one case out of 5 cases and answer the questions specific to that case and submit a poster presentation.

Assessment 4 – Group Presentation

Prepare a group presentation on the topic “Evaluating the Implications of the Industrial Relations Code, 2020 on Employer–Employee Relationships and Human Capital Management Practices in India.”

Text Books

T1: Dessler, G. (2023). Human resource management (17th ed.). Pearson Education.
– Comprehensive coverage of HCM foundations, talent acquisition, training, performance, compensation, and digital HR trends.

T2: Noe, R. A., Hollenbeck, J. R., Gerhart, B., & Wright, P. M. (2023). Human resource management: Gaining a competitive advantage (13th ed.). McGraw-Hill Education.
– Strategic HCM perspective covering performance management, development, retention, and competitive talent practices.

T3: Sengupta, A. (2024). Human resource management: Concepts, practices, and new paradigms (2nd ed.). Cengage Learning India.
– Indian context, updated with new HR paradigms, recruitment, performance, career management, diversity, and retention.

Reference Books

R1: Sharma, R. C., & Sharma, N. (2025). Human resource management: Concepts, theories and contemporary practices. Routledge India.
– Up-to-date theory and practices across HR functions, including workforce trends, acquisition, training, performance, compensation, and employee relations. (Routledge)

R2: Milkovich, G. T., Newman, J. M., Gerhart, B., & Nyberg, A. J. (2023). Compensation (14th ed.). McGraw-Hill Education.
– In-depth reference on compensation strategy, incentives, pay structures, and benefits aligned with Module 3.

R3: Monappa, A., Batra, G. S., & Chandra, P. (2023). Industrial relations and labour laws (6th ed.). McGraw-Hill Education India.
– Focused on India’s Labour Codes, industrial relations, dispute settlement, collective bargaining, and trade unions.

R4: Srivastava, S. C. (2026). Industrial relations and labour laws (9th ed.). Vikas Publishing House.

R5: Government of India. (2020). Industrial Relations Code, 2020 (updated ed. 2026). Taxmann.

Web Resources:

Web Links:

1. A review of performance measurement: Towards performance management

https://puniversity.informaticsglobal.com:2282/ehost/detail/detail?vid=7&sid=41ff6170-e9b6-4fdc-bd4a-bb122d67f0f7%40redis&bdata=JnNpdGU9ZWhvc3QtbGl2ZQ%3d%3d#AN=18259872&db=iih

2. https://ocw.mit.edu/courses/15-660-strategic-hr-management-spring-2003/g/

Related Articles:

1. **Impact of e-leadership and team dynamics on virtual team performance in a public organization** https://www-emerald-com-presiuniv.knimbus.com/insight/content/doi/10.1108/IJPSM-08-2020-0218/full/html
2. **Managing Diversity In The Workplace: Age, Language And Culture**

https://www.forbes.com/sites/forbesbusinesscouncil/2021/08/12/managing-diversity-in-the-workplace-age-language-and-culture/?sh=32d35341e954

3. Case Study: Apigee; People Management Practices and Challenge of growth. (Ivey Publishing-ISB-H)

Book - References:

- Becker, B. E., & Huselid, M. A. (2021). High performance work systems and firm performance: A synthesis of research and managerial implications. In The strategic human resource management sourcebook (pp. 123–140). Oxford University Press.
- Schmidt, L. (2021). Redefining HR: Transforming people teams to drive business performance. Kogan Page.
- Madhani, P. M. (2024). Strategic HR analytics: Driving business performance. *ResearchGate*. https://www.researchgate.net/publication/377208077_Strategic_HR_Analytics_Driving_Business_Performance
- People Strong. (2023). *Performance insights handbook*. https://www.peoplestrong.com/sg/white_paper/performance-insights-handbook

Catalogue prepared by	Dr. Anni Arnav/ Associate Professor / School of Management
Recommended by the Board of Studies on	BOS NO: 18th held on 6th June 2025
Date of Approval by the Academic Council	26th Academic Council Metting held on 25th July 2025

Course Code: QNT4115	**Course Title: Fundamentals of Business Analytics** **Type of Course: Program Core** **Theory & Practical Course**	**L**	**T**	**P**	**C**
		1	**0**	**2**	**2**
Version No.	1.0				
Course Pre-requisites	QNT4111Applied Business Statistics				
Anti-requisites					
Course Description	This course introduces students to the fundamentals of Business Analytics and its role in data-driven decision making. It covers key analytics concepts, types of analytics, business data and metrics, descriptive, diagnostic, and introductory predictive analytics, along with practical applications across business functions. The course emphasizes real-world business problem solving using analytical thinking and interpretation.				
Course Outcomes	CO1	Explain the fundamentals, types, and lifecycle of Business Analytics			
	CO2	Identify and classify business problems using appropriate analytics approaches			
	CO3	Analyze business data using various types of analytics techniques			
Course Objective	The course aims to develop students' ability to apply descriptive and diagnostic analytics techniques to real-world business problems while providing conceptual exposure to predictive analytics and forecasting methods. Additionally, it demonstrates how analytics is applied across major business functions such as marketing, finance, human resources, and operations to support data-driven managerial decisions.				
Module 1	Introduction to Business Analytics	Assignment using E Library (Participative Learning)			6 hrs

Evolution of data-driven decision making, What is Business Analytics?, Difference between Business Intelligence and Business Analytics, Types of Analytics, Descriptive Analytics, Diagnostic Analytics, Predictive Analytics, Prescriptive Analytics, Analytics lifecycle and workflow, Role of analytics in competitive advantage				
Module 2	Data, Data Types, and Business Metrics	Class Activity (Participative Learning)		6 hrs
Understanding business data, Types of data: Structured, semi-structured, unstructured, Qualitative vs quantitative data, Scales of measurement, Data quality issues and data preparation basics, Introduction to Key Performance Indicators (KPIs), Business metrics and dashboards				
Module 3		Project (Experiential Learning)		6 hrs
Descriptive analytics techniques, Summary statistics for business data, Data aggregation and comparison, Trend and variance analysis, Root cause analysis, Introduction to exploratory data analysis (EDA)				
Module 4		Hands-on with Tools		6 hrs
What is predictive analytics?, Predictive modeling concepts, Correlation and regression (conceptual understanding), Forecasting fundamentals, Assumptions and limitations of predictive analytics				
Module 5		Class activity + Quiz		6 hrs
Marketing analytics (customer segmentation, churn, campaign analysis), Financial analytics (profitability, budgeting, risk basics), Operations and supply chain analytics, Human resource analytics, Ethics and challenges in business analytics				
Targeted Application & Tools that can be used: Microsoft Excel, Google Sheets, Kaggle Datasets				
Project work/Assignment:				
Assignment 1: Module 1– Quiz Assignment 2: Module 2 - Written Assignment Assignment 3: Module 3 - Case study in Assignment 4: Module 4 - Project Work				
Text Book: T1:Evans, J. R. (2022). *Business Analytics: Methods, Models, and Decisions*. Pearson Education.				
Reference Books: **R1:** Prasad, R. N., & Acharya, S. (2016). *Fundamentals of business analytics* (2nd ed.). Wiley. **R2:** Jaggia, S., Lertwachara, K., Kelly, A., Chen, L., & Guha, A. (2023). *Business analytics: Communicating with numbers* (2nd ed.). McGraw Hill. **R3:** Albright, S. C., & Winston, W. L. (2015). *Business analytics: Data analysis & decision making* (7th ed.). Cengage Learning.				
Online Resources: • Presidency University Digital Library https://presiuniv.knimbus.com/user#/home • Kaggle Datasets • IBM Analytics Learning Resources **Research Articles:**				

1. Davenport, T. H., & Bean, R. (2023). Big data and AI-driven analytics: Transforming decision-making in organizations. *MIT Sloan Management Review*, *64*(4), 1–9.
2. Sharda, R., Delen, D., & Turban, E. (2024). Business analytics and data-driven decision making: A managerial perspective. *Decision Support Systems*, *176*, 114021. https://doi.org/10.1016/j.dss.2023.114021.
3. Wamba, S. F., Queiroz, M. M., Trinchera, L., & Fox, G. (2023). Big data analytics capability and business performance: A systematic review and research agenda. *International Journal of Information Management*, *68*, 102591. https://doi.org/10.1016/j.ijinfomgt.2022.102591

Multimedia (Videos):

Case Studies:

- Walmart – Data-driven Inventory Management - https://superagi.com/real-time-data-enrichment-case-studies-success-stories-from-netflix-uber-and-walmart/
- Netflix – Analytics-driven Content Recommendation - https://www.studocu.com/in/document/university-of-mumbai/big-data-analytics/bda-sem-7-tech-neo/108902115
- Amazon – Customer Analytics and Personalization - https://www.ithy.com/article/retail-analytics-implementation-case-studies-2693nh4p
- Uber – Demand Forecasting and Dynamic Pricing - https://ithy.com/article/analytics-case-studies-9hawx3lg.

Catalogue prepared by	Dr. P. Mary Jeyanthi & Dr. Varalakshmi Dandu
Recommended by the Board of Studies on	
Date of Approval by the Academic Council	

Course Code: QNT5133	**Course Title: Programming for Business Analytics** **Type of Course: Specialization Track Compulsory (STC Core courses)** **Theory & Practical Course**	**L**	**T**	**P**	**C**
		2	**1**	**2**	**4**
Version No.	1.0				

Course Pre-requisites	QNT4111Applied Business Statistics			
Anti-requisites				
Course Description	This course provides a comprehensive introduction to **programming for business analytics** using **Python**, designed specifically for management students. It focuses on building programming fundamentals from scratch and progressively applying them to real-world business analytics problems. Learners will gain hands-on experience in data handling, analysis, visualization, and basic automation to support data-driven decision-making across business functions.			
Course Outcomes	CO1	Understand Python programming fundamentals and syntax for business applications		
	CO2	Apply Python programming constructs to manipulate and analyze business data		
	CO3	Analyze datasets using Python libraries for business insights		
	CO4	Analyze data visualizations and analytical summaries using Python		
Course Objective	The objectives of this course are to introduce students to programming concepts using Python, develop logical and analytical thinking for business problem-solving, enable hands-on data analysis using programming tools, and demonstrate how programming supports business analytics across functional domains such as marketing, finance, HR, and operations.			
Module 1	Introduction to Programming and Python Basics	Assignment using E Library (Participative Learning)		15 hrs
Introduction to programming for business analytics, Why Python for Business Analytics?, Installing Python and IDEs (Anaconda, Jupyter Notebook), Python syntax and structure, Variables, data types, and type conversion, Input and output operations, Basic operators and expressions				
Module 2	Control Structures and Data Structures	Class Activity (Participative Learning)		15 hrs
Conditional statements (if, if-else, nested conditions), Looping constructs (for, while), Lists, tuples, sets, and dictionaries, Accessing and manipulating data structures, Practical business examples using data collections.				
Module 3	Functions and File Handling for Business Data	Project (Experiential Learning)		15 hrs
User-defined functions and modular programming, Function arguments and return values, Error handling and debugging basics, File handling (CSV, text files), Reading and writing business datasets				
Module 4	Business Analytics Applications using Python	Hands-on with Tools		15 hrs
Sales and marketing analytics using Python, Financial data analysis and basic forecasting, HR analytics use cases, Operations and supply chain analytics basics, Introduction to dashboards and				

reporting, Ethics and challenges in analytics programming				
Module 5	Python Libraries for Business Analytics	Class activity + Quiz		15 hrs
Introduction to NumPy for numerical computing, Pandas for data manipulation and analysis, Data cleaning and preparation using Pandas, Exploratory Data Analysis (EDA), Introduction to Matplotlib and Seaborn				
Targeted Application & Tools that can be used: Python Jupyter Notebook Anaconda, Pandas, NumPy, Matplotlib, Seaborn, Kaggle Datasets				
Project work/Assignment:				
Assignment 1: Module 1 – Programming Basics Quiz **Assignment 2:** Module 2 – Control Structures Exercise **Assignment 3:** Module 3 – File Handling Case Study **Assignment 4:** Module 4 – Data Analysis Project **Assignment 5:** Module 5 – Mini Business Analytics Project				
Text Book: T1: McKinney, W. (2025). *Python for Data Analysis: Data Wrangling with Pandas, NumPy, and IPython* (3rd ed.). O'Reilly Media				
Reference Books: R1: Ceder, N. (2025). *The Quick Python Book* (4th ed.). Manning Publications. ISBN 9781633436336 R2: Matthes, E. (2025). *Python Crash Course: A Hands-On, Project-Based Introduction to Programming* (3rd ed.). No Starch Press R3: Bader, D. (2025). *Python Tricks: A Buffet of Awesome Python Features*. Dan Bader				
Online Resources: • Presidency University Digital Library https://presiuniv.knimbus.com/user#/home Kaggle Datasets Python Official Documentation				

IBM Skills Network **Research Articles:** **Multimedia (Videos):** **Case Studies:** • Python Success Stories — https://www.python.org/about/success/ • Python Programming Case Study (PDF) — https://www.scribd.com/document/880397181/Python-Programming-Case-Study • Medium: Python Libraries Case Studies — https://medium.com/@kushalh0404/case-studies-showcasing-python-libraries-in-action-24d9c6d061e7

Catalogue prepared by	Dr. P. Mary Jeyanthi & Dr. Varalakshmi Dandu
Recommended by the Board of Studies on	
Date of Approval by the Academic Council	

Course Code: QNT5135	**Course Title: Data Story Telling** **Type of Course: Program Core**	**L**	**T**	**P**	**C**
		2	**1**	**2**	**4**
Version No.	1.0				
Course Pre-requisites	QNT4112 Applied Data Analysis and Visualization				
Anti-requisites					
Course Description	This course is designed to help learners develop the skill of translating complex data into compelling, actionable stories using tools like Power BI / Tableau. Students will gain hands-on experience in visual analytics, dashboard creation, and narrative crafting for data-driven decision-making.				
Course Outcomes	**CO1**	**Understand** the principles of data storytelling and the role of visual analytics in communication.			
	CO2	**Apply** Power BI/Tableau to design interactive dashboards and visual stories.			
	CO3	**Analyze** data trends and patterns to drive business insights.			

	CO4	**Create** Develop and present compelling data narratives for strategic decision-making.	
Course Objective	This course aims to enhance learners' **employability skills** through **experiential and participative learning**, enabling them to communicate data insights effectively to varied stakeholders.		
Module 1	**Introduction to Data Storytelling**	Participative Learning (Assignment/Case-based)	15 hrs
Topics: Why storytelling matters in data communication, Components of an effective data story, Understanding the audience and context, Introduction to Power BI/Tableau interfaces and features.			
Module 2	**Data Preparation and Transformation**	Hands-on Practical (Lab)/Assignment	15 hrs
Topics: Data sources, cleaning, and shaping data, Using Power Query and Tableau Prep, Data models and relationships, Measures and calculated fields			
Module 3	**Visual Design and Best Practices**	Case Study (Experiential Learning)	15 hrs
Topics: Choosing the right chart types, Visual design principles (colour, layout, consistency), Avoiding misleading visuals, Incorporating storytelling elements in dashboards.			
Module 4	**Crafting a Narrative with Dashboards**	Mini Project (Group Work)	15 hrs
Topics: Telling a story through interactive dashboards, Filters, slicers, drill-downs, User interactivity and dashboard aesthetics, Using storytelling templates and flow techniques.			
Module 5	**Case Studies & Story Presentation**	Classroom Presentation & Peer Review	15 hrs
Topics: Industry use-cases: Sales, HR, Finance, Marketing dashboards, Real-world problem-solving through data storytelling, Storyboarding and pitch deck creation, Final presentation and feedback			
Targeted Application & Tools that can be used: Power BI, Tableau, Tableau Public			
Project work/Assignment:			
Assignment 1: Module 1 – Assignment/Case-based **Assignment 2:** Module 2 - Written Assignment **Assignment 3:** Module 3 - Case study **Assignment 4:** Module 4 - Project Work			
Text Book: T1: Cole Nussbaumer Knaflic (2015). *Storytelling with Data: A Data Visualization Guide for Business Professionals*. Wiley.			
Reference Books: R1: McCandless, D. (2012). *Information is Beautiful*. HarperCollins. R2: Few, S. (2012). *Show Me the Numbers: Designing Tables and Graphs to Enlighten*. Analytics			

Press. R3: Microsoft & Tableau official documentation and eLearning materials.
Online Resources: **https://presiuniv.knimbus.com/user#/home** https://learn.microsoft.com/en-us/power-bi/ **Research Articles:** **Multimedia (Videos):** **Case Studies:** • How Power BI helped Coca-Cola bottlers increase supply chain transparency • Tableau in WHO: Health analytics dashboards • Netflix viewing behavior storyboards • Retail analytics dashboard for customer segmentation

Catalogue prepared by	**Dr. P. Mary Jeyanthi**
Recommended by the Board of Studies on	BOS NO: 18th held on 6,June,2025
Date of Approval by the Academic Council	Academic Council Meeting No. 26th held on 25,July,2025

3rd semester:

Course Code: GMM4113	**Course Title: Business Strategy and Corporate Transformation** **Type of Course: Program Core only**	**L- T-P- C**	**2**	**1**	**0**	**3**
Version No.	1.0					
Course Pre-requisites	GMM4111 Managerial Economics MKT4111 Marketing Management - Theories and Practices					
Anti-requisites	**NIL**					
Course Description	Corporate Strategy has become a significant point of the modern corporate world. The changing phases of the competition, the political and social changing faces, the invention of new techniques, and new ideas have compelled the corporate world to embrace the corporate strategy concept and come out with the success. This course (Corporate Strategy) is an integral part of the Strategic Management. Strategic Management is involved in many of the decisions that a leader makes.					

