



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

(Approved by AICTE | NAAC Accreditation with 'A++' Grade | Accredited by NBA | Affiliated to JNTUH)
Dundigal, Hyderabad - 500 043, Telangana

OUTCOME BASED EDUCATION WITH CHOICE BASED CREDIT SYSTEM

MASTER OF BUSINESS ADMINISTRATION

ACADEMIC REGULATIONS, COURSE CATALOGUE AND SYLLABI MB25

**MBA Regular Two Year Master Degree Program
(For the batches admitted from the academic year 2025 - 2026)**

**FAILURE TO READ AND UNDERSTAND THE REGULATIONS IS
NOT AN EXCUSE**

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-Take-up one idea.

Make that one idea your life-think of it, dream of it, and live on that idea. Let the brain muscles, nerves, every part of your body be full of that idea and just leave every other idea alone.

This is the way to success”

Swami Vivekananda

INSTITUTE VISION | MISSION

VISION

To bring forth students, professionally competent and socially progressive, capable of working across cultures meeting the global standards ethically.

MISSION

To provide students with an extensive and exceptional education that prepares them to excel in their profession, guided by dynamic intellectual community and be able to face the technically complex world with creative leadership qualities.

Further, be instrumental in emanating new knowledge through innovative research that emboldens entrepreneurship and economic development for the benefit of wide spread community.

DEPARTMENT VISION | MISSION

VISION

To excel in management education and research by nurturing the youth to become global management leaders.

MISSION

We intend to empower the capabilities of the young managers to face various challenges in the global community by raising their acquired skills and knowledge.

In pursuit of excellence, we provide training and development activities, cultivate research skills, enhance entrepreneurship abilities and offer employability in multi-domain business organizations.

PROGRAM OUTCOMES (PO's)

- PO1: Managerial skills:** Apply knowledge of management theories and practices to solve business problems.
- PO2: Decision making skills:** Foster analytical and critical thinking abilities for data-based decision making.
- PO3: Ethics:** Ability to develop value based leadership ability.
- PO4: Communication skills:** Ability to understand, analyze and communicate global, economic, legal, and ethical aspects of business.
- PO5: Leadership skills:** Ability to lead themselves and others in the achievement of organizational goals, contributing effectively to a team environment.
- PO6: Entrepreneurial and Innovation skills:** Demonstrate the skills in evaluating business opportunity and identifying sources of potential funding, and develop as successful entrepreneurs.
- PO7: Strategic skills:** Analyze and formulate managerial strategies to sustain in dynamic global business environment.
- PO8: Technology skills:** Inculcate and develop technical skills to face the competitive world successfully.

PRELIMINARY DEFINITIONS AND NOMENCLATURES

Academic Council: The Academic Council is the highest academic body of the institute and is responsible for the maintenance of standards of instruction, education and examination within the institute. Academic Council is an authority as per UGC regulations and it has the right to take decisions on all academic matters including academic research.

Academic Autonomy: Means freedom to an institute in all aspects of conducting its academic programs, granted by UGC for Promoting Excellence.

Academic Year: It is the period necessary to complete an actual course of study within a year. It comprises two consecutive semesters i.e., Even and Odd semester.

AICTE: Means All India Council for Technical Education, New Delhi.

Autonomous Institute: Means an institute designated as autonomous by University Grants Commission (UGC), New Delhi in concurrence with affiliating University (Jawaharlal Nehru Technological University, Hyderabad) and State Government.

Backlog Course: A course is considered to be a backlog course if the student has obtained a failure grade in that course.

Betterment: Betterment is a way that contributes towards improvement of the students 'grade in any course(s). It can be done by either (a) re-appearing or (b) re-registering for the course.

Board of Studies (BOS): BOS is an authority as defined in UGC regulations, constituted by Head of the Organization for each of the departments separately. They are responsible for curriculum design and updation in respect of all the programs offered by a department.

Certificate Course: It is a course that makes a student to gain hands-on experience and skills required for holistic development in a specific area/field.

Choice Based Credit System (CBCS): The choice based credit system is one which provides flexibility in designing curriculum and assigning credits based on the course content and hours of teaching along with provision of choice for the student in the course selection.

Compulsory Course: Course required to be undertaken for the award of the degree as per the program.

Commission: Means University Grants Commission (UGC), New Delhi.

Continuous Internal Assessment: It is an examination conducted towards internal assessment.

Course: A course is a subject offered by the institute for learning in a particular semester.

Course Outcomes: The essential skills that need to be acquired by every student through a course.

Credit: A credit is a unit that gives weight to the value, level or time requirements of an academic course. The number of 'Contact Hours' in a week of a particular course determines its credit value. One credit is equivalent to one lecture hour per week or two hours per week of tutorials/ self-learning/ practical/ field work during a semester.

Credit Point: It is the product of grade point and number of credits for a course.

Cumulative Grade Point Average (CGPA): It is a measure of cumulative performance of a student over all the completed semesters. The CGPA is the ratio of total credit points secured by a student in various courses in all semesters and the sum of the total credits of all courses in all the semesters. It is expressed up to two decimal points

Curriculum: Curriculum incorporates the planned interaction of students with instructional content, materials, resources and processes for evaluating the attainment of Program Educational Objectives (PEO).

Degree with Specialization: A student who fulfills the entire program requirements of her/his discipline and successfully completes a specified set of professional elective courses in a specialized area is eligible to receive a degree with specialization like Finance, Marketing, Human Resource, Systems and Entrepreneurship etc.

Department: An academic entity that conducts relevant curricular and co-curricular activities, involving both teaching and non-teaching staff and other resources in the process of study for a degree.

Detention in a Course: Student who does not obtain minimum prescribed attendance in a course shall be detained in that particular course.

Elective Course: A course that can be chosen from a set of courses. An elective can be Professional / Open Elective.

Evaluation: Evaluation is the process of judging the academic performance of the student in his/her courses. It is done through a combination of continuous internal assessment and semester end examinations.

Grade: It is an index of the performance of the students in a said course. Grades are indicated by alphabets.

Grade Point: It is a numerical weight allotted to each letter grade on a 10-point scale.

Institute: Means Institute of Aeronautical Engineering, Hyderabad unless indicated otherwise by the context.

Pre-requisite: A course, the knowledge of which is required for registration into higher level course.

Core: The courses that are essential constituents of each specialized discipline are categorized as professional core courses for that discipline.

Professional Elective: A course that is discipline centric. An appropriate choice of minimum number of such electives as specified in the program will lead to a degree with specialization.

Program: Means, Master of Business Administration (MBA).

Program Educational Objectives (PEO): The broad career, professional and personal goals that every student will achieve through a strategic and sequential action plan.

Project Work: It is a design or research based work to be taken up by a student during his/her IV semester to achieve a particular aim. It is a credit based course and is to be planned carefully by the student.

Re-Appearing: A student can reappear only in the semester end examination for the theory component of a course, subject to the regulations contained herein.

Registration: Process of enrolling into a set of courses in a semester of a Program.

Regulations: The regulations for MBA offered by Institute are designated as MB25 and are binding on all the stakeholders.

Semester: There shall be a minimum of 15 weeks of instruction, excluding the mid-term and semester-end exams. Around 15 instruction hours, 30 instruction hours and 45 hours of learning need to be followed per one credit of theory course, practical course and project/field-based learning respectively.

Semester End Examinations: It is an examination conducted in all courses offered in a semester at the end of the semester.

S/he: Means –she and he both.

Student Outcomes: The essential skill sets that need to be acquired by every student during her/his program of study. These skill sets are in the areas of employability, entrepreneurial, social and behavioral.

University: Means the Jawaharlal Nehru Technological University Hyderabad (JNTUH), Hyderabad.

Words ‘he’, ‘him’, ‘his’ occur and the simply ‘she’, ‘her’ and ‘her’ also.

PREFACE

Dear Students,

The focus at IARE is to deliver value based education with academically well qualified faculty and infrastructure. It is a matter of pride that IARE continues to be the preferred destination for students to pursue an engineering and management degree.

In the year 2015, IARE was granted academic autonomy status by University Grants Commission, New Delhi under Jawaharlal Nehru Technology University Hyderabad. From then onwards, our prime focus is on developing and delivering a curriculum which caters to the needs of various stakeholders. The curriculum has unique features enabling students to develop critical thinking, solve problems, analyze socially relevant issues, etc. The academic cycle designed on the basis of Outcome Based Education (OBE) strongly emphasizes continuous improvement and this has made our curriculum responsive to current requirements.

The curriculum at IARE has been developed by experts from academia and industry and it has unique features to enhance problem solving skills apart from academic enrichment. The curriculum of MBA program has been thoroughly revised as per AICTE / UGC / JNTUH guidelines and have incorporated unique features such as competency training / coding, industry driven elective, internship and many more. The curriculum is designed in a way so as to impart engineering / management education in a holistic approach towards excellence.

I hope you will have a fruitful stay at IARE.

Dr. L V Narasimha Prasad
Principal



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal - 500 043, Hyderabad, Telangana

ACADEMIC REGULATIONS

MBA Regular Two Year Master Degree Program (For the batches admitted from the academic year 2025 - 26)

For pursuing two-year postgraduate Master degree program of study in Master of Business Administration (MBA) offered by Institute of Aeronautical Engineering under Autonomous status and herein after referred to as IARE.

1. CHOICE BASED CREDIT SYSTEM:

The Indian Higher Education Institutions (HEI's) are changing from the conventional course structure to Choice Based Credit System (CBCS). The credit-based semester system provides flexibility in designing curriculum and assigning credits based on the course content and hours of teaching. The choice based credit system provides a 'cafeteria' type approach in which the students can take courses of their choice, learn at their own pace, undergo additional courses and acquire more than the required credits and adopt an inter-disciplinary approach to learning.

Choice Based Credit System (CBCS) is a flexible system of learning and provides choice for student's to select from the prescribed elective courses. A course defines learning objectives and learning outcomes and comprises of lectures/tutorials/laboratory work/field work/summer internship/main project viva voce/seminars/case studies/alternative assessment tools/presentations/self-study etc. or a combination of some of these.

Under CBCS, the requirement for awarding a degree is prescribed in terms of number of credits to be completed by the students.

The CBCS permits students to:

1. Choose electives from a range of elective courses offered by the departments of the institute.
2. Undergo additional courses of interest.
3. Adopt an inter-disciplinary approach in learning.
4. Make the best use of expertise of the available faculty.

2. MEDIUM OF INSTRUCTION:

The medium of instruction shall be **English** for all courses, examinations, seminar presentations and project work etc. The curriculum will comprise courses of study as given in curriculum section 8.0 in accordance with the prescribed syllabi.

3. ELIGIBILITY FOR ADMISSION:

The admissions for category A and B seats shall be as per the guidelines of Telangana State Council for Higher Education (TSCHE) in consonance with Government reservation policy.

- a) **Under Category A:** 70% of the seats are filled based on Integrated Common Entrance Test (ICET) ranks.
- b) **Under Category B:** 30% seats are filled on merit basis as per guidelines of Telangana State Council for Higher Education (TSCHE).

4. SPECIALIZATION COURSES AND CODE:

The specialization courses listed below are selected for MBA program as shown in Table 1.

Table 1: Specializations

S.No	Specialization	Code
1	Finance	MB
2	Marketing	
3	Human Resources	
4	Systems	
5	Entrepreneurship	

Note: An elective course may be offered to the students, only if a minimum of 25% of class strength opts for it.

5. TYPES OF COURSES

Courses in a program may be of two kinds: **Core and Elective**.

Core Course:

There may be a core course in every semester. This is the course which is mandatory to study by a student as a core requirement to complete the requirement of a program.

Other Core Course: Summer Internship / Field Report

Elective Courses:

Professional Electives Includes elective courses related to the specialization.

Open Electives Elective subjects which include inter-disciplinary subjects

Elective Courses provide breadth of experience in respective specialization and application areas.

Elective course is a course which can be chosen from a pool of courses. It may be:

- Supportive to the discipline of study.
- Providing an expanded scope.
- Enabling an exposure to some other discipline / domain.
- Nurturing students' proficiency / skill.

There shall be ten professional elective groups and two open elective groups.

Skill Development Courses (SDC): Data Visualization Lab / Analytics Lab

These courses are designed to help individuals to gain, improve, or refine specific skill.

Overall, students can choose six professional elective courses which suit their project work, consultation with the faculty advisor / mentor. A student also chooses two open elective courses in his / her area of interest.

6. SEMESTER STRUCTURE:

The MBA program in the institute in semester pattern, with FOUR semesters consisting of two academic years, each academic year having two semesters **Odd and Even** semesters. There shall be a minimum of 15 weeks of instruction, excluding the mid-term and semester-end exams. Around 15 instruction hours, 30 instruction hours and 45 hours of learning need to be followed per one credit of theory course, practical course and project/field-based learning respectively.

Each Semester shall have 'Continuous Internal Assessment (CIA)' and 'Semester End Examination (SEE)'. Choice Based Credit System (CBCS) are taken as 'references' for the present set of regulations. The terms 'SUBJECT' and 'COURSE' imply the same meaning here and refer to 'Theory Subject', or 'Lab Course', or 'Seminar', or 'Internship', or 'Project' as the case may be.

The two-year MBA program consists of 105 compulsory credits and the student has to register for all 105 credits and earn all 105 credits for the award of MBA degree

Each Semester shall have 'Continuous Internal Assessment (CIA)' and 'Semester End Examination (SEE)'. Choice Based Credit System (CBCS) and Credit Based Semester System (CBSS) are taken as 'references' for the present set of Regulations. The terms 'SUBJECT' and 'COURSE' imply the same meaning here and refer to 'Theory Subject', or 'Lab Course', or 'Seminar', or 'Internship', or 'Project' as the case may be.

7. PROGRAM DURATION:

A student shall be declared eligible for the award of MBA degree, if s/he pursues a course of study and completes it successfully in not less than two academic years and not more than four academic years. A student, who fails to fulfill all the academic requirements for the award of the degree within four academic years from the year of his/her admission, shall forfeit his/her seat in MBA program.

- A student will be eligible for the award of MBA degree on securing a minimum of 6.0/10.0 CGPA.
- In the event of non-completion of project work and/or non-submission of the project report by the end of the fourth semester, the candidate shall re-register by paying the semester fee for the project. In such a case, the candidate will not be permitted to submit the report earlier than three months and not later than six months from the date of registration.

Course registration:

It is mandatory to all the students to register the courses from their login before commencement of the class work through Samvidha (Student Management Portal).

8. CURRICULUM AND COURSE STRUCTURE:

The curriculum shall comprise the following:

S.No	Broad Course Classification	Course Group / Category	Course Description
1	Core Courses (CoC)	CC - Core Courses	Includes courses related to the Management
		Project Work	MBA Project or PG Project or Major Project
		Seminar / Pre-Submission Project Seminar	Seminar based on core contents related to Management
2	Other Core Courses (OCC)	Internship / Industry Oriented Mini- project	Summer Internship / Field Report
3	Elective Courses (EC)	PE - Professional Electives	Includes elective courses related to the specialization
		OE - Open Electives	Elective courses which include inter-disciplinary courses
4	Skill Development Courses (SDC)	Data Visualization Lab / Analytics Lab	Courses designed to help individuals gain, improve, or refine specific skill

Each Theory and Laboratory course carries credits based on the number of hours / week as follows:

- **Lecture Hours (Theory):** 1 credit per lecture hour per week.
- **Laboratory Hours (Practical):** 1 credit for 2 practical hours per week.
- **Seminar:** 1 credit for 2 hours per week.
- **Summer Internship:** 2 credits for 6 hours per week.
- **Pre-submission Project Seminar:** 2 credits for 4 hours per week.
- **Main Project Viva-Voce:** 4 credits for 9 hours of project work per week.

For example, a theory course with three credit weightage requires three hours of classroom instruction per week, totaling approximately 45 hours of instruction over the entire semester

Credit distribution for courses offered is shown in Table 3.

Table 3: Credits Distribution

S.No	Courses	Hours / Week	Credits
1	Core Courses	4	4
2	Professional Elective Courses	4	4
3	Open Elective Courses	3	3
3	Skill Development Courses (Laboratory courses)	1 (L) / 2 (P)	2
4	Field Report	2	1
5	Summer Internship (Field work)	4 (T)	2
6	Pre-submission Project Seminar	2 (T)	2
7	Main Project and Viva Voce	4 (P)	4

Course wise break-up to the total credits:

Total Theory Courses Core Courses (15) + Professional Electives (05+01) + Open Electives (02)	15@4 + 05@4+1@2 +02@3 credits	88
Laboratory Course	03@ 2 credits	06
Seminar	01@ 2 credits	02
Summer Internship (Field work)	01@ 1credit + 01@ 2credits	03
Pre-submission of Project + Project Work	01@ 2 credits + 01@ 4 credits	06
TOTAL CREDITS		105

9. EVALUATION METHODOLOGY:

Theory Course:

Each theory course will be evaluated for a total of 100 marks, with 40 marks for Continuous Internal Assessment (CIA) Examination and 60 marks for Semester End Examination (SEE). Student's performance in a course shall be judged by taking into account the results of CIA and SEE together. Table - 4 shows the typical distribution of weightage for CIA and SEE.

Semester End Examination (SEE):

The SEE is conducted for 60 marks of 3 hours' duration. The syllabus for the theory courses is divided into FIVE modules and each modules carries equal weightage in terms of marks distribution. The question paper pattern is as follows:

Two full questions with either 'or' choice will be drawn from each module. Each question carries 12 marks.

The emphasis on the questions is broadly based on the following criteria:

50 %	To test the objectiveness of the concept
30 %	To test the analytical skill of the concept
20 %	To test the application skill of the concept

Continuous Internal Assessment (CIA):

Total marks for each course shall be based on Continuous Internal Assessment (CIA) and Semester End Examination (SEE). There shall have a uniform pattern of 40:60 for CIA and SEE of both theory and practical courses.

In CIE, for theory courses, during a semester, there shall be two mid-term examinations. Each Mid-Term examination consists of two parts i) Part – A for 10 marks, ii) Part – B for 20 marks with a total duration of 2 hours as follows:

1. Mid-Term Examination for 30 marks:
 - a. Part - A: Objective/quiz paper/Short Note questions for 10 marks.
 - b. Part - B: Descriptive paper for 20 marks.

The objective/quiz paper is set with multiple choice, fill-in the blanks and match the following type of questions for a total of 10 marks. The descriptive paper shall contain 6 full questions out of which, the student has to answer 4 questions, each carrying 5 marks

The remaining 10 marks of Continuous Internal Evaluation are distributed as follows:

2. Assignment for 5 marks. (Average of 2 Assignments each for 5 marks)
3. PPT/ Poster Presentation/ Case Study/ Video presentation/ Survey/ Field Study/ Group discussion/ Role Play on a topic in the concerned course for 5 marks before II Mid-Term Examination.

Continuous Internal Examination (CIE):

Two CIE exams shall be conducted at the end of the 7th and 15th week of the semester respectively. The valuation and verification of answer scripts of CIE exams shall be completed within a week after the conduct of the Examination. First mid-term examination shall be conducted on 50% of the syllabus, and the second mid-term examination shall be conducted on the remaining 50% of the syllabus.

Semester End Examination (SEE)

The semester end examinations, for theory courses, will be conducted for 60 marks consisting of two parts viz. i) Part- A for 10 marks and ii) Part - B for 50 marks.

Part-A is compulsory, consists of five short answer questions; each question carries two marks.

Part-B consists of five questions carrying 10 marks each. There shall be two questions asked in the question paper from each module with either-or choice and the student should answer either of the two questions. The student shall answer one question from each of five modules.

The duration of SEE is 3 hours.

Laboratory Course: For practical courses there shall be a Continuous Internal Assessment (CIA) during the semester for 40 marks and 60 marks for semester end examination. Out of the 40 marks for internal evaluation:

1. A write-up on day-to-day experiment in the laboratory (in terms of Preparation / Performance in the laboratory / Calculations / Results and error analysis / Viva-voce) which shall be evaluated for **10 marks**.
2. **10 marks** for viva-voce (or) tutorial (or) case study (or) application (or) poster presentation of the course concerned.

3. Internal practical examination conducted by the laboratory teacher concerned shall be evaluated for **10 marks**.
4. The remaining **10 marks** are for Laboratory Project, which consists of the Project design / Program execution / field study submission which shall be evaluated after completion of laboratory course and before semester end practical examination.

The Semester End Examination shall be conducted with an external examiner and the laboratory handling faculty. The external examiner shall be appointed from the other colleges which will be decided by the head of the institute.

Semester End Examination held for 3 hours and total 60 marks are divided and allocated as shown below:

1. 10 marks for write-up
2. 15 for experiment/program
3. 15 for evaluation of results
4. 10 marks shall be awarded for the submission of a concise report on the industry relevance and practical applicability of the experiment/program, highlighting its potential use in real-world scenarios.
5. 10 marks for viva-voce on concerned laboratory course

Summer Internship

There shall be a summer internship during the summer vacation of II Semester and the evaluation is done in III Semester. Summer internship Report has to be submitted to the department after approval by the concerned supervisor/mentor and the Head of the department. Summer internship Report is evaluated for 100 marks. The report has to be evaluated by the Head, Supervisor/ mentor and a senior faculty of the department. A candidate has to secure a minimum of 50% of marks to be declared successful. If he fails to obtain the minimum marks, he has to reappear for the same during the supplementary examinations as and when conducted.

Pre Submission of the Project Seminar

The student can initiate the Project work after obtaining the approval of the PRC. The Supervisor and PRC will examine the progress of the Project Work during pre-submission project seminar. For the course 'pre-submission project seminar', there will be only internal evaluation for 100 marks. Evaluation shall be done by the PRC for 60 marks and the Supervisor shall evaluate the work for another 40 marks. A candidate has to secure a minimum of 50% of marks to be declared successful. If s/he fails to obtain the minimum marks, he has to reappear for the same during the supplementary examination as and when notification is issued,

Skill Development Courses:

Two Skill Development Courses are included in the Curriculum in III and IV semesters. Each skill development course carries two credits. The evaluation pattern will be same as that of a laboratory course including the internal and external assessments.

The objective of Skill Courses is to develop the cognitive skills as well as the psycho-motor skills.

Project work:

The project work should be carried out in the premises of Institute. However, it can also be carried out in any of the recognized Educational Institutions, Audit Firms, Industrial / Research Organizations, Service Organizations or Government Organizations with the prior permission from the supervisor and concerned Head of the Department.

- A Project Review Committee (PRC) shall be constituted with the Head of the Department as Chairperson, Dean nominated by the head of the institution, Supervisor and one or two senior faculty members of the Departments offering the MBA program.
- Registration of Project Work: A candidate is permitted to register for the project work at the beginning of IV semester after satisfying the attendance requirement in all the courses, both theory and laboratories upto III semester. The duration of the project work is one semester.

- A student shall submit the outcome of the project work in the form of a dissertation.
- A candidate shall be allowed to submit the project report only after fulfilling the attendance requirements of all the semesters.
- Every candidate shall work on projects approved by the PRC of the institute.
- The student shall submit the project work in the form of dissertation at least four weeks prior to the completion of the program. Head of the Department shall constitute an Internal Evaluation Committee (IEC) comprising of the Chairman BOS (PG), HOD and supervisor for project evaluation of the student.
- The Project thesis shall be adjudicated by one external examiner appointed by the Principal. The external examiner will be appointed by the Principal from the panel of experts provided by Chairman (BoS).
- If the report of the external examiner is **satisfactory**, the Head of the Department shall coordinate and make arrangement for the conduct of Main Project Viva-Voce examination. The Main Project Viva-Voce examination will be evaluated for 100 marks and it shall be conducted by a board consisting of the Supervisor, Head of the Department and the external examiner who adjudicated the Thesis. The candidate has to secure a minimum of 50% of marks in Project Work and Viva-Voce examination. The Project Work and Viva-Voce examination shall be conducted before commencement of the fourth semester end examinations.
- If the report of the examiner is **Unsatisfactory**, the candidate shall revise and resubmit the dissertation, in the time frame as prescribed by PRC. If the report of the examiner is unsatisfactory again, the thesis shall be summarily rejected. The candidates can re-register only once for conduct of project and evaluation of thesis, and will go through the entire process as mentioned above.
- If s/he fails to fulfill as specified, s/he will reappear for the Project Work and Viva Voice examination only after three months. In the reappeared examination also, fails to fulfill, s/he will not be eligible for the award of the degree.

The student will be allowed to appear for an open seminar followed by final viva voce examination at the end of last semester only, if s/he has submitted the project work in the form of paper for presentation/publication in a conference/journal and produce the proof of acceptance of the paper from the organizers/publishers.

10. ATTENDANCE REQUIREMENTS AND DETENTION POLICY:

- The program is offered on the basis of a module system with each course being considered a module. Attendance is calculated separately for each course.
- A student shall be eligible to appear for the semester-end examinations, if the student acquires a minimum of 75% of aggregate attendance of all the courses for that semester Attendance in all classes (Lectures/Laboratories) is compulsory. A student shall not be permitted to appear for the Semester End Examinations (SEE), if his/her attendance is less than 75%.
- **Condoning of shortage of attendance** (between 65% and 75%) up to a maximum of 10% (considering the days of attendance in sports, games, NCC, NSS activities and Medical grounds) in each course of a semester shall be granted by the institute academic committee on genuine reasons.
- Shortage of Attendance below 65% in any course shall in **no case be condoned**.
- A Student, whose shortage of attendance is **not condoned** in any course(s) in any semester, is considered detained in that course(s) and is not eligible to write Semester End Examination(s) of such subject(s) in that semester, and he has to seek re-registration for those courses(s) in subsequent semesters, and attend the same as and when offered.
- A student fulfills the attendance requirement in the present semester, shall not be eligible for readmission into the same class.

- A prescribed fee per course shall be payable for condoning shortage of attendance after getting the approval of institute academic committee for the same. The institute Academic Committee shall maintain relevant documents along with the request from the student.
- A Candidate shall acquire minimum required attendance course-wise in at least THREE theory courses in each semester for promoting to next semester.

11. CONDUCT OF SEMESTER END EXAMINATIONS AND EVALUATION:

- 11.1 Semester end examination shall be conducted by the Controller of Examinations (COE) by inviting Question Papers from the External Examiners.
- 11.2 COE shall invite 3-9 external examiners to evaluate all the end semester answer scripts on a prescribed date(s). Practical laboratory exams are conducted involving external examiners.
- 11.3 Examinations control office shall consolidate the marks awarded by internal and external examiners and award grades.

12. SCHEME FOR THE AWARD OF GRADE:

The following academic requirements have to be satisfied, in addition to the attendance requirements mentioned in clause no. 10. The performance of the candidate in each semester shall be evaluated course-wise, with a maximum of 100 marks per course (theory / laboratory), on the basis of Internal Evaluation (for 40 marks) and Semester End Examination (for 60 marks).

A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to each course, if he secures not less than 40% of marks (24 out of 60 marks) in the Semester End Examination (SEE), and a minimum of 50% of marks in the sum total of CIA (Continuous Internal Assessment) and SEE (Semester End Examination) taken together; in terms of Letter Grades and this implies securing 'B' Grade or above in a course.

A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to a course, if he secures not less than 50% of the total marks. The student is deemed to have failed, if he does not submit a report on summer internship or does not make a presentation of the same before the evaluation committee as per schedule. In such a case, he has to reappear for the same during the supplementary examinations as and when the notification is issued.

A student shall register for all courses for total of 105 credits as specified and listed in the course structure for the chosen specialization, put in the required attendance and fulfill the academic requirements for securing 105 credits obtaining a minimum of 'B' Grade or above in each course.

Note:

1. The SGPA will be computed and printed on the marks memo only if the candidate passes in all the courses offered and gets minimum 'B' grade in all the courses.
2. CGPA is calculated only when the candidate passes in all the courses offered in all the semesters

Marks and Letter Grades obtained in all those courses covering the above specified 105 credits alone shall be considered for the calculation of final CGPA, which will be indicated in the Grade Card /Marks Memo of second year second semester.

If a candidate fails to secure a pass in a particular course, it is mandatory that s/he shall register and reappear for the examination in that course during the next semester when examination is conducted in that course. It is mandatory that s/he should continue to register and reappear for the examination till s/he secures a pass.

If a student registers for extra course(s) (in the parent specialization or other specializations of Management) other than those listed courses totaling to 105 credits as specified in the course structure, the performance in extra course(s) (although evaluated and graded using the same procedure as that of the required 105 credits) will not be considered while calculating the SGPA and CGPA. For such extra course(s) registered, percentage of marks and Letter Grade alone will be indicated in the Grade

Card/Marks Memo, as a performance measure, subject to completion of the attendance and academic requirements.

Any student who got detained due to shortage of attendance in any course(s) in any semester, shall not be permitted to write the Semester End Examination of that course(s). However, he is eligible for re-registration of such course(s) in the subsequent semester(s), as and when next offered, with the academic regulations of the batch into which he is re-registered, by paying the prescribed fees per course. In all these re-registration cases, the student shall have to secure a fresh set of internal marks and Semester End Examination marks for performance evaluation in such course(s), and SGPA/CGPA calculations.

A student eligible to appear for the Semester End Examination in any course, but absent from it or failed (failing to secure 'B' Grade or above), may reappear for that course at the supplementary examination as and when conducted. In such cases, his Internal Marks assessed earlier for that course will be carried over, and added to the marks secured in the supplementary semester examination, for the purpose of evaluating his performance in that course.

A Student who fails to earn 105 credits as per the specified course structure, and as indicated above, within four academic years from the date of commencement of his first year first semester, shall forfeit his seat in MBA program and his admission shall stand cancelled.

13. LETTER GRADES AND GRADE POINTS:

Performances of students in each course are expressed in terms of marks as well as in Letter Grades based on absolute grading system. The UGC recommends a 10 point grading system with the following letter grades as given below:

% of Marks Secured in a Course (Class Intervals)	Letter Grade	Grade Points
90% and above ($\geq 90\%$, $\leq 100\%$)	O (Outstanding)	10
Below 90% but not less than 80% ($\geq 80\%$, $< 90\%$)	A+ (Excellent)	9
Below 80% but not less than 70% ($\geq 70\%$, $< 80\%$)	A (Very Good)	8
Below 70% but not less than 60% ($\geq 60\%$, $< 70\%$)	B+ (Good)	7
Below 60% but not less than 50% ($\geq 50\%$, $< 60\%$)	B (Above Average)	6
Below 50% ($< 50\%$)	F (Fail)	0
Absent	AB (Absent)	0

- A student is deemed to have passed and acquired to correspondent credits in particular course if s/he obtains any one of the following grades: "O", "A+", "A", "B+", "B".
- A student obtaining Grade "F" shall be considered "failed" and will be required to reappear as 'Supplementary Candidate' for the Semester End Examination (SEE), as and when conducted. In such cases, his Internal Marks (CIE Marks) in those courses will remain as obtained earlier in the examination.
- If a student has not appeared for the examinations, 'Ab' Grade will be allocated to him for any course and shall be considered 'failed'. Such student will be required to re-appear for supplementary / make-up exam as and when conducted. The internal marks in those courses will remain the same as those obtained earlier.
- A Letter Grade does not imply any specific marks percentage; it is only the range of percentage of marks.
- In general, a student shall not be permitted to repeat any course (s) only for the sake of 'Grade Improvement' or 'SGPA / CGPA Improvement'.

- At the end of each semester, the institute issues grade sheet indicating the SGPA and CGPA of the student. However, grade sheet will not be issued to the student if s/he has any outstanding dues.
- A student earns Grade Point (GP) in each Course, on the basis of the Letter Grade obtained by him in that Course. The corresponding 'Credit Points' (CP) are computed by multiplying the Grade Point with Credits for that particular Course.

Credit Points (CP) = Grade Point (GP) x Credits For a Course

- The student passes the Course only when he gets $GP \geq 6$ (B Grade or above).

14. COMPUTATION OF SGPA AND CGPA:

The UGC recommends to compute the Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA). The credit points earned by a student are used for calculating the Semester Grade Point Average (SGPA) and the Cumulative Grade Point Average (CGPA), both of which are important performance indices of the student.

The Semester Grade Point Average (SGPA) is calculated by dividing the Sum of Credit Points secured from all courses registered in a semester, by the total number of credits registered during that Semester. SGPA is rounded off to two decimal places. SGPA is thus computed as

$$SGPA = \frac{\sum_{i=1}^N C_i G_i}{\sum_{i=1}^N C_i} \dots \text{For each Semester,}$$

where 'i' is the course indicator index (taking into account all courses in a Semester), 'N' is the no. of courses 'registered' for the semester (as specifically required and listed under the Course catalogue of the parent department), C_i is the no. of Credits allotted to the i^{th} course, and G_i represents the Grade Points (GP) corresponding to the Letter Grade awarded for that i^{th} course.

The Cumulative Grade Point Average (CGPA) is a measure of the overall cumulative performance of a student over all semesters considered for registration. The CGPA is the ratio of the Total Credit Points secured by a student in ALL registered Courses in ALL Semesters, and the Total Number of Credits registered in ALL the Semesters. CGPA is rounded off to TWO decimal places. CGPA is thus computed from the II semester onwards, at the end of each Semester, as per the formula.

$$CGPA = \frac{\sum_{j=1}^M C_j G_j}{\sum_{j=1}^M C_j} \dots \text{for all Semesters registered}$$

where 'M' is the total no. of courses (as specifically required and listed under the Course catalogue of the parent Department) the student has 'registered' for from the 1st Semester onwards upto and inclusive of the Semester S (obviously $M > N$), 'j' is the course indicator (taking into account all courses from 1 to S Semesters), C_j is the no. of Credits allotted to the j^{th} course, and G_j represents the Grade Points (GP) corresponding to the Letter Grade awarded for that j^{th} course. After registration and completion of I semester however, the SGPA of that Semester itself may be taken as the CGPA, as there are no cumulative effects.

15. ILLUSTRATION OF COMPUTATION OF SGPA AND CGPA:

Illustration of calculation of SGPA:

Course Name	Course Credits	Grade letter	Grade point	Credit Point (Credit x Grade)
Course 1	4	A	8	$4 \times 8 = 32$
Course 2	4	O	10	$4 \times 10 = 40$
Course 3	4	B	6	$4 \times 6 = 24$
Course 4	3	B	6	$3 \times 6 = 18$

Course 5	3	A+	9	$3 \times 9 = 27$
Course 6	3	B	6	$4 \times 6 = 24$
	21			159

$$\text{Thus, SGPA} = 159 / 21 = 7.57$$

Illustration of calculation of CGPA:

Semester	Credits	SGPA	Credits * SGPA
Semester I	24	7	$24 \times 7 = 168$
Semester II	24	6	$24 \times 6 = 144$
Semester III	24	6.5	$24 \times 6.5 = 156$
Semester IV	24	6	$24 \times 6 = 144$
	96		612

$$\text{CGPA} = 612/96 = 6.37$$

SGPA of a semester will be mentioned in the semester Memorandum of Grades if all courses of that semester are cleared in first attempt. Otherwise, the SGPA shall be mentioned only on the Memorandum of Grades in which sitting he passed his last exam in that semester.

Conversion of CGPA into equivalent Percentage of Marks

The following formula shall be used for the conversion of CGPA into equivalent marks, whenever it is necessary

$$\text{Percentage (\%) of Marks} = (\text{Final CGPA} - 0.5) \times 10$$

16. REVALUATION:

If the examinee is not satisfied with the marks awarded, s/he may apply for revaluation of answer booklets in prescribed format online within three (3) working days from the date of declaration of result of the examination or issue of the statement of marks, whichever is earlier. The revaluation facility shall be for theory papers only. The revaluation of answer booklets shall not be permitted in respect of the marks awarded to the scripts of practical examination / project work (including theory part) and in viva voce / oral / comprehensive examinations.

17. GRADUATION REQUIREMENTS:

The following academic requirements shall be met for the award of the MBA degree.

If a student, who registers for all the specified courses as listed in the course catalog, satisfies all the course requirements, and passes the examinations prescribed in the entire MBA program, and secures the required number of **105 Credits** with $\text{CGPA} \geq 6.0$ (B Grade or above), shall be declared to have 'QUALIFIED' for the award of the MBA degree that he was admitted into.

18. AWARD OF DEGREE and CLASS:

If a student who registers for all the courses listed in the course catalogue and secures the required number of 105 Credits within 4 academic years from the date of commencement of the first academic year, shall be declared to have qualified for the award of the MBA degree that he was admitted into.

Award of Class:

After a student has earned the requirements prescribed for the completion of the program and is eligible for the award of MBA Degree, s/he shall be placed in one of the following three classes based on the CGPA:

Classification of degree will be as follows:

Class Awarded	CGPA
First Class with Distinction	≥ 7.5
First Class	$6.5 \leq \text{CGPA} < 7.5$
Second Class	$6.00 \leq \text{CGPA} < 6.5$

Note: A student with final CGPA (at the end of the MBA Program) < 6.00 shall not be eligible for the award of degree.

The student shall not take more than four academic years to fulfill all the academic requirements for the award of MBA degree from the date of commencement of first year first semester, failing which the student shall forfeit the seat in MBA program.

19. RE-ADMISSION / RE-REGISTRATION

19.1 Re-Admission for Discontinued Student

A student, who has discontinued the MBA degree program due to any reason whatsoever, may be considered for 'readmission' into the same degree program (with the same specialization) with the academic regulations of the batch into which he gets readmitted, with prior permission from the authorities concerned.

19.2 A student detained due to shortage of attendance shall be admitted in the same semester in the successive academic years with the academic regulations of the batch into which he seeks re-registration, with prior permission from the authorities concerned.

20. WITH-HOLDING OF RESULTS

If the candidate has not paid any dues to the college / if any case of indiscipline / malpractice is pending against him, the results of the candidate will be withheld. The issue of the degree is liable to be withheld in such cases.

21. TERMINATION FROM THE PROGRAM

The admission of a student to the program may be terminated and the student may be asked to leave the institute in the following circumstances:

- a) The student fails to satisfy the requirements of the program within the maximum period stipulated for that program.
- b) The student fails to satisfy the norms of discipline specified by the institute from time to time.

22. DISCIPLINE

Every student is required to observe discipline and decorum both inside and outside the institute and not to indulge in any activity which will tend to bring down the honor of the institute. If a student indulges in malpractice in any of the theory / practical examination, continuous assessment examinations he/she shall be liable for punitive action as prescribed by the Institute from time to time.

23. GRIEVANCE REDRESSAL COMMITTEE

The institute shall form a Grievance Redressal Committee for each course in each department with the Course handling faculty and the HOD as the members. This Committee shall solve all grievances related to the course under consideration.

24. TRANSITORY REGULATIONS

A. For students detained due to shortage of attendance:

1. A Student who has been detained in I year of MB23 Regulations due to lack of attendance, shall be permitted to join I semester of MB25 Regulations and he is required to complete the study of MBA program within the stipulated period of four academic years from the date of first admission in I Year.
2. A student who has been detained in any semester of II year of MB23 regulations for want of attendance, shall be permitted to join the corresponding semester of MB25 Regulations and

is required to complete the study of MBA within the stipulated period of four academic years from the date of first admission in I Year. The MB25 academic regulations under which a student has been readmitted shall be applicable to that student from that semester. See rule (B) for further transitory regulations.

B. For readmitted students in MB25 Regulations:

3. A student who has failed in any course under any regulation has to pass those courses in the same regulations.
4. The maximum credits that a student acquires for the award of degree, shall be the sum of the total number of credits secured in all the regulations of his/her study including MB25 regulations. There is NO exemption of credits in any case.
5. If a student is readmitted to MB25 Regulations and has any course with 80% of syllabus common with his/her previous regulations, that particular course in MB25 Regulations will be substituted by another course to be suggested by the University.

Note: If a student readmitted to MB25 Regulations and has not studied any courses/ topics in his / her earlier regulations of study which is prerequisite for further courses in MB25 Regulations, the institute Principals concerned shall conduct remedial classes to cover those courses / topics for the benefit of the students.

25. STUDENT TRANSFERS

- 25.1 There shall be no branch transfers after the completion of admission process.
- 25.2 There shall be no transfers from one college/stream to another within the constituent colleges and units of Jawaharlal Nehru Technological University Hyderabad.

26. MAPPING WITH THE SUSTAINABLE DEVELOPMENT GOALS

All the courses specified in the course structure of every program are mapped with the one or more sustainable development goals.

27. REVISION OF REGULATIONS AND CURRICULUM

The Institute from time to time may revise, amend or change the regulations, scheme of examinations and syllabi if found necessary and on approval by the Academic Council and the Governing Body shall come into force and shall be binding on the students, faculty, staff, all authorities of the Institute and others concerned.

**FAILURE TO READ AND UNDERSTAND
THE REGULATIONS IS NOT AN EXCUSE**



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MASTER OF BUSINESS ADMINISTRATION

Course Catalogue- MB25

I SEMESTER

Course Code	Course Name	Category	Periods Per Week			Credits	Scheme of Examination Max. Marks		
			L	T	P		CIA	SEE	Total
THEORY									
CMBE01	Management and Organizational Behavior	Core	4	-	-	4	40	60	100
CMBE02	Financial Reporting and Analysis	Core	4	-	-	4	40	60	100
CMBE03	Business Economics	Core	4	-	-	4	40	60	100
CMBE04	Business Law and Environment	Core	4	-	-	4	40	60	100
CMBE05	Research Methodology and Statistics Analysis	Core	4	-	-	4	40	60	100
--	Open Elective – I	Elective	3	-	-	3	40	60	100
PRACTICAL / SEMINAR									
CMBE12	Statistical Data Analysis Laboratory	Core	1	0	2	2	40	60	100
CMBE13	Business Communication and Soft Skills - Seminar	Core	1	0	2	2	40	60	100
TOTAL			25	00	04	27	320	480	800

II SEMESTER

Course Code	Course Name	Category	Periods Per Week			Credits	Scheme of Examination Max. Marks		
			L	T	P		CIA	SEE	Total
THEORY									
CMBE14	Human Resource Management	Core	4	-	-	4	40	60	100
CMBE15	Financial Management	Core	4	-	-	4	40	60	100
CMBE16	Marketing Management	Core	4	-	-	4	40	60	100
CMBE17	Entrepreneurship and Design Thinking	Core	4	-	-	4	40	60	100
CMBE18	Management Information Systems	Core	4	-	-	4	40	60	100
CMBE19	Quantitative Analysis for Business Decisions	Core	4	-	-	4	40	60	100
--	Open Elective – II	Elective	3	-	-	3	40	60	100
FIELD SURVEY REPORT									
CMBE26	Start-up / MSME / Innovation Development Plan / Sector Specific - Field Report	Core	-	-	2	1	100	-	100
TOTAL			27	00	02	28	380	420	800

*Internship during summer vacation (after Semester –II): 2 credits

III SEMESTER

Course Code	Course Name	Category	Periods Per Week			Credits	Scheme of Examination Max. Marks		
			L	T	P		CIA	SEE	Total
THEORY									
CMBE27	Logistics and Supply Chain Management	Core	4	-	-	4	40	60	100
CMBE28	AI for Business	Core	4	-	-	4	40	60	100
CMBE29	Business Analytics	Core	4	-	-	4	40	60	100
--	Program Elective - I	Elective	4	-	-	4	40	60	100
--	Program Elective - II	Elective	4	-	-	4	40	60	100
--	Program Elective - III	Elective	4	-	-	4	40	60	100
PRACTICAL/INTERNSHIP									
CMBE45	Data Visualization Lab	Core	1	-	2	2	40	60	100
CMBE46	Summer Internship	Core	-	-	4	2	100	-	100
TOTAL			24	-	06	28	380	420	800

IV SEMESTER

Course Code	Course Name	Category	Periods Per Week			Credits	Scheme of Examination Max. Marks		
			L	T	P		CIA	SEE	Total
THEORY									
CMBE47	Strategic Management	Core	4	-	-	4	40	60	100
--	Program Elective - IV	Elective	4	-	-	4	40	60	100
--	Program Elective - V	Elective	4	-	-	4	40	60	100
--	Program Elective - VI - Elective Specific Analytics Theory	Elective	2	-	-	2	40	60	100
PRACTICAL/ SEMINAR/ PROJECT WORK									
--	Program Elective - VI - Elective Specific Analytics Laboratory	Elective	-	-	4	2	40	60	100
CMBE68	Pre-submission Project Seminar	Core	-	-	4	2	100	-	100
CMBE69	Main Project Viva-Voce	Core	-	-	9	4	-	100	100
TOTAL			16	-	13	22	300	400	700

PROFESSIONAL ELECTIVES

Choose any one group of specialization for each semester from the following:

III SEMESTER	
Group - I: MARKETING	
CMBE30	Digital Marketing
CMBE31	Sales and Promotion Management
CMBE32	Brand Management and Consumer Behaviour
Group - II: FINANCE	
CMBE33	Security Analysis and Portfolio Management
CMBE34	Financial Technologies (FINTECH)
CMBE35	Strategic Cost and Management Accounting
Group - III: HUMAN RESOURCE MANAGEMENT	
CMBE36	Talent and Performance Management Systems
CMBE37	Learning and Development
CMBE38	Employee Relations
Group - IV: SYSTEMS	
CMBE39	Business Intelligence
CMBE40	Database Management Systems
CMBE41	Managing Digital Platforms
Group - V: ENTREPRENEURSHIP	
CMBE42	Startup and MSME Management
CMBE43	Family Business Management
CMBE44	Creativity Innovation and Entrepreneurship
IV SEMESTER	
Group - VI: MARKETING	
CMBE48	Services and Retailing Management
CMBE49	International Marketing
CMBE50	Marketing Analytics
CMBE51	Marketing Analytics Laboratory
Group - VII: FINANCE	
CMBE52	International Financial Management
CMBE53	Banking, Insurance and Risk Management
CMBE54	Financial Analytics
CMBE55	Financial Analytics Laboratory
Group - VIII: HUMAN RESOURCE MANAGEMENT	
CMBE56	Compensation and Reward Management
CMBE57	International Human Resource Management
CMBE58	HR Metrics and Analysis
CMBE59	HR Metrics and Analysis Laboratory
Group - IX: SYSTEMS	
CMBE60	Enterprise Resource Planning
CMBE61	Business Data Mining, Warehousing and Visualization
CMBE62	Machine Learning and Artificial Intelligence
CMBE63	Machine Learning and Artificial Intelligence Laboratory
Group - X: ENTREPRENEURSHIP	
CMBE64	Entrepreneurial Finance and Marketing

CMBE65	Social Entrepreneurship
CMBE66	Technology Business Incubation
CMBE67	Business Incubation – Idea Laboratory

OPEN ELECTIVES			
I SEMESTER		II SEMESTER	
Course Code	Course Title	Course Code	Course Title
CMBE06	Indian Ethos and Values for Management	CMBE20	R-Programming for Business Analytics
CMBE07	ESG and Sustainability Management	CMBE21	Psychology and Life
CMBE08	Cross Cultural Management	CMBE22	Business Ethics and Corporate Governance
CMBE09	Cyber Security	CMBE23	Disaster Management
CMBE10	Essentials of Managerial Skills	CMBE24	Total Quality Management
CMBE11	Project Management	CMBE25	Rural Marketing

COURSE CONTENT

(I – IV SEMESTERS)



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COURSE CONTENT

MANAGEMENT AND ORGANIZATIONAL BEHAVIOR								
I Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE01	Core	L	T	P	C	CIA	SEE	Total
		4	0	-	4	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Basic concepts of management								
SDGs Mapped: SDG 8 (Decent Work & Economic Growth), SDG 5 (Gender Equality)								

I. COURSE OVERVIEW:

The course focuses on the organization study of management principles and practices with the study of human behaviour within organizations and focus will be upon translation of management and organizational behaviour theory to practices that result in organizational effectiveness, efficiency, and human resource development. This course will provide a good foundation to study how to create effective workgroups to be successful in life.

II. COURSES OBJECTIVES:

The students will try to learn:

- The critical management theories, principles and philosophies and how to apply them in business landscape.
- The better utilization of human resources for different positions in the organization and also to monitor the resources.
- The leadership traits and theorist anticipates the consequences of each leadership style.
- The individual and group behavior, and understand the implications of organizational behavior on the process of management.
- The group behavior in organizations, including communication, leadership, power and politics, conflict, and negotiations.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Demonstrate the basic concepts and levels of management to make better organizational decisions.
- CO2 Make use of plans and the planning process that helps organization to gain competitive advantage.
- CO3 Use the knowledge of processes used in developing the various organizational designs.
- CO4 Summarize the authority and power to influence people to get the work done through proper Communication channel.
- CO5 Illustrate the behaviour of individuals and groups in organizations that resolve conflicts in organization.
- CO6 Apply various types of motivational theories that help to achieve organizational goals.

IV. COURSE CONTENT:

MODULE - I: INTRODUCTION TO MANAGEMENT (08)

Management- Definition, Nature, Purpose, Evolution of Management Thought-Scientific Management, Administrative Theory, Human Relations Approach, Hawthorne experiments, Behavioral Approach, Systems Theory. Managerial Roles, Managerial Levels, Managerial Skills, Functions of Management, Administration vs. Management, Contemporary Management Issues and Challenges.

MODULE - II: PLANNING AND DECISION MAKING (10)

Planning and Goal Setting, Organizational Planning, Vision, Mission and Goals, Types of Plans, Steps in Planning Process, Approaches to Planning, Planning in Dynamic Environment. Decision-making Process, Types of Decisions, Decision Making Styles, Vroom's Participative Decision-making Model.

MODULE - III: ORGANIZING AND CONTROLLING (09)

Organizational Structure, Principles of Organizing, Authority, Power and Influence, Designing Organizational Structure, Mechanistic and Organic Structures, Contemporary Organizational Design and its Challenges.

Controlling: The Control Process, Controlling for Organizational Performance, Types of Control, Financial Controls, Balanced Scorecard, Bench Marking, Contemporary issues in Controlling.

MODULE - IV: ORGANIZATION BEHAVIOUR (10)

Organization Behavior – Nature, Levels, Challenges, Individuals in Organizations - Personality and Ability. Big Five Model of Personality, Personality Traits, Ability - Cognitive Ability, Physical Ability, Emotional Intelligence, Group Dynamics and Teams- Types of Work Groups, Group Development, Characteristics of Work Groups, Effective Work Groups and Teams.

MODULE - V: LEADERSHIP AND MOTIVATION (08)

Leadership Traits, Leadership Styles, Leadership Theories, Power and Politics.

Motivation: Approaches to Motivation, Maslow's Needs Hierarchy Theory, Two-factor Theory of Motivation, McGregor's Theory, ERG theory, McClelland's Needs Theory, Valance Theory.

V. TEXTBOOKS:

1. K. Aswathappa, Organisational Behaviour, Himalaya Publications, 8e, 2021.
2. Harold Koontz, Heinz Weihrich, Mark V Cannice, Essentials of Management, Tata McGraw Hill Education, 11e, 2020.
3. John R Schermerhorn; Paul Davidson; Peter Woods; Aharon Factor, "Management", Milton, QLD: John Wiley and Sons Australia, Ltd, 7th edition, 2020.
4. Gerald A Cole and Phil Kelly, "Management Theory and Practice", Cengage Learning EMEA, 9th edition, 2020.

VI. REFERENCE BOOKS:

1. Stephen P. Robbins, Timothy A. Judge, Neharika Vohra, "Organizational Behavior", Pearson, 16th edition, 2017.
2. Laurie J. Mullins, "Management, and Organizational Behavior", Pearson Publications, 9th edition, 2012.
3. Dr. Vandana Jain, "Management Theory and Practice", IBH, 7th edition, 2012.
4. Ramesh B. Rudani, "Management and Organizational Behavior", Tata McGraw hill, 8th edition, 2011.
5. Rajeesh Viswanathan, "Principles of Management Concepts and Cases", Himalaya Publishing House (HPH), 10th edition, 2010.

VII. WEB REFERENCES:

1. https://play.google.com/store/books/details/Knowledge_Flow_Principles_of_Management?id=PUTIDAAQBAJ
2. https://play.google.com/store/books/details/M_GOVINDARAJAN_Principles_of_Management?id=novpISVa5agC
3. https://play.google.com/store/books/details/J_S_Chandan_Principles_of_Management_WBUT_2nd_Edit?id=ZmZDDAAAQBAJ

VIII. E-TEXT BOOKS:

1. <https://www.amazon.in/Management-Theory-Practice-G-Cole/dp/1844800881>
2. <https://www.worldcat.org/title/autopoiesis-in-organization-theory-and-practice/oclc/794708761?referer=di&ht=edition>
3. https://www.worldcat.org/title/work-postmodernism-and-organization-a-critical-introduction/oclc/1058003392&referer=brief_results
4. https://www.researchgate.net/publication/349006226_MANAGEMENT_THEORY_AND_PRACTICE
5. <https://www.worldcat.org/title/management-theory-and-practice-text-cases/oclc/896139825?referer=di&ht=edition>



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COURSE CONTENT

FINANCIAL REPORTING AND ANALYSIS								
I Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE02	Core	L	T	P	C	CIA	SEE	Total
		4	0	-	4	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Basic Concepts of Accounting								
SDGs Mapped: SDG 9 (Industry, Innovation and Infrastructure), SDG 12 (Responsible Consumption & Production)								

I. COURSE OVERVIEW:

Financial statements are very useful to the business concerns to interpret and analyze the financial growth of different companies. The course focuses on the objectives and importance of financial accounting, accounting concepts, accounting conventions, method of recording transactions under double entry system, accounting process like journal, ledger, trial balance and final accounts that enable students to understand earning position and financial position of business concern. This course includes appreciate and use financial statements as means of business communication. This course uses the analytical techniques of inventory valuation, funds flow and cash flow statements.

II. COURSES OBJECTIVES:

The students will try to learn:

- I. The principles of accounting and utilization of financial information for decision making and forward planning for future.
- II. The financial statements for knowing earning capacity and financial position of the business concern with confidence.
- III. The inventory valuation of different companies and make analysis of financial accounts.
- IV. The significance of financial statements as means of business communication.
- V. The analytical techniques and arriving at conclusions from financial information for the purpose of decision making

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Explain the principles, concepts, and conventions of accounting and their role in financial reporting.
- CO2 Apply the accounting process for recording, classifying, and summarizing financial transactions and compute depreciation using different methods to reflect asset valuation accurately.
- CO3 Evaluate inventory valuation methods and share capital transactions in business accounting.
- CO4 Describe the features, significance and classification of shares and debentures to maintain records for issue of shares at par and discount.
- CO5 Prepare and analyze funds flow and cash flow statements for financial planning.
- CO6 Evaluate the financial health of an organization using ratio analysis and interpretation of financial statements.

IV. COURSE CONTENT:

MODULE - I: INTRODUCTION TO ACCOUNTING (08)

Definitions, meaning, Importance, limitations, objectives, functions of financial accounting and classification of accounts, principles of accounts, accounting concepts and conventions, the generally accepted accounting principles (GAAP), their implications on accounting system; advantages and limitations of double entry system, accounting cycle.

MODULE - II: THE ACCOUNTING PROCESS (10)

Books of original record: journal and subsidiary books, ledger, trial balance, final accounts with adjustments: Methods of depreciation: Meaning, definitions, causes of depreciation, methods of depreciation like fixed installment method, diminishing balance method, annuity method and depreciation fund method (simple problems).

MODULE - III: INVENTORY VALUATION (09)

Meaning, objectives of inventory valuation, methods, merits and demerits of inventory valuation methods like FIFO method, LIFO method, weighted average method, simple average method (problems).

Issue of shares: entries for issue of shares at par, issue of shares at discount and premium, calls in arrears, forfeiture of shares, reissue of forfeiture of shares (problems).

MODULE - IV: FINANCIAL ANALYSIS (09)

Meaning, definitions, significance, limitations of funds flow and cash flow statements, Statement showing changes in working capital, funds from operations, distinction between funds flow and cash flow statements, funds flow and income statement, funds flow and balance sheet, cash profits and book profits; preparation and analysis of funds flow statement and cash flow statement (problems).

MODULE - V: FINANCIAL STATEMENTS AND RATIO ANALYSIS (09)

Analysis and interpretation of financial statements from investor and company point of view, horizontal analysis and vertical analysis of company financial statements; meaning, definitions, significance and limitations of ratio analysis; types of ratios like liquidity, leverage, solvency and profitability ratios (problems).

V. TEXTBOOKS:

1. S.N. Maheshwari, S. K. Maheshwari, Sharad K. Maheshwari, Accounting for Management, Vikas Publishing House, 5e, 2022.
2. Narayana Swamy R, "Financial Accounting: A Management Perspective", Prentice Hall of India, Delhi, 4th edition, 2022.
3. Paresh Shah, "Financial Accounting for Management", Oxford University Press, 3rd edition, 2019.
4. Prter & Norton, "Financial Accounting", Cengage publications, 9th edition, 2017.

VI. REFERENCE BOOKS:

1. V.Rajasekharam "Financial Accounting and Analysis" Pearson Education, 13th edition, 2012.
2. Ranjan Kumar Bai: "Financial Accounting and Analysis", S.Chand, 1st revised edition, 2012.
3. S.N.Maheshwari and S.K.Maheshwari, "Financial Accounting", Vikas publications, 4th edition, 2009.
4. Hanif and Mukarjee, "Financial Accounting", Tata McGraw Hill Ltd., 2nd edition, 2011.
Tulsian P.C., "Financial Accounting", Pearson Education, Revised 1st edition, 2013.