<table>
<tr><td></td><td colspan="4">This course includes what is a strategy, corporate direction, environmental scanning, and sources of competitive advantage, BEVUCA, Neurostrategy, strategy formulation, competitive strategies in emerging industries, balanced scorecard, and International Business.</td></tr>
<tr><td>Course Objective</td><td colspan="4">This course is designed to improve the EMLOYABILITY SKILLS by using participative learning.</td></tr>
<tr><td>Course Outcomes</td><td colspan="4">On successful completion of this course the students shall be able to:
1) Define corporate strategy
2) Identify various factors of competitive advantage
3) Explain various generic competitive strategies
4) Prepare a Balanced Scorecard for an organization.</td></tr>
<tr><td>Course Content:</td><td colspan="4"></td></tr>
<tr><td>Module 1</td><td>Introduction to Strategic Management</td><td>Case: Strategic Analysis of Starbucks Corporation</td><td>Data Analysis: Analysis the different tools used in Neurostrategy based on University SCOPUS database (% analysis).</td><td>12 Sessions</td></tr>
<tr><td colspan="5">Topics:
Module -I Introduction to Strategic Management
What is Strategic Management & Stages of Strategic Management, Integrating Intuition and Analysis, Adapting to Change, Key Terms in Strategic Management, External Opportunities and Threats & Internal Strengths and Weaknesses, Long-Term Objectives, Strategies and Annual Objectives & Policies, The Strategic-Management Model, Benefits of Strategic Management. Corporate Strategy, Directional Strategy, Portfolio Analysis Corporate Parenting. Nero strategy</td></tr>
<tr><td>Module 2</td><td>Environmental Scanning and Industry Analysis</td><td>Case Study: Southwest Airline</td><td>Data Analysis: Identification of factors responsible for BEVUCA Environment through questionnaire or from literature.</td><td>12 Sessions</td></tr>
<tr><td colspan="5">Capabilities and Competencies, Sources of Competitive Advantage: Position and Capability, Value Chain analysis- primary and secondary activities, Internal and External environmental analysis, SWOT, PESTEL analysis, VUCA & BEVUCA, how strategy shapes structure- structuralist and reconstructionist approach- blue and red ocean strategy, Dubai strategy proposition. The Nature of an Internal Audit, Key Internal Forces, The Resource-Based View (RBV) Integrating Strategy and Culture Industry Analysis: The External Factor Evaluation (EFE) The Competitive Profile Matrix (CPM)</td></tr>
<tr><td>Module 3</td><td>Strategy Formulation</td><td>Case study: Class- or Mass(HBR), Idalene F. Kesner and Rockney Walters(2005).</td><td>Data Analysis: Application of design thinking in industry, based on themes and sub theme analysis.(Application of spreadsheet with provided database).</td><td>12 Sessions</td></tr>
</table>

Generic Competitive Strategies- Cost leadership, Differentiation and focus, risk of generic strategy, The Balanced Scorecard, Types of Strategies, Levels of Strategies, Integration Strategies, Forward Integration & Backward Integration, Horizontal Integration, Intensive Strategies, Market Penetration & Market Development, Product Development, Diversification Strategies, Defensive Strategies A framework for competitor analysis- Michael Porter's Five Generic Strategies				
Module 4	**Competitive Strategy and corporate advantage**	**Case study: IKEA** (http://aeunike.lecture.ub.ac.id/files/2012/03/Case-Kel.9.pdf)	**Simulation:** Development and simulation of BSC with the help of spreadsheet.	**9 Sessions**
Topics: Competitive Strategy in emerging Industries- the structural environment, early mobility barriers, early mobility barriers, coping with the competitors, which emerging industries to enter. Evolution of global industries, strategic alternatives in global industries, How to Become a Sustainable Company, Balanced Score Card, Digital advantage – SMAC. International Business Strategy- mode of entry in international business, political and country risk in International Business. Implementing Strategies: Management and Operations Issues, Implementing Strategies: Marketing, Finance/Accounting, R&D, and MIS Issues.				
Targeted Application & Tools that can be used: 1. Module 1: Neurostrategy (Analysis of University SCOPUS database with the help of spreadsheet) 2. Module 2: BECUVA (Identification of Factors through SPSS) 3. Module 3: Design Thinking (Themes and sub themes analysis by VOSVIWER) 4. Module 4: Balanced Score Card (Spreadsheet application)				
Project work/Assignment:				
1.Quiz: Online quiz in University Edhitch platform (10 marks) 2. Article review 3. Identification of value creation process based on VRIO model of any organization of your choice(20 marks)				
Text Book Bhandari & Verma: *Strategic Management - A Conceptual Framework*, McGraw Hill Higher Education, New Delhi, India. https://highered.mheducation.com/sites/125902640x/information_center_view0/index.html				
References R1: Strategic Management CONCEPTS AND CASES, Fred R. David Francis Marion University Florence, South Carolina, 13th ed. Pearson Education, Inc., publishing as Prentice Hall R2: Michael E. Porter: Competitive Strategy, The Free Press, New York. http://www.mim.ac.mw/books/Michael%20E.%20Porter%20-%20Competitive%20Strategy.pdf. R3: HBR'S 10 Must Reads on Strategy. Harvard University Press, Boston, Massachusetts. R3: Paul Leinwand; Cesare Mainardi. *Strategy that works*, Harvard University Press, Boston, Massachusetts. https://www.scribd.com/document/533966997/Strategy-That-Works-How-Winning Companies-Close-the-Strategy-To-Execution-Gap-by-Paul-Leinwand-Cesare-R-Mainardi-Z-lib-org **Additional reading:** Preparing your business in Post- Pandemic World(HBR) https://img1.wsimg.com/blobby/go/a53b688c-293a-4784-a01f-75c9461a886a/HBRs%2010%20Must%20Reads%20on%20Managing%20in%20a%20Downturn%2C				

%20.pdf Presidency University Library link: https://puniversity.informaticsglobal.com:2293/insight/content/doi/10.1108/TQM-12-2016-0109/full/html

Catalogue prepared by	Dr. S.FAKRUDDIN ALI AHMED
Recommended by the Board of Studies on	BOS NO: 18th held on 6,June,2025
Date of Approval by the Academic Council	Academic Council Meeting No. 26th held on 25,July,2025

Course Code: GMM4114	**Course Title: Business Law and Regulatory Compliance Type of Course: Program Core**	**L**	**T**	**P**	**C**
		3	**0**	**0**	**3**
Version No.	1.0				
Course Pre-requisites	Foundational Business Administration awareness, which includes the Fundamentals of Business or Management Students should have a basic understanding of business functions such as marketing, finance, and operations to grasp how legal and regulatory issues impact different areas of business. English Language Proficiency Since legal documents, statutes, and case laws are often in English, students should be comfortable reading and interpreting formal and legal language. Basic Understanding of Legal Systems (Recommended) A general awareness of how the Indian legal system functions — including the roles of the legislature, judiciary, and regulatory bodies — will				

	enhance learning, but is not mandatory.
Anti-requisites	Nil
Course Description	This course offers an in-depth understanding of the Indian legal and regulatory framework governing business operations. It covers essential aspects of business law, including the Indian Contract Act, Companies Act, Consumer Protection Act, Intellectual Property Act, and relevant regulations. The course also focuses on regulatory compliance requirements as mandated by bodies such as SEBI and other statutory authorities. Students will develop the ability to identify legal risks, ensure compliance with sector-specific laws, and understand the implications of non-compliance in the Indian business environment. Through case studies, recent legal developments, and practical assignments, the course equips learners to align business practices with Indian legal standards.
Course Objective	This course is designed for skill development of the learner by using participative learning techniques. 🎬 Understand the foundational principles of business law relevant to the Indian legal system, including the laws governing contracts, companies, consumer rights, and Intellectual property rights. 🎬 Analyse key statutory and regulatory frameworks applicable to business entities in India, such as the Companies Act, 2013; SEBI regulations; FEMA. 🎬 Evaluate the role of regulatory bodies like SEBI in ensuring legal compliance and maintaining corporate accountability. 🎬 Interpret legal provisions and compliance obligations in business scenarios, and identify legal risks and implications of non-compliance.
Course Outcomes	**CO1**: Interpret foundational legal concepts and apply the principles of Indian Contract Law to evaluate the validity, performance, and breach of commercial agreements in business settings and analyze the legal framework governing the sale of goods. [Analyse] **CO2**: Demonstrate a practical understanding of company formation and compliance requirements as outlined in the Companies Act, 2013, and apply the provisions of the Foreign Exchange Management Act (FEMA), 1999, to evaluate and manage foreign exchange transactions **CO3**: Examine the key types of Intellectual Property Rights (IPRs) in India and apply relevant legal principles to protect and manage intellectual assets in business, innovation, and branding strategies. **CO4**: Interpret and apply the provisions of the Consumer Protection Act, 2019, to identify consumer rights, assess business responsibilities, and resolve consumer disputes in compliance with the legal framework governing consumer protection in India.

Course Content:				
Module 1	Introduction to the Indian Legal System and the Indian Contract Act, The Sale of Goods Act, 1930		Assessment 1 – MCQ Quiz on types of contracts, essentials, breach, and remedies.	**Understand 10 Sessions**
Topics: Sources and classification of Indian law, Essentials of a valid contract under the Indian Contract Act, 1872,Types of contracts and enforceability, Performance and discharge of contracts, Remedies for breach of contract and implications for business, Formation of Contract of Sale, Conditions and Warranties, Performance of Contract, Rights of an Unpaid Seller, "Doctrine of Caveat Emptor. Activity: Real-life business agreement case studies.				
Module 2	Companies Act - 2013 & FEMA 1999		Assessment 2 – Crossword or Puzzle: Key company law terms (MOA, AOA, AGM, ROC, etc.) in a gamified format.	Understand 15 Sessions
Definition of Company, Characteristics of a Company, Kinds of Companies, Incorporation of Companies. Memorandum of Association (MoA) & Articles of Association (AoA), Directors: Appointment, Roles & Responsibilities, and grounds for disqualification of Directors, Types of Shares, Corporate Social Responsibility (CSR) under Section 135, Winding up of a Company, Introduction to FEMA, Regulatory Structure under FEMA, Current Account vs Capital Account Transactions, Foreign Exchange Transactions, Foreign Direct Investment (FDI) and FEMA, Overseas Direct Investment (ODI) guidelines under FEMA, Penalties and Enforcement Mechanism. Activity: [FEMA Cases] • **Vodafone case** – Dispute over the indirect transfer of Indian assets by a foreign entity • **Flipkart/Walmart investment** – Under automatic vs. government route for FDI • **Startups raising funds** – Understanding FEMA's role in ECB or FDI regulations				
Module 3	Intellectual Property Rights (IPR)		Assessment 3 – Poster/Infographic: Students design an informative poster on types of IP (patents, trademarks, copyrights, etc.).	Analyse 10 Sessions
Intellectual Property Rights (IPR) Trademark Act, 1999: Registration, Infringement, Remedies, Copyright Act, 1957: Protection of				

literary, musical, artistic works, Patent Act, 1970: Patentability Criteria, Process, Rights of Patentees
Activity: Cases to be discussed:

- Case: Basmati rice GI dispute
- Case: Novartis v. Union of India (patent denial for cancer drug)
- Copyright: Music and movie piracy implications

Module 4	Consumer Protection Act - 2019		Assessment 4 Presentation -Case Laws on Celebrity Endorsements.	Understand 10 Sessions

Introduction to CPA, 2019, Key Definitions, Rights of Consumers (Section 2(9)), Consumer Disputes Redressal Agencies, E-Commerce and Consumer Rights, Duties and liabilities of e-commerce entities, Product Liability & Penalties, Liability of manufacturer, seller, and service provider, Conditions under which product liability arises, Penalties for misleading ads (endorser liability, celebrity accountability).

Activity:

Relevant Case Studies / Examples:

- Maggi noodles case (misleading advertisement & product safety)
- E-commerce refund disputes
- Celebrity endorsements leading to misleading promotions
- Case studies: Amazon/Flipkart refund complaints

- Debate: “Are Indian consumers truly protected in the digital age?”

Targeted Application & Tools that can be used:
Case lets and flowcharts to trace offer, acceptance, consideration, etc.
Poster making / Canva: Create awareness posters on types of IP.
Case analysis of FEMA violations or approvals (e.g., Flipkart/Walmart).

Project work/Assignment: Mention the Type of Project /Assignment proposed for this course

Web Resources:

- Full Text (PDF): India Code
- India Code Portal: Indian Kanoon
- AdvocateKhoj Bare Act: AdvocateKhoj

Sale of Goods Act, 1930

- Full Text (PDF): India Code
- India Code Portal: India Code
- Indian Kanoon: Indian Kanoon

Companies Act, 2013

- Full Text (PDF): India Code
- India Code Portal: India Code
- ICS Institute e-Book: e-book.icsi.edu

Intellectual Property Laws

- Patents Act, 1970 (PDF): Intellectual Property India
- Copyright Act, 1957 (PDF): Ministry of Education
- Trade Marks Act, 1999: Intellectual Property India

Consumer Protection Act, 2019

- Full Text (PDF): India Code
- India Code Portal: India Code
- Ministry of Consumer Affairs: consumeraffairs.nic.in

Foreign Exchange Management Act (FEMA), 1999

- Full Text (PDF): India Code
- Directorate of Enforcement: Enforcement Directorate

Text Books:

1. Kapoor, G. K., & Dhamija, S. (2023). *Business and corporate laws* (Latest ed.). Taxmann Publications.
2. Pathak, A. (2022). *Legal aspects of business* (7th ed.). McGraw Hill Education.

References:

1. Government of India. (2021). The Indian Contract Act, 1872: Bare act with illustrations (2021 ed.). Government of India Press.
2. Taxmann. (2022). Foreign exchange management manual (39th ed.). Taxmann Publications.
3. Taxmann. (n.d.). Consumer protection law & practice. Taxmann Publications.
(Use "n.d." if the publication year is not clearly mentioned on the book. Replace with the actual year if known.)
4. Bhandari, M. K. (2021). Law relating to intellectual property rights. Central Law Publications.
5. LexisNexis. (n.d.). Companies Act, 2013 (5th ed.). LexisNexis India.

Catalogue prepared by	Dr. SHALINI ACHARYA
Recommended by the Board of Studies on	BOS NO: 18th held on 6,June,2025
Date of Approval by the Academic Council	Academic Council Meeting No. 26th held on 25,July,2025

Course Code: QNT5123	**Course Title:** Predictive Analytics and Business Forecasting **Type of Course: Specialization Track Core** **Theory and Practical Course**	**L**	**T**	**P**	**C**
		3	**0**	**2**	**4**
Version No.	1.0				
Course Pre-requisites	QNT4111 Applied Business Statistics QNT4112 Applied Data Analysis and				

	Visualization		
Anti-requisites			
Course Description	This course explores statistical and machine learning methods used to model and forecast business outcomes. Students will gain hands-on experience in predictive analytics tools and techniques, enabling them to generate actionable insights for strategic decision-making in uncertain business environments.		
Course Outcomes	**CO1**	**Understand** Explain the theoretical foundation of predictive analytics and business forecasting.	
	CO2	**Apply** forecasting models like regression, time series, and exponential smoothing in business scenarios.	
	CO3	**Analyze** data using tools like Python/R to generate predictive models and evaluate their performance.	
	CO4	**Create** forecasting solutions using real-world business datasets for marketing, finance, and operations.	
Course Objective	This course is designed to enhance **employability skills** by building **analytical thinking** and **practical forecasting abilities** through **experiential and participative learning**.		
Module 1	**Introduction to Predictive Analytics**	Exploratory Data Analysis using Python/R (Participative Learning)	**10 Sessions + 5 Practical**
Topics: Introduction to Predictive Modeling – Descriptive vs Predictive Analytics – The Business Value of Predictive Analytics – Key Concepts – Predictive Modeling Process – CRISP-DM Framework – Overview of Tools.			
Module 2	**Regression Techniques for Prediction**	Mini Project on Linear and Logistic	**10 Sessions + 5**

		Regression (Experiential Learning)	**Practical**
Topics: Simple and Multiple Linear Regression – Model Evaluation (R^2, Adjusted R^2, RMSE) – Logistic Regression – Classification Accuracy – Use Cases in Marketing and HR.			
Module 3	**Time Series Forecasting**	Case Study/Time Series Forecasting in Excel/R (Case-Based Learning)	**10 Sessions + 5 Practical**
Topics: Time Series Components – Moving Average – Exponential Smoothing – ARIMA Models – Model Selection Criteria – Real-time Forecasting Examples in Retail and Finance.			
Module 4	**Machine Learning Approaches in Forecasting**	Assignment: Hands-on with Decision Trees and Random Forest (Experiential Learning)	**8 Sessions + 5 Practical**
Topics: Supervised vs Unsupervised Learning – Decision Trees – Random Forest – Model Interpretation – Comparison with Traditional Models – Use Cases in Sales Forecasting.			
Module 5	**Forecasting Applications in Business Strategy**	Group Project: Business Forecasting Challenge (Capstone Project)	**7 Sessions + 5 Practical**
Topics: Forecasting for Inventory and Demand Planning – Financial Forecasting – Predictive Customer Analytics – Ethics in Predictive Modeling – Presentation of Forecasting Strategy.			
Targeted Application & Tools that can be used: Python (Pandas, Scikit-learn, Statsmodels), R (Forecast, Tidyverse).			
Project work/Assignment:			
Assignment 1: Module 1 - Quiz **Assignment 2:** Module 2 - Written Assignment **Assignment 3:** Module 3 - Case study **Assignment 4:** Module 5 - Project Work			
Text Book: **T1:** Shmueli, G., Bruce, P. C., Yahav, I., Patel, N. R., & Lichtendahl Jr, K. C. (2017). *Data Mining for Business Analytics: Concepts, Techniques, and Applications in R*. Wiley.			

Reference Books: R1: Hyndman, R. J., & Athanasopoulos, G. (2021). *Forecasting: Principles and Practice* (3rd ed.). OTexts. R2: Kuhn, M., & Johnson, K. (2013). *Applied Predictive Modeling*. Springer. R3: James, G., Witten, D., Hastie, T., & Tibshirani, R. (2021). *An Introduction to Statistical Learning* (2nd ed.). Springer.					
Online Resources: **https://presiuniv.knimbus.com/user#/home** https://otexts.com/fpp3/ https://scikit-learn.org/stable/					
Research Articles: **Multimedia (Videos):** **Case Studies:** • Netflix – Customer Retention through Predictive Modeling • Amazon – Inventory Forecasting and Replenishment • Walmart – Sales Forecasting Using Machine Learning • Uber – Forecasting Driver Demand and Pricing	**Course Title:** Data Mining and Intelligent Decision Making **Type of Course:** **Specialization Track Core** **Theory and Practical Course**	**L** **3**	**T** **0**	**P** **2**	**C** **4**
Course Code: **QNT5124**					
Catalogue prepared by	**Dr. P. Mary Jeyanthi**				
Version No.	1.0				
Course Pre-requisites	QNT4111 Applied Business Statistics QNT4113 Business Research and Analytics				
Anti-requisites					
Date of Approval by the Academic Council	Academic Council Meeting No. 26th held on 25 July,2025 Recommended by the Board of Studies on BOS NO: 18th held on 6,June,2025				
Course Description	This course focuses on the principles and techniques of data mining and its applications in intelligent decision making. It explores classification, clustering, association, prediction, and anomaly detection using modern tools. The course integrates data-driven insights into managerial decisions and introduces intelligent systems in real-world contexts.				
Course Outcomes	**CO1**	**Understand** the fundamental concepts, processes, and applications of data mining in decision making.			
	CO2	**Apply** data mining algorithms (classification, clustering, association rules) to extract patterns from data.			
	CO3	**Analyze** complex datasets using appropriate data mining tools to support strategic decisions.			
	CO4	**Create** intelligent solutions that integrate mined data into actionable business insights.			
Course Objective	This course enhances **EMPLOYABILITY SKILLS**				

	through **EXPERIENTIAL LEARNING** in data handling, analysis, and automation of business decisions using SQL and data mining tools		
Module 1	**Introduction to Data Mining and SQL Basics**	Assignment using E Library (Participative Learning)	**10 Sessions + 5 Practical**
Topics: Data Mining vs. Traditional Analytics, KDD Process and Business Intelligence, Structured vs Unstructured Data, SQL Basics: SELECT, WHERE, ORDER BY, GROUP BY, JOINs. Case Study: Understanding Retail Data with SQL Queries.			
Module 2	**Classification Techniques with SQL Filters**	Quiz (Participative Learning)	**10 Sessions + 5 Practical**
Topics: Classification Techniques: Decision Trees, Naïve Bayes, KNN, SQL Conditions and CASE Statements for Data Labeling, Confusion Matrix, ROC Curve, Project: Customer Attrition Model using SQL and Scikit-learn.			
Module 3	**Clustering, Association Rules, and Advanced SQL**	Case Study (Experiential Learning)	**10 Sessions + 5 Practical**
Topics: Clustering: K-Means, Hierarchical Clustering, Association Rule Mining (Apriori, FP-Growth), Advanced SQL: Nested Queries, CTEs, Window Functions, Mini Project: Segmenting Customers and Market Basket Analysis using SQL queries.			
Module 4	**Intelligent Decision Support Systems and SQL Dashboards**	Class activity/Project	**8 Sessions + 5 Practical**
Topics: Integrating Data Mining into Business Decisions, Decision Rules and Scoring Models, SQL Views, Stored Procedures, Triggers, Dashboard Development: Business KPIs & Visual Insights.			
Module 5	Tools and Case-Driven Implementation	Class activity/Project	**7 Sessions + 5 Practical**
Topics: Tools: Python (Pandas, Scikit-learn), MySQL, Power BI, Data Cleansing and Transformation using SQL, Building an end-to-end decision support system, Real-time Case Discussion: Sales Prediction, Fraud Detection.			
Targeted Application & Tools that can be used: SQL (MySQL / PostgreSQL), Python (Pandas, Scikit-learn, Matplotlib), RapidMiner, Power BI / Tableau.			
Project work/Assignment:			
Assignment 1: Module 1 – Assignment **Assignment 2:** Module 2 - Quiz **Assignment 3:** Module 3 - Case study **Assignment 4:** Module 4 - Project Work			

Text Book: **T1:** Han, J., Pei, J., & Kamber, M. (2011). *Data Mining: Concepts and Techniques* (3rd ed.). Morgan Kaufmann.
Reference Books: **R1:** Witten, I. H., Frank, E., & Hall, M. A. (2016). *Data Mining: Practical Machine Learning Tools and Techniques* (4th ed.). Elsevier **R2:** Groff, J. R., & Weinberg, P. N. (2014). *SQL: The Complete Reference* (3rd ed.). McGraw-Hill **R3:** Provost, F., & Fawcett, T. (2013). *Data Science for Business*. O'Reilly Media
Online Resources: **https://presiuniv.knimbus.com/user#/home** https://mode.com/sql-tutorial/ https://archive.ics.uci.edu/ml/index.php **Research Articles:** • "Enhancing Business Intelligence with Data Mining and SQL Integration" – *Journal of Decision Systems* • "Predictive Models for Intelligent Decision Systems" – *MIT Sloan Management Review* **Multimedia (Videos):** **Case Studies:** • **Target Corporation** – Predictive Modeling using SQL • **Zara** – Data-Driven Inventory Decisions • **Uber** – Intelligent Dynamic Pricing Systems • **Flipkart** – Fraud Detection using SQL & ML

Catalogue prepared by	**Dr. P. Mary Jeyanthi**
Recommended by the Board of Studies on	BOS NO: 18th held on 6,June,2025
Date of Approval by the Academic Council	Academic Council Meeting No. 26th held on 25,July,2025

4th Semester:

Course Code: GMM4115	**Course Title: Corporate Governance, Ethics and Social Responsibility** **Type of Course:**	**L**	**T**	**P**	**C**
		2	**1**	**0**	**3**

	Program Core				
Version No.	1.0				
Course Pre-requisites	**Nil**				
Anti-requisites	**Nil**				
Course Description	Business Ethics is the art and discipline of applying ethical principles to examine and solve complex moral dilemmas. Ethical principles are the rules of conduct that are derived from ethical values, known as six pillars, namely trustworthiness, respect, responsibility, fairness, caring and citizenship. It is now established that high sense of professional morality must comprise one of the core values of corporate governance for the long term and also short term success of a company. Good corporate governance is an integral part of business ethics. The ethical values are regarded as imperatives for sustainable corporate growth and competitive edge. Hence a framework of effective accountability to the stakeholders is the essence of corporate governance. Corporate social responsibility is essentially a concept whereby companies integrate social and environmental concerns in their business operations and in the interaction with their stakeholders on voluntary basis. In doing so, they make an investment towards future and increase their profitability. In fact corporate governance and corporate social responsibility are interlinked with each other. The students are given the right exposure to Business ethics, corporate governance & social responsibility, which help them understand new concerns and expectations from various stakeholders in the context of large scale industrial change due to globalization. Opportunities for career progression can happen when there is application of ethical values in everything that one does, which means maintaining transparency and being socially responsible.				
Course Objective	1. Appraise various theories of ethical decision making,				

	2. Comply accepting the need of ethics in the global environment in which the organizations are functioning. 3. Point out the integration of ethics – in work-place management, marketing, accounting and finance, strategy etc. - towards the purpose of ethical growth of a business. 4. Recognize and understand the global perspectives of CSR, the corporate social responsiveness, corporate citizenship and sustainability, 5. Appraise in appreciating the importance of good corporate governance at domestic and international level, understand the various corporate governance systems in practice.		
Course Outcomes	1. To demonstrate conceptual skills of ethical theories and ethical decision making in the contest of organizational functioning. 2. To apply a comprehensive idea of corporate social responsibility in the interest of sustainability of planet for future generations. 3. To analyze development and understanding of corporate frauds, scams and the degrading environment and resources – (evidenced in class room discussions and the case study). 4. To appraise the concepts of corporate governance and learn the theories and practices of corporate governance. 5. To categorize various models of corporate governance around the world.		
Course Content:			
Module 1	**Understanding Business Ethics**	Assessment 1 - Quiz	12 Sessions
Introduction to Business Ethics, Ethics vs Morals ,The relationship between morality, ethics and ethical theory Nature of ethics- Definition of Business Ethics. Ethics & Law Why is business ethics important? Globalization and ethics . Effects of Globalization- Relevance of Globalization for Business Ethics Ethical impacts of globalization Sustainability- a key goal of BE The need of sustainability.Sustainability- Triple Bottom Line			

theory.			
Module 2	**Evolution of Corporate Governance**	Assessment 2 – Assignment	12 Sessions
Introduction, Meaning, Evolution,Nature & objectives of Corporate Governance. Global concerns, Historical Perspective of corporate governance,A brief from East India Company to Enron and World com. Managing agency system, promoter system, Anglo-American system.			
Module 3	**Theory and Practice of Corporate Governance**	Assessment 3 – Case Analysis	12 Sessions
The concept of corporation, what is a corporate?The concept of corporate governance Theoretical basis of corporate governance .Why corporate governance, Contemporary corporate governance situation,Corporate governance systems The Anglo- American Model,The German Model, The Japanese Model The common features in German and Japanese Models. The Indian Model of corporate governance.			
Module 4	**Corporate Responsibility, Stakeholders and Citizenship**	Assessment 4 – Mini Project	9 Sessions
Can a corporation have social responsibilities? Why do corporations have social responsibilities? - Business reasons, Moral reasons and Legal reasons. Corporate social responsibility and forms of CSR.Carroll's four-part model of corporate social responsibility .Arguments For and against Corporate Social Responsibility CSR and strategy: corporate social responsiveness- 4 'philosophies or strategies of social responsiveness (Carroll 1979) .Outcomes of CSR: corporate social performance- Donna Wood theory of CSP.Measuring Corporate Social Performance.Corporate Social Responsibility-Business Responsibilities in the 21st Century,Stakeholder theory of the firm-Traditional management model and A network model Why stakeholders matter? A new role for management as a result of stakeholder theory Stakeholder thinking in an international context Corporate accountability- Rise of Corporate Power- The problem of democratic accountability,Corporate Citizenship Concepts Corporate Citizenship – three perspectives,Assessing corporate Citizenship as a framework for business ethics.			
Targeted Application & Tools that can be used: Case Study,Article review,QUIZ and CSR Project			
Project work/Assignment: Mention the Type of Project /Assignment proposed for this course **Visit any MNC or Govt.Or NGO and Analyze CSR Policy and Prepare a PPT.**			
Text Book: **1.** Crane, Andrew & Matten Dirk (2018) Business Ethics, Oxford Publications			
References: 1. Fernando,A.C(2006), Corporate Governance-Principles, Policies and Practices, Pearson Publications 2. Subhash Chandra Das, Corporate Governance in India an evaluation, Third			

edition- PHI Publications.	
Catalogue prepared by	Dr.Ramesh Muthuswamy
Recommended by the Board of Studies on	BOS NO: 18th held on 6,June,2025
Date of Approval by the Academic Council	Academic Council Meeting No. 26th held on 25,July,2025

Course Code: GMM4118	**Course Title: Entrepreneurship and Innovation Management Type of Course: Program Core**	**L**	**T**	**P**	**C**
		2	**1**	**0**	**3**
Version No.	1.0				
Course Pre-requisites	**Nil**				
Anti-requisites	**Nil**				
Course Description	This course offers a comprehensive exploration of the theories, frameworks, and real-world applications of entrepreneurship and innovation management. It equips learners with the knowledge and tools needed to identify opportunities, generate innovative ideas, and transform them into sustainable business ventures. Emphasis is placed on entrepreneurial mind-set development, business model innovation, lean start-ups methodologies, and the role of technology and digital disruption in creating competitive advantage. Students will engage in hands-on experiential learning through simulations, group projects, case analyses, and start-ups pitching exercises. The course also highlights critical aspects of start-up financing, resource planning, and legal frameworks. Furthermore, it examines innovation ecosystems, policy interventions, and sustainability practices, enabling students to build ventures that are not only viable but socially responsible. By the end of the course, learners will be well-prepared to launch, manage, or support innovative business initiatives.				
Course Objective	This course aims to enhance student's entrepreneurship skills through experiential learning methods such as business simulations, real-time venture creation, and interactive case studies. It focuses on developing an entrepreneurial mindset, innovation capabilities, and the ability to navigate real-world challenges in launching and managing start-ups.				

<table>
<tr><td>Course Out Comes</td><td colspan="4">1. Understand the entrepreneurial process and innovation life cycles. (Understand)
2. Apply design thinking and lean startup methodologies to real-world problems. (Apply)
3. Analyze the feasibility of innovative business models in competitive environments. (Analyze, Evaluate)
4. Create a launch-ready entrepreneurial venture plan integrating innovation and sustainability. (Create)</td></tr>
<tr><td>Course Content:</td><td colspan="4"></td></tr>
<tr><td>Module 1</td><td>Foundations of Entrepreneurship and Innovation</td><td>Assessment 1</td><td>Concept Quiz + Ecosystem Mapping</td><td>10 Sessions</td></tr>
<tr><td colspan="5">Introduction to Entrepreneurship, Historical Evolution and Theories of Entrepreneurship, Traits and Competencies of Entrepreneurs, Types of Entrepreneurship (Corporate, Social, Tech, etc.), Role of Entrepreneurs in Economic Development, Innovation Defined: Concepts and Characteristics, Types of Innovation: Incremental vs. Radical, Entrepreneurial Ecosystems and Innovation Clusters, Policy Support and Government Initiatives, Guest Lecture/Startup Founder Talk.</td></tr>
<tr><td>Module 2</td><td>Ideation, Design Thinking, and Innovation Frameworks</td><td>Assessment 2</td><td>Creative Ideation Report + Peer Review</td><td>10 Sessions</td></tr>
<tr><td colspan="5">Introduction to Creative Thinking and Ideation, Sources of Innovative Ideas (Trend Analysis, Problem Framing), Brainstorming and SCAMPER Techniques, TRIZ and Lateral Thinking Tools, Introduction to Design Thinking, Empathy Mapping and User Research, Ideation and Prototyping in Design Thinking, Business Model Innovation, Intellectual Property Rights and Idea Protection, Pitching Initial Concepts (Peer Review)</td></tr>
<tr><td>Module 3</td><td>Business Models, Validation & Resource Planning</td><td>Assessment 3</td><td>Case Study + Investor Deck Analysis</td><td>10 Sessions</td></tr>
<tr><td colspan="5">Introduction to Business Models, Business Model Canvas (BMC): Overview, Deep Dive into BMC Components, Value Proposition Design, Market Research and Customer Validation, Lean Startup Principles: Build-Measure-Learn, MVP Development and Testing, Resource Planning and Team Building, Risk Identification and Mitigation Strategies, Real Startup Case Study Analysis</td></tr>
<tr><td>Module 4</td><td>Financing, Scaling and Sustainable Ventures</td><td>Assessment 4</td><td>Venture Pitch Simulation + Mini Project</td><td>10 Sessions</td></tr>
<tr><td colspan="5">Introduction to Startup Financing, Bootstrapping, Angel Investment, Venture Capital, Crowd funding and Alternate Finance Models, Financial Planning and Unit Economics, Crafting and Delivering a Business Pitch, Negotiation and Term Sheets, Scaling Strategies for Startups, Managing Innovation in Growth Phase, Sustainable and Social Entrepreneurship, Final Pitch Simulation + Feedback Round</td></tr>
<tr><td colspan="5">Targeted Application & Tools that can be used:
• Business Model Canvas (Strategyzer)
• Leanstack, Miro, Trello for project tracking</td></tr>
</table>

• Customer Validation Board • Pitch Deck Templates • Canva for visual storytelling
Project work/Assignment: Students will ideate, validate, and pitch an original venture using real-world tools. Peer feedback, mentor reviews, and simulation-based learning are integrated.
Web Resources: • www.strategyzer.com • www.startupindia.gov.in • www.techstars.com • www.seedrs.com • www.ycombinator.com **Sample Data Set:** Market data from Statista or Startup Genome Customer feedback templates Industry-specific problem statements
Text Book T1: Hisrich, R.D., Peters, M.P., & Shepherd, D.A. Entrepreneurship (10th ed.) – McGraw-Hill Education T2: Drucker, P.F. Innovation and Entrepreneurship – Harper Business T3: Barringer, B.R., & Ireland, R.D. Entrepreneurship: Successfully Launching New Ventures – Pearson T4: Byers, T., Dorf, R., & Nelson, A. Technology Ventures: From Idea to Enterprise – McGraw-Hill
References R1: Hisrich, R.D., Peters, M.P., & Shepherd, D.A. Entrepreneurship, McGraw-Hill R2: Osterwalder, A. & Pigneur, Y. Value Proposition Design, Wiley R3: Tidd, J. & Bessant, J. Managing Innovation, Wiley

Catalogue prepared by	Dr. Mohammed Mansoor & Prof. Shivaprasad
Recommended by the Board of Studies on	BOS NO: 18th held on 6,June,2025
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SPECILAIZATION TRACK ELECTIVE – BUSINESS ANALYTICS

Course Code: QNT5113	**Course Title: Computer Vision Tools for Business** **Type of Course: Specialization Track Elective Theory and Practical**	**L**	**T**	**P**	**C**
		2	**0**	**2**	**3**
Version No.	1.0				

Course Pre-requisites	QNT4111 Applied Business Statistics QNT4112 Applied Data Analysis and Visualization		
Anti-requisites			
Course Description	This course provides an in-depth exploration of Computer Vision (CV) technologies and their applications in solving real-world business problems. Students will learn to use various CV tools and libraries like OpenCV, Tensor Flow, and YOLO to extract meaningful visual data insights. The course blends technical skill development with business acumen, enabling students to design and implement CV-based solutions for marketing, retail, manufacturing, and customer experience optimization.		
Course Outcomes	**CO1**	**Understand:** Explain key concepts of image processing and computer vision	
	CO2	**Apply:** Computer vision tools to extract and analyze visual data	
	CO3	**Analyze:** Evaluate CV technologies for solving specific business problems	
	CO4	**Create:** Design and implement business solutions using computer vision models for decision making.	
Course Objective	This course is designed to improve the learners' **EMPLOYABILITYSKILLS** by using **EXPERIENTIALLEARNING** techniques.		
Module 1	**Business Relevance of Computer Vision and Industry**	Quiz (Participative Learning)	**8 Sessions + 5 Practical**
Topics: Computer vision: Concepts and business value, Overview of the vision pipeline: from image to insight, Vision use cases: Customer analytics, surveillance, automation, Image-based KPIs and ROI in computer vision projects, Ethical concerns: Surveillance, consent, and data misuse.			
Module 2	**Visual Data Interpretation and Analytical Storytelling**	Assignment using E Library (Participative Learning)	**8 Sessions + 7 Practical**
Topics: Types of visual data: Static images, video, scanned documents, Feature extraction: Identifying what the model "sees", Object detection and counting for retail/warehousing, Image-based document digitization using OCR, Creating insights from annotated images.			
Module 3	**Business Applications of Vision-Driven AI Models**	Case (Experiential Learning)	**7 Sessions + 9 Practical**
Topics: Understanding pre-trained computer vision models, Product tagging and catalog automation, Facial expression recognition for customer satisfaction, Vision analytics in insurance, banking, and retail, Evaluating vendor dashboards and platform demos.			
Module 4	**Executive Dashboards and Capstone Project**	Project (Experiential Learning)	**7 Sessions + 9 Practical**
Topics: Communicating computer vision results in a business setting, Integrating vision data with traditional BI dashboards, Using Tableau or Power BI to visualize object counts, OCR results, etc., Creating a business case for vision deployment, Capstone: End-to-end simulation of a CV-based			

solution.

Targeted Application & Tools that can be used: Python, Tensorflow

Project work/Assignment:

Assignment 1: Module 1 - Quiz
Assignment 2: Module 2 - Written Assignment
Assignment 3: Module 3 - Case study in
Assignment 4: Module 4 - Project Work

Text Book:

T1: Szeliski, R. (2010). *Computer Vision: Algorithms and Applications*. Springer.

Reference Books:

R1: Bradski, G. & Kaehler, A. (2008). *Learning OpenCV: Computer Vision with the OpenCV Library*. O'Reilly Media.
R2: Goodfellow, I., Bengio, Y., & Courville, A. (2016). *Deep Learning*. MIT Press.