VII. WEB REFERENCES:

1. http://www.koledza.lv/best/download/biblioteka/Financial_Accounting.pdf.
2. http://www.tutorialspoint.com/accounting_basics/accounting_basics_tutorial.pdf.

VIII. E-TEXT BOOKS:

1. <http://www.free-management-ebooks.com/skills-finance.html>.
2. <http://www.amazon.com/Financial-Reporting-Analysis-Lawrence-Revsine-book/dp/B005KLBRDS>.



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal - 500 043, Hyderabad, Telangana

COURSE CONTENT

BUSINESS ECONOMICS								
I Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE03	Core	L	T	P	C	CIA	SEE	Total
		4	0	-	4	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Basic concepts of economics								
SDGs Mapped: SDG 8 (Decent Work & Economic Growth), SDG 9 (Industry, Innovation and Infrastructure)								

I. COURSE OVERVIEW:

This course helps to understand the economic goals of firm and optimal decision making. Managerial economics considers macroeconomic factors such as population growth and economic growth in market. It includes production management, Demand and supply, cost of production, market structure pricing, pricing strategies and output decision. It deals with tools of math's and statistics in order to analyze and make optimal decision making.

II. COURSES OBJECTIVES:

The students will try to learn:

- The application of economic theory and methodology as alternative in managerial decisions in an organization.
- The design competition strategies, including costing, pricing, product differentiation, and market. Environment according to the natures of products and the structures of the markets.
- The quantitative techniques to business decisions using economic concepts such as supply and demand, price elasticity and marginal analysis.
- The price to charge that maximizes profits under a variety of circumstances, including perfect and imperfect competition and when the firm can identify groups of consumers.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Demonstrate the nature and scope of managerial economics in the modern business to foster the goals of the organization.
- CO2 Identify the fundamentals of managerial economics such as demand, production, price and supply which helps in doing business effectively.
- CO3 Evaluate benefit/cost, life cycle and break even analyses on one or more economic alternatives.
- CO4 Discuss various forms of production functions to know its affects in the cost of production.
- CO5 Examine the cost concepts and determinants of cost function and compare the differences between short-run and long-run cost function.
- CO6 Summarize the industry structure at firm level to develop pricing strategies with profit maximization.

IV. COURSE CONTENT:

MODULE - I: INTRODUCTION TO BUSINESS ECONOMICS (10)

Definition, Nature and Scope, Relationship with other disciplines – business decision making process- The role of managerial economist- Basic economic principles – the concept of opportunity cost, Marginalism, Equi-marginalism, incremental concept, Time perspective, discounting principle, risk and uncertainty.

MODULE - II: THEORY OF DEMAND AND SUPPLY (08)

Demand Analysis - demand function, law of demand, determinants of demand, types of demand. Elasticity of demand, types, Measurement and significance of Elasticity of Demand. Demand Forecasting, Need for Demand Forecasting, Methods of Demand Forecasting. Supply – Supply function, determinants of supply, law of supply, Elasticity of Supply.

MODULE - III: PRODUCTION AND COST ANALYSIS (09)

Production function, Production function with one, two variables, Cobb-Douglas Production Function, Marginal Rate of Technical Substitution, Isoquants and Isocosts, Returns to Scale, Economies of scale - Innovations and global competitiveness.

Cost concepts, determinants of cost, cost-output relationship in the short run and long run, short run vs. long run costs, average cost curves, Break Even Analysis.

MODULE - IV: MARKET STRUCTURES- PRICING AND OUTPUT DECISIONS (08)

Classification of Market Structures - Features - competitive situations - Price-Output determination under Perfect competition, Monopoly, Monopolistic competition and Oligopoly - both the long run and short run.

MODULE - V: PRICING STRATEGIES (10)

Pricing Policy, Price Discrimination, Cost plus Pricing, Pricing of multiple products, Transfer pricing, Pricing over Product Life Cycle. Theory of Firm - Managerial Theories and Behavioral Theories of firm. International Price Discrimination: Dumping, Effects of Dumping.

V. TEXTBOOKS:

1. Dr. D.M. Mithani, “Managerial Economics”, Himalaya Publishing House, 1st edition, 2022.
2. TR Jain and Khanna OP, “Managerial Economics”, VK Global Publications Pvt Ltd, 1st edition, 2020.
3. G Keat, Young K Y, Erfile E, Benarjee S, “Managerial Economics”, Pearson Education, 6th edition , 2017.
4. H L Ahuja, “Managerial Economics – Analysis of managerial Decision making”, S. Chand publications, New Delhi, 2nd edition, 2017.
5. P L Mehta, “Managerial Economics-Analysis, problems and Cases”, Sultan Chand & Sons, New Delhi, 2nd edition, 2016.

VI. REFERENCE BOOKS:

1. D M Mithani “Managerial Economics: Theory and Applications”, Himalaya Publication house, Hyderabad, 2nd edition, 2016.
2. G S Gupta, “Managerial Economics”, Tata McGraw Hill Publications, New Delhi, 2nd edition, 2017.

VII. WEB REFERENCES:

1. https://www.google.co.in/books/edition/Managerial_Economics/9clcDwAAQBAJ?hl=en&gbpv=1&dq=Managerial+Economics&printsec=frontcover
2. https://www.google.co.in/books/edition/Managerial_Economics_8th_Edition/H7FDDAAAQBAJ?hl=en&gbpv=1&dq=Managerial+Economics&printsec=frontcover
3. https://www.google.co.in/books/edition/MANAGERIAL_ECONOMICS/Q53GDgAAQBAJ?hl=en&gbpv=1&dq=Managerial+Economics&printsec=frontcover

VIII. E-TEXT BOOKS:

1. <https://www.sxccal.edu/wp-content/uploads/2020/01/MBA-Accounting-Managers-1stYear.pdf>
2. <https://www.freebookcentre.net/business-books-download/Accounting-Tools-For-Business-Decision-Making.html>
3. <https://pingpdf.com/pdf-managerial-economics-by-t-r-jain-free-pdf-download.html>
4. <https://mrcet.com/downloads/MBA/Managerial%20Economics.pdf>



INSTITUTE OF AERONAUTICAL ENGINEERING

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COURSE CONTENT

BUSINESS LAW AND ENVIRONMENT								
I Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE04	Core	L	T	P	C	CIA	SEE	Total
		4	0	-	4	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Basic knowledge of business and government policies								
SDGs Mapped: SDG 16 (Peace, Justice and Strong Institutions), SDG 12 (Responsible Consumption & Production)								

I. COURSE OVERVIEW:

To analyse the overall business environment and evaluate its various components in business decision making and provides an analysis and examination of significant contemporary ethical issues and challenges exist throughout the professional business arena. Business law provides the knowledge regarding the companies act to incorporate a company and also about partnership form of business organizations and duties and rights of partners and also about concepts relating to competition act.

II. COURSES OBJECTIVES:

The students will try to learn:

- I. The provisions of the Companies Act, 2013, and corporate governance practices.
- II. The principles of contract law and their application in business transactions.
- III. The Negotiable Instruments Act and its relevance to modern financial practices.
- IV. The influence of government policies, reforms, and business environment on organizations.
- V. The implications of business regulations, intellectual property rights, and environmental laws for sustainable business practices.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Explain the provisions of the Companies Act, 2013, including incorporation, directors, auditors, meetings, resolutions, and winding-up.
- CO2 Interpret and apply the principles of contract law, contracts of indemnity, guarantee, agency, and the Sale of Goods Act in business contexts.
- CO3 Analyze the provisions of the Negotiable Instruments Act, including types, endorsements, and discharge of instruments.
- CO4 Evaluate the impact of amendments and RBI guidelines on negotiable instruments and digital transactions.
- CO5 Assess the role of industrial policy, fiscal and monetary reforms, and NITI Aayog in shaping the business environment.
- CO6 Demonstrate knowledge of consumer protection, IT, competition, intellectual property, and environmental laws for sustainable business operations.

IV. COURSE CONTENT:

MODULE - I: Companies Act - 2013 (08)

Companies Act, 2013, Steps and Procedure for Incorporation of a Company, Appointment of Directors, Powers, Duties, & Liabilities of Directors, Role of Audit and Auditors, Change of Auditors, Related Party Transactions, Company Meetings, Resolutions, Winding-up of a Company.

MODULE - II: Law of Contract (09)

Nature and Types of Contract and Essential Elements of Valid Contract, Offer and Acceptance, Consideration, Capacity to Contract and Free Consent, Legality of Object. Unlawful and illegal Agreements, Contingent Contracts, Performance and Discharge of Contracts, Remedies for Breach of Contract.

Contracts-II: Indemnity and Guarantee, Contract of Agency, Sale of Goods Act-1930: General Principles, Conditions & Warranties, Performance of Contract of Sale, Auction Sale and E-Auctions.

MODULE - III: NEGOTIABLE INSTRUMENTS ACT (1881) (10)

Definition of Negotiable Instruments – features – Promissory note; bill of exchange & cheque; Holder and holder in the due course, crossing of a cheque, types of crossing; Negotiation; Dishonor and discharge of Negotiable Instrument.

Types of Endorsements, Holder, Holder in Due-course, Dishonor and Discharge of Negotiable Instruments, Offences by the Companies, Amendments, RBI Guidelines on Digital Transactions.

MODULE - IV: BUSINESS ENVIRONMENT (10)

Industrial Policy, Five Year Planning, Foreign Direct Investment (FDI), Fiscal Policy, Latest Union Budget, Reforms Undertaken by the Government, Monetary Policy, Banking Sector Reforms, NITI Aayog, Responsibilities and Functions, Green Business Initiatives.

MODULE - V: BUSINESS REGULATIONS AND ENVIRONMENT LAWS (08)

a) Consumer Protection Act 2019, Information Technology Act 2000, Cyber Security Competition Act 2002, Intellectual Property Rights.

b) Environmental Law: Water, Air Pollution, Green Tribunal in Protecting Environment, Sustainability Reporting Practices.

V. TEXTBOOKS:

1. Ravinder Kumar, “Legal Aspects of Business”, Sengae Learning, 6th edition, 2024.
2. MC Kuchhal, Vivek Kuchhal, Business Legislation for Management, Vikas, Publishing House, 9e, 2024.
3. V Balachandran, Legal Aspects of Business, 2e, Vijay Nicole Imprints, 2023.
4. Rajdeep Banerjee, Joyeeta Banerjee, Legal Aspects of Business, Sage Publications, 1e, 2022.
5. N.D. Kapoor, Dr. Rajni Abbi, Bharat Bhushan, Rajiv Kapoor, “Business Law”, Sultan Chand & Sons (P) Ltd, 1st edition, 2019.
6. Richard A Mann, Barry S Roberts, “Business Law and the Regulation of Business”, Cengage Publications, 13th edition, 2018.

VI. REFERENCE BOOKS:

1. K. Aswathappa, Essentials of Business Environment, Himalaya Publishers.
2. P.K. Dhar, Indian Economy Growing Dimensions, Kalyani Publishers.
3. N.D. Kapoor, Mercantile Law, Sultan Chand Publishers.
4. Chaula and Garg, Mercantile Law, Kalyani Publishers
5. Francis Cherunillam, Business Environment, Himalaya Publishers, 13e, 2022.

VII. Web References:

1. <https://www.pdfdrive.com/introduction-to-law-e28667799.html>
2. <https://www.pdfdrive.com/introduction-to-business-law-e187119724.html>

VIII. E-Text Books:

1. <https://www.pdfdrive.com/business-law-e18720370.html>
2. <https://www.pdfdrive.com/business-law-an-introduction-e28723759.html>
3. <https://pingpdf.com/pdf-managerial-economics-by-t-r-jain-free-pdf-download.html>



INSTITUTE OF AERONAUTICAL ENGINEERING

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Dundigal - 500 043, Hyderabad, Telangana

COURSE CONTENT

RESEARCH METHODOLOGY AND STATISTICS ANALYSIS								
I Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE05	Core	L	T	P	C	CIA	SEE	Total
		4	0	-	4	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Basic knowledge on statistics and research methodology								
SDGs Mapped: SDG 4 (Quality Education), SDG 9 (Industry, Innovation and Infrastructure)								

I. COURSE OVERVIEW:

This course is designed to understand of statistical methods and research techniques, enabling to make informed decisions in the field of management and conduct research effectively. The practical skills gained in this course are valuable for professionals in a wide range of industries and are often a foundation for further studies in business and management.

II. COURSES OBJECTIVES:

The students will try to learn:

- The various statistical techniques and solve problems effectively in the statistics.
- The different types of skewness and know about the coefficient variations of skewness.
- The application of statistical measures of central tendency and also statistical measures of dispersion.
- The application of ANOVA, other non-parametric test and analyze the recent trends.
- The time series analysis and also trend analysis of data and also know its importance for solving the problems arising.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Apply measures of central tendency, dispersion, skewness, and kurtosis for statistical analysis in business.
- CO2 Design business research using appropriate research methods, sampling techniques, and measurement tools.
- CO3 Interpret data using tabulation, diagrams, graphs, and perform hypothesis testing with t-tests.
- CO4 Formulate hypotheses and test them using small sample techniques for managerial decision-making.
- CO5 Apply ANOVA, chi-square, correlation, and regression techniques to analyze business data.
- CO6 Prepare professional research reports and perform time series analysis for forecasting trends.

IV. COURSE CONTENT:

MODULE - I: INTRODUCTION TO STATISTICS (08)

Functions of Statistics and Managerial Applications of Statistics, Relationship with other subjects. Measures of central Tendency- Mean, Median, Mode, Geometric Mean and Harmonic Mean. Range, Quartile deviation, Mean Deviation, Standard deviation and co-efficient of variation. Skewness: Karl Pearson's co-efficient of skewness, Bowley's co-efficient of skewness, Kelleys co-efficient of skewness, Kurtosis.

MODULE - II: RESEARCH DESIGN (09)

Meaning, Scope, Role of Business Research, Types of Research, Research Process, Ethics in Business Research, Research Problem, Purpose of Research Design, Types of Research Design: Experimental Research Design, Research Design for Cross Sectional, Longitudinal Studies, Data Collection **Methods & Tools:** Types of Data, Sources and Instruments for Data, Guidelines for Questionnaire, Sampling and its Application. Measurement and Scaling, Reliability and Validity in Measurement of Variables, Sources of Error in Measurement.

MODULE - III: TABULATION OF UNIVARIATE AND SMALL SAMPLE TESTS (08)

Bi variate and multi variate data, data classification and tabulation, diagrammatic and graphical representation of data. One dimensional, two dimensional and three dimensional diagrams and graphs.

t-Distribution, Properties and Applications, Testing for One and Two Means, Paired t-Test, Hypothesis Formulation and Testing.

MODULE - IV: ANALYSIS OF VARIANCE AND CORRELATION ANALYSIS (10)

One-Way and Two-Way ANOVA (with and without Interaction). Chi-Square Distribution: Test for a Specified Population Variance, Test for Goodness of fit, Test for Independence of Attributes.

Correlation, Limits for Coefficient of Correlation, Karl Pearson's Coefficient of Correlation, Spearman's Rank Correlation, Linear and Multiple Regression Analysis, Discriminant Analysis, Exploratory Factor Analysis.

MODULE - V: REPORT WRITING AND TIME SERIES ANALYSIS (10)

Importance of Report writing, Types of Research Reports, Report Preparation and Presentation, Report Structure, Report Formulation, Guides for Effective Documentation, Research Briefings. Referencing Styles and Citation in Business Management Research. Components, Models of Time Series—Additive, Multiplicative and Mixed models, Trend analysis-Free hand curve, Semi averages, moving averages, Least Square methods.

V. TEXTBOOKS:

1. Gerald Keller, "Statistics for Management and Economics", Cengage Learning, 12th edition, 2025.
2. Gupta S.C., "Fundamentals of Statistics", Himalaya Publishing House, 8th edition, 2023.
3. Levin R.I., Rubin S. David, "Statistics for Management", Pearson, 9th edition, 2023.
4. Levin Richard (Author), H. Siddiqui Masood (Author), S. Rubin David (Author), Rastogi Sanjay (Author), "Statistics for Management", Pearson Education, 8th edition, 2017.
5. P.C. Tulsian, Bharat Jhunjhnuwala, "Business Statistics", S. Chand, 2016.

VI. REFERENCE BOOKS:

1. Donald R Cooper, Pamela S. Schindler, Business Research Methods, Tata Mc Graw Hill, 12e, 2019.
2. Deepak Chawla, Neena Sondhi, Research Methodology: Concepts & Cases, Vikas Publishing, 2e, 2016.
3. William G Zikmund, Barry J Babin, Jon C. Carr, Atanu Adhikari, Mitch Griffin, Barry J. Babin, Business Research Methods Cengage Learning, 8e, 2016.
4. Levine, Stephan, Krehbiel, Berenson, "Statistics for Managers using Microsoft Excel", PHI, 4th edition, 2022.
5. J. K Sharma, "Business Statistics", Pearson Publications, 2nd edition, 2015.

VII. Web References:

1. <https://aditya30702.files.wordpress.com/2012/07/statistics-for-managers-using-microsoft-excel-gnv64.pdf>
2. <http://www.nprcet.org/mba/document/First%20Semester/BA7102%20STATISTICS%20FOR%20MANAGEMENT%20LT%20P%20C%203%201%200%204%20ODD.pdf>

VIII. E-Text Books:

1. <http://bookboon.com/en/statistics-and-mathematics-ebooks>

2. <http://www.ebay.com/bhp/statistics-for-managers-using-microsoft-excel>
3. <https://www.sapnaonline.com/books/statistics-management-levin-richard-8177585843-9788177585841-academic>
4. <https://link.springer.com/book/10.1007/b101868>



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal - 500 043, Hyderabad, Telangana

COURSE CONTENT

INDIAN ETHOS AND VALUES FOR MANAGEMENT								
I Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE06	Elective	L	T	P	C	CIA	SEE	Total
		3	0	-	3	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Basic concepts of ethics and management								
SDGs Mapped: SDG 16 (Peace, Justice and Strong Institutions), SDG 10 (Reduced Inequalities)								

I. COURSE OVERVIEW:

This course focuses on the integration of traditional Indian values, philosophies, and ethical principles into the modern context of business and management. It aims to instill an understanding of how ancient Indian wisdom can be applied to contemporary management practices.

II. COURSES OBJECTIVES:

The students will try to learn:

- I. The various schools of Indian philosophy and the cultural heritage that has shaped Indian values.
- II. The importance of values in personal and professional life.
- III. The Develop skills in ethical decision-making by drawing from Indian ethical principles and theories.
- IV. Promote cultural sensitivity and an appreciation for diversity in the context of global business operations.
- V. Encourage self-reflection and self-awareness to identify and clarify their own values.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Comprehend the concepts of Dharma and Karma and their significance in personal and professional life.
- CO2 Explore the connection between spirituality and business and its application in management.
- CO3 Study ethical theories like Niti Shastra and Artha Shastra and their application in modern management.
- CO4 Evaluate ethical issues in marketing, advertising practices, and financial reporting.
- CO5 Consider cultural factors in ethical decision-making and conflict resolution.
- CO6 Use techniques for self-reflection and self-assessment to improve leadership and ethical decision-making.

IV. COURSE CONTENT:

MODULE - I: INTRODUCTION TO INDIAN PHILOSOPHY AND CULTURE (08)

Overview of Indian philosophy and cultural heritage, Key schools of thought (e.g., Vedanta, Yoga, Buddhism), Concepts of Dharma and Karma, the role of values in personal and professional life
Ethical dilemmas in management

MODULE - II: LEADERSHIP AND MANAGEMENT IN INDIAN CONTEXT (10)

Leadership qualities in Indian scriptures and epics (e.g., Bhagavad Gita), Role models from Indian history and mythology, Understanding the connection between spirituality and business
Mindfulness and its application in management.

MODULE - III: CORPORATE SOCIAL RESPONSIBILITY (CSR) AND SUSTAINABILITY (09)

Indian perspectives on CSR, Sustainability practices aligned with Indian ethos, Principles of yogic management, Mind-body wellness in the workplace.

Study of ethical theories such as Niti Shastra and Artha Shastra, Application of these theories in modern management.

MODULE - IV: GLOBAL ETHICS AND MULTINATIONAL CORPORATIONS (10)

Ethical challenges in a global business environment, Cultural considerations in ethical decision-making, Ethical issues in marketing and advertising practices, Ethical marketing strategies, Ethical issues in financial reporting and accounting practices, Corporate governance and financial ethics.

MODULE - V: PERSONAL VALUES AND LEADERSHIP (08)

Self-awareness and identifying personal values, Aligning personal values with leadership styles, Techniques for self-reflection and self-assessment, Identifying and defining personal values, Strategies for creating an ethical work environment, Handling ethical challenges within organizations.

V. TEXTBOOKS:

1. Abbe Brown, Smita Kheria, Jane Cornwell, and Marta Iljadica, “Contemporary Intellectual Property law and policy”, Oxford University Press, 7th edition, 2024.
2. Sreenivasulu N S, “Intellectual Property Law- Dynamic Interfaces”, Universal Law Publishing, 3rd edition, 2022.
3. Dr Wadehra B L, “Law Relating to Intellectual Property”, Universal Law Publishing, 5th edition 2016.
4. James Boyle and Jennifer Jenkins, “Intellectual Property: Law & the Information Society—Cases and Materials”, James Boyle, Jennifer Jenkins, 5th edition, 2016.
5. Pandey Neeraj and Dharni Khushdeep, “Intellectual Property Rights”, Prentice Hall of India, 1st edition, 2014.

VI. REFERENCE BOOKS:

1. Caves, Frankel, Jones, “World Trade and Payments-An Introduction”, Pearson Education, 4th edition, 2015.
2. Carlos M. Correa, “Intellectual property rights, The WTO and Developing countries”, Zed books.
3. Peter-Tobias stoll, Jan busche, Katrianarend, “WTO- Trade –related aspects of IPR”, Library of Congress.
4. Surendra Bhandari, “World Trade Organization (WTO) and Developing Countries”, Vikas Publishing House.
5. P. K. Vasudeva, “World Trade Organization: Implications on Indian Economy”, Pearson Education, 2015.
6. P. Krishna Rao, WTO, “Text and cases”, Excel Books, 2015.

VII. Web References:

1. <http://www.ebooksdirectory.com>
2. <http://Campusguides.lib.utah.edu>

VIII. E-Text Books:

1. <http://www.bookboon.com>
2. <http://www.freemagagement.com>
3. <http://www.emeraldinsight.com>
4. <https://www.bdu.ac.in/cells/ipr/docs/ipr-eng-ebook.pdf>



INSTITUTE OF AERONAUTICAL ENGINEERING

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COURSE CONTENT

ESG AND SUSTAINABILITY MANAGEMENT								
I Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE07	Elective	L	T	P	C	CIA	SEE	Total
		3	0	-	3	40	60	100
Contact Classes: 45		Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45		
Prerequisite: Basic concepts of Sustainable Development Goals (SDGs)								
SDGs Mapped: SDG 12 (Responsible Consumption & Production), SDG 13 (Climate Action)								

I. COURSE OVERVIEW:

This course is designed to understand and implement ESG (Environmental, Social, Governance) principles and sustainability practices in organizations. It emphasizes the integration of environmental management, social responsibility, corporate governance, and ethical decision-making into strategic business operations. Students will learn to analyze ESG frameworks, apply sustainability strategies, and evaluate emerging trends to enhance organizational performance and stakeholder value.

II. COURSES OBJECTIVES:

The students will try to learn:

- The significance and evolution of ESG and sustainability in modern business.
- The environmental challenges, climate strategies, and sustainability initiatives.
- How to Examine social responsibility, stakeholder engagement, and employee wellbeing practices.
- The governance principles, ethical practices, and risk management in organizations.
- The ESG strategies, technological innovations, and emerging trends with corporate vision and business strategy.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Understand ESG concepts, CSR, triple bottom line, and global frameworks including SDGs, GRI, SASB, and BRSR.
- CO2 Analyze environmental management systems, climate strategies, circular economy, carbon footprint, and renewable energy applications for sustainable business practices.
- CO3 Develop strategies for stakeholder engagement, diversity, equity, inclusion (DEI), ethical labor practices, and employee wellbeing initiatives.
- CO4 Identify gender gaps and promote gender equality and social sustainability in organizational contexts.
- CO5 Evaluate governance principles, ethical frameworks, transparency, anti-corruption measures, and global ESG standards for organizational accountability.
- CO6 Apply ESG strategies, technological innovations, and emerging global trends to align corporate vision, enhance value creation, and ensure sustainable business operations.

IV. COURSE CONTENT:

MODULE - I: Introduction to ESG and Sustainability (08)

The definition and importance of ESG in business; Historical evolution of ESG and sustainability concepts and the rise of ESG in corporate and investor agendas; Key concepts such as sustainability, corporate social responsibility (CSR), and the triple bottom line (people, planet, profit); Global frameworks and standards including the UN Sustainable Development Goals (SDGs), Global Reporting Initiative (GRI), Sustainability Accounting Standards Board (SASB) and Business Responsibility & Sustainability Reporting (BRSR)

MODULE - II: Environmental Management and Climate Strategies (10)

Climate change and its impact on business operations and strategy, Sustainable practices in manufacturing and operations, Environmental Management Systems (EMS), ISO 14001, Environment Impact assessment (EIA); Resource Management: focusing on water, energy, and waste reduction strategies; The concept of a circular economy: the Ellen MacArthur Foundation, Circular business models and value creation, Life cycle assessment (LCA);

Carbon foot-printing and GHG Protocols: measure, report, and reduce greenhouse gas emissions; Scope 1, Scope 2 and Scope 3 emissions; environmental regulations and compliances, such as carbon taxes and emissions trading systems; Renewable energy and their applications, decarbonization, energy transition strategies

MODULE - III: Social sustainability and Stakeholder Management (09)

Social Responsibility and Community Engagement: Pyramid of corporate social responsibility (CSR), Community development and impact, stakeholder engagement, Stakeholder theory, Legitimacy theory; Human rights and ethical labour practices in global supply chains, Modern slavery and child labour prevention, Worker safety and occupational health management.

Diversity, Equity, and Inclusion (DEI) in the workplace, Importance of DEI in the workplace and strategies for promoting DEI and gender gap in senior management; Employee wellbeing and development: Employee engagement and retention strategies, Learning/Training and development programs, Mental health and work-life balance initiatives.

MODULE - IV: Governance and Ethics (10)

Corporate governance principles; Board composition, diversity and executive accountability; Anti-corruption, ethical decision-making and leadership in business, whistleblower policies; Data privacy and cybersecurity governance; Corporate disclosure and transparency practices, Stakeholder communication strategies, Greenwashing: Third-party assurance and verification; Risk management and investor perspectives and opportunities.

MODULE - V: Strategic ESG and Future Trends (08)

Aligning ESG with corporate mission, vision, and business strategy; Embedding ESG across value chains and decision-making; Technological Innovations in ESG: Utilizing technology to advance ESG goals: data analytics for ESG metrics, blockchain for supply chain transparency, Digital transformation and sustainability: smart grids, IoT for resource efficiency; Future Trends and Challenges: ESG in emerging economy.

V. TEXTBOOKS:

1. Kristyn Noeth, The ESG and Sustainability Desk book for Business: A Guide to Policy, Regulation, and Practice, A press; 1st edition, July 2024.
2. Tracy Dathe, Marc Helmold, René Dathe, Isabel Dathe, Implementing Environmental, Social and Governance (ESG) Principles for Sustainable Businesses: A Practical Guide in
3. Sustainability Management (Responsible Leadership and Sustainable Management) Springer International Publishing AG; 1st ed. 2024 edition
4. Crane, A., Matten, D., & Spence, L. Corporate Social Responsibility: Readings and cases in a global context (4th ed.), Routledge. 2019.

VI. REFERENCE BOOKS:

1. O'Connor, B., The ESG investing handbook: Insights and developments in environmental, social and governance investment. Harriman House, 2021.
2. C.V. Baxi and Ajit Prasad, Corporate Social Responsibility: Concepts and Cases – The Indian Experience, Excel Books

VII. WEB REFERENCES:

1. <https://www.phindia.com>
2. <https://www.cambridgescholars.com>
3. <https://www.taylorfrancis.com>

VIII. E-TEXT BOOKS:

1. <https://link.springer.com>
2. <https://www.kobo.com>



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal - 500 043, Hyderabad, Telangana

COURSE CONTENT

CROSS CUTURAL MANAGEMENT								
I Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE08	Elective	L	T	P	C	CIA	SEE	Total
		3	0	-	3	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Basic concepts of cultural management								
SDGs Mapped: SDG 10 (Reduced Inequalities), SDG 5 (Gender Equality)								

I. COURSE OVERVIEW:

This course is designed to provide the knowledge and skills necessary to understand, navigate, and effectively manage in a diverse and global business environment. It focuses on cultural differences, their impact on business practices, and strategies for successful cross-cultural collaboration.