Online Resources:

https://presiuniv.knimbus.com/user#/home

Research Articles:

1. Suma, K. G., Patil, P., & Sunitha, G. (2024). *Computer Vision and Its Intelligence in Industry 4.0*. IGI Global.https://www.researchgate.net/publication/387429378_Computer_Vision_and_Its_Intelligence_in_Industry

2. Zhou, H. A., Wolfschläger, D., & Florides, C. (2024). *Generative AI in Industrial Machine Vision – A Review*. *arXiv*. https://arxiv.org/abs/2402.12345

3. Mansour, A. E., et al. (2024). *AI and Computer Vision-based Real-time Quality Control: A Review of Industrial Applications*. *Procedia Computer Science*, *231*, 212–220. https://www.sciencedirect.com/science/article/pii/S187705092302207X

Multimedia (Videos):

1. **Example Use Case for SAS Computer Vision Capabilities**
   https://www.youtube.com/watch?v=N2dQDC5goZI
   youtube.com+2imerit.net+2youtube.com+2youtube.comyoutube.com
2. **L-DIH Talks – Computer Vision for Industrial Applications**
   https://www.youtube.com/watch?v=IAhRtsV-M w0 youtube.com
3. **Common Production Issues That CV AI Can Solve!**
   https://www.youtube.com/watch?v=cmfVsQa4B6c

Case Studies:

1: Walmart – Shelf Inventory Monitoring
2: Coca-Cola – Brand Logo Detection in Social Media
3: BMW – Automated Visual Inspection in Manufacturing
4: Amazon Go – Computer Vision for Cashless Retailing
https://venturebeat.com/ai/walmart-opens-an-ai-powered-store-to-monitor-inventory-in-real-time
https://towardsdatascience.com/detecting-brand-logos-in-social-media-images-with-deep-

learning-f7e80f4c5a7e https://www.bmw.com/en/innovation/artificial-intelligence-production.html	
Catalogue prepared by	**Dr. Varalakshmi Dandu**
Recommended by the Board of Studies on	BOS NO: 18th held on 6,June,2025
Date of Approval by the Academic Council	Academic Council Meeting No. 26th held on 25,July,2025

Course Code: QNT5114	**Course Title: AI and Machine Learning for Business Applications Type of Course: Specialization Track Elective** **Theory and Practical**	**L**	**T**	**P**	**C**
		2	**0**	**2**	**3**
Version No.	1.0				
Course Pre-requisites	QNT4111 Applied Business Statistics QNT4112 Applied Data Analysis and Visualization				
Anti-requisites					
Course Description	This course provides an applied understanding of Artificial Intelligence (AI) and Machine Learning (ML) in solving complex business problems. Learners will explore ML models, AI frameworks, and deployment strategies with hands-on exposure to Python, Scikit-learn, TensorFlow, and real-world datasets. The course emphasizes decision-making through predictive analytics and intelligent automation in domains such as marketing, finance, supply chain, and customer service.				
Course Outcomes	**CO1**	**Understand** Explain fundamental concepts			

		and techniques in AI and ML relevant to business functions	
	CO2	**Apply** machine learning algorithms to analyze structured and unstructured business data	
	CO3	**Evaluate** model performance and optimize AI-driven business decision processes	
	CO4	**Create** and deploy AI solutions for predictive analytics and business automation	
Course Objective	This course is designed to improve the learners' **EMPLOYABILITY SKILLS** by using **EXPERIENTIAL LEARNING** techniques.		
Module 1	**Foundations of AI and Machine Learning**	Quiz (Participative Learning)	**8 Sessions + 5 Practical**
Topics: Introduction to AI and ML concepts, Business applications: customer churn, fraud detection, forecasting, Supervised vs. unsupervised learning, Overview of ML algorithms: linear regression, decision trees, k-means, ML workflow and data pipelines.			
Module 2	**Business Problem-Solving with Predictive Modeling**	Assignment using E Library (Participative Learning)	**8 Sessions + 7 Practical**
Topics: Predictive analytics process in business, Buildin and validating regression and classification models, Overfitting, bias, and variance, Evaluation metrics: accuracy, precision, recall, F1-score, ROC curve, Use case: Customer lifetime value prediction.			
Module 3	**Recommendation Systems and Business Personalization**	Case Study (Experiential Learning)	**7 Sessions + 9 Practical**
Topics: Recommendation systems: types and architecture, Collaborative vs. content-based filtering, Matrix factorization basics, Use cases in Netflix, Amazon, and Spotify, Ethics of algorithmic personalization.			
Module 4	**AI Deployment, Governance, and**	Project (Experiential	**7 Sessions**

	Strategic Impact	Learning)	**+ 9 Practical**

Topics: Strategic planning for AI in business, AI project lifecycle and KPIs, Explainable AI (XAI) and ethical deployment, AI governance, data privacy, and compliance (GDPR, DPDP), Capstone project development and presentation.

Targeted Application & Tools that can be used: Python, Scikit-learn, Pandas, TensorFlow, Keras, Power BI, Google Colab

Project work/Assignment:

Assignment 1: Module 1 - Quiz

Assignment 2: Module 2 - Written Assignment

Assignment 3: Module 3 - Case study

Assignment 4: Module 4 - Project Work

Text Book:

T1: Géron, A. (2019). *Hands-On Machine Learning with Scikit-Learn, Keras & TensorFlow* (2nd Ed.). O'Reilly Media.

Reference Books:

R1: Mitchell, T. (1997). *Machine Learning*. McGraw-Hill.

R2: Aggarwal, C. (2018). *Machine Learning for Business*. Springer.

R3: Provost, F., & Fawcett, T. (2013). *Data Science for Business*. O'Reilly.

Online Resources:

https://presiuniv.knimbus.com/user#/home

Research Articles:

1. **Brynjolfsson, E., & McAfee, A. (2017)**. *Artificial Intelligence, for Real*. *Harvard Business Review*. https://hbr.org/2017/07/artificial-intelligence-for-the-real-world
2. **Davenport, T. H., Guha, A., Grewal, D., & Bressgott, T. (2020)**. *How Artificial Intelligence Will Change the Future of Marketing*. *Journal of the Academy of Marketing Science*, *48*, 24–42. https://doi.org/10.1007/s11747-019-00696-0
3. **Shrestha, Y. R., Ben-Menahem, S. M., & von Krogh, G. (2019)**. *Organizational Decision-Making Structures in the Age of Artificial Intelligence*. *California Management Review*, *61*(4), 66–83. https://doi.org/10.1177/000812561986225

Multimedia (Videos):

1. **How AI is changing business strategy** – Harvard Business School https://www.youtube.com/watch?v=6LYRgrqJgDc
2. **Machine Learning in Business – Real Examples** – Data School https://www.youtube.com/watch?v=2ePf9rue1Ao
3. **AI and the Future of Work** – World Economic Forum https://www.youtube.com/watch?v=4B31g3icdrg

Case Studies:

1. **Netflix** – Content personalization using collaborative filtering
2. **Amazon** – Dynamic pricing and demand forecasting using ML

3. **HDFC Bank** – Fraud detection using classification algorithms 4. **Zara** – Inventory optimization using AI-driven analytics 5. **Unilever** – Talent acquisition using predictive AI models https://towardsdatascience.com https://www.kaggle.com https://dataconomy.com

Catalogue prepared by	**Dr. Varalakshmi Dandu**
Recommended by the Board of Studies on	BOS NO: 18th held on 6,June,2025
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Course Code: QNT5115	**Course Title:** Data Architecture and Database Systems **Type of Course: Specialization Track Elective Theory and Practical**	**L** **2**	**T** **0**	**P** **2**	**C** **3**
Version No.	1.0				
Course Pre-requisites	QNT4111 Applied Business Statistics QNT4112 Applied Data Analysis and Visualization				
Anti-requisites					
Course Description	This course introduces the principles of data architecture and database systems essential for managing modern data-driven businesses. It covers conceptual and logical database design, data modeling, relational databases, NoSQL databases, and cloud-based data management. Students will gain hands-on experience in SQL, ER modeling, normalization, and implementing database solutions for real-world				

	business problems.		
Course Outcomes	**CO1**	**Understand** the principles of data architecture and database system design	
	CO2	**Apply** SQL and NoSQL techniques to store, retrieve, and manipulate business data	
	CO3	**Analyze** and design effective data models for enterprise systems	
	CO4	**Create** data solutions that align with business strategies	
Course Objective	This course is designed to improve the learners' **EMPLOYABILITY SKILLS** by using **EXPERIENTIAL LEARNING** techniques.		
Module 1	**Fundamentals of Data Architecture and Business Data Needs**	Quiz (Participative Learning)	**8 Sessions + 5 Practical**
Topics: Overview of data architecture and data strategy, Data lifecycle: creation, storage, processing, archival, Business challenges in data management, Introduction to relational databases and SQL, Entity Relationship Diagrams (ERDs) and data modeling.			
Module 2	**Relational Databases and SQL for Business Analytics**	Assignment using E Library (Participative Learning)	**8 Sessions + 7 Practical**
Topics: SQL basics: SELECT, WHERE, GROUP BY, ORDER BY, JOINs: INNER, LEFT, RIGHT, FULL OUTER, Subqueries, CASE WHEN, aliases, Aggregate functions: COUNT, SUM, AVG, MIN, MAX, Real-world data querying: HR, sales, finance datasets.			
Module 3	**Data Warehousing and Business Intelligence Integration**	Case Study (Experiential Learning)	**7 Sessions + 9 Practical**
Topics: OLTP vs. OLAP systems, Data warehousing concepts and architecture, Star and			

snowflake schema design, ETL pipelines and data staging, Integration with BI tools like Power BI and Tableau.			
Module 4	**Modern Data Architecture – Cloud, NoSQL, and Governance**	Project (Experiential Learning)	**7 Sessions + 9 Practical**
Topics: NoSQL overview: document, key-value, columnar, graph databases, MongoDB and BigQuery use cases in business, Cloud data platforms: AWS Redshift, Azure Synapse, Google BigQuery, Data governance, privacy laws (GDPR, DPDP), and metadata management, Data lakes and lakehouse architecture overview.			
Targeted Application & Tools that can be used: MySQL, PostgreSQL, MongoDB, Firebase, ERDPlus, DB Browser, Cloud SQL (AWS/GCP)			
Project work/Assignment:			
Assignment 1: Module 1 - Quiz **Assignment 2:** Module 2 - Written Assignment **Assignment 3:** Module 3 - Case study in **Assignment 4:** Module 4 - Project Work			
Text Book: **T1:** Coronel, C., & Morris, S. (2019). *Database Systems: Design, Implementation, and Management* (13th Ed.). Cengage Learning.			
Reference Books: **R1**: Elmasri, R., & Navathe, S. (2015). *Fundamentals of Database Systems*. Pearson Education. **R2**: Redmond, E., & Wilson, J. R. (2012). *Seven Databases in Seven Weeks*. Pragmatic Bookshelf. **R3**: Kleppmann, M. (2017). *Designing Data-Intensive Applications*. O'Reilly Media.			
Online Resources: Presidency University Library Portal: https://presiuniv.knimbus.com/user#/home SQL Tutorial: https://www.w3schools.com/sql/ MongoDB University: https://university.mongodb.com/ **Research Articles:** 1. **Inmon, W. H. (2021)**. *The Evolution of Data Architecture for the Modern Enterprise*. *Journal of Data Management*, 23(1), 10–18. https://tdwi.org/articles/2021/02/15/adv-all-evolution-of-modern-data-architecture.aspx 2. **Khan, A., et al. (2020)**. *Data Lakes and Analytics Platforms: Benefits and Challenges*. *Information Systems Frontiers*, *22*(2), 487–502. https://doi.org/10.1007/s10796-018-9847-7 3. **Abadi, D. J. (2016)**. *The Design and Implementation of Modern Column-Oriented Database Systems*. *Communications of the ACM*, *59*(11), 118–127. https://cacm.acm.org/magazines/2016/11/209135-the-design-and-			

implementation-of-modern-column-oriented-database-systems/

Multimedia (Videos):

1. **Data Architecture Explained in Simple Terms** – Firebox Training https://www.youtube.com/watch?v=H3GizZgBEq0
2. **What is Data Warehouse? Data Warehouse Tutorial for Beginners** – Simplilearn https://www.youtube.com/watch?v=QpdhBUYk7Kk
3. **SQL Full Course for Beginners | Learn SQL in 4 Sessions** – Programming with Mosh https://www.youtube.com/watch?v=7S_tz1z_5bA
4. **NoSQL vs SQL: What's the Difference?** – Academind https://www.youtube.com/watch?v=ZS_kXvOeQ5Y

Case Studies:

Netflix – Using NoSQL (Cassandra) for scalable content delivery https://netflixtechblog.com/benchmarking-cassandra-scalability-on-aws-over-a-million-writes-per-second-39f45f066c9e

Uber – PostgreSQL and Big Data for real-time ride management https://eng.uber.com/schemaless-part-one/

Amazon – DynamoDB for scalable product data storage https://aws.amazon.com/dynamodb/

Zomato – MySQL and sharding techniques for high-speed querying https://engineering.zomato.com/how-we-scaled-zomatos-database-to-serve-traffic-from-24-countries-60c9b108fdd2

Flipkart – MongoDB adoption for managing user-generated reviews https://www.mongodb.com/customers/flipkart

Course Code: QNT5116	**Course Title:** Deep Learning Techniques and Applications	**L**	**T**	**P**	**C**
		2	0	2	3
Version No.	1.0				
Course Pre-requisites	QNT4111 Applied Business Statistics QNT4112 Applied Data Analysis and Visualization				
Anti-requisites					
Catalogue prepared by	**Dr. Varalakshmi Dandu**				
Recommended by the Board of Studies on	BOS NO: 18th held on 6 June 2025				
Date of Approval by the Academic Council	Academic Council Meeting No. 26th held on 25 July 2025				

Type of Course: Specialization Track Elective

Course Description

This course offers a comprehensive introduction to deep learning techniques and their practical applications in business. It focuses on artificial neural networks, convolutional neural networks (CNNs), recurrent neural networks (RNNs), and transfer learning, using industry-standard tools such as TensorFlow and Keras. Students will apply deep learning models to business problems such as customer behavior prediction, fraud detection, image recognition, and sentiment analysis.

Course Outcomes	**CO1**	**Understand** the theoretical foundations of deep learning and neural network architectures
	CO2	**Apply** deep learning techniques using TensorFlow/Keras for business-relevant data
	CO3	**Analyze** the performance of deep learning models and optimize them for

		business use	
	CO4	**Create** end-to-end solutions involving real-world datasets using deep learning models	
Course Objective	This course is designed to improve the learners' **EMPLOYABILITY SKILLS** by using **EXPERIENTIAL LEARNING** techniques.		
Module 1	**Introduction to Deep Learning Concepts and Tools**	Quiz (Participative Learning)	**8 Sessions + 5 Practical**
Topics: Evolution from machine learning to deep learning, Artificial neural networks (ANN): structure and workflow, Activation functions: ReLU, Sigmoid, Tanh, Loss functions and optimizers, Introduction to TensorFlow and Keras platforms.			
Module 2	**Convolutional Neural Networks (CNNs) and Image-based Business Use Cases**	Assignment using E Library (Participative Learning)	**8 Sessions + 7 Practical**
Topics: CNN architecture: convolutional, pooling, and fully connected layers, Image classification pipeline, Use cases: facial recognition, product classification, defect detection, pre-trained models: VGG, ResNet, MobileNet, Transfer learning and fine-tuning.			
Module 3	**Recurrent Neural Networks (RNNs) and Sequence Data in Business Use cases**	Case Study (Experiential Learning)	**7 Sessions + 9 Practical**
Topics: Introduction to RNNs and LSTMs, Handling sequential and time-series data, Applications in forecasting and language modeling, Tokenization and embedding for text data, Use case: Customer sentiment analysis from reviews			
Module 4	**Advanced Applications, Ethics, and Capstone Project**	Project (Experiential Learning)	**7 Sessions + 9 Practical**

Topics: Deep learning in recommendation systems and anomaly detection, Introduction to Generative Adversarial Networks (GANs), Business risks of black-box models, Explainable AI (XAI) and model interpretability (SHAP, LIME), Capstone design and peer presentation.
Targeted Application & Tools that can be used: Python, TensorFlow, Keras, Streamlit, Pandas, NumPy, Matplotlib, Scikit-learn
Project work/Assignment:
Assignment 1: Module 1 - Quiz **Assignment 2:** Module 2 - Written Assignment **Assignment 3:** Module 3 - Case study in **Assignment 4:** Module 4 - Project Work
Text Book: **T1:** Géron, A. (2022). *Hands-On Machine Learning with Scikit-Learn, Keras, and TensorFlow* (3rd Ed.). O'Reilly Media.
Reference Books: **R1**: Chollet, F. (2017). *Deep Learning with Python*. Manning Publications. **R2**: Goodfellow, I., Bengio, Y., & Courville, A. (2016). *Deep Learning*. MIT Press. **R3**: Aggarwal, C. C. (2018). *Neural Networks and Deep Learning*. Springer.
Online Resources: Presidency University Library Portal: https://presiuniv.knimbus.com/user#/home TensorFlow Tutorials: https://www.tensorflow.org/tutorials Keras Documentation: https://keras.io/guides/ **Research Articles:** 1. **LeCun, Y., Bengio, Y., & Hinton, G. (2015)**. *Deep Learning*. *Nature*, *521*(7553), 436–444. https://www.nature.com/articles/nature14539 2. **Chollet, F. (2017)**. *Deep Learning with Python*. *Manning Publications*. (Chapter excerpts & case studies) https://livebook.manning.com/book/deep-learning-with-python/about-this-book 3. **Brownlee, J. (2020)**. *How to Get Started with Deep Learning for Time Series Forecasting*. *Machine Learning Mastery*. https://machinelearningmastery.com/deep-learning-for-time-series-forecasting/ **Multimedia (Videos):** 1. **Deep Learning Crash Course (Simplilearn)** https://www.youtube.com/watch?v=aircAruvnKk 2. **Convolutional Neural Networks (CNNs) Explained – StatQuest** https://www.youtube.com/watch?v=FTr3n7uBIuE 3. **Recurrent Neural Networks and LSTM Explained – Simplilearn** https://www.youtube.com/watch?v=UNmqTiOnRfg 4. **How Businesses Use Deep Learning (McKinsey Tech Talks)** https://www.youtube.com/watch?v=ekDqjHjJYYE **Case Studies:**

Google Translate – Neural Machine Translation with RNNs
https://ai.googleblog.com/2016/09/a-neural-network-for-machine.html
Tesla – Self-driving vision using CNNs
https://www.tesla.com/autonomy
Amazon – Product recommendation using deep learning embeddings
https://aws.amazon.com/personalize/
HDFC Bank – Fraud detection with LSTM networks
https://analyticsindiamag.com/hdfc-banks-use-of-analytics-machine-learning-explained/
Swiggy/Zomato – Menu image classification and sentiment analysis using CNN and NLP models
https://analyticsindiamag.com/what-is-swiggy-doing-in-ai-and-machine-learning/

Course Code: QNT5117	**Course Title:** Health-Tech and Pharma Analytics	**L**	**T**	**P**	**C**
Course Prepared by	**Type of Course:**				
Recommended by the Board of Studies on	**Specialization Track Elective**, **Theory and Practical**	2	0	2	3
Date of Approval by the Academic Council					
Version No.					

Course Prepared by: Dr. Varalakshmi Dandu
BOS No.: 18th held on 6 June, 2025
Academic Council Meeting No. 26th held on 25 July, 2025
1.0

Course Pre-requisites	QNT4111 Applied Business Statistics QNT4112 Applied Data Analysis and Visualization	
Anti-requisites		
Course Description	This course provides an interdisciplinary understanding of analytics applications in the healthcare and pharmaceutical industries. Learners will explore health data systems, clinical trial analytics, predictive modeling for patient care, AI in diagnostics, drug discovery, and regulatory analytics. Students will use industry-relevant tools to derive insights from electronic health records (EHRs), claims data, and genomic data to support strategic and operational decisions.	
Course Outcomes	**CO1**	**Understand** healthcare and pharmaceutical data ecosystems and analytics use cases
	CO2	**Apply** statistical and machine learning methods to health and pharma datasets
	CO3	**Analyze** patient behavior, treatment efficacy, and healthcare operations using analytical tools

	CO4	**Create** data-driven solutions for public health, pharma supply chains, and personalized medicine	
Course Objective	This course is designed to improve the learners' **EMPLOYABILITY SKILLS** by using **EXPERIENTIAL LEARNING** techniques.		
Module 1	**Health and Pharma Data Ecosystems**	Quiz	**8 Sessions + 5 Practical**
Topics: Health and Pharma Data Ecosystems: EHRs, clinical data, real-world evidence, healthcare KPIs, ICD coding systems, HIPAA regulations.			
Module 2	**Analytics in Healthcare**	Assignment using E Library (Participative Learning)	**8 Sessions + 7 Practical**
Topics: Descriptive and Predictive Analytics in Healthcare: Patient segmentation, readmission prediction, treatment optimization, anomaly detection.			
Module 3	**AI & ML Applications**	Case Study (Experiential Learning)	**7 Sessions + 9 Practical**
Topics: AI & ML Applications in Pharma: Drug discovery analytics, clinical trial optimization, adverse event prediction, NLP for medical text.			
Module 4	**Business Cases and Capstone Project**	Project (Experiential Learning)	**7 Sessions + 9 Practical**
Topics: Business Cases and Capstone Project: Vaccine distribution analytics, pharma marketing ROI, population health modeling, dashboard creation.			
Targeted Application & Tools that can be used: Python, R, Tableau, Power BI, SQL, Scikit-learn, NLP Libraries (spaCy, NLTK), TensorFlow, Jupyter Notebook			
Project work/Assignment:			
Assignment 1: Module 1 - Quiz **Assignment 2:** Module 2 - Written Assignment **Assignment 3:** Module 3 - Case study **Assignment 4:** Module 4 - Project Work			
Text Book: **T1:** Reddy, C. K., & Aggarwal, C. (2015). *Healthcare Data Analytics*. CRC Press.			

Course Code: QNT5118	**Course Title: Analytics-Driven Supply Chain Optimization** **Type of Course: Specialization Track Elective** **Theory and Practical**	**L**	**T**	**P**	**C**
		2	0	2	3
Version No.	1.0				
Course Pre-requisites	QNT4111 Applied Business Statistics QNT4112 Applied Data Analysis and Visualization				
Anti-requisites					
Course Description	This course explores the application of advanced analytics techniques in optimizing supply chain performance across procurement, logistics, inventory, and demand forecasting. It provides hands-on exposure to data-driven decision-making using simulation, predictive modeling, network optimization, and real-time analytics. Students will develop skills to transform supply chains into responsive, agile, and data-intelligent systems.				
Course Outcomes	**CO1**	**Understand** the strategic role of analytics in supply chain management			
	CO2	**Apply** data modeling and forecasting techniques for supply chain optimization			
	CO3	**Analyze** logistics, inventory, and distribution data using analytical tools			
	CO4	**Create** simulation and optimization models to enhance supply chain agility and efficiency			
Course Objective	This course is designed to improve the learners' **EMPLOYABILITY SKILLS** by using **EXPERIENTIAL LEARNING** techniques.				
Module 1	**Supply Chain Fundamentals &**	Quiz (Participative		**8 Sessions + 7**	

Reference Books:

R1: Davenport, T. H., & Glaser, J. (2002). *Just-in-Time Delivery Comes to Knowledge Management*. Harvard Business Review.

R2: Bennett, C. C., & Hauser, K. (2013). *Artificial Intelligence Framework for Simulating Clinical Decision-Making*. Journal of Healthcare Engineering.

R3: Saria, S., Butte, A., & Sheikh, A. (2018). *Better Medicine Through Machine Learning*. PLOS Medicine.

Online Resources:

Presidency University Library Portal: https://presiuniv.knimbus.com/user#/home

HealthIT.gov – Data Standards: https://www.healthit.gov

FDA – Real World Evidence: https://www.fda.gov/science-research/science-and-research-special-topics/real-world-evidence

Research Articles:

Multimedia (Videos):

Case Studies:

Pfizer & IBM Watson – AI in cancer drug discovery https://www.ibm.com/watson-health/learn/ai-healthcare

Apollo Hospitals – Predictive analytics for cardiac risk detection https://www.analyticsvidhya.com/blog/2021/09/apollo-hospitals-and-healthcare-ai-applications/

NHS UK – AI and ML in hospital readmission prediction https://www.nature.com/articles/s41746-020-0251-7

GSK – Clinical trial data analytics https://www.gsk.com/en-gb/media/press-releases/accelerating-clinical-data-analytics/

WHO – Population health analytics for disease surveillance https://www.who.int/tools/global-health-observatory

Catalogue prepared by	**Dr. Varalakshmi Dandu**
Recommended by the Board of Studies on	BOS NO: 18th held on 6,June,2025
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	Data Landscape	Learning)	**Practical**
Topics: Supply Chain Fundamentals & Data Landscape: SCOR model, KPIs, data sources, supplier-customer data integration, digital twins.			
Module 2	**Forecasting & Inventory Analytics**	Assignment using E Library (Participative Learning)	**8 Sessions + 7 Practical**
Topics: Forecasting & Inventory Analytics: Demand forecasting, time-series models, ABC analysis, EOQ, safety stock analytics.			
Module 3	**Logistics and Distribution Optimization**	Case Study (Experiential Learning)	**7 Sessions + 7 Practical**
Topics: Logistics and Distribution Optimization: Route planning, network optimization, warehouse analytics, reverse logistics.			
Module 4	**Simulation & Decision Optimization**	Project (Experiential Learning)	**7 Sessions + 9 Practical**
Topics: Simulation & Decision Optimization: Linear programming, Monte Carlo simulation, supply chain dashboards, case-based capstone.			
Targeted Application & Tools that can be used: Excel Solver, R, Python, AnyLogic, Power BI, Tableau, Simul8, Supply Chain Guru, SQL.			
Project work/Assignment:			
Assignment 1: Module 1 - Quiz **Assignment 2:** Module 2 - Written Assignment **Assignment 3:** Module 3 - Case study in **Assignment 4:** Module 4 - Project Work			
Text Book: **T1:** Chopra, S., & Meindl, P. (2020). *Supply Chain Management: Strategy, Planning, and Operation* (7th Ed.). Pearson Education.			
Reference Books: **R1**: Simchi-Levi, D., Kaminsky, P., & Simchi-Levi, E. (2008). *Designing and Managing the Supply Chain*. McGraw-Hill. **R2**: Stadtler, H., Kilger, C., & Meyr, H. (2015). *Supply Chain Management and Advanced Planning*. Springer. **R3**: Ballou, R. H. (2003). *Business Logistics/Supply Chain Management*. Pearson Education.			
Online Resources: 🎬 Presidency University Library Portal: https://presiuniv.knimbus.com/user#/home 🎬 Supply Chain Digital: https://www.supplychaindigital.com 🎬 MIT Center for Transportation and Logistics:			

https://ctl.mit.edu/

Research Articles:

Multimedia (Videos):

Case Studies:
Walmart – Inventory optimization using real-time analytics
https://hbr.org/2006/03/the-12-different-ways-for-companies-to-innovate
Amazon – Predictive logistics and warehouse robotics
https://supplychaindigital.com/logistics/inside-amazons-robot-powered-warehouses
Unilever – Demand forecasting with AI-driven platforms
https://www.forbes.com/sites/insights-intelai/2020/03/31/how-unilever-is-using-ai-to-forecast-demand/
DHL – Route optimization using AI and IoT
https://www.dhl.com/content/dam/dhl/global/core/documents/pdf/glo-core-artificial-intelligence-in-logistics.pdf
Flipkart – Last-mile delivery efficiency using data analytics
https://analyticsindiamag.com/how-flipkart-uses-machine-learning-for-delivery-optimization/

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Course Code: **QNT5119**	**Course Title:** Text Analytics and Natural Language Processing **Type of Course: Specialization Track Elective**	**L**	**T**	**P**	**C**
		2	**0**	**2**	**3**
Version No.	1.0				
Course Pre-requisites	QNT4111 Applied Business Statistics QNT4112 Applied Data Analysis and Visualization				
Anti-requisites					

Course Description	This course offers a comprehensive exploration of text analytics and natural language processing (NLP) techniques with applications in business intelligence, sentiment analysis, social media analytics, customer feedback mining, and automation. Students will learn to preprocess, analyze, and model textual data using Python libraries and machine learning models. Practical implementation focuses on deriving actionable insights from unstructured text in business contexts.		
Course Outcomes	**CO1**	**Understand** the concepts, challenges, and workflow of text mining and NLP	
	CO2	**Apply** preprocessing and feature engineering techniques to textual datasets	
	CO3	**Analyze** unstructured business data using NLP tools and machine learning models	
	CO4	**Create** business applications using sentiment analysis, topic modeling, and text classification	
Course Objective	To empower learners with **hands-on skills** in text analytics and natural language processing through **experiential learning**, enabling them to solve business problems involving large-scale unstructured text data.		
Module 1	**Introduction to Text Analytics**	Quiz	**8 Sessions + 5 Practical**
Topics: Foundations of Text Analytics: Types of textual data, tokenization, stemming, lemmatization, stop words, POS tagging.			
Module 2	**Text**	Assignment	**8**

	Representation & Preprocessing	using E Library (Participative Learning)	**Sessions + 7 Practical**
Topics: Text Representation & Preprocessing: Bag of Words, TF-IDF, word embeddings, N-grams, vectorization techniques.			
Module 3	**NLP Techniques & Models**	Case Study (Experiential Learning)	**7 Sessions + 9 Practical**
Topics: NLP Techniques and Models: Named Entity Recognition (NER), sentiment analysis, topic modeling (LDA), classification using Naive Bayes, SVM.			
Module 4	**Applications in Business Analytics**	Project (Experiential Learning)	**7 Sessions + 9 Practical**
Topics: Applications in Business Analytics: Social media analytics, feedback mining, chatbot NLP, fraud detection, document summarization.			
Targeted Application & Tools that can be used: Python, NLTK, spaCy, Scikit-learn, TextBlob, Gensim, Hugging Face Transformers, Google Colab			
Project work/Assignment:			
Assignment 1: Module 1 - Quiz **Assignment 2:** Module 2 - Written Assignment **Assignment 3:** Module 3 - Case study **Assignment 4:** Module 4 - Project Work			
Text Book: **T1:** Raj, B., & Abhishek, M. (2021). *Text Analytics with Python: A Practical Real-World Approach to Gaining Actionable Insights from Your Data* (2nd Ed.). Apress.			
Reference Books: **R1**: Bird, S., Klein, E., & Loper, E. (2009). *Natural Language Processing with Python*. O'Reilly. **R2**: Jurafsky, D., & Martin, J. H. (2021). *Speech and Language Processing* (3rd Ed.). Draft. **R3**: Sarkar, D. (2016). *Text Analytics with Python*. Apress.			
Online Resources: 1. Presidency University Library Portal: https://presiuniv.knimbus.com/user#/home 2. NLTK Tutorials: https://www.nltk.org/book/ 3. Hugging Face Transformers: https://huggingface.co/transformers/ **Research Articles:**			

Multimedia (Videos): **Case Studies:** 1. **Netflix** – Text summarization for content metadata tagging https://netflixtechblog.com/tagged/nlp 2. **Zomato** – Sentiment analysis from customer reviews https://medium.com/swlh/sentiment-analysis-on-zomato-reviews-using-python-nlp-5f8493ebc23f 3. **Amazon** – Customer feedback mining for product improvement https://towardsdatascience.com/applying-nlp-to-analyze-amazon-reviews-using-python-71efb491dfa0 4. **HDFC Bank** – Chatbot analytics and NER for customer service https://analyticsindiamag.com/hdfc-banks-use-of-analytics-machine-learning-explained/ 5. **Twitter** – Trend analysis and political sentiment detection https://monkeylearn.com/blog/sentiment-analysis-twitter/

Catalogue prepared by	**Dr. Varalakshmi Dandu**
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Course Code: **QNT5120**	**Course Title:** MarTech and AdTech in Practice **Type of Course: Specialization Track Elective** **Theory and Practical**	**L** **2**	**T** **0**	**P** **2**	**C** **3**
Version No.	1.0				
Course Pre-requisites	MKT4111: Marketing Management - Theories and Practices				
Anti-requisites					
Course Description	This course offers a comprehensive overview of Marketing Technology (MarTech) and Advertising Technology (AdTech) ecosystems. Learners will				

	explore how businesses leverage data-driven tools for customer acquisition, personalization, campaign automation, ad targeting, media buying, and performance measurement. The course includes hands-on experience with tools like Google Ads, Meta Ads Manager, CRM platforms, and programmatic advertising software.		
Course Outcomes	**CO1**	**Understand** the MarTech and AdTech ecosystems, platforms, and key functions	
	CO2	**Apply** data-driven tools to design and execute personalized marketing and ad campaigns	
	CO3	**Analyze** campaign performance and customer journeys using CRM and analytics tools	
	CO4	**Create** integrated MarTech-AdTech strategies for improved ROI and omni channel marketing	
Course Objective	To prepare learners to design, execute, and analyze **technology-enabled marketing and advertising strategies** through **experiential learning** and practical tool-based implementation.		
Module 1	**Introduction to MarTech & AdTech**	Quiz (Participative Learning)	**8 Sessions + 5 Practical**
Topics: Introduction to MarTech & AdTech: Ecosystem overview, CDPs vs. CRMs, DMPs, SSPs, DSPs, cookies, tracking pixels.			
Module 2	**Marketing Automation & CRM**	Assignment using E Library (Participative Learning)	**8 Sessions + 7 Practical**

Topics: Marketing Automation & CRM: Tools like HubSpot, Salesforce, personalization, customer lifecycle management, lead scoring.			
Module 3	**AdTech Platforms & Programmatic Advertising**	Case Study (Experiential Learning)	**7 Sessions + 9 Practical**
Topics: AdTech Platforms & Programmatic Advertising: Real-time bidding, Google Ads, Meta Ads, retargeting, A/B testing, geo-targeting.			
Module 4	**Analytics & Campaign Optimization**	Project (Experiential Learning)	**7 Sessions + 9 Practical**
Topics: Analytics & Campaign Optimization: Attribution models, ad fraud prevention, ROI dashboards, AI in MarTech-AdTech.			
Targeted Application & Tools that can be used Google Ads, Meta Ads Manager, HubSpot, Salesforce, Zoho CRM, Mailchimp, Google Tag Manager, Hotjar, SEMrush, Tableau, Power BI			
Project work/Assignment:			
Assignment 1: Module 1 - Quiz **Assignment 2:** Module 2 - Written Assignment **Assignment 3:** Module 3 - Case study **Assignment 4:** Module 4 - Project Work			
Text Book: **T1:** Scott Brinker. (2023). *Marketing Technology Landscape Supergraphic*. Chiefmartec.com.			
Reference Books: **R1**: Kotler, P., Kartajaya, H., & Setiawan, I. (2021). *Marketing 5.0: Technology for Humanity*. Wiley. **R2**: Chaffey, D., & Ellis-Chadwick, F. (2019). *Digital Marketing* (7th Ed.). Pearson. **R3**: Ryan, D. (2016). *Understanding Digital Marketing*. Kogan Page.			
Online Resources: 1. Presidency University Library Portal: https://presiuniv.knimbus.com/user#/home 2. ChiefMartec Blog: https://chiefmartec.com 3. Google Ads Help: https://support.google.com/google-ads 4. HubSpot Academy: https://academy.hubspot.com 5. Meta for Business: https://www.facebook.com/business/learn **Research Articles:**			

Multimedia (Videos):

Case Studies:

1. **Nike** – Personalization at scale using MarTech stack https://www.cio.com/article/243911/how-nike-is-transforming-marketing-technology.html
2. **Spotify** – Programmatic audio advertising and personalization https://ads.spotify.com/en-US/news-and-insights/spotify-advertising-case-studies/
3. **Coca-Cola** – CRM and cross-channel automation for campaigns https://www.salesforce.com/in/customer-success-stories/coca-cola/
4. **Amazon** – AdTech strategy with audience targeting and DSP https://advertising.amazon.com/en/help/glossary/demand-side-platform-dsp
5. **Lenskart** – Omnichannel MarTech implementation in India https://www.livemint.com/technology/tech-news/how-lenskart-is-using-technology-to-scale-operations-11607366373916.html

Catalogue prepared by	**Dr. Varalakshmi Dandu**
Recommended by the Board of Studies on	BOS NO: 18th held on 6,June,2025
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Course Code: QNT5125	**Course Title:** BFSI Analytics **Type of Course: Specialization Track Elective Theory and Practical**	**L**	**T**	**P**	**C**
		2	**0**	**2**	**3**
Version No.	1.0				
Course Pre-requisites	QNT4111: Applied Business Statistics QNT4112: Applied Data Analysis and Visualization				
Anti-requisites					
Course Description	This course explores the use of analytics in the Banking, Financial Services, and Insurance (BFSI) sector. It equips students with the skills to analyze financial data, detect fraud, assess credit risk, optimize customer value, and support regulatory compliance. Learners will use statistical tools and machine learning techniques to solve real-world BFSI problems and gain experience with industry-standard platforms for risk and financial analytics.				

Course Outcomes	**CO1**	**Understand** the analytics lifecycle within banking, financial, and insurance services	
	CO2	**Apply** predictive analytics techniques to assess credit risk, customer churn, and loan defaults	
	CO3	**Analyze** financial and transactional data using advanced analytical tools	
	CO4	**Create** data-driven solutions for fraud detection, portfolio optimization, and customer segmentation	
Course Objective	To enable learners to apply **analytics in financial decision-making**, **risk modeling**, and **compliance monitoring** through hands-on experience with real-world datasets and platforms used in the BFSI domain.		
Module 1	**BFSI Sector Overview**	Quiz (Participative Learning)	**8 Sessions + 5 Practical**
Topics: BFSI Sector Overview & Data Landscape: Core banking, insurance systems, payment ecosystems, financial KPIs, compliance data			
Module 2	**Credit Risk and Customer Analytics**	Assignment using E Library (Participative Learning)	**8 Sessions + 7 Practical**
Topics: Credit Risk and Customer Analytics: Credit scoring, churn prediction, customer value segmentation, predictive models			
Module 3	**Fraud Detection and Regulatory Analytics**	Case Study (Experiential Learning)	**7 Sessions + 9 Practical**
Topics: Fraud Detection and Regulatory Analytics: Anomaly detection, anti-money laundering (AML), Basel compliance, audit trails.			
Module 4	**Portfolio and Insurance Analytics**	Class activity (Project Work)	**7 Sessions + 9 Practical**
Topics: Portfolio and Insurance Analytics: Investment analysis, claims prediction, solvency modeling, project dashboard.			
Targeted Application & Tools that can be used: Python, R, SAS, Power BI, Tableau, SQL, Scikit-learn, XGBoost, Alteryx			
Project work/Assignment:			
Assignment 1: Module 1 - Quiz **Assignment 2:** Module 2 - Written Assignment **Assignment 3:** Module 3 - Case study **Assignment 4:** Module 4 - Project Work			
Text Book: **T1:** Naresh Malhotra & Satya Bhushan Dash. (2025). *Marketing Research: An Applied Orientation with BFSI Case Studies*. Pearson.			
Reference Books: **R1**: Baesens, B. (2014). *Analytics in a Big Data World: The Essential Guide to Data Science and its*			

Applications. Wiley.
R2: James, G., Witten, D., Hastie, T., & Tibshirani, R. (2021). *An Introduction to Statistical Learning*. Springer.