II. COURSES OBJECTIVES:

The students will try to learn:

- I. The importance of cross culture in conduct of business.
- II. The various aspects in reconciling cultural dilemmas, culture and styles of management.
- III. The culture and corporate structures.
- IV. The business communication across cultures.
- V. The cultural aspects while working with international teams.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Identify and explain the determinants of culture, including historical, geographical, and social factors.
- CO2 Analyze the interplay between culture and management styles, specifically management tasks and cultural values.
- CO3 Recognize the importance of cultural diversity in organizational settings and its implications for inclusion and performance.
- CO4 Analyze the impact of culture on marketing strategies and product adaptation.
- CO5 Explore common barriers to intercultural communication and strategies for overcoming them.
- CO6 Develop strategies for understanding and dealing with conflicts stemming from cultural differences.

IV. COURSE CONTENT:

MODULE - I: INTRODUCTION TO CULTURE (09)

Determinants of Culture, Facets of Culture, Levels of Culture, National Cultural Dimensions in the Business Context, the Influence of National Culture on Business Culture. Business Cultures: East and West.

MODULE - II: CULTURAL DIMENSIONS AND DILEMMAS (09)

Value Orientations and Dimensions, Reconciling Cultural Dilemmas, Culture and Styles of Management: Management Tasks and Cultural Values.

MODULE - III: CULTURE AND ORGANIZATIONS (12)

Culture and Corporate Structures, Culture and Leadership, Culture and Strategy.

Cultural Change in Organizations, Culture and Marketing, Cultural Diversity.

MODULE - IV: CULTURE AND COMMUNICATIONS (08)

Business Communication across Cultures, Barriers to Intercultural Communication, Negotiating Internationally.

MODULE - V: CROSS CULTURAL TEAM MANAGEMENT (07)

Working with International Teams, Group Processes During International Encounters, Conflicts and Cultural Difference, Understanding and Dealing with Conflicts, Developing Intercultural Relationships.

V. TEXTBOOKS:

1. Marie-Joelle Browaeys, Roger Price: Understanding Cross-Cultural Management, Pearson, 4e, 2019.
2. David C. Thomas: Cross Cultural Management, Sage Publications, 4e, 2017.
3. Nigel Holdon, Cross Cultural Management: Knowledge Management Perspective, Pentice Hall, 2012.
4. Parissa Haghirian: Multinational and Cross-Cultural Management, Routledge, 2012.

VI. REFERENCE BOOKS:

1. Chakraborty S.K., "Management Transformation by Values", New Delhi, Sage Publication, 1990.
2. Velasquez, "Business Ethics, Concepts & Cases", 6th edition, PHI, 2009.
3. Chakraborty, S.K., "Ethics in Management-Vedantic Approach", New Delhi, Oxford India Ltd. 1995.

VII. Web References:

1. <https://www.pdfdrive.com/indian-ethos-and-business-ethics-ver01-e34424691.html>
2. <https://www.pdfdrive.com/business-ethics-as-practice-ethics-as-the-everyday-business-of-business-e185421524.html>.

VIII. E-Text Books:

1. <https://www.pdfdrive.com/indian-ethos-and-management-e34424686.html>.
2. <https://www.pdfdrive.com/business-ethics-as-practice-ethics-as-the-everyday-business-of-business-e185421524.html>.
3. <https://pdfcoffee.com/indian-ethos-and-value-mbazadmdo-pdf-free.html>
4. <http://www.himpub.com/documents/Chapter2059.pdf>
5. <https://www.proquest.com/openview/0659629308ca7f1cf32c7ccd10afefe0/1?pq-origsite=gscholar&cbl=546310>
6. <https://himadri.cmsdu.org/documents/IndianEthos.pdf>



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COURSE CONTENT

CYBER SECURITY								
I Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE09	Elective	L	T	P	C	CIA	SEE	Total
		3	0	-	3	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Basic concepts of Information Technology								
SDGs Mapped: SDG 16 (Peace, Justice and Strong Institutions)								

I. COURSE OVERVIEW:

This course is to provide with a comprehensive understanding of cybersecurity principles, threats, management practices, tools, and emerging technologies. It emphasizes both the technical and managerial aspects of cybersecurity, including risk management, legal frameworks, and personal cybersecurity. Students will learn to analyze cyber threats, implement security controls, and apply cybersecurity strategies to protect organizational and personal information in an evolving digital landscape.

II. COURSES OBJECTIVES:

The students will try to learn:

- The foundations, key concepts, and objectives of cybersecurity.
- The various types of cyber threats, cybercrimes, and the legal and ethical frameworks governing cybersecurity.
- The cybersecurity management practices, risk management, and security controls.
- The emerging tools, technologies, and frameworks that enhance cybersecurity resilience.
- Integrate cybersecurity best practices, personal security measures, and contemporary applications to mitigate risks in organizations and personal contexts.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Familiarize with the concepts of cybersecurity, including CIA triad, security goals, vulnerabilities, and challenges.
- CO2 Analyze cyber threats, types of cybercrimes, attacker motives, and legal frameworks to ensure compliance and ethical cybersecurity practices.
- CO3 Develop strategies for cybersecurity governance, risk management, and implementation of security policies, procedures, and controls.
- CO4 Identify and apply technical and physical security controls, IoT security measures, and incident response protocols to protect organizational information assets.
- CO5 Evaluate cybersecurity tools, cryptography, IAM systems, AI, blockchain, and emerging frameworks to strengthen digital resilience.
- CO6 Apply personal cybersecurity best practices, privacy regulations, and contemporary technologies (Web 3.0, 5G, APTs) to secure digital interactions and organizational systems.

IV. COURSE CONTENT:

MODULE - I: FOUNDATIONS OF CYBERSECURITY (08)

Introduction to Information Systems, Cyberspace and Cybersecurity, Cybersecurity vs. Information Security. Key Concepts of Cybersecurity: definition, meaning and scope of cybersecurity. Key objectives of cybersecurity: confidentiality, integrity & availability (CIA triad). Essential Security and Privacy Goals. Cybersecurity Vulnerabilities and Challenges, Common Vulnerabilities and Exposures (CVE).

MODULE - II: CYBER THREATS, CRIMES, AND LEGAL FRAMEWORKS (10)

Types of Cybercrime and Threat Actors, Motives of attackers, Cyberattack Tools and Methods, Cyber Kill Chain and Response, National and International Cybersecurity Policies, Cybersecurity Laws and Ethics, Role of Law Enforcement and Cyber Forensics, Cybercrime Investigation and Evidence Handling.

MODULE - III: CYBERSECURITY MANAGEMENT AND CONTROLS (09)

Information Security Governance and Risk Management. Cybersecurity Management Practices, Security Policies, Procedures, and Controls, Security Incident Response and Business Continuity.

Data and Application Security. Overview of Technical Controls, Physical and User Access Security, Internet of Things (IoT) Security.

MODULE - IV: CYBERSECURITY TOOLS, TECHNOLOGIES, AND EMERGING FRAMEWORKS (10)

Cybersecurity Frameworks and Industry Standards, Cyber Resilience and Human Factor, Cryptography and Digital Signatures, Identity and Access Management (IAM), Antivirus, Email Security, Role of AI, Blockchain, and Quantum Computing in Cybersecurity.

MODULE - V: CONTEMPORARY APPLICATIONS AND PERSONAL CYBERSECURITY (08)

Personal Cybersecurity Best Practices, Privacy and Data Protection Regulations, Cybersecurity. Emerging Technologies: Web 3.0, 5G, APTs, Secure-by-Design and Supply Chain Security, Ethical Use of Technology and Digital Trust.

V. TEXTBOOKS:

1. Ajay Singh, "Introduction to Cybersecurity: Concepts, Principles, Technologies and Practices", Universities Press (India) Pvt. Ltd. 2024.
2. Jocelyn O, Padallan, "Cybersecurity", Arceler Press. 2020. (e-book), 2022.
3. Susan Lincke, "Information Security Planning: A Practical Approach", Springer. 2022.

VI. REFERENCE BOOKS:

1. Susanne Chishti and Janob Barberis, The Fintech Book, Wiley
2. David L. Shrier and Alex Pentlan, Global Fintech, The MIT Press, 2022.

VII. Web References:

1. [http://www.spinger.com/gp/cyber security.com](http://www.spinger.com/gp/cyber%20security.com)
2. http://www.en.wikipedia.org/wiki/list_of_cyber_security.html

VIII. E-Text Books:

1. <http://www.search.gmx.net/abuteconomics/saveyourtime.com>
2. http://www.archive.mu.ac.in/myweb_test/plitlalscience.com



INSTITUTE OF AERONAUTICAL ENGINEERING

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COURSE CONTENT

ESSENTIALS OF MANAGERIAL SKILLS								
I Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE10	Elective	L	T	P	C	CIA	SEE	Total
		3	0	-	3	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Basic concepts of management								
SDGs Mapped: SDG 8 (Decent Work & Economic Growth), SDG 4 (Quality Education)								

I. COURSE OVERVIEW:

This course is designed to provide a foundation in the core skills and competencies required for effective management and leadership. This course helps students develop practical skills and knowledge that can be applied in various organizational settings.

II. COURSES OBJECTIVES:

The students will try to learn:

- I. The management competencies in the business and personal skills.
- II. The problem solving and building relationship management in business communications.
- III. The relationship skills and business communication across cultures.
- IV. The team building culture and leadership culture in business.
- V. Focus on skills to empower and delegation.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Identify personal areas for skill development and apply those skills in a practical context.
- CO2 Recognize the steps of analytical problem solving and its limitations.
- CO3 Analyze and apply relationship-building skills in various situations.
- CO4 Learn the principles of coaching and counseling in a managerial context.
- CO5 Apply team-building skills and principles in practical team scenarios.
- CO6 Explore strategies for developing empowerment in the workplace.

IV. COURSE CONTENT:

MODULE - I: INTRODUCTION TO SKILLS & PERSONAL SKILLS (08)

Importance of competent managers, skills of effective managers, developing self-awareness on the issues of emotional intelligence, self-learning styles, values, attitude towards change, learning of skills and applications of skills.

MODULE - II: PROBLEM SOLVING AND BUILDING RELATIONSHIP (10)

Problem solving, creativity, innovation, steps of analytical problem solving, limitations of analytical problem solving, impediments of creativity, multiple approaches to creativity, conceptual blocks, conceptual block bursting. Skills development and application for above areas.

MODULE - III: BUILDING RELATIONSHIP SKILLS (09)

Building relationship Skills for developing positive interpersonal communication, importance of supportive communication, coaching and counseling, defensiveness and disconfirmation, principles of supportive communications.

Personal interview management. Skill analysis and application on above areas.

MODULE - IV: TEAM BUILDING (10)

Developing teams and team work, advantages of team, leading team, team membership. Skill development and skill application.

MODULE - V: EMPOWERING AND DELEGATING (08)

Meaning of empowerment, dimensions of empowerment, how to develop empowerment, inhibitors of empowerment, delegating works.

V. TEXTBOOKS:

1. Byron Kalies,” Essential Management Skills”, Createspace Independent Pub, 2024
2. DK, “The Book of Management (: The Ten Essential Skills for Achieving High Performance”, Penguin UK, 2020.

VI. REFERENCE BOOKS:

1. E. H. McGrath,” Basic Managerial Skills for All”, PHI Learning, 2021

VII. Web References:

1. <https://books.google.com> › book
2. <https://www.taylorfrancis.com>

VIII. E-Text Books:

1. <https://www.amazon.in> › Essential-Management-Skills



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COURSE CONTENT

PROJECT MANAGEMENT								
I Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE11	Elective	L	T	P	C	CIA	SEE	Total
		3	0	-	3	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Basic concepts of management								
SDGs Mapped: SDG 9 (Industry, Innovation and Infrastructure), SDG 11 (Sustainable Cities & Communities)								

I. COURSE OVERVIEW:

Project management is the application of knowledge, skills, tools, and techniques applied to project activities in order to meet the project requirements. Project management is a process that includes planning, putting the project plan into action, and measuring progress and performance.

II. COURSES OBJECTIVES:

The students will try to learn:

- I. How to evaluate a small or shorter term project in your workplace, such as running an event or an office move, implementing workplace changes, developing web sites, conducting trade work and managing office infrastructure changes.
- II. The structured approach prepare a project plan, incorporating appropriate plans, schedules, a budget and specific outputs/deliverables for each step of the plan.
- III. The Scope, Cost, and Schedule baselines as a means of evaluating project progress and incorporating Earned Value measurement
- IV. The effective organizational leadership and change skills for managing projects, project teams, and stakeholders.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Understand the project management and project lifecycle, project management research to take business decision to accept or reject the project.
- CO2 Analyze the project planning for defining the project and understand the approaches to project screening and selection to implement in project
- CO3 Identify the project objective to finish the project within time period
- CO4 Access the risk in project to reduce and minimize the cost and make decision about the project budget.
- CO5 Gain the cross functional cooperation and conflicts management to solve the issues in team building.
- CO6 Review the project control cycles and human factors in project evaluation and control to take project related decisions.

IV. COURSE CONTENT:

MODULE - I: INTRODUCTION (08)

Project management, what is project management, why project management, project lifecycle, project management research in brief, project management today, organization strategy and structure and culture, format of organization structure, stake holder management, organization culture, creating a culture for project management.

MODULE - II: PROJECT PLANNING (10)

Project planning defining the project, approaches to project screening and selection, work breakdown structure, financial module, getting approval and compiling a project charter, setting up a monitoring and controlling process.

MODULE - III: PROJECT EXECUTION (09)

Initiating the project, controlling and reporting project objectives, conducting project evaluation.

Managing risk four stage process, risk management an integrated approach, cost management, creating a project budget.

MODULE - IV: LEADING PROJECT TEAMS (10)

Building a project team, characteristics of a effective project team, achieving cross functional cooperation, virtual project teams, conflicts management, negotiations.

MODULE - V: PERFORMANCE MEASUREMENT AND EVALUATION (08)

Project control cycles, monitoring project performances, earned value management, human factors in project evaluation and control, project termination, types of project terminations, project management and future current and future trends in project management.

V. TEXTBOOKS:

1. Gray, Larson, "Project Management", Tata McGraw Hill, 4th edition, 2015.
2. Jeffery K.Pinto, "Project Management", Pearson Education, 4th edition, 2015.
3. Enzo Frigenti, "Project Management", Kogan, 4th edition, 2015.
4. Project Management Institute, "A guide to the Project Management Body of Knowledge", Project Management Institute, 5th edition, 2013.
5. Greg Horine, "Project Management Absolute Beginner's Guide", QUE Publishing, 3rd edition, 2012.

VI. REFERENCE BOOKS:

1. R. Panneerselvam, P. Senthilkumar: "Project Management", PHI, Revised 4th edition, 2015.
2. Thomas M.Cappels: "Financially Focused Project Management", SPD, Revised 4th edition, 2008.

VII. Web References:

1. <http://home.hit.no/~hansha/documents/theses/projectmanagement.pdf>
2. <http://gurukpo.com/Content/MBA/Project%20Mngg..pdf>

VIII. E-Text Books:

1. <http://www.pondiuni.edu.in/sites/default/files/Project%20Managementt200813.pdf>
2. http://www.adi.pt/docs/innoregio_pmanagement.pdf
3. <http://index-of.co.uk/Project%20Management/Fundamentals%20of%20Project%20Management.pdf>
4. <https://book.akij.net/eBooks/2018/March/5abcc35b666f7/a%20guide%20to%20the%20project%20management%20body%20of%20knowledge%206e.pdf>



INSTITUTE OF AERONAUTICAL ENGINEERING

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Dundigal - 500 043, Hyderabad, Telangana

COURSE CONTENT

STATISTICAL DATA ANALYSIS - LABORATORY								
I Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE12	Core	L	T	P	C	CIA	SEE	Total
		1	0	2	2	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Basic concepts of Statistics and Information Technology								
SDGs Mapped: SDG 4 (Quality Education), SDG 9 (Industry, Innovation and Infrastructure)								

I. COURSE OVERVIEW:

The principle aim of the course is to help the students gain a well-rounded introduction to it for manager's laboratory learning and its significance in their day to day life. Moreover, the course pays special attention to develop understand and implement computer programs in the areas related to algorithms, system software, multimedia, web design, big data analytics, and networking for efficient analysis and design of computer-based systems of varying complexity., career building and different methods of job searching.

II. COURSES OBJECTIVES:

The students will try to learn:

- The application of Statistical tools to Research Problem / Projects.
- The various statistical tools for decision making.
- Identify hands on experience in working with MS Excel for hypotheses testing.
- THE different types of formulas and functions in MS Excel.
- Examine the results for better decision making.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Analyze the functions in MS-Office and statistical packages to prepare presentations
- CO2 Identify, formulate, and solve managerial problems by creating templates.
- CO3 Understand the various formats in business instructions.
- CO4 Enhancing knowledge of contemporary issues securing data from external sources.
- CO5 Illustrate various parts of corporate reports and business proposals.
- CO6 Ensuring measures of dispersion for data analysis.

IV. COURSE CONTENT:

WEEK – 1: INTRODUCTION TO STATISTICAL PACKAGES

MS - EXCEL/SPSS: Introduction, uses, functions and features of Statistical Packages, Getting started with excel/SPSS.

WEEK-2: HIGHLIGHTS AND MAIN FUNCTIONS

Home, Insert, page layout, formulas, Data, review, view, add-ins, Using help function, Customizing the Quick Access Toolbar.

WEEK-3: INTRODUCTION TO CREATING AND USING TEMPLATES

Entering, Editing, Copy, Cut, Paste, Paste Special, Formatting Data and Using the Right Mouse Click.

Saving, Page Setup, and Printing, Using Headers and Footers.

WEEK-4: BASICS OF WORKING WITH DATA

Manipulating Data, using Data Names and Ranges, Filters and Sort and Validation Lists.

WEEK-5: USING AND FORMATTING TABLES

Using and Formatting Tables, Basic Formulas and Use of Functions, Data Analysis Using Charts and Graphs, Managing, Inserting, and Copying Worksheets.

WEEK-6: DATA FROM EXTERNAL SOURCES

Securing the Document, Advanced Formulas and Functions, Worksheet Features, Data Analysis using Pivot Tables and Pivot Charts.

WEEK-7: DATA ANALYSIS -I

Tabulation, bar diagram, Multiple Bar diagram, Pie diagram, Measure of central tendency: mean, median, mode.

WEEK-8: MEASURE OF DISPERSION

Variance, standard deviation, Coefficient of variation. Correlation, regression lines.

WEEK-9: DATA ANALYSIS -II

T-test, F-test, ANOVA one-way classification, chi square test, independence of attributes.

WEEK-10: TIME SERIES

Forecasting Method of least squares, moving average method. Inference and discussion of results.

WEEK-11: VARIOUS FORMATTING STYLES IN LaTeX-PART - I

Using LaTeX to create project certificate. Features to be covered: - Formatting Fonts in word, Drop Cap in word.

WEEK-12: VARIOUS FORMATTING STYLES IN LaTeX-PART - II

Applying Text effects, Using Character Spacing, Borders and Colors, Inserting Header and Footer, Using Date and Time option in LaTeX.

WEEK-13: GRAPHICS AND TABLES IN LaTeX-PART - I

Create LaTeX documents with images and image caption at centre alignment.

WEEK-14: GRAPHICS AND TABLES IN LaTeX-PART - II

Table with thick border and table caption with centre alignment, row height, and content with cell centre alignment.

V. TEXTBOOKS:

1. Gross Debra, "Succeeding in Business with Microsoft Excel - 2013: A Problem Solving Approach", Cengage Learning, 1st edition, 2014.
2. Paul Mcfedries, "Excel 2013 Formulas and Functions", Pearson Education, 1st edition, 2013.
3. Dodge Mark, Stinson Craig, "Microsoft Excel 2013 Inside Out", Prentice Hall of India, 1st edition, 2013.

VI. REFERENCE BOOKS:

1. Giridhar Joshi, "Management Information Systems", Oxford University Press, Revised 5th edition, 2023.
2. Lisa Miller, "MIS Cases: Decision Making with Application Software", Pearson Education, Revised 8th edition, 2021.
3. Guy Hart Davis, How to do everything with Microsoft Office Excel, Tata McGraw Hill, Revised 7th edition, 2020.

VII. WEB REFERENCES:

1. <http://www.abebooks.com/servlet/SearchResults?isbn.pdf>.
2. <http://www.amazon.in/Succeeding-Business-Microsoft-Excel-2013>
3. <http://ctan.org/pkg/bibtopic>

VIII. E-TEXT BOOKS:

1. <http://www.chegg.com/textbooks/succeeding-in-business>
2. <http://www.amazon.com> › ... › Computers & Technology › Software
3. [http://www books.google.com](http://www.books.google.com) › ... › Desktop Applications › Spreadsheets



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COURSE CONTENT

BUSINESS COMMUNICATION and SOFT SKILLS - SEMINAR								
I Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE13	Core	L	T	P	C	CIA	SEE	Total
		0	0	4	2	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Basic skills of communication								
SDGs Mapped: SDG 4 (Quality Education), SDG 10 (Reduced Inequalities)								

I. COURSE OVERVIEW:

The principle aim of the course is to help the students gain a well-rounded introduction to business communication skills learning and its significance in their day to day life. Moreover, the course pays special attention to develop skills for effective written business communication, career building and different methods of job searching.

II. COURSES OBJECTIVES:

The students will try to learn:

- The fundamentals of business communication, various media of communication, and ways to overcome barriers for effective interpersonal and intercultural communication in professional settings.
- The process of developing effective business writing skills, including drafting, editing, and formatting different types of business correspondence and reports with clarity and professionalism.
- How to prepare and present business reports, proposals, and oral presentations effectively while applying appropriate communication strategies for diverse audiences.
- The contemporary aspects of communication such as business etiquette, professional networking, public relations, and the role of communication in global and digital business environments.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Discuss and apply the practice exercises of writing business messages.
- CO2 Describe the various components of writing a business letter.
- CO3 Understand the various formats in instructions.
- CO4 Apply the practice exercises to analyze the audience.
- CO5 Illustrate various parts of corporate reports and business proposals.
- CO6 Explore the strategies of self-analysis to build a better career

IV. COURSE CONTENT:

MODULE - I: INTRODUCTION (08)

Introduction to Business Communication, Communication Barriers, Communication Media Choices, Inter-cultural and Team Communication, Interpersonal Communication: Respecting Social Protocol, Networking and Socializing Professionally, Non-Verbal Communication, Listening, Communication through social media, Business Meetings.

MODULE - II: DEVELOPING BUSINESS WRITING SKILLS (08)

Process of Writing, Drafting, Revising Visuals, Editing, Proofreading and Formatting, Writing Positive and Neutral Messages, Persuasive Messages, Bad News Messages, Business Letter Writing, Kinds of Business Letters, Communicating with E-Mail and Memos. Improving Readability of Written Communication using Gunning Fog Index.

MODULE - III: BUSINESS REPORTS AND PROPOSALS (10)

Writing the Report, Planning the Report, Steps in Writing Business Reports.

Parts of a Report, Corporate Report and Business Proposal, Citing Sources.

MODULE - IV: ORAL AND EMPLOYMENT COMMUNICATION (09)

The Role of Business Presentations, Planning and Organizing Presentations, Team Presentations, Online Presentations. Understanding Yourself, Career, Goal Setting, Preparing Resume, Resume Formats, Writing Covering Letters, and Enquiry Mails, Preparing for the Job Interview.

MODULE - V: CONTEMPORARY ASPECTS IN COMMUNICATION (10)

Business Etiquette, Developing Professional Telephone Skills, Mass Media, Public Relations Management, Cross Cultural and Global Communication, Communication in Information Technology, e-Business related Operations.

V. TEXTBOOKS:

1. Mary Ellen Guffey and Dana Loewy, Business Communication, Cengage, 11e, 2025
2. Kelly M. Quintanilla and Shawn T. Wahl, Business and Professional Communication, Sage Publications, 5e, 2024.
3. Mallika Nawal, Business Communication, Cengage Learning, 3e, 2023.
4. Varinder Kumar, Bodh Raj, Business Communication, Kalyani Publishers, 6e, 2019.

VI. REFERENCE BOOKS:

1. Ober Newman, Communicating in Business, Cengage Learning, 2015.
2. Rebecca Moore Howard, Writing Matters, 3e, Mc Graw Hill Education, 2018.
3. Jeff Butterfield, Soft Skills for Everyone, Cengage Learning, 2017.
4. David Irwin, "Effective Business Communications", Viva-Thorogood, 3rd edition, 2015.
5. Rajendra Pal, J S Korlahi, "Essentials of Business Communication", Sultan Chand and Sons, 2nd edition, 2015.

VII. Web References:

1. <http://www.abahe.co.uk/Free-En-Resources/English-for-Managers-Business-Correspondance.pdf>
2. http://www.pcfreak.net/international_university_college_files/Business%20Communication.pdf

VIII. E-Text Books:

1. <https://open.umn.edu/opentextbooks/BookDetail.aspx?bookId=8>
2. <https://www.goodreads.com/shelf/show/business-communication>



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal - 500 043, Hyderabad, Telangana

COURSE CONTENT

HUMAN RESOURCE MANAGEMNT								
II Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE14	Core	L	T	P	C	CIA	SEE	Total
		4	-	-	4	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Management and Organizational Behavior								
SDGs Mapped: SDG 8 (Decent Work & Economic Growth), SDG 5 (Gender Equality)								

I. COURSE OVERVIEW:

Human Resource Management links people-related activities to business strategy. The course develops a critical understanding of the role and functions of the various human resource activities in an organization, providing students with a comprehensive review of key HRM concepts, techniques, and issues. Topics include job analysis and design; recruitment and selection; evaluation; performance management; occupational health and safety; and the strategic contribution of HRM to organizational performance and evaluating HRM effectiveness. Working with contemporary case studies, collaborative and individual work processes enhance communication and discourse, which are characteristic of the HRM context and environment.

II. COURSES OBJECTIVES:

The students will try to learn:

- I. The role of human resource management in the effective management of organizations.
- II. The implementation process of recruitment, selection and performance management system in an organization.
- III. The basic training strategies and specifications for the delivery of training programs.
- IV. The execution processes for compensation management and reward systems.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Summarize and apply basic human resource management concepts to real-world business situations.
- CO2 Recognize and classify various recruitment and selection processes to enhance employees' performance.
- CO3 Demonstrate the concept of training and development, as well as describe the different types of training to improve employees' talents and performance.
- CO4 Identify performance appraisal procedures that can help you to improve your work skills, knowledge, talents, and personalities
- CO5 Develop compensation and reward strategy to recruit, motivate, and retain outstanding talent.
- CO6 Incorporate strong employee and employer relations to promote cooperation and productivity among employees.

IV. COURSE CONTENT:

MODULE - I: INTRODUCTION TO HUMAN RESOURCE MANAGEMENT (10)

Introduction to HRM, Line Managers, HRM: Managerial and Operative Functions, New Approaches to Organizing HR, Globalization & Competition Trends, Technological Trends, Trends in Nature of Work, Workforce and Demographic Trends, Economic Challenges, Equal Employment Opportunity and DEI. HR Score Card. Self-Directed Work Teams (SDWT) Human Resource Information System (HRIS), e-HRM, Introduction to HR Analytics and AI in HRM.

MODULE - II: RECRUITMENT AND SELECTION (10)

Basics of Talent Management Process, Job Analysis, Methods for Collecting Job Analysis Information, Job Descriptions and Specifications, Job Design, Job Enlargement, Job Enrichment and Job Rotation, Job Satisfaction. HR Planning, Recruitment, eRecruitment & Selection Process, Planning & Forecasting of human Resources, Sources of Recruitment, Recruitment on Diverse Work Force, Employee Testing and Selection, Basic Types of Interviews, Errors in Interviews.

MODULE - III: TRAINING AND DEVELOPMENT AND PERFORMANCE MANAGEMENT (08)

Importance of Training and Development, Training Process, Analyzing Training Needs & Designing the Program, Implementation of training programs, Training Methods.

Management Development Process, Evaluation of Training and Development programs.

Performance Management: Concept of Performance Management and Appraisal, The Performance Appraisal Process, Techniques for Performance Appraisal, Career Management.

MODULE - IV: COMPENSATION AND EMPLOYEE WELFARE (08)

Basic Factors in Determining Pay Rates, Job Evaluation Methods, Compensation and Reward Structure, Pricing Managerial and Professional Jobs, Performance based Pay Benefits: Insurance, Retirement Benefits, and Employee Welfare Facilities. Salient Features of Workmen Compensation Act & Minimum Wages Act.