Online Resources:
Presidency University Library Portal:
https://presiuniv.knimbus.com/user#/home
RBI Publications:
https://www.rbi.org.in
World Bank Financial Data:
https://databank.worldbank.org/source/financial-inclusion

Research Articles:
1. https://academic.oup.com/jrsssa/article-pdf/160/3/523/49760733/jrsssa_160_3_523.pdf

2. https://www.researchgate.net/publication/368824037_USE_OF_BIG_DATA_ANALYTICS_IN_BANKING_INDUSTRY

3. https://www.emerald.com/insight/content/doi/10.1108/jeim-05-2020-0176/full/html

Multimedia (Videos):
1. https://www.youtube.com/watch?v=2A_2AzaA-zI&list=PL_sAZbXvtzYIQrP06zyJqmqhELMynzWI4

2. https://www.youtube.com/watch?v=VEb7Zs6Cfh8

3. https://www.youtube.com/watch?v=hHthCn_XjVk

Case Studies:
HDFC Bank – Credit risk modeling using ML
https://analyticsindiamag.com/hdfc-banks-use-of-analytics-machine-learning-explained/
ICICI Lombard – Predictive analytics in claims and underwriting
https://www.icicilombard.com/blogs/health-insurance/hi/how-data-analytics-is-helping-the-health-insurance-industry
SBI – Customer segmentation and CRM analytics
https://www.sbi.co.in/web/about-us/analytics
Axis Bank – Fraud analytics and AML compliance
https://www.analyticsvidhya.com/blog/2021/03/how-axis-bank-uses-data-science/
LIC India – Mortality and solvency analytics
https://www.licindia.in/Bottom-Links/Financials

Catalogue prepared by	**Dr. Srikanth Reddy**
Recommended by the Board of Studies on	BOS NO: 18th held on 6,June,2025
Date of Approval by the	Academic Council Meeting No. 26th held on 25,July,2025

Academic Council	

Course Code: QNT5126	**Course Title:** Retail Marketing Analytics **Type of Course: Specialization Track Elective** **Theory and Practical**	**L**	**T**	**P**	**C**
		2	**0**	**2**	**3**
Version No.	1.0				
Course Pre-requisites	MKT4111: Marketing Management - Theories and Practices QNT4112: Applied Data Analysis and Visualization				
Anti-requisites					
Course Description	This course focuses on the application of analytics in the retail marketing domain. It helps students understand how retail businesses use data to drive merchandising decisions, inventory planning, customer segmentation, campaign optimization, and loyalty strategies. Learners will apply statistical and machine learning techniques to real-world retail datasets using analytics tools to derive actionable business insights.				
Course Outcomes	**CO1**	**Understand** the use of analytics in solving retail marketing problems			
	CO2	**Apply** techniques for customer segmentation, sales forecasting, and pricing analysis			
	CO3	**Analyze** customer behavior, basket size, churn, and loyalty using retail data			
	CO4	**Create** data-driven strategies for personalized marketing, inventory optimization, and store performance tracking			
Course Objective	To equip learners with the skills to analyze **retail marketing data** and make **data-driven decisions** using advanced analytics techniques and tools.				
Module 1	**Retail Analytics Landscape**	Quiz (Participative Learning)		**8 Sessions + 5 Practical**	
Topics: Retail Analytics Landscape: Retail KPIs, POS systems, retail data sources, retail channel analytics, consumer decision journey					
Module 2	**Customer and Product Analytics**	Assignment using E Library (Participative Learning)		**8 Sessions + 7 Practical**	

Topics: Customer and Product Analytics: Segmentation, RFM analysis, market basket analysis, product affinity, churn prediction			
Module 3	**Inventory Optimization**	Case Study (Experiential Learning)	**7 Sessions + 9 Practical**
Topics: Pricing, Promotion, and Inventory Optimization: Markdown pricing, sales forecasting, ABC analysis, campaign ROI			
Module 4	**Advanced Applications**	Project (Experiential Learning)	**7 Sessions + 9 Practical**
Topics: Advanced Applications and Capstone: Store performance dashboards, omnichannel retail analytics, personalization, use of AI/ML			
Targeted Application & Tools that can be used Python, R, Power BI, Tableau, Excel Solver, RapidMiner, SQL, Orange, Google Analytics			
Project work/Assignment:			
Assignment 1: Module 1 – Quiz on Retail KPIs and Data **Assignment 2**: Module 2 – Customer Segmentation and Basket Analysis **Assignment 3**: Module 3 – Pricing Optimization Project **Assignment 4**: Module 4 – Capstone: Store or Campaign Analytics Dashboard			
Text Book: **T1:** Cox, E. (2011). Retail analytics: The secret weapon (1st ed.). Wiley.			
Reference Books: **R1**: Kumar, V., & Reinartz, W. (2018). *Customer Relationship Management*. Springer. **R2**: Davenport, T. H. (2006). *Competing on Analytics*. Harvard Business Press.			
Online Resources: Presidency University Library Portal: https://presiuniv.knimbus.com/user#/home McKinsey on Retail: https://www.mckinsey.com/industries/retail Harvard Business Review Retail Articles: https://hbr.org/topic/retail **Research Articles:** 1. https://www.researchgate.net/profile/Sudeep-Chandramana/publication/323309092_Retail_Analytics_Driving_Success_in_Retail_Industry_with_Business_Analytics/links/5a8d4ad5a6fdcc786eb06cf9/Retail-Analytics-Driving-Success-in-Retail-Industry-with-Business-Analytics.pdf 2. https://www.emerald.com/insight/content/doi/10.1108/sd-04-2021-0039/full/html 3. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5068349 **Multimedia (Videos):** 1. https://www.youtube.com/watch?v=6WXgqkTsv0k 2. https://www.youtube.com/watch?v=ZoAtxdXZAKk 3. https://www.youtube.com/watch?v=mJWfdHVbRFk			

Case Studies: **Walmart** – Demand forecasting and shelf optimization https://hbr.org/2010/11/the-future-of-retail **Zara** – Inventory planning through data analytics https://www.mckinsey.com/industries/retail/our-insights/zara-it-for-fast-fashion **Amazon** – Personalized recommendations using retail analytics https://aws.amazon.com/retail/analytics/ **Reliance Retail** – Customer profiling and regional campaign strategies https://www.analyticsvidhya.com/blog/2022/01/how-reliance-uses-data-analytics-in-retail/ **Big Bazaar** – Pricing and promotion analytics for footfall optimization https://www.indianretailer.com/article/technology/digital-trends/how-big-bazaar-is-transforming-with-retail-analytics.a6781/

Catalogue prepared by	**Dr. N Srikanth Reddy**
Recommended by the Board of Studies on	BOS NO: 18th held on 6,June,2025
Date of Approval by the Academic Council	Academic Council Meeting No. 26th held on 25,July,2025

Course Code: QNT5127	**Course Title:** IoT and Sensor Data Analytics **Type of Course: Specialization Track Elective** **Theory and Practical Course**	**L** **2**	**T** **0**	**P** **2**	**C** **3**
Version No.	1.0				
Course Pre-requisites	QNT4111 Applied Business Statistics				
Anti-requisites					
Course Description	This course introduces the fundamentals of the Internet of Things (IoT) and techniques to analyze sensor-generated data for business applications. It covers IoT architecture, data collection, transmission, and analytics using real-time sensor data streams, providing a foundation to design and evaluate IoT solutions that drive strategic decision-making in various industries.				
Course Outcomes	**CO1**	**Understand** the architecture, devices, and protocols that			

		enable IoT ecosystems.	
	CO2	**Apply** IoT technologies for sensor integration, data acquisition, and processing.	
	CO3	**Analyze** sensor-generated data using analytics frameworks and tools.	
	CO4	**Create** business solutions using real-time sensor data for operational efficiency and strategic insight.	
Course Objective	This course is designed to improve the learners' **EMPLOYABILITYSKILLS** by using **EXPERIENTIAL LEARNING** techniques.		
Module 1	**Introduction to IoT and Smart Systems**	Quiz	**8 Sessions + 5 Practical**
Topics: Introduction to IoT – IoT Applications in Business – Components of IoT Systems – Architecture Layers (Perception, Network, Application) – Business Value of IoT – Ethical and Security Concerns.			
Module 2	**IoT Devices and Sensor Technologies**	Assignment using E Library (Participative Learning)	**8 Sessions + 7 Practical**
Topics: Types of Sensors – Actuators – Microcontrollers (Arduino, Raspberry Pi) – Communication Protocols (ZigBee, Bluetooth, Wi-Fi, MQTT) – Interfacing Sensors – Data Transmission Techniques.			
Module 3	**Sensor Data Management and Storage**	Case Study (Experiential Learning)	**7 Sessions + 9 Practical**
Topics: Data Acquisition and Sampling – Edge vs Cloud Processing – IoT Data Formats (JSON, CSV) – Sensor Data Cleaning – Time-Series Data Storage – IoT Platforms (ThingSpeak, Azure IoT, AWS IoT Core).			
Module 4	**Data Analytics for Sensor Data**	Project (Experiential Learning)	**7 Sessions + 9 Practical**
Topics: Descriptive and Exploratory Analysis – Time-Series Analysis – Real-time Data Visualization – Anomaly Detection – Predictive Modeling with Sensor Data – Stream Analytics using Python or Power BI.			
Targeted Application & Tools that can be used: Python (Pandas, Matplotlib, Scikit-learn), Power BI, Excel for Sensor Dashboards			

Project work/Assignment:
Assignment 1: Module 1 - Quiz **Assignment 2:** Module 2 - Written Assignment **Assignment 3:** Module 3 - Case study **Assignment 4:** Module 4 - Project Work
Text Book: **T1:** Bahga, A., & Madisetti, V. (2015). *Internet of Things: A Hands-On Approach*. Universities Press.
Reference Books: **R1:** Geng, H. (Ed.). (2016). *Internet of things and data analytics handbook* (1st ed.). Wiley **R2:** Hariharan, M. S. (n.d.). *IoT data analytics using Python*. BPB Publications.
Online Resources: **https://presiuniv.knimbus.com/user#/home** **Research Articles:** 1. https://www.sciencedirect.com/science/article/pii/S2666603020300294 2. https://www.mdpi.com/journal/sensors/special_issues/IoTDA2020 3. https://journalofbigdata.springeropen.com/articles/10.1186/s40537-019-0268-2 **Multimedia (Videos):** 1. https://www.youtube.com/watch?v=9wq4HzEH0uQ 2. https://www.youtube.com/watch?v=8jUvdL_XhUQ 3. https://www.youtube.com/watch?v=U6n6NcQDIMs **Case Studies:** 1. IoT in Smart Cities: Barcelona's Connected Infrastructure 2. Predictive Maintenance using IoT in Manufacturing – GE Aviation 3. IoT in Logistics: DHL's Sensor-Based Tracking 4. Healthcare Monitoring through Wearable IoT Devices – Fitbit Case

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Course Code:	**Course Title:**	**L**	**T**	**P**	**C**
QNT5128	FinTech and				

	Blockchain Analytics **Type of Course: Specialization Track Elective Theory and Practical Course**	**2**	**0**	**2**	**3**
Version No.	1.0				
Course Pre-requisites	QNT4111 Applied Business Statistics				
Anti-requisites					
Course Description	This course provides a strategic and analytical understanding of emerging FinTech innovations and blockchain technologies. Learners will explore the evolving digital financial ecosystem, including cryptocurrencies, decentralized finance (DeFi), robo-advisors, and payment systems. Emphasis is placed on blockchain data analytics and how it informs decision-making in financial services.				
Course Outcomes	**CO1**	**Understand the components and technologies shaping the FinTech ecosystem.**			
	CO2	**Apply blockchain principles to evaluate decentralized systems and crypto assets.**			
	CO3	**Analyze financial and blockchain data using analytics tools and models.**			
	CO4	**Create business insights using real-time FinTech and blockchain applications.**			
Course Objective	This course is designed to improve the learners' **EMPLOYABILITYSKILLS** by using **EXPERIENTIAL LEARNING** techniques.				
Module 1	**Foundations of FinTech and Digital Finance**	Quiz (Participative Learning)		**8 Sessions + 5 Practical**	
Topics: Introduction to FinTech – Evolution of Digital Finance – RegTech, InsurTech, WealthTech – FinTech Business Models – FinTech Disruptions in Banking and Capital Markets – Digital Lending, Digital Payments – Regulatory Landscape.					
Module 2	**Blockchain Technology and**	Assignment using E Library		**8 Sessions + 7**	

	Cryptocurrency	(Participative Learning)	**Practical**
Topics: Blockchain Architecture – Consensus Mechanisms – Smart Contracts – Distributed Ledger Technologies (DLT) – Introduction to Bitcoin, Ethereum – Wallets and Exchanges – Security, Privacy and Regulatory Considerations.			
Module 3	**Blockchain Analytics**	Case Study (Experiential Learning)	**7 Sessions + 9 Practical**
Topics: Understanding Blockchain Data – Public Block Explorers (e.g., Etherscan) – Transaction Analytics – Wallet Tracking – Blockchain Network Analysis – Applications in AML, KYC, and Fraud Detection – On-chain vs Off-chain Data.			
Module 4	**Data Analytics in FinTech**	Project (Experiential Learning)	**7 Sessions + 9 Practical**
Topics: FinTech Data Sources – Predictive Models in Credit Scoring – Risk Modeling – Customer Segmentation – Robo-Advisory Systems – Sentiment Analysis in Crypto Markets – Real-time Payment and Transaction Analytics.			
Targeted Application & Tools that can be used: Python (for crypto and financial analytics) Power BI / Tableau for visualization Google Colab, Excel for Financial Modeling			
Project work/Assignment:			
Assignment 1: Module 1 - Quiz **Assignment 2:** Module 2 - Written Assignment **Assignment 3:** Module 3 - Case study **Assignment 4:** Module 4 - Project Work			
Text Book: **T1:** Schueffel, P. (2020). *The FinTech Book: The Financial Technology Handbook for Investors, Entrepreneurs and Visionaries*. Wiley.			
Reference Books: **R1:** Mougayar, W. (2016). *The Business Blockchain: Promise, Practice, and Application of the Next Internet Technology*. Wiley. **R2:** Tapscott, D., & Tapscott, A. (2016). *Blockchain Revolution: How the Technology Behind Bitcoin is Changing Money, Business, and the World*. Penguin. **R3:** Iman, N. (2022). *FinTech and RegTech in a Nutshell, and the Future in a Sandbox*. Springer.			
Online Resources: **https://presiuniv.knimbus.com/user#/home** **Research Articles:** 1. https://www.sciencedirect.com/science/article/pii/S2772485922000606 2. https://jfin-swufe.springeropen.com/articles/10.1186/s40854-023-00469-3 3. https://dl.acm.org/doi/abs/10.1145/3531056.3531068			

Multimedia (Videos): 1. https://www.youtube.com/watch?v=tmDrZAECvfA 2. https://www.youtube.com/watch?v=n41dE9Z9_NI 3. https://www.youtube.com/watch?v=puN2la6L5qU **Case Studies:** 1. Paytm's Role in Transforming India's Digital Payments 2. Ethereum Gas Fees and Smart Contract Use in DeFi 3. Blockchain Analytics in Fraud Detection – Chainalysis Case 4. The Rise of Robo-Advisors: Betterment and Wealthfront

Catalogue prepared by	**Dr. T S Edwin**
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Course Code: QNT5129	**Course Title:** Strategic HR Analytics **Type of Course: Specialization Track Elective Theory and Practical Course**	**L** **2**	**T** **0**	**P** **2**	**C** **3**
Version No.	1.0				
Course Pre-requisites	QNT4111 Applied Business Statistics OBH4111 Human Behavior in Organizations				
Anti-requisites					
Course Description	This course introduces students to the strategic application of HR analytics to drive data-informed decisions within organizations. By integrating quantitative methods with HR practices, the course enables learners to link HR metrics to business outcomes, predict workforce trends, and enhance decision-making. Students will use tools such as Excel, Power BI, R, or Python to visualize, interpret, and communicate HR data insights.				

<table>
<tr><td rowspan="4">Course Outcomes</td><td>CO1</td><td colspan="2">Understand the role of HR analytics in strategic decision-making</td></tr>
<tr><td>CO2</td><td colspan="2">Apply statistical tools to analyze and interpret HR data</td></tr>
<tr><td>CO3</td><td colspan="2">Analyze workforce metrics and identify trends to support strategic initiatives</td></tr>
<tr><td>CO4</td><td colspan="2">Create HR dashboards and predictive models to support talent management and organizational effectiveness</td></tr>
<tr><td>Course Objective</td><td colspan="3">This course is designed to improve the learners' EMPLOYABILITYSKILLS by using EXPERIENTIALLEARNING techniques.</td></tr>
<tr><td>Module 1</td><td>Introduction to Strategic HR Analytics</td><td>Quiz (Participative Learning)</td><td>8 Sessions + 5 Practical</td></tr>
<tr><td colspan="4">Topics: Introduction to HR Analytics; Evolution from operational to strategic HR analytics; Strategic workforce planning; Metrics and KPIs in HR; Data sources in HRIS Tools: MS Excel, Power BI basics</td></tr>
<tr><td>Module 2</td><td>Data Analysis for HR Decision-Making</td><td>Assignment using E Library (Participative Learning)</td><td>8 Sessions + 7 Practical</td></tr>
<tr><td colspan="4">Topics: Descriptive analytics; Statistical analysis of HR data; Visualization techniques; Employee turnover, retention, and engagement metrics Tools: Excel, Tableau / Power B</td></tr>
<tr><td>Module 3</td><td>Predictive Analytics in HR</td><td>Case Study (Experiential Learning)</td><td>7 Sessions + 9 Practical</td></tr>
<tr><td colspan="4">Topics: Regression and classification models; Attrition prediction; Performance modeling; Sentiment analysis from employee feedback. Tools: R / Python (pandas, scikit-learn)</td></tr>
<tr><td>Module 4</td><td>Strategic Applications & Capstone Project</td><td>Project (Experiential Learning)</td><td>7 Sessions + 9 Practical</td></tr>
<tr><td colspan="4">Topics: Aligning HR analytics with business strategy; Talent acquisition analytics; Succession planning; Building HR analytics dashboards. Tools: Power BI or Tableau. Hands-on Project: Real-world HR problem and analytics solution presentation</td></tr>
<tr><td colspan="4">Targeted Application & Tools that can be used: Python, Tensorflow</td></tr>
</table>

Course Code: QNT5130	**Course Title:** Digital and Social Media Analytics	**L**	**T**	**P**	**C**
	Type of Course: **Specialization Track Elective**	**2**	**0**	**2**	**3**
	Theory and Practical Course				
Version No.	1.0				
Course Pre-requisites	QNT4112 Applied Data Analysis and Visualization, Digital Marketing				
Anti-requisites					
Course Description	This course equips learners with analytical tools and frameworks to extract insights from digital and social media data. It emphasizes the strategic use of analytics to measure campaign effectiveness, track customer engagement, and optimize online marketing performance across platforms. Practical exposure to web and social analytics tools is integral to this course.				
Course Outcomes	**CO1**	Understand the role of analytics in digital and social media marketing.			
	CO2	Apply metrics and KPIs to assess the performance of digital campaigns.			
	CO3	Analyze data from web and social media platforms using analytics tools.			
	CO4	Create data-driven marketing insights for improved customer engagement and ROI.			
Course Objective	This course is designed to improve the learners' **EMPLOYABILITY SKILLS** by using **EXPERIENTIAL LEARNING** techniques.				
Module 1	**Foundations of Digital and Social Media Analytics**	Quiz (Participative Learning)			**8 Sessions + 5 Practical**
Catalogue prepared by	Dr. Suresh Kumar				
Recommended by the Board of Studies on	BOS NO: 18th held on 6,June,2025				
Topics: Importance of Analytics in Digital Marketing – Evolution of Social Media and Web Analytics – Types of Digital Metrics – Understanding KPIs – Introduction to Google Analytics and Facebook Insights – Ethical Considerations in Data Use.					
Date of Approval by the Academic Council	Academic Council Meeting No. 26th held on 25,July,2025				
Module 2	**Tools and Techniques in Digital Analytics**	Assignment using E Library (Participative Learning)			**8 Sessions + 7 Practical**
Topics: Setting up Analytics Tools (Google Analytics, Meta Business Suite) – Tagging and Tracking – UTM Parameters – Data Collection and Filtering – Dashboard Creation – Introduction to Google Tag Manager.					
Module 3	**Social media Listening and Sentiment Analysis**	Case Study (Experiential Learning)			**7 Sessions + 9**

Project work/Assignment:

Assignment 1: Module 1 - Quiz
Assignment 2: Module 2 - Written Assignment
Assignment 3: Module 3 - Case study
Assignment 4: Module 4 - Project Work

Text Book:
T1: Fitz-enz, J., & Mattox, J. R. (2014). *Predictive Analytics for Human Resources*. Wiley.

Reference Books:
R1: Pease, G., Beresford, B., & Walker, L. (2014). *Human Capital Analytics*. Wiley
R2: Marr, B. (2018). *Data-Driven HR: How to Use Analytics and Metrics to Drive Performance*. Kogan Page

Online Resources:
https://presiuniv.knimbus.com/user#/home

Research Articles:
1. Bridging the Gap: Why, How and When HR Analytics Can Impact Organizational Performance; Steven McCartney and Na Fu (2022)
2. The Role of HR Analytics in Strategic Decision-Making: A Systematic Literature Review; Ahmad Solihin (2024)
3. HR Data Analytics and Evidence-Based Practice as a Strategic Business Partner; B.S. Patil and M.R.S.R. Priya (2024)

Multimedia (Videos):
1. https://www.youtube.com/watch?v=5MtvabqzoSo
2. https://www.youtube.com/watch?v=MyKbMmyg3Eo
3. https://www.youtube.com/watch?v=5fh5IAFWciU

Case Studies:
1: Walmart – Shelf Inventory Monitoring
2: Coca-Cola – Brand Logo Detection in Social Media
3: BMW – Automated Visual Inspection in Manufacturing
4: Amazon Go – Computer Vision for Cashless Retailing
https://venturebeat.com/ai/walmart-open-ai-powered-system-tracks-inventory-in-real-time
https://towardsdatascience.com/detecting-brand-logos-in-social-media-images-with-deep-learning-f7e80f4c5a7e
https://www.bmw.com/en/innovation/artificial-intelligence-production.html

			Practical
Topics: Social media Listening Platforms (Hootsuite, Brandwatch) – Hashtag and Keyword Tracking – Sentiment Analysis Techniques – Brand Engagement Metrics – Case Studies in Social Media Campaigns.			
Module 4	**Data Interpretation and Visualization**	Project (Experiential Learning)	**7 Sessions + 9 Practical**
Topics: Audience Behavior and Engagement Metrics – Funnel Analysis – Cohort Analysis – Attribution Models – Custom Reports and Visual Dashboards using Google Data Studio / Power BI.			
Targeted Application & Tools that can be used: Google Analytics (GA4), Meta Business Suite (Facebook & Instagram Insights), Twitter Analytics, LinkedIn Analytics, Google Tag Manager, Power BI, Hootsuite, Brandwatch (for listening and monitoring)			
Project work/Assignment:			
Assignment 1: Module 1 - Quiz **Assignment 2:** Module 2 - Written Assignment **Assignment 3:** Module 3 - Case study **Assignment 4:** Module 4 - Project Work			
Text Book: **T1:** Marshall, G., & Johnston, M. (2022). *Digital Marketing Analytics: Making Sense of Consumer Data in a Digital World*. Pearson.			
Reference Books: **R1:** Tuten, T. L., & Solomon, M. R. (2020). *Social Media Marketing*. Sage. **R2**: Chaffey, D., & Ellis-Chadwick, F. (2019). *Digital Marketing* (7th ed.). Pearson			
Online Resources: **https://presiuniv.knimbus.com/user#/home** **Research Articles:** 1.https://www.researchgate.net/publication/342511503_Digital_Analytics_Modeling_for_Insights_and_New_Methods 2. https://www.jisem-journal.com/download/a-review-of-usage-and-applications-of-social-media-analytics-10958.pdf 3.https://www.researchgate.net/publication/259148570_The_Power_of_Social_Media_Analytics **Multimedia (Videos):** 1. http://www.youtube.com/watch?v=aEsWltLmPfc 2. http://www.youtube.com/watch?v=yDUIzn77DL4 3. http://www.youtube.com/watch?v=Pn82AJme0_o **Case Studies:** 1**:** Nike's Campaign Optimization using Web Analytics 2. Starbucks' Sentiment Analysis on Social Media Feedback 3. Netflix Personalization through Audience Behavior Analytics 4. Airbnb's Use of Data to Improve Marketing Funnel Conversion			

Catalogue prepared by	Dr. S Suresh Kumar
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Course Code: QNT5131	**Course Title:** Risk and Fraud Analytics **Type of Course: Specialization Track Elective Theory and Practical Course**	**L**	**T**	**P**	**C**
		2	**0**	**2**	**3**
Version No.	1.0				
Course Pre-requisites	QNT4113 Business Research and Analytics Corporate Finance				
Anti-requisites					
Course Description	This course provides a comprehensive understanding of risk identification and fraud detection using data analytics techniques. It equips learners to apply statistical, machine learning, and business intelligence tools to detect anomalies, assess financial risks, and prevent fraud across various domains such as banking, insurance, and e-commerce.				
Course Outcomes	**CO1**	**Understand key concepts in enterprise risk and fraud detection.**			
	CO2	**Apply metrics and KPIs to assess the performance of digital campaigns.**			
	CO3	**Analyze financial and operational data for risk profiling and fraud prevention.**			
	CO4	**Create dashboards and predictive models to monitor and mitigate organizational risk.**			
Course Objective	This course is designed to improve the learners' **EMPLOYABILITY SKILLS** by using **EXPERIENTIAL LEARNING** techniques.				
Module 1	**Introduction to Risk and Fraud**	Quizusing E Library (Participative Learning)		**8 Sessions + 5 Practical**	
Topics: Types of Business Risks – Fraud Triangle – Regulatory Frameworks – Financial and Operational Risk – Role of Analytics in Risk and Fraud Management – Case Examples from BFSI and					

E-commerce.			
Module 2	**Data Preparation for Risk and Fraud Analytics**	Assignment using E Library (Participative Learning)	**8 Sessions + 7 Practical**
Topics: Data Collection and Cleaning – Handling Missing or Duplicate Data – Outlier Detection – Feature Engineering – Exploratory Data Analysis for Risk Profiling – Labeling and Sampling Techniques.			
Module 3	**Fraud Detection Techniques**	Case Study (Experiential Learning)	**7 Sessions + 9 Practical**
Topics: Statistical Techniques: Z-score, Benford's Law – Clustering for Anomaly Detection – Classification Models (Decision Trees, Logistic Regression) – Time-series for Transaction Monitoring – Network Analysis for Fraud Rings.			
Module 4	**Business Intelligence and Reporting**	Project (Experiential Learning)	**7 Sessions + 9 Practical**
Topics: Dashboards for Risk Monitoring – Key Risk Indicators (KRIs) – Visualization of Fraud Metrics – Power BI for Decision Dashboards – Alerts and Reporting Mechanisms – Integration with Enterprise Risk Systems.			
Targeted Application & Tools that can be used: Excel, Python (Pandas, Scikit-learn), Power BI or Tableau.			
Project work/Assignment:			
Assignment 1: Module 1 - Quiz **Assignment 2:** Module 2 - Written Assignment **Assignment 3:** Module 3 - Case study **Assignment 4:** Module 4 - Project Work			
Text Book: **T1:** Baesens, B. (2015). *Analytics in a Big Data World: The Essential Guide to Data Science and its Applications*. Wiley.			
Reference Books: **R1:** Bolton, R. J., & Hand, D. J. (2002). *Statistical Fraud Detection: A Review*. Statist. Sci. **R2**: Michelman, P. (2014). *Harvard Business Review on Managing Risk*. Harvard Business Review Press.			
Online Resources: **https://presiuniv.knimbus.com/user#/home** **Research Articles:** 1.https://www.researchgate.net/publication/357612119_Analysis_on_Business_Analytics_in_Risk_Management 2. https://riskonnect.com/reporting-analytics/data-analytics-risk-management-overcoming-challenges-and-pitfalls/ 3. https://www.tandfonline.com/doi/full/10.1080/01605682.2022.2041373			

Multimedia (Videos):

1. http://www.youtube.com/watch?v=QFyM3w95fXI
2. http://www.youtube.com/watch?v=xwm0YM3cmUE
3. http://www.youtube.com/watch?v=2ra0u9FsFgk

Case Studies:

1. Credit Card Fraud Detection using Predictive Modelling
2. Insurance Claims Risk Assessment – ICICI Lombard
3. PayPal's Use of Network Analytics to Detect Fraud Rings
4. Deutsche Bank's Risk Management Using Big Data

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Course Code: QNT5132	**Course Title:** Business Intelligence and Visualization **Type of Course: Specialization Track Elective Theory and Practical Course**	**L**	**T**	**P**	**C**
		2	**0**	**2**	**3**
Version No.	1.0				
Course Pre-requisites	QNT4111 Applied Business Statistics QNT4112 Applied Data Analysis and Visualization				
Anti-requisites					
Course Description	This course provides a comprehensive understanding of Business Intelligence (BI) concepts and tools with a focus on data visualization. Students will learn how to extract, transform, and load (ETL) data, create dashboards, and generate business insights through visual storytelling. Popular BI tools like Power BI and Tableau will be used to solve real-world business problems across industries.				
Course Outcomes	**CO1**	**Understand** the core concepts and architecture of Business Intelligence systems			

	CO2	**Apply** BI tools for data integration, cleansing, and modeling	
	CO3	**Analyze** business data using visualization techniques to support decision-making	
	CO4	**Create** an interactive dashboards and reports to communicate insights effectively	
Course Objective	This course is designed to improve the learners' **EMPLOYABILITYSKILLS** by using **EXPERIENTIALLEARNING** techniques.		
Module 1	**Introduction to Business Intelligence**	Quiz (Participative Learning)	**8 Sessions + 8 Practical**
Topics: Introduction to BI; Evolution and role of BI in organizations; BI lifecycle; Architecture of BI systems; ETL concepts Tools: MS Excel, SQL basics.			
Module 2	**Data Visualization Principles and Tools**	Assignment using E Library (Participative Learning)	**8 Sessions + 8 Practical**
Topics: Visual analytics concepts; Chart types and storytelling with data; Dashboard design best practices; Data modeling and cleansing Tools: Excel, Tableau / Power BI.			
Module 3	**Advanced Visualization and BI Applications**	Case Study (Experiential Learning)	**8 Sessions + 7 Practical**
Topics: Interactive visualizations; Slicers, filters, DAX functions; KPI monitoring; Embedding analytics in decision systems. Tools: Power BI Desktop, Tableau Public			
Module 4	**Industry Use Cases & Capstone Project**	Project (Experiential Learning)	**6 Sessions + 7 Practical**
Topics: BI applications in retail (sales dashboards), finance (profitability analysis), HR (workforce analytics); Capstone project involving real-life BI scenarios and data. Tools: Power BI, Google Data Studio, Excel.			
Targeted Application & Tools that can be used: Python, Tensorflow			
Project work/Assignment:			
Assignment 1: Module 1 - Quiz **Assignment 2:** Module 2 - Written Assignment **Assignment 3:** Module 3 - Case study **Assignment 4:** Module 4 - Project Work			
Text Book: **T1:** Moss, L. T., & Atre, S. (2003). *Business Intelligence Roadmap: The Complete Project Lifecycle for Decision-Support Applications*. Addison-Wesley			
Reference Books: **R1:** Few, S. (2009). *Now You See It: Simple Visualization Techniques for Quantitative Analysis*. Analytics Press **R2**: Kimball, R., & Ross, M. (2013). *The Data Warehouse Toolkit: The Definitive Guide to Dimensional Modeling*. Wiley			
Online Resources:			

https://presiuniv.knimbus.com/user#/home

Research Articles:

1.https://www.researchgate.net/publication/388780215_Enhancing_Business_Intelligence_with_Data_Visualization_Tools

2.https://www.researchgate.net/publication/259333034_Data_Visualization_in_Business_Intelligence

3. https://www.francisxavier.ac.in/blog/the-role-of-data-visualization-in-business-intelligence-driving-informed-decision-making

Multimedia (Videos):

1. http://www.youtube.com/watch?v=33k1GzNybf8

2. http://www.youtube.com/watch?v=MLcDtRDQZbE

3. http://www.youtube.com/watch?v=MkjlIzvfqdo

Case Studies:

1: Walmart – Shelf Inventory Monitoring
2: Coca-Cola – Brand Logo Detection in Social Media
3: BMW – Automated Visual Inspection in Manufacturing
4: Amazon Go – Computer Vision for Cashless Retailing

https://venturebeat.com/ai/walmart-opens-an-ai-powered-store-to-monitor-inventory-in-real-time
https://towardsdatascience.com/detecting-brand-logos-in-social-media-images-with-deep-learning-f7e80f4c5a7e
https://www.bmw.com/en/innovation/artificial-intelligence-production.html

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Course Code: QNT5134	**Course Title: Database Management** **Type of Course: Discipline Elective**	**L-T-P-C**	**L**	**T**	**P**	**C**
			2	**1**	**2**	**4**
Version No.	2.0					

Course Pre-requisites	NIL			
Anti-requisites	NIL			
Course Description	The Database Management Course is an industry oriented course focused on providing Data Management and Data world insights. The learner is equipped with Data Management practices and trends in the Industry. Database Management is about monitoring, administration, of databases and data left. Database management involves Data Architecture, Design, Implementation and Support of data. The course involves theory and practical perspective of data management aspects. Open Source tools will be provided for Data Management activities. The lab activities will be performed in the Open Source tool.			
Course Objectives	The Course promotes learners' employability skills through the understanding and application of Relational Database Management Systems (RDBMS), Industry applications in managing data in all business functions across Industry sectors. Laboratory Assignments/ real time Use Cases will be simulated and resolved during the Hours. This will involve hands-on experiential learning in the complex datasets in determining probable outcome.			
Course Out Comes	On successful completion of the course the learners are able to: CO1) Describe complex data repositories in organizations [Comprehension] CO2) Apply SQL syntax for desired outcomes. [Apply] CO3) Illustrate usage of tools to create reporting dashboards and dataplots [Apply] CO4) Analyse Databases (including Big Data) as deployed in various industries [Analysis]			
Course Content:				
Module 1	Introduction to Database Management Systems (DBMS)	Case Study (participative learning)	Case study: DBMS in organizations	20 Hours(Theory, LAB, Tutoring)
Topics: Introduction to Database Management Systems – Types and Definitions, Data Normalization, Database architecture, Data mirroring, Role of a DBA,				
Module 2	Overview of Structured Query Language	Assignment and Case Study (participative learning)	Case Study: Creation of Tables, Managing data and interrelation Students who complete the course will be equipped to write SQL queries,	20 Hours(Theory, LAB, Tutoring)

	(SQL), Normalization			
Topics: Overview of SQL. Installation of Work Packages, Module 2: Building the Database Schema; Creating tables and columns; Building tables with CREATE TABLE; Modifying table structure with ALTER TABLE; Adding columns to an existing table; Removing tables with DROP TABLE				
Module 3	Models & Database Design (Logical and Conceptual), Database Objects, Big Data overview	Assignment and Case Study (Experiential learning)	A Case Study	20 Hours(Theory, LAB, Tutoring)
Topics: Relational Model, Entity Relationship Model, Database design and ER Model: overview, ER-Model, Constraints, ER- Diagrams, ERD Issues, weak entity sets, Codd's rules, Relational Schemas, Introduction to UML Relational database model: Logical view of data, keys, integrity rules. Relational Database design: features of good relational database design, atomic domain, Normalization (1NF, 2NF, 3NF, BCNF). Big Data – characteristics, tools to manage Big Data.				
Module 4	Data Modeling Constraints & Data Manipulation; Big Data overview	Assignment and Case Study & Project	Students are assigned a project to work using DMBS tools and techniques.	15 Hours(Theory, LAB, Tutoring)
Topics: What are constraints, types of constrains, Integrity constraints, Views: Introduction to views, data independence, security, updates on views, comparison between tables and views, Big Data – characteristics, tools to manage Big Data.				
List of Experiments (Embedded Lab - Student's self-study): Practical exercises are done using 1. Creation of Dataset, Tables. 2. Building Data Repositories, Roll Back and Data Updation. 3. Relation building between Dataset, Tables, 4. DBMS Projects Hospital, Library, School, Salary, Hotel, Pharmacy, Student, Payroll, Employee				
Targeted Application & Tools that can be used: Open Source DMBS & SQL Tools				
Project work/Assignment: Mention the Type of Project /Assignment proposed for this course: Building Databases, Data Structures for these sectors – Education, Banking, Airlines, Universities, Manufacturing and selling, Human resources				
Text Book				

T1:	*Database Management System (DBMS)A Practical Approach*, Rajiv Chopra, S Chand, 5th Ed
References: • R1: Relational model database management – E.F. CODD • R2: Database Design & Relational Theory: Normal Forms & All That Jazz – C.J. Date Web resources: • DBMS basics: https://www.youtube.com/watch?v=3EJlovevfcA • SQL Basics: https://www.w3schools.com/sql/default.asp • Learn SQL: https://www.codecademy.com/learn/learn-sql • Big Data Introduction : https://www.youtube.com/watch?v=bAyrObl7TYE	
Catalogue prepared by	Prof Kiran Koppada
Recommended by the Board	