MODULE - V: EMPLOYEE RELATIONS (09)

Ethics, Employee Relations, and Fair Treatment at Work, Labor Relations and Collective Bargaining, Employee welfare measures, Managing Global Human Resources, Managing Human Resources in Small and Entrepreneurial Firms, employee separation.

V. TEXTBOOKS:

1. Gary Dessler, Biju Varkkey. "Human Resource Management", Pearson, 17th edition, 2023.
2. V.S.P. Rao, "Human Resource Management", Cengage Learning, 10th edition, 2021.
3. Raman Preet, "Future of Human Resource Management: Case Studies with Strategic Approach", Cengage Learning, 5th edition, 2019.
4. K.Aswathappa, "Human Resource Management", Mc Graw-Hill, 8th edition, 2017.
5. Robert L.Mathis, John H.Jackson, Manas Ranjan Tripathy, "Human Resource Management", Cengage Learning, 10th edition, 2016.

VI. REFERENCE BOOKS:

1. Venkata Raman C. S, Srivastava B. K, "Personnel Human Resource Management", Tata McGraw Hill, 2nd edition, 2009.
2. Cynthia D. Fisher, Lyle F. Schoenfeld, "Human Resource Management", Wiley India Publishers, 3rd edition, 2009.
3. Jyothi, "Human Resource Management", Pearson Education, 12th edition, 2009.
4. R. Wayne Mondy, Robert M. Noe, "Human Resource Management", Pearson Education, 5th revised edition, 2009.

VII. WEB REFERENCES:

1. <https://play.google.com/books/reader?id=-NbrDQAAQBAJ&hl=en&pg=GBS.PT14>
2. <https://play.google.com/books/reader?id=QCKq8zyRPyC&hl=en&pg=GBS.PT26.w.5.0.49>
3. <https://play.google.com/books/reader?id=51G11zh2yp8C&hl=en&pg=GBS.PR13>
4. <https://play.google.com/books/reader?id=3tY8DgAAQBAJ&hl=en&pg=GBS.PA6>

VIII. E-TEXT BOOKS:

1. <https://www.pdfdrive.com/human-resources-management-set-concepts-methodologies-tools-and-applications-human-resources-management-concepts-methodologies-tools-and-applications-e175226969.html>
2. <https://www.pdfdrive.com/human-resource-management-e5972245.html>
3. <https://www.pdfdrive.com/human-resource-management-e30956441.html>
4. <https://www.pdfdrive.com/human-resource-management-practice-yimgcom-e11037371.html>
5. <https://open.lib.umn.edu/humanresourcemanagement/>
6. https://primo.csu.edu.au/permalink/61CSU_INST/1hkg98a/alma991001683790402357



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal - 500 043, Hyderabad, Telangana

COURSE CONTENT

FINANCIAL MANAGEMENT								
II Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE15	Core	L	T	P	C	CIA	SEE	Total
		4	-	-	4	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Financial Reporting and Analysis								
SDGs Mapped: SDG 8 (Decent Work & Economic Growth), SDG 9 (Industry, Innovation and Infrastructure)								

I. COURSE OVERVIEW:

The course focuses on the nature, scope, evolution of finance function; goals of finance function enable students to understand maximizing profit, wealth, welfare and earnings per share of business concern. Financial management is also very useful to the business concerns to take investment decisions, capital structure decisions and dividend decisions from time to time for the growth and development of business. This course includes management of cash, receivables, inventory and current assets in working capital planning. This course uses the analytical techniques and arriving at conclusions from financial information for the purpose of decision making

II. COURSES OBJECTIVES:

The students will try to learn:

- I. The basic functions and goals of financial management for better utilization of funds.
- II. Investment strategies for effective utilization of financial resources.
- III. Capital structure decisions for proper utilization of funds.
- IV. Dividend decisions and related theories to help investors earn a high return on their investment.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Describe the basic functions and goals of financial management to know the importance of finance function in the contemporary scenario.
- CO2 Discuss the characteristics and importance of investment decisions and capital budgeting principles to evaluate the cash flows
- CO3 Demonstrate the importance of financial structure and leverages decisions to analyze the capital structure.
- CO4 Explain the measurement of cost of capital to help the business organizations in expanding the operations.
- CO5 Enumerate the dividend decisions, value of the firm and relevance for dividends declaration and payments.
- CO6 Examine the concept of working capital and committees recommendations on this concept to identify the fund requirement for day to day operations.

IV. COURSE CONTENT:

MODULE - I: THE FINANCE FUNCTION (10)

Nature and scope, functions, objectives and importance of financial management, evolution of finance function, new role in the contemporary scenario, profit maximization, wealth maximization and EPS maximization, role of financial manager, the agency relationship and costs, risk return trade off, concept of time value of money, future value and present value.

MODULE - II: THE INVESTMENT DECISION (09)

Investment decision process, developing cash flow, data for new projects, capital budgeting techniques: traditional and discounted cash flow methods: payback period method, average rate of return method, net present value method, profitability index method, internal rate of return method (problems), the net present value vs. internal rate return; approaches for reconciliation, capital budgeting decision under conditions of risk and uncertainty;

MODULE - III: CAPITAL STRUCTURE DECISIONS (08)

Cost of capital: concept and measurement of cost of capital, debt vs. equity, cost of equity, preference shares, equity capital and retained earnings, weighted average cost of capital and marginal cost of capital. Importance of cost of capital in capital budgeting decisions.

Capital structure vs. financial structure: capitalization, financial leverage, operating leverage and composite leverage, earnings before interest and tax, Earning per Share Analysis (problems).

MODULE - IV: DIVIDEND DECISION (10)

Dividends and value of the firm, Relevance of dividends, MM hypothesis, Factors determining dividend policy, dividends and valuation of the firm, the basic models. Declaration and payment of dividends, bonus shares, rights issue, share-splits, and major forms of dividends: cash and bonus shares, The theoretical backdrop: dividends and valuation, Major theories centered on the works of Gordon and Walter models (problems). A brief discussion on dividend policies of Indian companies.

MODULE - V: WORKING CAPITAL MANAGEMENT (08)

Components of working capital, gross vs. net working capital, determinants of working capital needs, the operating cycle approach. Management of cash, basic strategies for cash management, cash budget (problems), cash management techniques/processes; management of receivables and management of inventory (problems), the importance of current assets management in working capital planning, planning of working capital, financing of working capital through bank finance and trade credit, recommendations of Tandon and Daheja committee on working capital, cases.

V. TEXTBOOKS:

1. Chandra, Prasanna, "Fundamentals of Financial Management", McGraw-Hill Education, 9th edition, 2020.
2. Rajesh Kothari, "Financial Management a contemporary Approach", Sage publications, 1st edition, 2017.
3. Srivastava, "Financial Management", Himalaya Publication House, Mumbai, 6th edition, 2016.
4. Prasanna Chandra, "Financial Management Theory and Practice", Mc Graw Hill, New Delhi, 9th edition, 2015.
5. I.M. Pandey, "Financial Management", Vikas Publishing House, New Delhi, 11th edition, 2015.

VI. REFERENCE BOOKS:

1. Brigham, E. F. and Ehrhardt. M. C., "Financial Management Theory and Practice", Thomson South-Western Publications, 15th edition, 2020.
2. Vishwanath S. R., "Corporate Finance Theory and Practice", Sage Publications, 5nd edition, 2017.
3. Prasanna Chandra, "Financial Management Theory and Practice", Tata McGraw Hill, 10th edition, 2016.
4. Sudershana Reddy, "Financial Management", HPH Publications, 6th edition, 2010.
5. Rajiv Srivastava and Anil Misra, "Financial Management", Oxford Higher Education Publications, 4th edition, 2009.

VII. WEB REFERENCES:

1. http://qu.edu.iq/ade/wp-content/uploads/2016/02/financial_management_www.accfile.com_.pdf
2. http://bschool.nus.edu.sg/staffprofile/bizzwn/Financial_Mgt_2E.pdf

VIII. E-TEXT BOOKS:

1. <http://www.freebookcentre.net/Business/Finance-Books.html>
2. <http://www.icaew.com/en/library/library-collection/ebooks/financial-management>
3. https://www.google.co.in/books/edition/Financial_Management_Principles_and_Prac/sSzpPWDSapoC?hl=en&gbpv=1&dq=financial+management+e-books&printsec=frontcover
4. https://www.google.co.in/books/edition/Financial_Management_Theory_Problems_and/r1ljDwAAQBAJ?hl=en&gbpv=1&dq=financial+management+e-books&printsec=frontcover



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal - 500 043, Hyderabad, Telangana

COURSE CONTENT

MARKETING MANAGEMENT								
II Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE16	Core	L	T	P	C	CIA	SEE	Total
		4	-	-	4	40	60	100
Contact Classes: 45	Tutorial Classes: 01	Practical Classes: Nil				Total Classes: 45		
Prerequisite: Business Economics								
SDGs Mapped: SDG 12 (Responsible Consumption & Production), SDG 8 (Decent Work & Economic Growth)								

I. COURSE OVERVIEW:

This course imparts the skills to make effective decision making with respect to the various marketing function including assessing marketing opportunities and also develop them to formulating marketing strategies along with implementation plans. Course topics include market-oriented strategic planning, marketing research and information systems, buyer behavior, target market selection, competitive positioning, product and service planning and managing pricing, distribution, and integrated communications, including advertising, public relations, Internet marketing, media, direct marketing, and sales promotions. Through a combination of interactive discussions, and applies marketing topics to consumer and business-to-business products, services, and non-profit organizations.

II. COURSES OBJECTIVES:

The students will try to learn:

- I. The concepts of marketing and the role of marketing in business and society.
- II. The aspects of consumer behavior and consumer decisions.
- III. The of market segmentation, targeting, and positioning analysis.
- IV. The distribution, promotion, and communication strategies into an action plan.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Illustrate the marketing concepts and information system skills to evaluate current business events in the industry.
- CO2 Analyze consumer markets, customer value, product and brand development to increase customer satisfaction.
- CO3 Integrate the concepts of consumer and business market segmentation for effective product design and development.
- CO4 Apply the concept of market target and positioning to establish the image of a brand.
- CO5 Develop marketing channels, promotional mix and sales promotion strategies to set a business apart from its competitors.
- CO6 Appraise pricing-related strategies, and developing marketing trends to maximize sales growth.

IV. COURSE CONTENT:

MODULE - I: INTRODUCTION TO MARKETING AND MARKET RESEARCH (09)

Importance and scope of Marketing, Core Marketing Concepts, Marketing Philosophies, Marketing Environment, Marketing Strategies & Plans, and Changing Marketing landscape, Market Research - Definition of MR, Marketing Research process, Marketing Information systems, Marketing Research & Ethics, International Marketing Research.

MODULE-II: ANALYZING MARKETING OPPORTUNITIES CUSTOMER VALUE AND MARKETING MIX (08)

Decision Making, Building Customer Value, Analyzing Consumer Markets – Consumer Behavior – Cultural, Social & Personal Factors, developing products & brands – product levels; classifying products, product range, product line & product mix, Product Life Cycles, new product development, New Service Development, Stages of Product/ Service innovation development, The process of adoption, Branding.

MODULE - III: DESIGNING A CUSTOMER DRIVEN STRATEGY (08)

Market segmentation - STP Process - segmentation of consumer market, business market, requirement for effective segmentation.

Market targeting – evaluating market segmentation, selecting target market segmentation, positioning – Positioning and repositioning, positioning maps, product positioning strategies.

MODULE-IV: DISTRIBUTION DECISIONS, PROMOTIONS AND COMMUNICATION STRATEGIES (10)

Marketing Channels, Channel intermediates and functions, channel structure, channel for consumer products, business and industrial products, alternative channel, channel strategy decisions. The promotional mix, advertising, public relations, sales promotion, personal selling, Direct and online Marketing. Marketing communication- communication process, communication promotion mix, factors affecting the promotion mix.

MODULE - V: PRICING DECISION AND PERSONAL COMMUNICATION (10)

Importance of price, cost determinant of price, markup pricing, profit maximization pricing, break even pricing, pricing strategies, ethics of pricing strategy, product line pricing, WOM, Rural marketing, BOP, relationship Marketing, Digital marketing, Social media marketing, postmodern marketing, market sustainability and ethics, Global marketing, green marketing.

V. TEXTBOOKS:

1. G. Shainesh, Philip Kotler, Kevin lane Keller, Alexander Chernev, Jagdish N.Sheth, “Marketing Management”, Pearson,16e, 2022
2. Iacobucci, Dawn. “Marketing management”, Cengage Learning, 6th edition, 2021.
3. Park, Seohee. “Marketing Management”, Vol. 3. Seohee Academy, 6th edition, 2020.
4. Kotler, P., Armstrong, G., Agnihotri, P. K., and Haque, E. “Principles of Marketing: A South Asian Perspective”, Pearson Education Prentice Hall of India, 18th edition, 2020.
5. Philip Kotler, Gray Armstrong, “Principles of Marketing”, Pearson Education, 15th edition, 2016.

VI. REFERENCE BOOKS:

1. Rosalind Masterson, Nichola Phillips, David Pickton, Marketing: An Introduction, Sage Publications, 5e, 2021.
2. Ramaswamy Namakumari, “Marketing Management”, TMH, 9th edition, 2023.
3. Philip Kotler, Gray Armstrong, Prafulla. Y. Agnihotri, Ehsan UL Haque, “Principles of Marketing, South Asian perspective”, Pearson Education, 13th edition, 2012.
4. K.Karunakaran, “Marketing Management”, Himalaya Publishing House, 2nd edition, 2012.
5. Rajan Saxena, “Marketing Management”, TMH, 4th edition, 2013.

VII. WEB REFERENCES:

1. http://www.pondiuni.edu.in/storage/dde/downloads/mbaii_mm.pdf
2. <http://www.ddegjust.ac.in/studymaterial/pgdapr/pgdapr-105.pdf>

VIII. E-TEXT BOOKS:

1. http://dl.ueb.edu.vn/bitstream/1247/2250/1/Marketing_Management_-_Millenium_Edition.pdf
2. http://197.14.51.10:81/pmb/GESTION2/MARKETING/Fundamentals_of_Marketing.pdf
3. <https://ipsedu.in/downloads/MBABooks/principles-of-marketing-philip-kotler.pdf>
4. <http://solr.bccampus.ca:8001/bcc/file/ddbe3343-9796-4801-a0cb-7af7b02e3191/1/Core%20Concepts%20of%20Marketing.pdf>
5. <https://htbiblio.yolasite.com/resources/Marketing%20Book.pdf>



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal - 500 043, Hyderabad, Telangana

COURSE CONTENT

ENTREPRENEURSHIP AND DESIGN THINKING								
II Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE17	Core	L	T	P	C	CIA	SEE	Total
		4	-	-	4	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Business Law and Environment								
SDGs Mapped: SDG 8 (Decent Work & Economic Growth), SDG 9 (Industry, Innovation and Infrastructure)								

I. COURSE OVERVIEW:

The purpose of the course is to acquire necessary knowledge and skills required for organizing and carrying out entrepreneurial activities, for analysing and understanding business situations in entrepreneurs act and to master the knowledge necessary to plan entrepreneurial activities. The objective of the course is, further on, to develop the ability of analysing various aspects of entrepreneurship– especially of taking over the risk, and the specificities as well as the pattern of entrepreneurship development and, finally, to contribute to their entrepreneurial and managerial potentials.

II. COURSES OBJECTIVES:

The students will try to learn:

- The key factors and be able to apply the key entrepreneurial process – command and control, calculated risk-taking and opportunity recognition to business development
- The function of the entrepreneur in the successful, commercial application of innovations in business landscape.
- The key resources required to develop an existing business such as ideas and finance, launch a new venture, or initiate a business enterprise.
- The ability to engage in critical thinking by analyzing situations and constructing and selecting viable solutions to solve problems.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Explore new vistas of entrepreneurship in the twenty-first century environment to establish new business opportunities.
- CO2 Evaluate entrepreneurial mindset and personality of each individual helping to detect difficulties and propose a timely solution.
- CO3 Recognize the entrepreneurial mindset for giving value to the company.
- CO4 Develop entrepreneurial imagination and creativity to develop the value of the company.
- CO5 Identify and establish new venture prospects based on new technology to evaluate the feasibility of a new business concept.
- CO6 Investigate strategic entrepreneurial perspectives that aid in the development of a competitive mindset.

IV. COURSE CONTENT:

MODULE - I: UNDERSTANDING ENTREPRENEURIAL MIND-SET (08)

The Evolution of Entrepreneurship, Qualities, Skills, Functions of Entrepreneurs, Types of Entrepreneurs, Approaches to Entrepreneurship, Process Approach, Role of Entrepreneurship in Economic Development.

The individual Entrepreneurial Mindset and Personality: The Entrepreneurial Journey, Stress and the Entrepreneur, The Entrepreneurial Ego, Entrepreneurial Motivations, Motivational Cycle, Entrepreneurial Motivational Behavior, Entrepreneurial Competencies, Entrepreneurial Stress.

MODULE - II: STRATEGIC PERSPECTIVES IN ENTREPRENEURSHIP (10)

Strategic Planning, Strategic Actions, Strategic Positioning, Business Stabilization, Building the Adaptive Firms, Understanding the Growth Stage, Internal Growth Strategies and External Growth Strategies, Unique Managerial Concern of Growing Ventures.

MODULE - III: OPPORTUNITIES AND CHALLENGES OF ENTREPRENEURSHIP (09)

Initiatives by the Government of India to Promote Entrepreneurship, Social and Women Entrepreneurship. Feasibility Analysis, Industry and Competitor Analysis, Formulation of the Entrepreneurial Plan, The Challenges of New Venture Start-ups.

Developing an Effective Business Model, Blue and Red Ocean Strategies, Sources of Finance, Critical Factors for New venture Development, Evaluation Process. Intellectual Property Protection: Patents, Copyrights, Trademarks and Trade Secrets, Avoiding Trademark Pitfalls.

MODULE - IV: DESIGN THINKING – AN INTRODUCTION (10)

Principles of Design Thinking, Process of Design Thinking, Planning a Design Thinking Project, Understanding of the Problem, Problem Analysis, Reformation of the Problem, Empathetic Design Methods.

MODULE - V: PROTOTYPE, TESTING IDEAS, IMPLEMENTING DESIGN THINKING (08)

Creativity, Creativity Process, Creativity Techniques, Business Idea, Evaluation of Ideas, Kano Method, Finding Gaps in the Market Place, Prototype, Lean Startup Method, Visualization, Presentation Techniques, Desirability Testing, Methods to Initiate Ventures, Creating New Ventures, Acquiring an Established Venture, Franchising, Advantages and Disadvantages, Implementing Design Thinking, Agility for Design Thinking.

V. TEXTBOOKS:

1. Chandramouli Subramanian, Thyagarajan Paramasivan & Sankaran Venkataramani, Design Thinking –A hands on Approach, 1e, Universities Press, 2025.
2. Ali J Ahmed, Punita Bhatt, Lain Acton, Entrepreneurship in Developing and Emerging Economies, Sage Publications, 1e, 2019.
3. Sharma, Sangeeta. "Entrepreneurship development", PHI Learning Pvt. Ltd., 7th edition, 2021.
4. Akino, Susan. "SMEs and Entrepreneurship Development Determinants in Practice: Case of Uganda." Handbook of Research on Sustaining SMEs and Entrepreneurial Innovation in the Post-COVID-19 Era", IGI Global, 5th edition, 2021.

VI. REFERENCE BOOKS:

1. Christian Mueller - Roterberg, Handbook of Design Thinking –Tips and Tools for how to design Thinking, Independently Published, US, 2018.
2. D F Kuratko and T V Rao, Entrepreneurship-A South-Asian Perspective, Cengage Learning, 1e, 2012.
3. Poornima M Charantimath, "Entrepreneurship Development and Small Business Enterprises ", Pearson Publications, 2nd edition, 2012.

VII. WEB REFERENCES:

1. <https://play.google.com/books/reader?id=uUdLAgAAQBAJ&hl=en&pg=GBS.PR6>
2. <https://play.google.com/store/books/details?id=-RE8BAAAQBAJ>
3. <https://play.google.com/books/reader?id=HhI8BAAAQBAJ&hl=en&pg=GBS.PP1>
4. <https://play.google.com/books/reader?id=sarDDAAAQBAJ&hl=en&pg=GBS.PP1>
5. <https://play.google.com/books/reader?id=5PXgDAAAQBAJ&hl=en&pg=GBS.PP1>

VIII. E-TEXT BOOKS:

1. <https://www.pdfdrive.com/entrepreneurship-development-directorate-of-distance-education-e7748053.html>



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal - 500 043, Hyderabad, Telangana

COURSE CONTENT

MANAGEMENT INFORMATION SYSTEMS								
II Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE18	Core	L	T	P	C	CIA	SEE	Total
		4	-	-	4	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Statistical Data Analysis								
SDGs Mapped: SDG 9 (Industry, Innovation and Infrastructure), SDG 4 (Quality Education)								

I. COURSE OVERVIEW:

The course focuses on the importance of management, management concepts, and management practices with the study of human behavior within organizations. The primary goal of this course is to provide knowledge on advanced leadership roles in modern organization. This course will create awareness of various information system solutions like ERP, CRM, Data warehouses and the issues in successful implementation of technologies in any organization.

II. COURSES OBJECTIVES:

The students will try to learn:

- I. The knowledge to increase the effectiveness and decision making process for managers.
- II. The compression between computer system and decision support system to help the department in their daily work and solve problems.
- III. How to solve new and non-repeated problems in the business decision making process.
- IV. MIS is helpful in controlling costs by giving information about idle time, labour turnover, wastages and losses and surplus capacity

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Summarize the basic concepts of management information system process, structure, and classification in order to develop strategic and operational planning and management control.
- CO2 Analyze business applications such as ERP, e-commerce, DSS, and BI systems.
- CO3 Develop and manage information systems using planning, acquisition, and implementation strategies.
- CO4 Apply system development models and CASE tools for effective system development.
- CO5 Evaluate system analysis, design, and requirement determination methods.
- CO6 Apply the concept of cybercrime, classify cyber criminals, and resolve security issues to protect an IT infrastructure.

IV. COURSE CONTENT:

MODULE - I: INTRODUCTION (08)

Management information system importance, definition, nature and scope of management information system, structure and classification of management information system, information and systems concept, types of information, information systems for competitive advantage.

MODULE - II: BUSINESS APPLICATIONS OF INFORMATION SYSTEM (08)

Electronic commerce, enterprise resource planning systems, decision support system, business intelligence and knowledge management system.

MODULE - III: MANAGEMENT OF INFORMATION SYSTEM (10)

Information System Planning, System Acquisition, Systems Implementation, System Development Models: Water Fall Model, System Development Lifecycle.

V-Model, Computer Assisted and Software Engineering Tools, Prototype Iterative Model, Evaluation & Maintenance.

MODULE - IV: BUILDING OF INFORMATION SYSTEMS (10)

System development stages, system development approaches, systems analysis and design, requirement determination, strategies for requirement determination, structured analysis tools, system design, design objectives, conceptual design, design methods and detailed system design.

MODULE - V: INTRODUCTION TO CYBER CRIME (09)

Cyber Space; Cyber Law; e-Business; e-Consumers; Spam, Phishing. Cyber Crime and Information Security: Threats and Vulnerabilities. Inter-networks Security Defenses, Other Security Measures, System Control and Audit, Blockchain.

V. TEXTBOOKS:

1. Rainer, R. Kelly, and Brad Prince, "Introduction to information systems", John Wiley & Sons, 4th edition, 2021.
2. Laudon & Laudon, "Management Information Systems", Pearson, 12th edition, 2015.
3. Murthy, "Management Information System, Himalaya", 9th edition, 2013.
4. S.A.Kelkar, Software Project Management-A Concise Study, PHI, 3rd edition, 2012.

VI. REFERENCE BOOKS:

1. Ken Laudon, Jane P. Laudon, Management Information Systems, Pearson education, 18th edition, 2025.
2. Jennifer L Bayuk, Jason Healey, Paul Rohmeyer, Marcus H.Sachs, Jeffrey Schmidt, Joseph Weiss, Cyber security Policy Guidebook, Wiley, 7th edition, 2022.
3. A K Gupta, Sharma "Management of Systems" Macmillan, 1st edition, 2012.

VII. Web References:

1. <http://www.ijcse.com/docs/IJCSE11-02-01-054.pdf>
2. <http://www.pitt.edu/~druzdzet/psfiles/dss.pdf>

VIII. E-Text Books:

1. <https://www.scribd.com/doc/252519209/Decision-Support-Systems-and-Intelligent-Systems-7th- Edition-Free-eBook-Download>
2. <http://link.springer.com/book/10.1007%2F978-3-540-48713-5>
3. <https://www.jerrypost.com/Books/MISBook/Bookfiles5/Chapters/MISPost-Preface-500.pdf>
4. https://www.researchgate.net/profile/Javed-Saani/publication/340647719_Management_Information_Systems/links/5eb7f7fe299bf1287f782bb5/Management-Information-Systems.pdf
5. https://repository.dinus.ac.id/docs/ajar/Kenneth_C.Laudon,Jane_P_.Laudon_Management_Information_Sysrem_13th_Edition_.pdf



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal - 500 043, Hyderabad, Telangana

COURSE CONTENT

QUANTITATIVE ANALYSIS FOR BUSINESS DECISIONS								
II Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE19	Core	L	T	P	C	CIA	SEE	Total
		4	-	-	4	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Basic concepts of management								
SDGs Mapped: SDG 4 (Quality Education), SDG 9 (Industry, Innovation and Infrastructure)								

I. COURSE OVERVIEW:

The main objective of the course is to help develop and enhance quantitative approach & knowledge. This means good quantitative skills, as well as confidence in the usage of statistical methods and their interpretations, focusing on improved decision-making abilities based on quantitative sources.

II. COURSES OBJECTIVES:

The students will try to learn:

- I. The fundamental concepts, scope, and applications of Operations Research (OR) in managerial decision-making, along with the process of developing and applying OR models for problem-solving.
- II. How to formulate and solve Linear Programming Problems (LPP) using graphical and simplex methods, and understand the role of duality and limitations of LPP in real-world applications.
- III. How to apply mathematical models for solving Assignment and Transportation problems using standard methods such as the Hungarian Method, VAM, and MODI, and analyze optimal solutions for business operations.
- IV. The decision-making techniques under various conditions of uncertainty and risk, and understand the basic concepts of Queuing Theory and Game Theory for optimizing managerial performance.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Understand the nature, scope, and applications of Operations Research and different types of OR models.
- CO2 Analyze and formulate Linear Programming Problems (LPP) and solve them using graphical and simplex methods.
- CO3 Develop solutions for assignment problems, including variations, using Hungarian and simplex methods.
- CO4 Apply transportation problem techniques, including initial feasible solution methods and optimality tests.
- CO5 Evaluate decision-making under uncertainty, risk, and perfect information using decision trees.
- CO6 Apply queuing and game theory models to solve problems involving waiting lines and strategic decision-making.

IV. COURSE CONTENT:

MODULE - I: Introduction to Operations Research (08)

Nature and Scope of Operations Research: Origins of OR, Applications of OR in different Managerial Areas, Problem Solving and Decision-making, Quantitative and Qualitative Analysis. Defining a Model, Types of Models, Process for Developing an Operations Research Model, Practices, Opportunities and Shortcomings of using an OR Model.

MODULE - II: Linear Programming Method (08)

Structure of LPP, Assumptions of LPP, Application Areas of LPP, Guidelines for Formulation of LPP, Formulation of LPP for Different Areas, Solving of LPP by Graphical Method: Extreme Point Method, Simplex Method, Converting Primal LPP to Dual LPP, Limitations of LPP.

MODULE - III: Assignment Model (10)

Assignment Model: Algorithm for Solving Assignment Model, Hungarians Method for Solving Assignment Problem, Variations of Assignment Problem: Multiple Optimal Solutions, Maximization Case in Assignment Problem, Unbalanced Assignment Problem, Travelling Salesman Problem, Simplex Method for Solving Assignment Problem.

Transportation Problem: Mathematical Model of Transportation Problem, Methods for Finding Initial Feasible Solution: Northwest Corner Method, Least Cost Method, Vogels Approximation Method, Test of Optimality by Modi Method, Unbalanced Supply and Demand, Degeneracy and its Resolution.

MODULE – IV: DECISION THEORY (10)

Introduction, ingredients of decision problems, decision making under uncertainty, cost of uncertainty, under risk, under perfect information, decision tree, construction of decision tree.

MODULE – V: QUEUING THEORY (09)

Queuing structure and basic components of a queuing model, distributions in queuing model, Differences in queuing model with FCFS, queue discipline, single and multiple service station with finite and infinite population, Game Theory, Saddle Point, Value of the Game.

VII. TEXTBOOKS:

1. Stacho, Juraj. “Introduction to operations research”, 10th edition, 2021.
2. Stevenson J. William, “Operations Management”, Tata McGraw-Hill, 14th edition, 2019
3. Barry Render, Ralph M. Stair, Jr., Michael E. Hanna, “Quantitative Analysis for Management”, Pearson Education, 11th edition, 2017.
4. B Mahadevan, “Operations Management: Theory and Practice”, Pearson Education India, 3rd edition, 2015.

VIII. REFERENCE BOOKS:

1. Anand Sharma, “Quantitative Techniques for Decision Making”, HPH, 1st edition, 2010.
2. Prem Kumar Gupta, “Introduction to Operations Research”, S.Chand, 5th edition, 2012.
3. K.L Schgel, “Quantitative Techniques and Statistics”, 3rd revised edition, 2012.
4. Hillier / Lieberman, “Introduction to operations research”, TMH, 9th edition, 2012.
5. Hamdy A Taha, “Operations Research: An Introduction”, Pearson, 9th edition, 2013.

IX. WEB REFERENCES:

1. <http://web.itu.edu.tr/topcuil/ya/OR.pdf>
2. <http://textofvideo.nptel.iitm.ac.in/112106134/lec1.pdf>

X. E-TEXT BOOKS:

1. <https://www.goodreads.com/shelf/show/operations-research>
2. https://books.google.co.in/books/about/Operations_Research.html?id=P9h42uyE72YC
3. <https://www.bbau.ac.in/dept/UIET/EME-601%20Operation%20Research.pdf>
4. http://eprints.stiperdharmawacana.ac.id/51/1/%5BJohn_Buglear%5D_Quantitative_Methods_for_Busines%28BookFi%29.pdf



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal - 500 043, Hyderabad, Telangana

COURSE CONTENT

R-PROGRAMMING FOR BUSINESS ANALYTICS								
II Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE20	Elective	L	T	P	C	CIA	SEE	Total
		3	0	-	3	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Basic concepts of Information Technology								
SDGs Mapped: SDG 4 (Quality Education), SDG 9 (Industry, Innovation and Infrastructure)								

I. COURSE OVERVIEW:

This course is designed to know the fundamental skills in R programming and data analysis for effective business decision-making. R is a powerful and widely used programming language for data analysis, and this course will focus on its application in the context of business analytics.

II. COURSES OBJECTIVES:

The students will try to learn:

- I. The fundamentals of R programming and its significance in business analytics.
- II. The mechanisms of import, clean, and preprocess data for analysis.
- III. The basic statistical concepts and apply them to business data.
- IV. How to formulate and test hypotheses to make data-driven business decisions.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Demonstrate a strong grasp of R programming language fundamentals, including data structures, variables, and functions.
- CO2 Create a wide range of data visualizations using R, and effectively communicate insights and findings through charts and graphs.
- CO3 Apply statistical techniques using R to analyze data, including descriptive statistics, hypothesis testing, and regression analysis.
- CO4 Solve practical business problems by applying R to analyze and make data-driven decisions in various scenarios.
- CO5 Interpret data analysis results and translate them into actionable insights for business decision-makers.
- CO6 Enhance problem-solving skills, especially in the context of business analytics, to identify opportunities for improvement and innovation.

IV. COURSE CONTENT:

MODULE - I: INTRODUCTION TO R AND RSTUDIO (08)

Introduction to R and RStudio, Installing R and RStudio, RStudio Interface, Basic R syntax and data types, Basic operations in R, Importing and exporting data, Data frames and data manipulation, Sub setting and filtering data, Data cleaning and transformation.

MODULE - II: DATA VISUALIZATION WITH GGLOT2 (10)

Introduction to data visualization, Creating scatter plots, bar charts, and histograms, Customizing visualizations with ggplot2, Exploratory data analysis (EDA), Measures of central tendency and dispersion, Frequency distributions, Box plots and summary statistics, Data summarization and reporting.

MODULE - III: PROBABILITY, DISTRIBUTIONS AND HYPOTHESIS TESTING (09)

Probability concepts, Probability distributions (normal, binomial, etc.), Sampling distributions, Central Limit Theorem.

Introduction to hypothesis testing, t-tests (one-sample, two-sample), Chi-squared tests, Type I and Type II errors.

MODULE - IV: LINEAR REGRESSION AND TIME SERIES ANALYSIS (10)

Simple linear regression, Multiple linear regression, Model assessment and diagnostics, Predictive modeling, Introduction to time series data, Time series decomposition, Forecasting techniques, Seasonal decomposition and analysis.

MODULE - V: DATA MINING AND MACHINE LEARNING (08)

Introduction to data mining and machine learning, Support vector machines (SVM), neural networks and deep learning, Model evaluation and hyper parameter tuning.

V. TEXTBOOKS:

1. Matt Dowle, Matt. Efficient Data Manipulation with R by Efficient Data Manipulation with R. Matt Dowle, 2023.
2. Hadley Wickham and Garrett Golemund Wickham, Hadley, and Garrett Golemund , R for Data Science. R for Data Science. O'Reilly Media, 2022.
3. Christian Albright and Wayne Winston Albright, Christian, and Wayne Winston , Business Analytics: Data Analysis & Decision Making. Business Analytics: Data Analysis & Decision Making. Cengage Learning, 2021.

VI. REFERENCE BOOKS:

1. Text Mining with R: A Tidy Approach by Julia Silge and David Robinson Silge, Julia, and David Robinson. Text Mining with R: A Tidy Approach. O'Reilly Media, 2020.
2. Practical Statistics for Data Scientists by Andrew Bruce and Peter Bruce Bruce, Andrew, and Peter Bruce. Practical Statistics for Data Scientists. O'Reilly Media, 2019.
3. Data Science for Business by Foster Provost and Tom Fawcett Provost, Foster, and Tom Fawcett. Data Science for Business. O'Reilly Media, 2017.
4. Applied Predictive Modeling by Max Kuhn and Kjell Johnson Kuhn, Max, and Kjell Johnson. Applied Predictive Modeling. Springer, 2016.

VII. WEB REFERENCES:

1. <http://www.sanfoundry.com/best.reference-books.com>
2. <http://www.managementhelp.org/management/theories.html>

VIII. E-TEXT BOOKS:

1. <http://www.bayt.com/en/specialities/q/33147/whatare.com>
2. <http://www.semesteratsea.org<spring2017.com>
3. <https://www.heimkaup.is/contemporary-management>
4. <https://www.e-elgar.com/shop/gbp/contemporary-issues-in-management-9781783470006.html>
5. <https://kydopasaci.epaperiesnovel.icu/contemporary-challenges-in-management-book-12917ch.php#>



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

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COURSE CONTENT

PSYCHOLOGY AND LIFE								
II Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE21	Elective	L	T	P	C	CIA	SEE	Total
		3	0	-	3	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Basic concepts of management								
SDGs Mapped: SDG 3 (Good Health & Wellbeing), SDG 5 (Gender Equality)								

I. COURSE OVERVIEW:

The course is designed to provide the basic understanding of the psychology of human behaviour. This will be given exposure to concepts, terminology, principles, and theories that comprise an introductory course in psychology.

II. COURSES OBJECTIVES:

The students will try to learn:

- The goals, fields and applications, development of Psychology from middle 19th century.
- The applications of psychology to disadvantaged groups, problems of social integration
- The nature and characteristics, types of stresses and changing behavior to save the environment.
- The community psychology, understanding of communities and individuals within environments.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Identify psychology's contributions to increasing the development of human behavior.
- CO2 Use psychological applications to help disadvantaged populations make better decisions, manage stress, and behave better.
- CO3 Understand the various branches of psychology in order to address a wide range of human issues and/or improve one's quality of life.
- CO4 Describe the concept of nature, characteristics, and classification of environmental psychology to encourage long-term behavior and overall well-being.
- CO5 Determine environmental stress factors in order to reduce negative health impacts.
- CO6 Utilizing community psychology to protect people's health and well-being in their community.

IV. COURSE CONTENT:

MODULE - I: FUNDAMENTALS OF PSYCHOLOGY (08)

Definition, goals, fields and applications, development of Psychology from middle 19th century, psychology in ancient India, The founding of experimental Psychology: Contributions of Weber, Fechner, Wundt and Eddinghaus, William James and Galton, Development of Psychology in India.

MODULE - II: APPLICATIONS AND FIELDS OF PSYCHOLOGY (10)

Applications of Psychology to disadvantaged groups, problems of social integration, Information technology and Mass media, Economic Development. Fields of Psychology: Social psychology, Educational psychology, Experimental psychology, Clinical psychology, Personality psychology.

MODULE - III: ENVIRONMENTAL PSYCHOLOGY (09)

Nature and Characteristics, classification of environment, Indian perspective on human environment relationship. Environmental stress: Nature and characteristics.

Types of stresses, natural disorders, technological catastrophe, noise and air pollution, Changing behavior to save the environment.

MODULE - IV: COMMUNITY PSYCHOLOGY (10)

Introducing community psychology, understanding communities: Individuals within environments, Human diversity, preventing problem behavior and promoting social competence, Promoting community and social change.

MODULE - V: CASE STUDIES (08)

Case studies on current psychological cases.

V. TEXTBOOKS:

1. Weiten, Wayne. "Psychology: Themes and variations". Cengage Learning, 6th edition, 2021.
2. Martin, G. Neil. "The Psychology of Comedy", Routledge, 8th edition, 2021.
3. Best, Rachel. "Introductory Psychology-14080-PSYC 1010-J", 6th edition, 2021.
4. McKenna, Eugene. "Business psychology and organizational behavior", Routledge, 5th edition, 2020.
5. De Wall, C. Nathan, and David G. Myers. "Psychology in Everyday Life", Worth, 4th edition, 2016.

VI. REFERENCE BOOKS:

1. Sahakian, William, S. Ed. History of Psychology, F.E. Peacock, Publishers, Inc. Itasca, Illinois, 1981.
2. Charles G. Morris, Albert Anthony Maisto, Ann Levine, "Psychology: An Introduction", 1980.

VII. Web References:

1. http://ocw.mit.edu/ans7870/9/9.00SC/MIT9_00SCF11_text.pdf
2. https://www.ivcc.edu/uploadedFiles/_faculty/_dockins/PSY_chapter1.pdf

VIII. E-Text Books:

1. <http://www.blackwellpublishing.com/intropsych/pdf/chapter15.pdf>
2. http://college.cengage.com/psychology/sue/abnormal/8e/instructors/sue_irm.pdf
3. https://ocw.mit.edu/ans7870/9/9.00SC/MIT9_00SCF11_text.pdf



INSTITUTE OF AERONAUTICAL ENGINEERING

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COURSE CONTENT

BUSINESS ETHICS AND CORPORATE GOVERNANCE								
II Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE22	Elective	L	T	P	C	CIA	SEE	Total
		3	-	-	3	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Basic concepts of ethics and management								
SDGs Mapped: SDG 16 (Peace, Justice and Strong Institutions), SDG 12 (Responsible Consumption & Production)								

I. COURSE OVERVIEW:

The course aims to develop an understanding of the underlying concepts of corporate governance, business ethics and CSR which are relevant to the contemporary business environment. It is designed to foster the understanding of the ethical influences on economic, financial, managerial, and environmental aspects of business. The course further aims to develop ability to critically analyse ethical issues in business. This course reviews different regulatory processes essential to the understanding of the principles of corporate governance.

II. COURSES OBJECTIVES:

The students will try to learn:

- The ethical principles and moral reasoning applied in business decisions, including major theories of ethics and professional responsibilities.
- The various business functions such as marketing, HRM, finance, media, and healthcare, and apply ethical frameworks to resolve them.
- The board roles, governance mechanisms, and accountability to stakeholders, with reference to national and global standards.
- The importance of Corporate Social Responsibility (CSR) and evaluate CSR strategies as a tool for sustainable development and organizational competitiveness.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Integrate the ethics of production, marketing, human resource management, finance, and accounting to be followed in professional life for the benefit of the organization.
- CO2 Narrate the ethics of media reporting and the ethics of healthcare services applicable to designing advertising for a product.
- CO3 Analyze the corporate governance system's failures and the corporate governance needs in India.
- CO4 Evaluate the theories of corporate governance and apply them in companies to solve the problems in business.
- CO5 Demonstrate the functions, structure, role, duties, and responsibilities of directors to follow in the organization.
- CO6 Integrate the ethics of production, marketing, human resource management, finance, and accounting to be followed in professional life for the benefit of the organization.

IV. COURSE CONTENT:

MODULE - I: BUSINESS ETHICS THE CHANGING ENVIRONMENT (08)

Business Ethics-introduction, Levels of Business Ethics-Five Myths about Business Ethics, stages of Moral development Kohlberg's study-carol Gilligan's Theory-Principles of Ethics.

MODULE - II: PROFESSIONAL ETHICS (10)

Introduction to Professional Ethics- Ethics in Production and Product Management-Ethics of Marketing Professionals-Ethics in HRM-Ethics of Finance and Accounting Professionals-Ethics of Advertisement-Ethics of Media Reporting-Ethics of Healthcare Services.

MODULE - III: CORPORATE GOVERNANCE (09)

Introduction to Corporate Governance - Major Corporate Governance Failures- Need for Corporate Governance - Corporate Governance in India.

Theories of Corporate Governance - Agency Theory, Stewardship Theory, and Stakeholder Theory – Convergence- Problems of Governance in Companies.

MODULE - IV: ROLE OF BOARD (10)

Functions of the Board, Structure of the Board, role of the board, Role, duties and responsibilities of Directors, Types of Directors, Board as a learning organization, Leveraging Good Governance for Competitive Advantage. Conflicts of Interest, Remedial Actions. Governance Ratings- Merits and Demerits.

MODULE - V: CORPORATE SOCIAL RESPONSIBILITY (08)

Definition, Models for Implementation of CSR, Scope of CSR, Steps to attain CSR, Core - BCSD India, Ethics and Social Responsibility of Business, Social Responsibility and Indian Corporations, CSR as a business strategy for sustainable development.

V. TEXTBOOKS:

1. Mulej, Matjaž, Gražyna O'Sullivan, and Tjaša Štrukelj, eds. "Social Responsibility and Corporate Governance", Palgrave Macmillan, 8th edition, 2021.
2. DA Silveira, Alexandre Di Miceli. "Corporate governance and ethical culture: Do boards matter?" Review of Managerial Science, 4th edition, 2021.
3. Sateesh Kumar, "Corporate Governance", Oxford University Press, 3rd edition, 2015.
4. C. Fernando: "Business Ethics and Corporate Governance", Pearson, 2nd edition, 2018.
5. Christine A. Mallin, Corporate Governance, Oxford University Press, South Asia Edition, 4th edition, 2016.

VI. REFERENCE BOOKS:

1. Bob Tricker, Corporate Governance Principles, Policies and Practices, Oxford University Press, 2015.
2. Sateesh Kumar, "Corporate Governance", Oxford University Press, 2015.
3. N. Balasubramanian, Corporate Governance and Stewardship, TMH, 2012.
4. A. C. Fernando, Corporate Governance, Principles, Policies and Practices, Pearson, 2012.

VII. Web References:

1. ICSI and Taxmann Publication: "Corporate Governance".
2. A.C. Fernando: "Corporate Governance: Principles, Policies and Practices".
3. Inderjit Dube: "Corporate Governance".
4. Sanjiv Aggarwal: "Corporate Governance: Concepts and Dimensions".
5. P.V. Sharma and S. Rajani: "Corporate Governance: Contemporary Issues and Challenges".
6. John Caver: "Board Leadership".

VIII. E-Text Books:

1. <https://ddceutkal.ac.in/Syllabus/BECG-MBA.pdf>
2. <http://www.himpub.com/documents/Chapter2975.pdf>
3. http://ebooks.lpude.in/management/mba/term_3/DMGT301_DMGT503_CORPORATE_GOVERNANCE_AND_ETHICS.pdf
4. <https://www.elgaronline.com/view/9781849803717.xml>
5. <https://www.booktopia.com.au/business-ethics-corporate-governance-dynamics-in-zimbabwe-mufaro->

COURSE CONTENT

DISASTER MANAGEMENT								
II Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE23	Elective	L	T	P	C	CIA	SEE	Total
		3	0	-	3	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Basic concepts of management								
SDGs Mapped: SDG 11 (Sustainable Cities & Communities), SDG 13 (Climate Action)								

I. COURSE OVERVIEW:

Disaster Management course imparts knowledge related to the disaster including preparedness, mitigation and rehabilitation. Disaster Management helps in the time of emergency, natural calamity and man-made calamity. This course reduces the potential losses from hazards, assure prompt and appropriate assistance to the victims of a disaster, and achieve a rapid and effective recovery.

II. COURSES OBJECTIVES:

The students will try to learn:

- The specific contributions of the Red Cross/Red Crescent movement to the practice and conceptual understanding of disaster management and humanitarian response and their significance in the current context
- The standards of humanitarian response and practical relevance in specific types of disasters and conflict situations
- The strengths and weaknesses of disaster management approaches, planning and programming in different countries, particularly their home country
- The recognize issues, debates and challenges arising from the nexus between paradigm of development and disasters.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Outline the disaster management concepts to reduce the risks and consequences.
- CO2 Discuss various aspects of emergencies and society's role for disaster communication to get an immediate response
- CO3 Analyze the concept of disaster communication for experiences of the international disaster management efforts.
- CO4 Demonstrate the critical analysis of international disaster management and identify gaps that improve strong coordination.
- CO5 Recognize Disaster Administration to reduce the vulnerability of the disaster
- CO6 Apply the scientific tools of disaster management to prevent the risk involved in natural disasters.

IV. COURSE CONTENT:

MODULE - I: TYPES, TRENDS, CAUSES, CONSEQUENCES AND CONTROL OF DISASTERS (08)

Geological Disasters (earthquakes, landslides, tsunami, mining); Hydro-Meteorological Disasters (floods, cyclones, lightning, thunder-storms, hail storms, avalanches, droughts, cold and heat waves); Biological Disasters (epidemics, pest attacks, forest fire); Technological Disasters (chemical, industrial, radiological, nuclear) and Manmade Disasters (building collapse, rural and urban fire, road and rail accidents, nuclear, radiological, chemicals and biological disasters); Global Disaster Trends – Emerging Risks of Disasters – Climate Change and Urban Disasters.

MODULE - II: DISASTER MANAGEMENT CYCLE AND FRAMEWORK (10)

Disaster Management Cycle – Paradigm Shift in Disaster Management Pre-Disaster – Risk Assessment and Analysis, Risk Mapping, Prevention and Mitigation of Disasters, Early Warning System; Preparedness, Capacity Development; Awareness During Disaster – Evacuation – Disaster Communication – Search and Rescue – Emergency Operation Centre – Incident Command System – Relief and Rehabilitation – Post-disaster – Damage and Needs Assessment, Restoration of Critical Infrastructure – Early Recovery – Reconstruction and Redevelopment.

MODULE - III: INTERNATIONAL DISASTER MANAGEMENT EXPERIENCE (09)

International Disaster Management Experience: International disaster management efforts during Spanish Flu (1918), Tsunamis (2004) and COVID (2019). The Cuban Model of Hurricane Risk Management, Japan's Emergency Management and response System.

Bangladesh multi-hazard risk reduction Model. Critical analysis of international disaster management experience-identifying gaps and best practices.

MODULE - IV: DISASTER ADMINISTRATION (10)

Disaster Administration: United Nations and its Disaster Management Mechanism UNDP, UNDRR, WHO. Disaster Administration in India: Disaster Management Authority at National, State and District levels; Allied governmental bodies, institutions and mechanisms/resources for Disaster Management; State and National Disaster Mitigation Funds. Gaps in Disaster Policy and Administration

MODULE - V: APPLICATIONS OF SCIENCE AND TECHNOLOGY FOR DISASTER MANAGEMENT (08)

Geo-informatics in Disaster Management (RS, GIS, GPS and RS) Disaster Communication System (Early Warning and Its Dissemination) Land Use Planning and Development Regulations Disaster Safe Designs and Constructions Structural and Non-Structural Mitigation of Disasters S&T Institutions for Disaster Management in India.

V. TEXTBOOKS:

1. Rivera, Jason D., ed. "Disaster and Emergency Management Methods: Social Science Approaches in Application", Routledge, 8th edition, 2021.
2. Kapoor, Mukesh. "Disaster management", Saurabh Publishing House, 6th edition, 2020.
3. Elvas, Luís B., "Disaster Management in Smart Cities", Smart Cities, 4th edition, 2021.
4. D.R Khullar, "Environment & Disaster Management", 3rd edition, 2021.
5. Brebbia, C. A., ed. "Disaster Management", WIT Press, 6th edition, 2018.

VI. REFERENCE BOOKS:

1. Manual on natural disaster management in India, M C Gupta, NIDM, New Delhi
2. R K Bhandani, "An overview on natural & man-made disasters and their reduction", CSIR, New Delhi
3. World Disasters Report, International Federation of Red Cross and Red Crescent, Switzerland, 2009.
4. Coppola D P, "Introduction to International Disaster Management", Elsevier Science (B/H), London, 2007.
5. Disasters in India Studies of grim reality, Anu Kapur & others, 2005, 283 pages, Rawat Publishers, Jaipur

VII. WEB REFERENCES:

1. http://ndmindia.nic.in/disaster_management_in_india_09052017.pdf
2. <http://epdfiles.engr.wisc.edu/dmcweb/AA02AimandScopeofDisasterManagement.pdf>

VIII. E-TEXT BOOKS:

1. https://www.iare.ac.in/sites/default/files/lecture_notes/dm%20notes.pdf
2. <http://www.cbse.nic.in/natural%20hazards%20&%20disaster%20management.pdf>
3. <http://196.223.158.148/bitstream/handle/123456789/619/Improving%20Disaster%20Management.pdf?sequence=1&isAllowed=y>



INSTITUTE OF AERONAUTICAL ENGINEERING

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COURSE CONTENT

TOTAL QUALITY MANAGEMENT								
II Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE24	Elective	L	T	P	C	CIA	SEE	Total
		3	-	-	3	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Basic concepts of management								
SDGs Mapped: SDG 9 (Industry, Innovation and Infrastructure), SDG 12 (Responsible Consumption & Production)								

I. COURSE OVERVIEW:

This course is designed to introduce the principles and practices of Total Quality Management, a management philosophy focused on continuous improvement, customer satisfaction, and the pursuit of excellence in all aspects of an organization. Students will learn about the key principles, tools, and strategies for implementing TQM in various business settings.

II. COURSES OBJECTIVES:

The students will try to learn:

- The fundamental concepts of Total Quality Management, including quality evolution, philosophies, customer focus, and cost of quality.
- How to apply TQM principles such as leadership, employee involvement, continuous improvement techniques, and supplier partnership for organizational excellence.
- The use of Statistical Process Control tools and traditional quality control techniques to analyze and improve process performance.
- The various quality tools, methodologies, and standards such as QFD, FMEA, Six Sigma, and ISO systems to implement effective quality management in manufacturing and service sectors.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- Apply TQM tools and techniques to improve processes and operations.
- Identify and address quality issues within an organization.
- Analyze customer needs and expectations to enhance satisfaction.
- Implement continuous improvement practices in various business contexts.
- Assess the role of leadership and employee involvement in TQM.
- Interpret case studies and real-world examples of successful TQM implementations.

IV. COURSE CONTENT:

MODULE - I: INTRODUCTION TO TOTAL QUALITY MANAGEMENT (08)

Evolution of Quality, Quality Definition, Need for Quality, Dimensions of Product and Service Quality, Basic Concepts of TQM, TQM Framework, Quality Philosophies, Contributions of Deming, Juran and Crosby, Feiganbaum, Ishikawa and Taguchi, Barriers to TQM, Quality Statements, Customer Focus, Customer Orientation, Customer satisfaction, Customer Complaints, Customer Retention, Costs of Quality.

MODULE - II: TQM PRINCIPLES (10)

Leadership, Strategic Quality Planning, Quality Councils, Employee Involvement, Motivation, Empowerment, Team and Teamwork, Quality Circles Recognition and Reward, Performance Appraisal, Continuous Process Improvement, PDCA Cycle, 5S, Kaizen, Supplier Partnership, Partnering, Supplier Selection, Supplier Rating.

MODULE - III: STATISTICAL PROCESS CONTROL (09)

Statistical Fundamentals such as Mean and Standard Deviation, Chance and Assignable Causes, Control Charts for Variables, Process Capability Analysis such as Cp and Cpk, Seven basic (Traditional) Quality Control Tools: 1) Check Sheets (Tally Sheet) 2) Stratification (Alternatively, Flowchart or Run-chart) (Trend Analysis) 3) Histograms 4) Pareto Chart (80-20 Rule) 5) Cause-and-Effect Diagrams (Fishbone or Ishikawa Diagram) 6) Scatter Diagrams 7) Control charts.

MODULE - IV: TOOLS AND TECHNIQUES (10)

Quality Functions Development (QFD), Benefits, Voice of Customer, Information Organization, House of Quality (HOQ), Building a HOQ, QFD Process, Taguchi Method and Quality Loss function, Failure Mode Effect Analysis (FMEA): Requirements of Reliability, Failure rate, Total Productive Maintenance (TPM), Seven New Management Tools for Process Improvement: Affinity diagram, Interrelationship Diagram, Tree Diagram, Matrix Diagram, Matrix Data Analysis, Arrow Diagram, Process Decision program Chart, Benchmarking and POKA YOE, Six Sigma, Methodologies: DMAIC, DFSS, Six Sigma Belts, Quality Circles.

MODULE - V: QUALITY MANAGEMENT SYSTEMS (08)

Introduction, Benefits of ISO Registration, ISO 9000 Series of Standards, ISO 9001, Requirements, Implementation, Documentation, Writing the Documents, Quality Auditing, TQM Culture, Quality Auditing, QS 9000, ISO 14000, Concepts, Requirements and Benefits, TQM Implementation in Manufacturing and Service Sectors.

V. TEXTBOOKS:

1. Sunil Sharma, Total Quality Management, Sage Publications, 5e, 2024.
2. Bester field, et al., Total Quality Management, Pearson Education Asia, 6e, 2016.
3. Suganthi, L. and Samuel, A., Total Quality Management, Prentice Hall (India) Pvt. Ltd., 2016.
4. Janakiraman. B and Gopal.R.K., “Total Quality Management – Text and Cases”, Prentice Hall (India) Pvt. Ltd., 2014.

VI. REFERENCE BOOKS:

1. James R. Evans and William M. Lindsay, “The Management and Control of Quality”, 16th Edition, South-Western (Thomson Learning), 2025.
2. Oakland, J.S., TQM – Text with Cases, Butterworth – Heinemann Ltd., Oxford, 8th Edition, 2020.

VII. Web References:

1. <https://www.igi-global.com/chapter/the-changes-brought-by-total-quality-management-to-cognitive-learning/264577>

VIII. E-Text Books:

1. <https://www.igi-global.com/book/digital-technology-advancements-knowledge-management/257158>
2. https://books.google.co.in/books/about/Digital_Technology.html?id=My7Zr0aP2L8C&redir_esc=y



INSTITUTE OF AERONAUTICAL ENGINEERING

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COURSE CONTENT

RURAL MARKETING								
II Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE25	Elective	L	T	P	C	CIA	SEE	Total
		3	0	-	3	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Basic concepts of management								
SDGs Mapped: SDG 8 (Decent Work & Economic Growth), SDG 10 (Reduced Inequalities)								

I. COURSE OVERVIEW:

This course is designed to provide the unique challenges and opportunities in marketing products and services in rural areas. Rural marketing is distinct from urban marketing due to factors such as lower income levels, diverse cultures, and infrastructure limitations. Students will learn strategies, tools, and best practices for effectively reaching and serving rural markets.

II. COURSES OBJECTIVES:

The students will try to learn:

- I. The importance of Rural Marketing, Rural Environment, Problems in Rural Marketing in India
- II. The different rural marketing strategies to be adopted by the corporate.
- III. The rural market brand and channel management aspects.
- IV. The factors that influence rural consumers during purchase of products

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Understand the characteristics and dynamics of rural markets.
- CO2 Develop marketing strategies tailored to rural consumers and businesses.
- CO3 Identify and analyze the cultural, economic, and social factors influencing rural marketing.
- CO4 Evaluate the role of technology and digital marketing in rural areas.
- CO5 Implement distribution and supply chain strategies for reaching rural customers.
- CO6 Analyze case studies and real-world examples of successful rural marketing initiatives.

IV. COURSE CONTENT:

MODULE - I: INTRODUCTION (08)

Nature and Characteristics of Rural Market, Understanding the Indian Rural Economy, Rural Marketing Models, Rural Marketing Vs Urban Marketing, Parameters Differentiating Urban & Rural Market, Differences in Consumer Behavior in Rural and Urban Markets.