Course Code: QNT5136	**Course Title: Applied Marketing Analytics** **Type of Course: Specialization Track Core**	**L- T-P- C**	**2**	**0**	**2**	**3**
Version No.	1.0					
Course Pre-requisites	NIL					
Anti-requisites	NIL					
Course Description	This course provides an applied framework for leveraging analytics in modern marketing. It integrates consumer behavior data, marketing campaigns, digital and social media data, and builds actionable insights using statistical and machine learning techniques. Students will learn to use Python, Excel, Power BI, and social media APIs to solve real-world marketing problems related to customer segmentation, A/B testing, and ROI analysis.					
Course Objective	To equip students with tools and techniques to analyze marketing data, interpret customer behavior, optimize campaigns, and support strategic marketing decisions using analytics-driven approaches.					
Course Outcomes	By the end of this course, students will be able to: CO1: Understand various sources and types of marketing data. CO2: Apply analytics tools to analyze customer behavior and market segments. CO3: Design and evaluate marketing experiments and campaigns. CO4: Leverage social media analytics and sentiment analysis in decision making. CO5: Present marketing insights effectively through visual					

	dashboards and storytelling.			
Course Content	This course bridges the gap between marketing strategy and data-driven decision-making through hands-on application of analytics. Students explore a wide range of marketing data—from consumer behavior to digital campaigns—and apply analytics techniques to optimize marketing effectiveness. Topics include customer segmentation, A/B testing, sentiment analysis, and predictive modeling. Students use tools such as Python, Power BI, Tableau, and social media APIs to build marketing dashboards and deliver actionable insights. The course concludes with a capstone project based on real-world marketing data.			
Module 1	Marketing Data Landscape and Consumer Behavior Analytics	Experiential Learning	Handson understanding of Marketing Data	7 Lectures, 8 Practical Sessions
Sources of marketing data (CRM, Google Analytics, Social Media) - Customer journey and sales funnel analysis - Structured and unstructured marketing data - Data wrangling, segmentation variables, KPIs				
Module 2	Exploratory Marketing Analytics and Customer Segmentation	Experiential Learning	Understanding of key concepts of Analytics	(7 Lectures, 8 Practical Sessions)
RFM (Recency, Frequency, Monetary) analysis - K-Means, DBSCAN, Hierarchical clustering - Building buyer personas - Case: E-commerce customer segmentation.				
Module 3	Campaign Analytics and A/B Testing	Experiential Learning	Campaign success metrics	(7 Sessions, 8 Practical)
Campaign success metrics: CTR, conversion rate, bounce rate, ROI - Hypothesis testing in A/B campaigns - Chi-square, t-tests for campaign evaluation - Case: Email marketing or landing page testing.				
Module 4	Predictive Modeling and Sentiment Analysis	Experiential Learning	Predicting customer churn using classification models	7 Lectures,8 Practical Sessions
Predicting customer churn using classification models - Lifetime value prediction - Sentiment analysis using social media text (Twitter API, TextBlob) - Visualization of sentiment scores and trends.				
Module 5	Marketing Dashboards and	Capstone Project	KPIs for marketing	(7 Lectures, 8 Practical

	Capstone Project		dashboarding	Sessions)

KPIs for marketing dashboarding - Building and narrating insights through Tableau/Power BI - Group project: Real or synthetic marketing dataset - Peer review and final presentations.

Targeted Application & Tools that can be used:

- Python, Pandas, Scikit-learn, TextBlob, Tableau, Power BI, Google Analytics, Twitter API
- Tableau/Power BI

Tutorial Plan:

1	Introduction to marketing data sources and key performance indicators (KPIs)
2	Understanding and deriving RFM scores from transactional data
3	Interpretation of clustering results – how to build customer personas
4	Designing an A/B test – hypothesis framing and campaign structure
5	Evaluating test results using statistical significance (p-value, t-test)
6	Churn analytics – identifying churn features and risk prediction setup
7	Building a sentiment dictionary – Positive vs Negative tone in customer feedback
8	Designing an integrated marketing dashboard (storyboard approach)
9	Peer review of student dashboards – group feedback and suggestions
10	Capstone debrief – synthesizing marketing insights into business recommendations

Practical Plan:

1	Importing and cleaning marketing campaign data using Excel/Python
2	Creating customer RFM segmentation model
3	Running K-Means clustering using Python and visualizing clusters
4	Designing visual dashboards using Power BI for customer segments
5	Analyzing a social media dataset for engagement metrics
6	Developing a test case: Landing page A/B variation setup

7	Performing t-test and chi-square test to compare A/B test outcomes
8	Building churn prediction models using Logistic Regression
9	Evaluating classification models with ROC curves and precision-recall
10	Extracting Twitter data using Tweepy or Twitter API
11	Conducting basic sentiment analysis with TextBlob
12	Visualizing sentiment trends using Seaborn and WordCloud
13	Predicting customer lifetime value using regression models
14	Creating campaign ROI visualizations using Power BI
15	Dashboard creation: e-commerce funnel analysis
16	Tableau-based storytelling: Customer insights
17	Finalizing capstone dataset and objectives
18	Developing end-to-end analytics project (segmentation or churn prediction)
19	Dashboard integration and result interpretation
20	Capstone presentation and peer evaluation

Text Book

T1: Winston, Wayne L. (2014). Marketing Analytics: Data-Driven Techniques with Microsoft Excel. Wiley.

T2: Lilien, G. L. & Rangaswamy, A. (2003). Marketing Engineering: Computer-Assisted Marketing Analysis and Planning. Trafford.

Reference Books

Marketing Data Science by Thomas W. Miller

Predictive Marketing by Omer Artun & Dominique Levin

Digital Marketing Analytics by Chuck Hemann & Ken Burbary

Web Links and Case Study Links https://analytics.google.com/ https://www.kaggle.com/datasets https://developer.twitter.com/en/docs/twitter-api https://public.tableau.com/ Case Study: Email Campaign A/B Testing – HubSpot Dataset Case Study: Customer Churn – Telecom Dataset (IBM Sample)	
Catalogue prepared by	Dr. P. Mary Jeyanthi
Recommended by the Board of Studies on	Mention the BOS Number and the Date of BOS
Date of Approval by the Academic Council	Mention the Academic Council Meeting No. & the date of the meeting:

Course Code: QNT5137	**Course Title: Financial Data Analytics Type of Course: Specialization Track Core**	**L- T-P- C**	**2**	**0**	**2**	**3**
Version No.	1.0					
Course Pre-requisites	NIL					
Anti-requisites	NIL					
Course Description	This course offers a practical and conceptual framework for applying data analytics in finance. It explores techniques to analyze large-scale financial data, extract insights, and improve decision-making in financial contexts. Students will learn data visualization, time-series analysis, risk modeling, and forecasting using tools such as Python, Excel, and Power BI. Case studies on stock markets, credit risk, and portfolio management will enhance experiential learning.					
Course Objective	To develop analytical and computational skills in finance by integrating data science tools with financial concepts.					

<table>
<tr><td></td><td colspan="4">Students will learn to build models for financial forecasting, credit risk assessment, fraud detection, and investment analysis using real-world datasets.</td></tr>
<tr><td>Course Outcomes</td><td colspan="4">By the end of this course, students will be able to:

• CO1: Understand the nature and types of financial data used in business analytics.
• CO2: Apply statistical and visualization techniques to explore and interpret financial data.
• CO3: Build predictive models to solve financial problems such as stock price forecasting and credit scoring.
• CO4: Evaluate model performance using appropriate financial and statistical metrics.
• CO5: Communicate financial insights effectively using dashboards and storytelling techniques.</td></tr>
<tr><td>Course Content</td><td colspan="4">This course explores the intersection of financial theory and data-driven decision-making. Students will learn to process, analyze, and interpret financial data using advanced analytical techniques and industry-standard tools. Key topics include time-series forecasting, risk analytics, credit scoring models, and fraud detection. The course balances theoretical understanding with practical applications through hands-on exercises, real-world case studies, and a capstone project. Emphasis is placed on data visualization and storytelling to effectively communicate insights for strategic financial decisions.</td></tr>
<tr><td>Module 1</td><td>Introduction to Financial Data & Analytics Tools</td><td>Experiential Learning</td><td>Hand-on with Financial data Basics</td><td>6 Lectures, 6 Practical Sessions</td></tr>
<tr><td colspan="5">Types of Financial Data: Market, Fundamental, and Alternative Data - Introduction to tools: Excel, Python (Pandas, NumPy), Power BI - Financial data sources: NSE/BSE, Yahoo Finance, Quandl- Data cleaning, transformation, and preprocessing for financial datasets</td></tr>
<tr><td>Module 2</td><td>Exploratory Data Analysis (EDA) and Visualization in Finance</td><td>Experiential Learning</td><td>Understanding of key finance concepts and foundation of analytics</td><td>(6 Lectures, 6 Practical Sessions)</td></tr>
<tr><td colspan="5">Participative Learning – Case on Stock Trend Analysis, Descriptive statistics in financial analysis - Visualizing trends, returns, and volatility using line charts, candlestick charts - Correlation, covariance, and multivariate analysis - Dashboards with Tableau/Power BI.</td></tr>
<tr><td>Module 3</td><td>Financial Forecasting and Time Series</td><td>Project-Based Learning</td><td>Forecasting Stock Prices</td><td>(6 Sessions, 6</td></tr>
</table>

	Modeling			Practical)
Time-series analysis: Stationarity, trend, seasonality - ARIMA, SARIMA, Exponential Smoothing, Prophet - Stock returns and volatility modeling - Forecast accuracy: MAE, RMSE, MAPE				
Module 4	Predictive Modeling in Finance – Credit Risk & Fraud Detection	Experiential Learning	Classification techniques	6 Lectures,6 Practical Sessions
Logistic Regression, Decision Trees, Random Forest - Credit scoring models and evaluation (ROC-AUC, Confusion Matrix) - Fraud analytics using clustering and anomaly detection.				
Module 5	Financial Dashboarding, Storytelling, and Capstone Project	Capstone Project	Storytelling with Financial Data	(6 Lectures, 6 Practical Sessions)
Dashboard development in Power BI/Tableau - Capstone Project: End-to-end modeling using financial dataset - Report writing and decision-making presentations.				
Targeted Application & Tools that can be used: • Python (Pandas, NumPy, scikit-learn, statsmodels, Prophet) • Power BI / Tableau • Excel (for initial modeling) • APIs (Yahoo Finance, NSE India, Quandl)				
Tutorial Plan:				

1	Overview of financial data types and sources – case discussion on stock market datasets
2	Hands-on walkthrough: Extracting and profiling structured financial datasets
3	Interpreting summary statistics and correlation matrices in financial datasets
4	Tutorial on time-series components (trend, seasonality, noise) using real stock price data
5	Building hypothesis for forecasting: Practice on selecting right models and metrics
6	Case analysis: Credit scoring metrics – Sensitivity, specificity, ROC
7	Problem-solving: Detecting financial fraud using unsupervised methods – theory discussion
8	Group task: Design of dashboard KPIs for investor decision making

9	Interpretation of model results and scenario analysis
10	Peer review and tutorial wrap-up: Capstone problem debrief & insight synthesis

Practical Plan:

1	Importing financial datasets from Yahoo Finance / NSE using Python (finance, pan datareader)
2	Data cleaning: Handling missing values, duplicate entries, and formatting for finar data
3	Time-series decomposition and visualizations using Matplotlib and Seaborn
4	Statistical summary generation (mean, std dev, kurtosis) on stock data
5	Creating financial dashboards in Power BI/Tableau using cleaned data
6	Forecasting with ARIMA model – step-by-step training on Python
7	Stock return calculation, log returns, moving average, and Bollinger Bands
8	Volatility analysis using rolling statistics and standard deviation
9	Building Prophet models for predicting equity price or gold price trends
10	Logistic regression for credit risk classification using Lending Club dataset
11	Model evaluation metrics: Confusion matrix, ROC, AUC, F1-score
12	Feature engineering and scaling techniques for financial machine learning models
13	Implementing decision tree and random forest on financial datasets (credit/fraud
14	Building unsupervised clustering models for anomaly/fraud detection
15	Creating comparative dashboards: Mutual fund vs equity investment returns
16	Dynamic scenario-based sensitivity analysis using Excel
17	Exploratory visualization: Correlation heatmaps of financial indicators
18	Capstone Project – Phase 1: Financial data collection and hypothesis formulation
19	Capstone Project – Phase 2: Modeling and dashboard creation

	20	Capstone Project – Final Presentation and Peer Feedback

Text Book
Python for Finance by Yves Hilpisch (O'Reilly Media)

Financial Analytics with R by Mark J. Bennett & Dirk L. Hugen (Cambridge University Press)

Web Links and Case Study Links

https://finance.yahoo.com/

https://www.kaggle.com/

https://www.nseindia.com/

https://powerbi.microsoft.com/

https://public.tableau.com/

Catalogue prepared by	Dr. P. Mary Jeyanthi
Recommended by the Board of Studies on	BOS NO: 18th held on 6th June 2025
Date of Approval by the Academic Council	26th Academic Council Meeting held on 25th July 2025

Course Code: **PPS4010**	**Course Title: Corporate Readiness Program – I** Type of Course: Practical Only Course	L- T - P- C	0	0	2	0
Version No.	1.0					
Course Pre-requisites	Students are expected to understand Basic English. Students should have inclination and enthusiasm to involve, participate and learn.					
Anti-requisites	**Nil**					
Course Description	This course is designed to enable students to develop strong behavioural, emotional, and career-readiness capabilities through a structured four-phase journey—Reflect, Innovate, Stimulate, and Elevate. The course focuses on building self-awareness, emotional intelligence, behavioural excellence, career clarity, and professional readiness through experiential learning, self-diagnostic tools (e.g., FIRO-B), simulations, and reflective practices, thereby preparing					

	learners for effective workplace integration and placement success. As a semester-integrated initiative, it bridges academic learning with industry expectations, introducing structured self-awareness early, translating insights into observable behaviours, enabling evidence-based career mapping, and preparing for professional conduct and interviews.			
Course Out Comes	On successful completion of the course the students shall be able to: CO1: Identify career goals using self-diagnostic evidence CO2: Present a professional brand aligned to industry expectations CO3: Demonstrate behavioural excellence in teams, communication, and ethical decision-making			
Course objective	The objective of the course is to familiarize the learners with the concepts of "Corporate Readiness Program I course" and attain SKILL DEVELOPMENT through PARTICIPATIVE LEARNING techniques, including flipped classroom, activity-based simulations, and real-world applications.			
Course Content:				
Module 1	Reflect			**8 Sessions**
Topics: **Topics:** Strong self-awareness foundation using FIRO-B, Psychological safety and interpersonal needs, Personality, values, and work identity, Emotional intelligence and self-regulation, Resilience, stress management, and professional maturity **Activity:** Self-assessments, guided reflection, facilitated discussions, activities, journaling				
Module 2	**Innovate**			**8 Sessions**
Topics: **Topics:** Behavioural effectiveness at the workplace, Leadership mind-sets and decision-making, Collaboration, conflict management, and influence skills, Professional ethics and behavioural role modelling **Activity:** Case studies, role plays, group tasks, behavioural simulations				
Module 3	**Stimulate**			**8 Sessions**
Topics: **Topics:** Career awareness and industry expectations, Career mapping and role targeting, Skill gap analysis and employability alignment, Career action planning Activity: Career diagnostics, mapping exercises, mentoring discussions, individual planning				
Module 4	**Elevate**			**6 Sessions**
Topics: **Topics**: Resume structuring and personal branding, Mock interviews and assessment simulations, Final review, career strategy, and professional closure. **Activity**: Resume labs, mock interviews, assessment center simulations, expert feedback				
Targeted Application & Tools that can be used: Interactive Quiz TED Talks You Tube Links Activities FIRO-B Diagnostic Tool Reflection Journals Career Mapping Templates				

Resume Builders STAR Method Guides
Project work/Assignment: Mention the Type of Project /Assignment proposed for this course: Assignment 1: Profile Presentation (e.g., present self-insights from FIRO-B and personal values aligned to career goals). Assignment 2: Career Roadmap and Professional Portfolio (e.g., 3-Year Career Map, Skill Action Plan, Updated Resume, and Brand Statement).
The topics related to skill development: The topics related to soft skills, behavioral skills, emotional intelligence, career readiness, and employability skills for Skill Development through Participative Learning Techniques. This is attained through assessment Component mentioned in course handout.

Catalogue prepared by	Faculty of L&D
Recommended by the Board of Studies on	
Date of Approval by the Academic Council	

Course Code: **PPS4011**	**Course Title: Corporate Readiness Program – II** Type of Course: Practical Only Course	L- T - P-C	0	0	2	0
Version No.	1.0					
Course Pre-requisites	Students are expected to understand Basic English. Students should have inclination and enthusiasm to involve, participate and learn.					
Anti-requisites	NIL					
Course Description	This course enables students to develop a strong foundation in the critical soft skills required to succeed in the corporate environment. It equips learners with the ability to create profile-centric resumes, participate effectively in group discussions, and perform confidently in interviews. Through role-playing exercises, simulations, and experiential learning activities, the course offers a practical and engaging learning environment that bridges the gap between academic learning and workplace expectations.					
Course Objective	The objective of the course is to familiarize the learners with the concepts of "Corporate Readiness Program II course" and attain SKILL DEVELOPMENT through PARTICIPATIVE LEARNING techniques.					
Course Out Comes	**On successful completion of this course the students shall be able to:** CO1 Create a profile-centric resume that highlights skills and experiences effectively CO2 *Apply* effective communication strategies such as clarity, relevance, turn-taking, and active listening during group discussions CO3 Apply effective verbal and non-verbal communication skills, and professional presence during interviews					

Course Content				
Module 1	**Corporate Readiness**	Classroom Activity		**8 Sessions**
Topics: KYC (Know Your Company) and JD (Job Description), resume writing (profile centric), video resume, ATS. **Activity:** Resume Templates, Peer Feedback, Video Resumes				
Module 2	**Group Discussion**	Mock GD		**10 Sessions**
Topics: Types & Purpose of GD, Tips to prepare for GD, GD Phrases and Vocabularies, GOD Technique, Mind mapping, Parameters, Mock GD practice. **Activity:** Group Activities, Peer Assessment				
Module 3	**Personal Interview Skills**	Mock PI		**10 Sessions**
Topics: Purpose, Type and Modes of Interview, virtual and offline PI, KYC (Know Your Company) and JD (Job Description), Techniques - STAR, CAR, FAB, Mock PI practice. Activity: Interview Question Bank, Sample JDs, KYC Framework, STAR, CAR, and FAB Technique Templates				
Targeted Application & Tools that can be used: 1. Interactive Quiz 2. TED Talks 3. You Tube Links Activities				
Assignment proposed for this course Assignment 1: Text & Video Resume Assignment 2: Personal Interview				
• Continuous Individual Assessment • Campus to Corporate Mock Drill for each module				
The topics related to skill development: Corporate Readiness, Group Discussion, Personal Interview skills for Skill Development through Participative Learning Techniques. This is attained through assessment Component mentioned in course handout.				
Catalogue prepared by	Ms. Nirmal Kaur			
Recommended by the Board of Studies on				
Date of Approval by the Academic Council				