MODULE - II: RURAL MARKETING MIX (10)

Rural Marketing Mix, Additional Ps in Rural Marketing, 4As of Rural Marketing Mix, New Product Development for Rural Market, Rural Market Product Life Cycle, Objectives behind New Product Launch, New Product Development process.

MODULE - III: RURAL MARKET BRAND & CHANNEL MANAGEMENT (09)

Brand Loyalty in Rural Market, Regional Brands Vs National Brands, Channel Management, Indian Rural Retail Market.

Rural Retail Channel Management, Strategies of Rural Retail Channel Management.

MODULE - IV: RURAL MARKET RESEARCH (10)

Sources of Information, Factors Influencing Rural Consumers during Purchase of Products, Rural Consumer Life style, Approaches and Tools of Marketing Research, Rural Business Research, Evolution of Rural Marketing Research, Sources and Methods of Data Collection, Data Collection Approaches in Rural Areas, Data Collection Tools for Rural Market. Limitation and Challenges in Rural Marketing Research, Role of Rural Marketing Consulting Agencies.

MODULE - V: APPLICATIONS AND INNOVATIONS (08)

Marketing of Consumer Products, Services, Social Marketing, Agricultural Marketing, Rural Industry Products, Innovation for Rural Market, Marketing Strategies, eRural Marketing, Agricultural Co-operative Marketing, Rural Market Mapping, Corporate Social Responsibility, Organized Rural Marketing, IT for Rural Development, e-Governance for Rural India.

V. TEXTBOOKS:

1. Dinesh Kumar, Punam Gupta, Rural Marketing, Sage Publications, 2023.
2. Pradeep Kashyap, Rural Marketing, 6e Pearson Education, 2022.
3. T P Gopalaswamy, Rural Marketing, Environment, problems and strategies, Vikas Publications, 5e, 2021.
4. Sanal Kumar Velayudhan, Rural Marketing, Sage Publications, 2e, 2012.

VI. REFERENCE BOOKS:

1. C. S. G. Krishnamacharyulu, Lalitha Ramakrishnan, Rural Marketing: Text and Cases, Pearson Education, 2019.
2. Balram Dogra & Karminder Ghuman, Rural Marketing, TMH, 2019.

VII. Web References:

1. <http://mft.info/core/uploads/sites/32/2016/04/ENVIRONMENTAL-SCIENCE.pdf>
2. http://collegesat.du.ac.in/UG/Envinromental%20Studies_ebook.pdf

VIII. E-Text Books:

1. http://www.ed.gov.nl.ca/edu/k12/curriculum/documents/science/highschool/ES3205_student_text_chapter_1.pdf
2. <https://www.taylorfrancis.com/books/mono/10.4324/9780203974988/environmental-management-geoff-wilson-raymond-bryant>
3. <https://open.umn.edu/opentextbooks/textbooks/562>
4. <https://www.textbooks.com/Environmental-Science-16th-Edition/9781337569613/G-Tyler-Miller-and-Scott-Spoolman.php?CSID=2CUAAZWO3J3SMTTCOAUCTSOB>



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COURSE CONTENT

START-UP / MSME / INNOVATION DEVELOPMENT PLAN / SECTOR SPECIFIC REPORT								
II Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE26	Core	L	T	P	C	CIA	SEE	Total
		-	-	2	1	100	--	100
Contact Classes: Nil	Tutorial Classes: Nil	Practical Classes: 25			Total Classes: 25			
Prerequisite: Basic skills of field survey								
SDGs Mapped: SDG 8 (Decent Work & Economic Growth), SDG 9 (Industry, Innovation and Infrastructure)								

I. COURSE OVERVIEW:

To provide students with practical exposure to diverse organizational settings—Start-ups, MSMEs, innovation initiatives, or sector-specific domains—enabling them to apply theoretical knowledge to real-world business problems and strategic decision-making.

II. COURSES OBJECTIVES:

The students will try to learn:

- I. The organizational structures, operations, and business models in start-ups, MSMEs, and larger sectoral contexts.
- II. The functional areas such as marketing, operations, finance, and HR during internship exposure.
- III. The challenges faced by organizations and develop practical solutions.
- IV. The problem areas and propose innovative solutions aligned with organizational goals.
- V. The sectoral trends, policy impacts, and strategic opportunities for growth.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Understand start-up operations, founding journey, and business model dynamics.
- CO2 Analyze tasks, responsibilities, and entrepreneurial challenges during the internship.
- CO3 Examine functional area operations and identify organizational challenges in MSMEs.
- CO4 Propose actionable process improvements and efficiency enhancements.
- CO5 Develop innovative solutions for identified problems with feasibility and impact assessment.
- CO6 Evaluate sector trends, company positioning, and policy/regulatory influences on organizational operations.

IV. COURSE CONTENT:

Approach to Summer Internship:

(a) START-UP:

1. **Company Profile & Founding Journey:** Include the start-up's origin story, vision, founding team, funding stages, and current status (incubator, accelerator, market stage).
2. **Business Model Analysis:** Explain the value proposition, revenue model, customer segments, and go-to-market strategy.
3. **Roles & Responsibilities during Internship:** Detail your tasks, problem-solving contributions, learning outcomes, and exposure to entrepreneurial challenges.
4. **SWOT Analysis & Strategic Recommendations:** Analyze strengths, weaknesses, opportunities, and threats, and suggest future strategies for growth/scalability.

(b) MSME (Micro, Small & Medium Enterprise)

1. **MSME Background & Operational Context:** Provide a brief overview of the company, its size (micro/small/medium), industry type, location, and core operations.
2. **Functional Area Observations:** Describe the internship role, specific departmental exposure (HR, Marketing, Operations, etc.), and process understanding.
3. **Challenges Faced by the MSME:** Discuss typical pain points such as resource constraints, market competition, digitization gaps, or financial limitations.
4. **Suggestions for Process Improvement:** Offer actionable recommendations to improve efficiency, customer reach, or financial performance.

(c) INNOVATION DEVELOPMENT PLAN

1. **Identification of a Problem Area:** Begin by clearly stating the real-world problem or unmet need identified through observation, research, or stakeholder inputs.
2. **Ideation & Conceptualization:** Outline the innovation idea (product, service, process), how it was developed, and how it addresses the defined problem.
3. **Feasibility & Impact Assessment:** Assess technical feasibility, market potential, costbenefit analysis, and possible risks involved.
4. **Implementation Roadmap:** Provide a plan with milestones, resource requirements, stakeholder involvement, and scalability scope.

(d) SECTOR-SPECIFIC REPORT

1. **Industry Overview:** Present a macro-level view of the chosen sector (e.g., BFSI, FMCG, Healthcare, IT, etc.), including size, trends, challenges, and opportunities.
2. **Company-Specific Analysis:** Highlight the organization's position in the sector, its market share, competitors, and key strategic moves.
3. **Internship Learnings & Functional Insights:** Reflect on your experience in a functional area and its alignment with sector trends (e.g., digital banking in BFSI).
4. **Policy or Regulatory Impacts:** Discuss relevant government policies, economic factors, or sector-specific reforms that influence the company's operations.



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COURSE CONTENT

LOGISTICS AND SUPPLY CHAIN MANAGEMENT								
III Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE27	Core	L	T	P	C	CIA	SEE	Total
		4	-	-	4	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Marketing Management								
SDGs Mapped: SDG 9 (Industry, Innovation and Infrastructure), SDG 12 (Responsible Consumption & Production)								

I. COURSE OVERVIEW:

The course brings the knowledge in terms of basic concept of supply chain concepts and logistics. The course also gives exposure on competitive advantage and its uses and supply chain management and its focus areas and also to know the measurement of logistics performance and various kinds of cost drivers associated in logistics performance, the course also gives the focus on supply chain and logistics relationships and strategies applied in benchmarking. The course provides the knowledge about the various sourcing decisions and transporting methods and pricing of products and finally how to get the competitive advantage in the area of logistics by managing global logistics and global supply chains.

II. COURSES OBJECTIVES:

The students will try to learn:

- I. The fundamental concepts of supply chain management, its objectives, strategies, drivers, and best practices to enhance value creation and sustainability.
- II. The role and functions of logistics in supply chain operations, including transportation, distribution, outsourcing, and reverse logistics for achieving competitive advantage.
- III. The methods for designing and optimizing supply chain networks by considering distribution roles, influencing factors, and technology-driven models.
- IV. How to evaluate and improve supply chain performance by addressing issues such as the bullwhip effect, coordination challenges, global supply chain complexity, and IT-driven solutions like Supply Chain 4.0.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Appraise one's competitive strategy through the application of logistics in business.
- CO2 Narrate about the measurement of logistics effectiveness to take corrective actions.
- CO3 Examine the performance of logistics for optimum utilization to obtain competitive advantage.
- CO4 Identify different kinds of supply chain relationship operations associated with the business organizations for maintaining effective supply chain relations.
- CO5 Appraise on the effective channel maintenance and structure for facilitating the commodities available at destination points.
- CO6 Organize the sourcing and transporting decisions for the propose minimizing the transporting cost and cost of purchase.

VI. COURSE CONTENT:

MODULE – I: UNDERSTANDING SUPPLY CHAIN (08)

Objectives of a Supply Chain, Importance, Stages of Supply Chain, Value Chain Process, Cycle View of Supply Chain Process, Key Issues in SCM, Logistics & SCM, Supply Chain Drivers and Obstacles, Supply Chain Strategies, Strategic Fit, Best Practices in SCM, Obstacles of Streamlined SCM, Green Supply Chain Management, Supply Chain Sustainability.

MODULE – II: LOGISTICS (09)

Evolution, Objectives, Components and Functions of Logistics Management, Difference between Logistics and Supply Chain, Distribution related Issues and Challenges. Gaining Competitive Advantage through Logistics Management, Transportation: Functions, Costs, and Mode of Transportation Network and Decision, Models, Containerization, Cross Docking, Reverse Logistics. Outsourcing: Nature and Concept, Strategic Decision to Outsourcing, Third-party Logistics (3PL), Fourth-party Logistics (4PL).

MODULE – III: DESIGNING THE SUPPLY CHAIN NETWORK (10)

Designing the Distribution Network, Role of Distribution, Factors Influencing Distribution, Design Options, e-Business and its Impact, Distribution Networks in Practice.

Network Design in the Supply Chain, Role of Network, Factors Affecting the Network Design Decisions, Modeling for Supply Chain.

MODULE – IV: SUPPLY CHAIN PERFORMANCE (10)

Bullwhip Effect and Reduction, Performance Measurement: Dimension, Tools of Performance Measurement, SCOR Model. Demand Chain Management, Global Supply Chain, Challenges in Establishing Global Supply Chain, Factors that influence Designing Global Supply Chain Network.

MODULE – V: COORDINATION IN A SUPPLY CHAIN (08)

Importance of Coordination, Lack of Supply Chain Coordination and the Bullwhip Effect, Obstacles to Coordination, Managerial Levels, Building Partnerships and Trust, Continuous Replenishment and Vendor Managed Inventories, Collaborative Planning, Forecasting and Replenishment. Role of Information Technology in Supply Chain, Supply Chain 4.0.

V.TEXT BOOKS:

1. IMT Ghaziabad Advanced Supply Chain Management, Sage Publications, 2021.
2. Rajat K. Basiya, Integrated Supply Chain Management, Sage Publications, 2020.
3. K Sridhara Bhat, Logistics & Supply Chain Management, HPH, 1e, 2017.
4. Chopra, Sunil, Meindl, Peter and Kalra, D. V., Supply Chain Management: Strategy, Planning and Operation; Pearson Education, 6e, 2016.

VII. REFERENCE BOOKS:

1. Altekhar, Rahul V, Supply Chain Management: Concepts and Cases; PHI Learning, 1e, 2005.
2. Ballou, R.H. Business Logistics Management. Pearson Education, 5e, 2014.
3. Coyle, Bardi, Langley, “The Management of Business Logistics – A Supply Chain Perspective”, Thomson Press, 7e, 2003.

VIII.WEB REFERENCES:

1. <http://www.ijcse.com/docs/IJCSE11-02-01-054.pdf>
2. <http://www.pitt.edu/~druzdzl/psfiles/dss.pdf>

IX. E-TEXT BOOKS:

1. <https://www.scribd.com/doc/252519209/Decision-Support-Systems-and-Intelligent-Systems-7th-Edition->

Free-eBook-Download

2. <http://link.springer.com/book/10.1007%2F978-3-540-48713-5>
3. <https://www.jerrypost.com/Books/MISBook/Bookfiles5/Chapters/MISPost-Preface-500.pdf>
4. https://www.researchgate.net/profile/Javed-Saani/publication/340647719_Management_Information_Systems/links/5eb7f7fe299bf1287f782bb5/Management-Information-Systems.pdf
5. https://repository.dinus.ac.id/docs/ajar/Kenneth_C.Laudon,Jane_P_.Laudon_Management_Information_Systemsrem_13th_Edition_.pdf



INSTITUTE OF AERONAUTICAL ENGINEERING

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Dundigal - 500 043, Hyderabad, Telangana

COURSE CONTENT

AI FOR BUSINESS								
III Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE28	Core	L	T	P	C	CIA	SEE	Total
		4	0	-	4	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Management Information Systems								
SDGs Mapped: SDG 9 (Industry, Innovation and Infrastructure), SDG 8 (Decent Work & Economic Growth)								

I. COURSE OVERVIEW:

This course introduces students to the fundamentals of Artificial Intelligence (AI) and its applications in business. It covers AI concepts, types, implementation strategies, business use cases, autonomous agents, robotics, and ethical and regulatory considerations. Students will gain insights into how AI can enhance decision-making, optimize operations, improve customer experiences, and drive innovation while understanding associated challenges and governance issues.

II. COURSES OBJECTIVES:

The students will try to learn:

- I. The evolution, scope, and applications of AI in business contexts.
- II. The different types of AI and understand their functionalities and enterprise implementation.
- III. The AI product development lifecycle and its applications across industries.
- IV. The role of AI agents, robotics, and human-machine collaboration in organizations.
- V. The ethical, legal, and regulatory aspects associated with AI adoption.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Understand the fundamentals, scope, evolution, and managerial relevance of AI.
- CO2 Analyze various AI types and formulate strategies for AI implementation in enterprises.
- CO3 Apply AI across business functions such as CRM, HR, Finance, Supply Chain, and Education.
- CO4 Develop insights on AI product lifecycle management and achieving product-market fit.
- CO5 Evaluate autonomous agents, robotics, and human-machine collaboration in organizational settings.
- CO6 Apply ethical, governance, and regulatory frameworks to manage AI risks, bias, and compliance.

IV. COURSE CONTENT:

MODULE - I: INTRODUCTION TO ARTIFICIAL INTELLIGENCE (10)

Definition and scope, Evolution of AI in Business, Importance and applications of AI, Foundations of AI, Features of AI, Goals of AI, Managerial view of AI, AI subfields, issues and challenges in AI.

MODULE - II: AI TYPES AND IMPLEMENTATION (10)

AI types – Based on capabilities: Narrow AI, General AI, Super AI, Based on functionalities: Reactive Machines, Limit memory -generative AI, virtual assistant and chat bots, responsible AI, Self-aware AI, Generative AI. Role of Data in enterprise AI, a blueprint for enterprise, AI implementation.

MODULE - III: AI APPLICATION IN BUSINESS (09)

AI Product Development Lifecycle, Product market Fit, Stages of the AI lifecycle, AI in Customer relationship management, healthcare, Finance, Retail, Agriculture, Education, Supply chain, Sales forecasting, HR Analytics.

MODULE - IV: AI AGENTS & ROBOTS (08)

Autonomous agents, Agentic AI, Robots in used today, Human machine collaboration, Managing automation with robots. AI & ML – overlaps among AI, ML and Data science.

MODULE - V: ETHICAL AND REGULATORY ASPECTS IN AI (08)

Ethical considerations in AI, AI risk and governance, managing AI security concerns, bias and fairness in AI systems. AI regulatory frameworks, Data privacy and security, liability and accountability, Intellectual Property in AI.

V. TEXT BOOKS:

1. Pavan Kumar Gurazada, Seema Gupta. Artificial Intelligence in Business. Vikas Publishing House. 2025.
2. Rahul De'. AI for Managers. Cengage Learning. 2025.
3. Marily Nika, Building AI-Powered Products-The Essential Guide to AI and Gen AI Product Management, O'Reilly, 2025.
4. Saptarshi Goswami, Amit Kumar Das, Amlan Chakravarti. AI for Everyone – A Beginner's Handbook for AI. Pearson India. 2024.

VI. REFERENCE BOOKS:

1. Rahul Dubey. Emerging Technologies for Effective Management. Cengage Learning. 2023.
2. Doug Rose, Artificial Intelligence for Business: What you need to know about Machine Learning and Neural Networks, Pearson, 2021.

VII. Web References:

1. http://tn.upi.edu/pdf/AI_Management.pdf
2. <https://notendur.hi.is/~kth93/3.20.pdf>

VIII. E-Text Books:

1. <http://ebooks.cambridge.org/ebook.jsf?bid=CBO9781139150002>
2. <http://www.ebook777.com/AI-management-4th-edition/>



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COURSE CONTENT

BUSINESS ANALYTICS								
III Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE29	Core	L	T	P	C	CIA	SEE	Total
		4	-	-	4	40	60	100
Contact Classes: 45	Tutorial Classes: 01	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Management Information Systems								
SDGs Mapped: SDG 9 (Industry, Innovation and Infrastructure), SDG 4 (Quality Education)								

I. COURSE OVERVIEW:

This course equips with knowledge and skills required for business analytics, including data handling, data science concepts, and analytics techniques. It provides exposure to data warehousing, data mining, text and web analytics, simulation, prescriptive analytics, and decision support systems. Students will also gain insights into big data technologies, Python, machine learning, and AI applications to facilitate effective business decision-making.

II. COURSES OBJECTIVES:

The students will try to learn:

- I. The handling data and business analytical tools that can be used for decision- making in an organization.
- II. The data warehousing concepts, data mining techniques.
- III. The relationships between business processes and analytics applications.
- IV. The prescriptive analytics and its applications across business domains.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- | | |
|-----|---|
| CO1 | Contrast on concepts, challenges and framework of business analytics for making effective business decisions. |
| CO2 | Demonstrate data warehousing architecture and data marts for reporting and performance measurement through visual analytics. |
| CO3 | Summarize data mining and text mining techniques to extract and analyze information from structured and unstructured sources. |
| CO4 | Develop suitable system for web mining process to web analytics and easy access of data. |
| CO5 | Experiment with prescriptive analytics and its models to develop effective decision making support system. |
| CO6 | Distinguish the Finance, HR and Marketing analytics and big data technologies for applying them in their respective fields. |

IV. COURSE CONTENT:

MODULE - I: INTRODUCTION TO BUSINESS ANALYTICS (08)

Introduction to Data, Importance of Analytics, Data for Business Analytics, Big Data, Business Analytics in Practice. Data Visualization, Data Visualization Tools, Data Queries, Statistical Methods for Summarizing Data, Exploring Data using Pivot Tables.

MODULE - II: DESCRIPTIVE STATISTICS ANALYTICS (10)

Population and Samples, Measures of location, Measures of Dispersion, Measures of Variability, Measures of Association. Probability Distribution and Data Modeling, Discrete Probability Distribution, Continuous Probability Distribution, Random Sampling from Probability Distribution, Data Modeling and Distribution fitting.

MODULE - III: PREDICTIVE ANALYTICS (09)

Karl Pearson Correlation Technique, Multiple Correlation, Spearman's Rank Correlation, Simple and Multiple Regression, Regression by the Method of Least Squares.

Building Good Regression Models. Regression with Categorical Independent Variables, Linear Discriminant Analysis, One-Way and Two-Way ANOVA.

MODULE - IV: DATA MINING (10)

Scope of Data Mining, Data Exploration and Reduction, Unsupervised Learning, Cluster Analysis, Association Rules, Supervised Learning, Partition Data, Classification Accuracy, Prediction Accuracy, K-Nearest Neighbors, Classification and Regression Trees, Logistics Regression.

MODULE - V: SIMULATION (08)

Random Number Generation, Monte Carlo Simulation, What If Analysis, Verification and Validation, Advantages and Disadvantages of Simulation, Risk Analysis, Decision Tree Analysis.

V. TEXT BOOKS:

1. James E.Sallis, Geir Gripsrud, Ulf Henning Olsson, Ragnhild Silkoset, "Research Methods and Data Analysis for Business Decisions": A Primer Using SPSS, Springer International Publishing, 1e, 2021.
2. Anil Maheswari, Big Data, Tata McGraw Hill, New Delhi, 2e, 2019.
3. U.DineshKumar, "Business Analytics", Wiley, 2017.
4. Laursen, Thorlund, "Business Analytics for Managers", Wiley, 2nd edition, 2017.
5. Sahil Raj, "Business Analytics", Cengage Learning, 3rd edition, 2015
6. Albright, Winston, "Business Analytics - Data Analysis and Decision Making", Cengage Learning, 5th edition, 2015.

VI. REFERENCE BOOKS:

1. Artun, Levin, "Predictive Marketing", Wiley, 2nd edition, 2015.
2. RN Prasad, Seema Acharya, "Fundamentals of Business Analytics", Wiley, 2011.

VII. WEB REFERENCES:

1. <https://www.pdfdrive.com/business-analytics-for-managers-taking-business-intelligence-beyond-reporting-e167628994.html>

VIII. E-TEXT BOOKS:

1. <https://www.pdfdrive.com/business-intelligence-and-analytics-e56416503.html>



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COURSE CONTENT

DIGITAL MARKETING								
III Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE30	Elective	L	T	P	C	CIA	SEE	Total
		4	-	-	4	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Marketing Management								
SDGs Mapped: SDG 8 (Decent Work & Economic Growth), SDG 12 (Responsible Consumption & Production)								

I. COURSE OVERVIEW:

This course introduces students to the principles, strategies, and tools of digital marketing. It covers online promotion of products, services, and brands through various digital channels. Students will learn to plan, execute, and measure digital marketing campaigns to drive customer engagement, retention, and business growth.

II. COURSES OBJECTIVES:

The students will try to learn:

- I. The importance of digital marketing and its applications for increasing sales.
- II. The digital campaigns, traffic sources, keywords, landing pages, and audience behavior.
- III. The customer engagement and loyalty through repeat visitor analysis and retention strategies.
- IV. The social media strategies, including Facebook, blogging, and microblogging via Twitter.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Develop a foundational understanding of digital marketing terminology, strategies, and best practices.
- CO2 Create and optimize websites and content for improved user experience and search engine visibility.
- CO3 Acquire the skills to create, manage, and optimize PPC advertising campaigns using platforms like Google Ads.
- CO4 Develop proficiency in creating and managing email marketing campaigns, building email lists, and using automation.
- CO5 Acquire skills in display advertising, native advertising, and remarketing strategies, including ad design and targeting.
- CO6 Understand mobile marketing strategies, including mobile app marketing and location-based marketing. Understand mobile marketing strategies, including mobile apps, location-based marketing, and social media campaigns.

IV. COURSE CONTENT:

MODULE - I: UNDERSTANDING DIGITAL MARKETING (09)

Concept, Components of Digital Marketing, Need and Scope of Digital Marketing, Benefits of Digital Marketing, Digital Marketing Platforms and Strategies, Comparison of Marketing and Digital Marketing, Digital Marketing Trends.

MODULE - II: CHANNELS OF DIGITAL MARKETING (09)

Digital Marketing: Website Marketing, Search Engine Marketing, Online Advertising, Email Marketing, Blog Marketing, Social Media Marketing, Audio, Video and Interactive Marketing, Online Public Relations, Mobile Marketing, Migrating from Traditional Channels to Digital Channels.

Marketing in the Digital Era: Segmentation: Importance of Audience Segmentation, Use of Digital Media by different Segments. Organizational Characteristics, Purchasing Characteristics, Using Digital Media for Reach, Acquisition and Retention of New Customers, Digital Media for Customer Loyalty.

MODULE - III: DIGITAL MARKETING PLAN (09)

Need of a Digital Marketing Plan, Elements of a Digital Marketing Plan – Marketing Plan, Executive Summary, Mission, Situational Analysis, Opportunities and Issues, Goals and Objectives.

Marketing Strategy, Action Plan, Budget, Writing the Marketing Plan and Implementing the Plan.

MODULE - IV: SEARCH ENGINE MARKETING AND ONLINE ADVERTISING (09)

Importance of SEM, understanding Web Search – keywords, HTML tags, Inbound Links, Online Advertising vs. Traditional Advertising, Payment Methods of Online Advertising – CPM (Cost-per- Thousand) and CPC (Cost-per-click), Display Ads - choosing a Display Ad Format, Landing Page and its importance.

MODULE - V: SOCIAL MEDIA MARKETING (09)

Understanding Social Media, Social Networking with Facebook, LinkedIn, Blogging as a social medium, Micro blogging with Twitter, Social Sharing with YouTube, Social Media for Customer Reach, Acquisition and Retention. Measurement of Digital Media: Analyzing Digital Media Performance, Analyzing Website Performance, Analyzing Advertising Performance.

V. TEXT BOOKS:

1. Dinesh Kumar, Marketing in the Digital Age, Sage Publications, 2021.
2. Annmarie Hanlon, Digital Marketing: Strategic Planning & Integration, Sage Publications, 1e, 2019.
3. Chuck Hemann & Ken Burbary, Digital Marketing Analytics, Pearson, 2e, 2018.
4. Ryan Deiss, Russ Henneberry, “Digital Marketing for Dummies”, Tata McGraw, Hill, 5th Edition, 2017.
5. Jan Zimmerman, Deborah Ng, “Social Media Marketing”, Pearson, 4th Edition, 2017

VI. REFERENCE BOOKS:

1. Judy Strauss & Raymond Frost, E-Marketing, Pearson, 2016.
2. Vandana Ahuja, Digital marketing, Oxford University Press 2015.
3. Michael R Solomon, Tracy Tuten, Social Media Marketing, Pearson, 1e, 2015.
4. Michael Miller, B2B Digital Marketing, 1e, Pearson, 2014.

VII. WEB REFERENCES:

1. http://www.iaapa.org/docs/handout-archive---ops/mon_khan_digital-marketing.pdf
2. https://www.mitodesign.com/pedroguillon/phd_knowledge_center/pdf/digitalmarketing.pdf

VIII. E-TEXT BOOKS:

1. <http://www.quirk.biz/emarketingtextbook>
2. <https://www.amazon.com/eMarketing-essential-guide-digital-marketing-ebook/dp/B006CWHY2W>



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal - 500 043, Hyderabad, Telangana

COURSE CONTENT

SALES AND PROMOTION MANAGEMENT								
III Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE31	Elective	L	T	P	C	CIA	SEE	Total
		4	-	-	4	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Marketing Management								
SDGs Mapped: SDG 8 (Decent Work & Economic Growth), SDG 12 (Responsible Consumption & Production)								

I. COURSE OVERVIEW:

Sales and Promotions Management focuses on planning, organizing, and executing sales and promotional strategies to drive product or service sales and enhance brand visibility. The course equips students with the knowledge and skills to design, implement, and evaluate sales and promotional campaigns effectively, integrating advertising, distribution, and ethical considerations.

II. COURSES OBJECTIVES:

The students will try to learn:

- I. The basic concepts of sales and promotion management.
- II. The importance of advertising and choosing appropriate advertising media.
- III. The concepts associated with sales management.
- IV. The various aspects in sales promotion.
- V. The sales distribution channels and management practices.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Explain the concepts, evolution, and tools of promotion, including advertising, personal selling, publicity, and direct marketing.
- CO2 Analyze advertising strategies, media selection, message development, budgeting, and evaluation of effectiveness.
- CO3 Apply sales management techniques, including sales planning, forecasting, budgeting, and sales force management.
- CO4 Design and evaluate sales promotion strategies across different stages of the product life cycle, considering ethical and legal aspects.
- CO5 Develop and manage distribution channels for consumer, business, and rural markets, including international channels.
- CO6 Evaluate ethical considerations and regulatory compliance in sales, promotions, and distribution management.

IV. COURSE CONTENT:

MODULE - I: PROMOTION (08)

Introduction to Promotion, Concept, Evolution, Promotion Mix: Advertising, Sales Promotion, Personal Selling, Publicity, Public Relations, Direct Marketing, Word of Mouth, Online Marketing. Managing Promotional Tools: Direct Marketing, Direct Marketing Decisions, Direct Marketing Objectives, Advantages of Direct Marketing, Measurement of Direct Marketing Effort, Public Relations. Setting Objectives, Program Implementation and Publicity.

MODULE - II: ADVERTISING AND ADVERTISING MEDIA (09)

A) Importance and Functions of Advertising, Role of Advertising, AIDA model, Types of Advertising, Advertising Plan, DAGMAR Approach, Visualization of Advertising Layout – Functions, Principles, and Elements of a layout.

B) **Types of Media:** Print, Electronic and Other Media; Merits and Demerits of each media. Media Planning: Frequency, Reach and Outcome. Appeals, Setting Advertising Objectives, Advertising Message, Advertising Budget, Evaluation of Advertising Effectiveness – Methods, and Regulation of Advertising in India – Misleading and deceptive advertising.

MODULE - III: SALES MANAGEMENT (09)

Importance, Types of Selling, Difference between Selling and Marketing, Sales Activities, Selling Skills, Selling Strategies, Selling Process, Sales Planning Process, Sales Forecasting Methods, Sales Budgeting Process.

Sales Force Management: Recruitment and Selection, Training, Motivation, Compensation, Control and Evaluation.

MODULE - IV: SALES PROMOTION (09)

Concepts, Need and Objective, Personal Selling vs. Advertising, Types of Sales Promotion, Sales Promotion Strategies: Sales Promotion and Product Life Cycle, Cross Promotion, Surrogate Selling, Bait and Switch advertising. Ethical and legal aspects of sales promotion.

MODULE - V: SALES DISTRIBUTION (10)

Distribution Channels, Need for Channels, Channel Intermediaries and Functions, Channel Structure, Channels for Consumer Products, Business and Industrial Products, Alternative channels, Channels for Rural Markets, Channel Strategy Decisions. Designing, Motivating and Evaluating Channel Members, Managing Retailers, Wholesalers, Franchisers. Managing Conflict, Reasons for Channel Conflicts. Managing International Channel of Distribution. Ethical issues in Sales and Distribution Management.

V. TEXT BOOKS:

1. Pingali Venugopal, Sales and Distribution Management, Sage Publications, 2e, 2021.
2. George E. Belch, Michel E. Belch, Keyoor Purani, Advertising and Promotion: An integrated marketing communication Perspective, Mc Graw Hill, 9e, 2017.
3. Terence A. Shimp, J. Craig Andrews, Advertising, Promotion, and other aspects of Integrated Marketing Communications, 9e, Cengage, 2016.
4. Ramendra Singh, Sales and Distribution Management: A Practice-Based Approach, 1e, Vikas, 2016.

VI. REFERENCE BOOKS:

1. Jaishri Jethwaney, Shruti Jain, Advertising Management, Oxford, 2015.
2. Richard R Still, Edward W Cundiff, Norman A P Govoni, Sales and Distribution Management, 5e, Pearson, 2011.

VII. WEB REFERENCES:

1. <https://www.studynama.com/community/threads/338-Brand-management-pdf-lecture-notes-ebook-download-for-mba-students>.
2. http://www.kvimis.co.in/sites/kvimis.co.in/files/ebook_attachments/Keller%20Strategic%20Brand%20Management.pdf.

VIII. E-TEXT BOOKS:

1. <https://www.scribd.com/doc/17045977/product-and-brand-management-a-concise-note-on-everything-about-product-and-brand-management>.

2. http://iimsnepal.com/download/e%20book%20materials/mba%20ebook%20material/mba%204th%20semester%20ebook%20materials/dmgt508_product_and_brand_management.pdf.



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal - 500 043, Hyderabad, Telangana

COURSE CONTENT

BRAND MANAGEMENT AND CONSUMER BEHAVIOUR								
III Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE32	Elective	L	T	P	C	CIA	SEE	Total
		4	-	-	4	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Marketing Management								
SDGs Mapped: SDG 12 (Responsible Consumption & Production), SDG 8 (Decent Work & Economic Growth)								

I. COURSE OVERVIEW:

This course provides a comprehensive understanding of consumer behavior and brand management principles. It covers psychological, social, and cultural factors that influence consumer decisions and examines strategies to build, manage, and evaluate brands. Students gain skills to analyze consumer motivations, perceptions, attitudes, and decision-making processes, and to apply these insights for marketing and brand strategies.

II. COURSES OBJECTIVES:

The students will try to learn:

- I. The environmental influences on consumer behavior, perception and attitude of consumers.
- II. The consumer decision making and marketing ethics towards consumers.
- III. The primary market research studies for the mutual benefit of consumers and organizations.
- IV. The marketing decisions keeping in mind the consumer behavior.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Explain the concepts of branding, brand equity, brand loyalty, and strategic brand management processes.
- CO2 Design and implement brand marketing programs, leveraging brand elements, IMC, and performance measurement.
- CO3 Analyze consumer behavior models, market segmentation, and organizational buying behavior.
- CO4 Examine consumer motivation, personality, learning processes, memory, and involvement to influence marketing strategies.
- CO5 Evaluate cultural, social, family, and group influences on consumer decision-making and post-purchase behavior.
- CO6 Apply insights from consumer behavior and brand management to make informed marketing and branding decisions.

IV. COURSE CONTENT:

MODULE - I: INTRODUCTION TO BRAND MANAGEMENT (05)

Concept of Brand and Branding Basics; Understanding terms -Brand Names and Brand Extensions Meaning, Advantages, Disadvantages. Brand equity, Co-Branding and Corporate Branding. Branding strategies: Concept and types of branding strategies. Steps in brand development strategies. Brand switching. Management of Brand-Meaning & Definition. Strategic Brand Management Process –Steps in Brand Management Process, Brand Loyalty; Brand Relationship. Building brand loyalty - Brand Positioning and Brand Associations. Brand Image and Personality - Valuation of Brands- Brand Valuation -Brand Tracking and Monitoring.

MODULE - II: PLANNING & IMPLEMENTING BRAND MARKETING PROGRAMS (10)

Criteria for Choosing Brand Elements, Options & tactics for Brand Elements, Use of IMC for Brand Building, Leveraging Secondary Brand Associations to Brand building. Measuring & Interpreting Brand Performance Developing a Brand Equity Measurement & Management System, Measuring Sources of Brand Equity & Outcome of Brand Equity. Designing & Implementing Branding Strategies Managing Brands over Time.

MODULE - III: INTRODUCTION TO CONSUMER BEHAVIOR (10)

Meaning and Definition of Consumer Behavior. Need and Advantages to Study Consumer Behavior. Differences between consumer buying and organizational buying. Consumer behavior and marketing strategy; profiling consumers and their needs.

Market segmentation and consumer research; Organizational Buying Behaviors. Models of Consumer Behavior-Advert Sheth Model, EKB Model, Howard Sheth Model, Family Decision-making Model, Pavlovian Model and Economic Model.

MODULE - IV: CONSUMER MOTIVATION, PERSONALITY: LEARNING MEMORY AND INVOLVEMENT (10)

Introduction, needs, objectives and Scope of Consumer Motivation. Overcoming Problems of Motivational Conflict. Defense Mechanism, Motive arousal, Motivational theories. Consumer Personality: Learning Memory and Involvement Consumer attitudes, beliefs, feelings and Behavior Consumer Learning attitudes and components of learning Memory system, memory process, concept of involvement, dimensions of involvement.

MODULE - V: CULTURAL AND SOCIAL INFLUENCES ON CONSUMER BEHAVIOR (10)

Characteristics of Culture, values, sub cultures, cross cultural and multi-cultural influences on Consumer Behavior. Social Class and Group influences on Consumer Behavior with regard to money and other status symbols, conformity to group norms behavior and Influence, family life influences, standard of life and living Influences. Consumer Decision Process: Problem Recognition – Information Search – Evaluation of Alternatives – Outlet Selection and Purchase –Consumption – Post-Purchase Consumption Behavior.

V. TEXT BOOKS:

1. Wayne D. Hoyer, Deborah J. MacInnis Rik Pieters, Consumer Behaviour, &e, Cengage, 2024.
2. Sheath and Mittal, “Consumer Behaviour Thompson learning”, in 2015.
3. Solomon, M. R. “Consumer Behaviour: buying, having, and being,” 11th edition, “Pearson Education India”, in 2015.
4. Kumar Dinesh, “Consumer Behaviour” 1st edition, “Oxford publication” in 2015.
5. Schiffman and Kannik,” Consumer Behaviour” 11th edition, Pearson Edition” in 2015.

VI. REFERENCE BOOKS:

1. Pati. D, Branding Concepts and Process, Macmillan Publisher, PHI, 15th Edition, 2021
2. Blackwell and Engel, Consumer Behavior, Cengage Publication, Indian Edition, 3rd Edition.2020
3. Majumudar Ramanuj, Consumer Behavior - Insights from Indian Market, PHI, 2nd Edition, 2018.
4. Subroto Sen Gupta, Brand Positioning, Tata McGraw-Hill, 7th edition, 2017

VII. WEB REFERENCES:

1. https://d1.islamhouse.com/data/en/ih_books/single/en_Consumer_Behavior.pdf
2. <http://www.ijcrar.com/vol-2-9/Pinki%20Rani.pdf>



INSTITUTE OF AERONAUTICAL ENGINEERING

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COURSE CONTENT

SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT								
III Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE33	Elective	L	T	P	C	CIA	SEE	Total
		4	-	-	4	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Financial Management								
SDGs Mapped: SDG 8 (Decent Work & Economic Growth), SDG 9 (Industry, Innovation and Infrastructure)								

I. COURSE OVERVIEW:

This course aims to provide an insight into the evaluation and analysis of a wide range of financial securities and thereby developing techniques for designing an optimal portfolio. The main emphasis of the course is to impart an understanding of the methods and techniques of Risk Quantification, Security Valuation, Fundamental Analysis, and Technical Analysis required for security selection for designing an optimal portfolio.

II. COURSES OBJECTIVES:

The students will try to learn:

- The participants with the stock markets of India to provide a conceptual insight to the valuation of securities.
- The knowledge of investment alternatives, process and portfolio management in an organization
- The changing domestic and global investment scenario in general and Indian capital market and operations of stock exchanges.
- Provide an in-depth knowledge of the theory and practice of portfolio management.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Describe the investment environment and management process to take various investment decisions.
- CO2 Evaluate the significance of risk and return relationship from Markowitz portfolio theory and mean variance approach.
- CO3 Analyze different types of bonds, interest rates and measuring bond yields in the real world.
- CO4 Apply bond pricing theorems and bond immunization for formulating active and passive bond management strategies.
- CO5 Summarize the overview of derivative market strategies to find out the strength of the firm in investment decisions
- CO6 Assess the trends in Indian mutual funds and measure their performances through various evaluation models.

IV. COURSE CONTENT:

MODULE – I: INVESTMENT AND SECURITY ANALYSIS (09)

Introduction, Indian Financial System and Structure, Investment, Speculation and Gambling, Features of Investment, Investment Avenues, Investment Process. The Investment Environment, Securities Market of India, Securities Trading and Settlement, Types of Orders, Margin Trading, Roles and Responsibilities of SEBI.

MODULE – II: PORTFOLIO ANALYSIS (08)

The returns and risks from investing Markowitz portfolio theory, mean variance approach, portfolio selection, efficient portfolios, the single index model capital asset pricing model, arbitrage pricing theory.

MODULE – III: BOND ANALYSIS AND VALUATION AND MANAGEMENT (10)

Classification of Fixed Income Securities, Types of bonds, interest rates, term structure of interest rates, measuring bond yields, yield to maturity, yield to call, yield to maturity, holding period return.

Bond pricing theorems, bond duration, active and passive bond management strategies, bond immunization, bond volatility, bond convexity.

MODULE – IV: EQUITY VALUATION (08)

a) Intrinsic Value versus Market Value, Equity Valuation Models, Discounted Cash Flow Techniques, Dividend Discount Models (DDM), Growth Rate cases for DDM, Free Cash Flow Valuation Approaches, Relative Valuation Techniques, Earnings Multiplier Approach, Price/ Earnings, Price/ Book Value, Price/ Sales Ratio, EVA.

b) Fundamental Analysis, Technical Analysis, Efficient Market Hypothesis.

MODULE – V: (10)

Types of mutual funds schemes, structure, net asset value, risk and return, performance evaluation models Sharpe model, treynor model, Jensen model, fama's decomposition. Trends in Indian mutual funds.

V. TEXT BOOKS:

1. Donald E. Fischer, Ronald J Jordan & A K Pradhan, "Security Analysis and Portfolio Management", 7th edition, Pearson Education, 2018
2. Prasanna Chandra, "Investment Analysis and Portfolio Management", 5th edition, McGraw Hill India, 2017.
3. Charles P. Jones, "Investments Principles and Concepts", 12th edition, Wiley India edition. 2016.
4. Shalini Talwar, "Security Analysis and Portfolio Management", Cengage Learning, 2016.
5. V.K. Bhalla, "Investment Management", 17th edition, S. Chand Publications, 2016.

VI. REFERENCE BOOKS:

1. ZVI Bodie, Alex Kane, Alan J Marcus, "Investments", TMH, 3rd Edition, 2012.
2. Donald E Fischer, Ronald J Jordan, "Security Analysis and Portfolio Management", 6th Edition, 2012.
3. Prasanna Chandra, "Investment analysis and Portfolio Management" 4th Edition, TMH, 2012.
4. Punithavathi Pandian, "Security Analysis and Portfolio Management", Vikas Publishing House, 2nd Edition, 2012.
5. M. Ranganatham, R. Madhumathi, "Security Analysis and Portfolio Management", 2nd Edition, 2012.

VII. WEB REFERENCES:

1. http://164.100.133.129:81/econtent/Uploads/Security_Analysis_&_Portfolio_Management.pdf
2. <http://www.ucipfg.com/Repositorio/MATI/MATI-08/BLOQUE-ACADEMICO/Unidad-4/lecturas/4.pdf>

VIII. E-TEXT BOOKS:

1. <http://www.ddegjust.ac.in/studymaterial/mba/fm-304.pdf>
2. <https://www.amazon.in/Security-Analysis-Portfolio-Management-Kevinebook/dp/B00K7YGOZ4>



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal - 500 043, Hyderabad, Telangana

COURSE CONTENT

FINANCIAL TECHNOLOGIES (FINTECH)								
III Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE34	Elective	L	T	P	C	CIA	SEE	Total
		4	-	-	4	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Financial Management								
SDGs Mapped: SDG 9 (Industry, Innovation and Infrastructure), SDG 8 (Decent Work & Economic Growth)								

I. COURSE OVERVIEW:

This course provides an in-depth understanding of the FinTech ecosystem, technological enablers, and their applications in banking, capital markets, and financial services. It emphasizes the role of digital transformation, blockchain, artificial intelligence, payment systems, and regulatory frameworks in reshaping the financial sector. Students will gain both conceptual knowledge and practical insights through case studies and applications, preparing them for careers in the evolving FinTech landscape.

II. COURSES OBJECTIVES:

The students will try to learn:

- The role of FinTech in transforming traditional financial and service sectors.
- The technology enablers such as UPI, blockchain, APIs, Robo-advisors, and chatbots in promoting digital finance.
- The applications of FinTech in banking operations, lending, and payment systems.
- The significance of FinTech in capital markets and its related stakeholders, operations, and emerging innovations.
- The regulatory, ethical, and security challenges in FinTech with an emphasis on sustainable finance and financial inclusion.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Explain the fundamentals of FinTech and its role in digital transformation of financial ecosystems.
- CO2 Demonstrate the applications of technology enablers such as UPI, APIs, blockchain, and robo-advisors in financial services.
- CO3 Analyze the impact of FinTech on banking operations, lending, and customer experience
- CO4 Evaluate the role of FinTech in capital markets, InsurTech, PropTech, and RegTech with real-world case applications.
- CO5 Assess the regulatory frameworks, cyber security concerns, and challenges faced by FinTech companies.
- CO6 Apply sustainable finance practices and innovative FinTech solutions to promote financial inclusion and green economic growth.

IV. COURSE CONTENT:

MODULE – I: INTRODUCTION TO FINTECH (09)

Digital Transformation in Manufacturing and Service Industry, The changing structure of the Financial ecosystem. Fintech and its advantages, Digital India and its role in promoting Fintech. Introduction to India Stack – Unique Identification, Presence Less Verification, eKYC, Digital Signature, Digital Document Repository (DigiLocker), Use of DigiLocker to Expedite Recruitment Process, Cashless Digital Payments, Account Aggregation, Receivables Exchange TReDS, Regulatory Framework.

MODULE - II: TECHNOLOGY ENABLERS FOR FINTECH (09)

Digital Payments, Unified Payment Interface (UPI), Payment Gateway, The Instant Mobile Payment System (IMPS), Chatbots - Customer Relationship and Service, Use of Chatbots in P2P Platforms, Chatbots for Guiding Personal Financial Management, Robo Advisors or Algorithm-Based Planners - The Advantages of Robo Advisors, Application Programming Interface (API), Blockchain – key concepts, applications, Distributed ledger technology and Decentralized Finance (DeFi)]Cross Border Trade Using Blockchain, Value Chain of Blockchain, Working of a Business Blockchain, Case Study—Capgemini Solution on AWS Managed Blockchain: From Proof of Concept to Production.

MODULE - III: FINTECH IN BANKING (09)

Digital Transformation in Banks. Changing Customer Expectations, Fitment of FinTech Companies in Digital Transformation – Core Banking Solutions, Network Banking and Cheque Truncation System, Cards with Chip and Pin, Net banking, Toll Gate Collections, PoS Terminals, Buy Now Pay Later (BNPL), Prepaid Mechanisms.

FinTech in Lending and Borrowing: Introduction to the Business of Lending - Credit-worthiness of the Borrower, FinTech in Lending Business, Latest Technology Trends in Lending, Case Study—Amazon SMB Lending - Amazon as a FinTech Lender, Case Study—Indifi - How the Platform Works

MODULE - IV: FINTECH IN CAPITAL MARKETS (09)

Raising Capital, Types of Securities, Important Stakeholders in Capital Markets, The Trade Lifecycle, Clearing, Settlement & Back office Operations – Clearing, Settlement, Asset Servicing, How Technology Supports Capital Market Processes, Other Types of FinTech Companies: Insurtech, PropTech – Case Study—Property Locator App of DBS Bank, TailFin, EnablingTech, RegTech.

MODULE - V: FINTECH REGULATIONS AND CHALLENGES (09)

Concerns and Trends in FinTech World: Concerns of FinTech Companies, Challenges Faced by FinTech Companies. Cyber security Sustainable Finance: Sustainable business practices, the role of Fintech in the Society, Green economic growth, Financial Inclusion and the role of Technology.

V.TEXT BOOKS:

1. Chandrahauns Chavan and Atul Patankar, Introduction to Fintech, Pearson,2024
2. Peter Goldfish, A Global guide to Fintech and Future Payment Trends, Routledge, 2023
3. Sanjay Phadke, Fintech Futue The Digital DNA Finance, Sage,2020
4. Chenjiazi Zhong, Cryptocurrencies and Beyond, Business experts press, LLC, 2025

VI. REFERENCE BOOKS:

1. Shrier, David L. Frontiers of Financial Technology: Expeditions in Future Commerce, From Blockchain and Digital Banking to Prediction Markets and Beyond. VisionaryFuture, 2016.
2. Mills, Karen G. Fintech, Small Business & the American Dream. 2nd ed., Palgrave Macmillan, 2024.
3. Teigland, Robin, Shahryar Siri, et al., editors. The Rise and Development of FinTech: Accounts of Disruption from Sweden and Beyond. Routledge, 2018.

VII. WEB REFERENCES:

1. [http://www.icsi.in/Study%20Material%20Executive/Executive%20Programme-2013/COST%20AND%20MANAGEMENT%20ACCOUNTING%20\(MODULE%20I%20PAPER%202\).pdf](http://www.icsi.in/Study%20Material%20Executive/Executive%20Programme-2013/COST%20AND%20MANAGEMENT%20ACCOUNTING%20(MODULE%20I%20PAPER%202).pdf).

VIII. E-TEXT BOOKS:

1. [https://www.free-ebooks.net/ebook/Fin technologies](https://www.free-ebooks.net/ebook/Fin+technologies)



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal - 500 043, Hyderabad, Telangana

COURSE CONTENT

STRATEGIC COST AND MANAGEMENT ACCOUNTING								
III Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE35	Elective	L	T	P	C	CIA	SEE	Total
		4	-	-	4	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Financial Management								
SDGs Mapped: SDG 12 (Responsible Consumption & Production), SDG 8 (Decent Work & Economic Growth)								

I. COURSE OVERVIEW:

This course provides an integrated understanding of Cost and Management Accounting concepts, tools, and techniques required for effective managerial decision-making. It emphasizes cost analysis, control, costing systems, cost-volume-profit analysis, activity-based costing, budgeting, standard costing, and variance analysis. The framework prepares students to apply accounting information for planning, control, decision-making, and risk management in dynamic business environments.

II. COURSES OBJECTIVES:

The students will try to learn:

- I. The concepts of Risk Management, measurements and risk management strategies using derivatives.
- II. The Provide understanding of various risk measurement tools.
- III. Impart knowledge of various aspects in derivatives market.
- IV. Elucidate various aspects in Risk Management.
- V. Provide understanding of various techniques in Risk Management.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Recall and differentiate cost, management, and financial accounting concepts to analyze their role in planning, control, and strategic decision-making.
- CO2 Apply costing methods such as job costing, process costing, and cost sheet preparation to managerial decisions like pricing, product mix, and make-or-buy.
- CO3 Analyze business problems using cost-volume-profit (CVP) analysis and illustrate the application of activity-based costing (ABC) in improving process efficiency.
- CO4 Develop and evaluate different types of budgets for planning and control, and examine cost and managerial audit applications.
- CO5 Interpret and evaluate standard costing techniques and variance analysis for assessing performance and reconciling profits.
- CO6 Integrate risk management tools with cost and managerial decision-making for effective planning and control in uncertain environments.

IV. COURSE CONTENT:

MODULE – I: INTRODUCTION TO COST AND MANAGEMENT ACCOUNTING, COST ANALYSIS AND CONTROL (08)

Management Accounting Vs. Cost Accounting Vs. Financial Accounting, Role of Accounting Information Planning and Control, Strategic Decisions and the Management Accountant. Enhancing the value of Management Accounting Systems. Cost Concepts and Managerial use of Classification of Costs, Cost Analysis and Control: Direct and Indirect Expenses, Allocation and Apportionment of Overheads, Calculation of Machine Hour rate.

MODULE - II: COSTING FOR DECISION MAKING (09)

Unit Costing, Job Costing, Cost Sheet and Tender and Process Costing and their Variants, Treatment of Normal Losses and Abnormal Losses, Interprocess Profits, Costing for By-products and Equivalent Production. Application of Managerial Costing for Control, Profit Planning, Closing down of a Plant, Dropping a Product line, Charging General and Specific Fixed Costs, Fixation of Selling Price, Make or Buy Decisions, Key or Limiting Factor. Selection of Suitable Product Mix, Desired level of Profits, Diversification of Products, Closing down or suspending activities.

MODULE - III: COST-VOLUME-PROFIT (CVP) ANALYSIS AND ACTIVITY-BASED COSTING (ABC) (10)

Essentials of CVP Analysis. The Breakeven Point using Equation Method, Contribution Margin Method and Graph Method. Target Operating Income. Target Net Income and Income Taxes. Breakeven Analysis for Decision making. Margin of Safety. Application of BEP for various Business Problems. CVP analysis in Service and Nonprofit Organizations.

Activity Based Cost (ABC) Systems: Comparison of Traditional and Activity Based Cost Systems. Emergence of ABC Systems. Activity Hierarchies. Tracing Costs to Activities, Tracing Costs from Activities to Products, Customer Profitability, Process Efficiency. Activity Based Management. ABC Systems in Service Organizations. The Technological Edge of using ABC Systems.

MODULE - IV: BUDGETARY CONTROL (09)

Budget, Budgetary Control, Steps in Budgetary Control, Flexible Budget, Different Types of Budgets: Sales Budget, Cash Budget, Production Budget, Performance Budgets and Computerized Budgeting. Activity Based Budgeting. Budgeting Process in Non-Profit Organizations. Zero Based Budgeting. Criticisms of Budgeting. An Introduction to Cost Audit and Managerial Audit.

MODULE - V: STANDARD COSTING AND VARIANCE ANALYSIS (09)

Standard Costing – Establishing cost standards, Standard Cost and Standard Costing, Standard Costing Vs Budgetary Control, Standard Costing Vs Estimated Cost, Standard Costing and Marginal Costing, Analysis of Variance, Material Variance, Labour Variance and Sales Variance. Reconciling Budgeted Profit and Actual Profit. Standard Absorption Costing. Volume Efficiency and Capacity Variance.

V. TEXT BOOKS:

1. S. P. Jain and K. L. Narang, Cost and Management Accounting, Kalyani Publishers, New Delhi, 6e, 2019.
2. James Jambalvo, Managerial Accounting, John Wiley & Sons, Inc. New Delhi, 7e, 2019.
3. M. Y. Khan, P. K. Jain, Management Accounting: Theory and Problems, TMH, New Delhi, 7e 2017.
4. Horngren, Data, Foster, Cost Accounting: A Managerial Emphasis. Pearson Education, 16e, 2017.
5. Hansen Mowen, Cost and Management Accounting & Control, Thompson Publications, 5e, 2012.

VI. REFERENCE BOOKS:

1. Colin Drury, Cost and Management Accounting, Cengage Learning, 8e, 2015.
2. John K Shank and Vijay Govindarajan. Strategic Cost Management The new tool for competitive Advantage. The Free press. 2008.
3. Atkinson, Banker, Kaplan and Young, Management Accounting PHI, 2006.

VII. WEB REFERENCES:

1. <https://www.scribd.com/document/184434634/45790874-mba-3-sem-finance-notes-bangalore-university>.

VIII. E-TEXT BOOKS:

1. http://iimsnepal.com/download/e%20book%20materials/mba%20ebook%20material/mba%203rd%20semester%20ebook%20materials/dmgt512_strategic_cost_and_analysis.pdf.



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal - 500 043, Hyderabad, Telangana

COURSE CONTENT

Talent and Performance Management Systems								
III Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE36	Elective	L	T	P	C	CIA	SEE	Total
		4	-	-	4	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Human Resource Management								
SDGs Mapped: SDG 8 (Decent Work & Economic Growth), SDG 5 (Gender Equality)								

I. COURSE OVERVIEW:

This course focuses on Talent and Performance Management (TPM) as a strategic function for building organizational effectiveness. It provides an in-depth understanding of talent acquisition, development, retention, and performance measurement frameworks. Students will explore competency mapping, succession planning, performance management systems (PMS), coaching, reward systems, and legal aspects. The course equips learners to integrate talent strategies with organizational goals and drive sustained employee performance.

II. COURSES OBJECTIVES:

The students will try to learn:

- I. The importance of talent and performance management.
- II. The companies integrate competencies with Talent management process.
- III. The various aspects in performance management.
- IV. The various aspects in PMS Process and implementation.
- V. The Elaborate on Employee development, Reward & Legal Systems.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Describe the evolution, scope, and significance of Talent Management (TM) and its role in creating competitive advantage.
- CO2 Apply competency mapping and integrate competencies into performance, career, and succession planning processes.
- CO3 Analyze different performance management systems, approaches, and their strategic linkages with organizational goals.
- CO4 Design and implement performance planning processes, including KPIs, KRAs, metrics, and performance evaluations
- CO5 Evaluate employee development methods, feedback mechanisms, and reward systems for enhancing workforce productivity
- CO6 Examine the legal and ethical issues associated with performance management and apply them in organizational practices.

IV.COURSE CONTENT:

MODULE – I: FOUNDATIONS OF TALENT MANAGEMENT (TM) (09)

Definition, Meaning, Importance, Objectives and Scope of TM. Evolution and development of TM. Need for and Imperatives of TM in modern organizations. Models of TM: McKinsey's TM Framework, Deloitte's TM Wheel, Ulrich's TM Model and CCL's 70-20-10 Model. TM as a competitive advantage for organizations. Role of HR in TM. Key challenges in managing TM today.

MODULE - II: COMPETENCY BASED TALENT STRATEGIES (08)

Importance of Competencies for TM. Competency Mapping, Assessment and Development. Integration of Competencies with Performance Management, Talent Development, Career Development, Succession Planning and Talent Retention. Employee Succession using 9-Box Talent Management Grid. Leadership Development through identification high-potentials, development of a strong Pipeline cum Bench Strength.

MODULE - III: INTRODUCTION TO PERFORMANCE MANAGEMENT (PM) (10)

Importance of Performance Management. Contribution of PM. Disadvantages of poorly implemented PM. Role of HR in PMS. Determinants of Performance: Declarative Knowledge, Procedural Knowledge and Motivation.

Linkages of PMS with other HR Processes. Different Approaches to PMS: Traditional Performance Appraisal System, MBO and Balanced Scorecard. Linking PM and Strategy. Use of Technology in PMS.

MODULE - IV: PMS DESIGN & EXECUTION (10)

Performance Planning & Agreement on Goals, Key Result Areas (KRAs), Key Performance Indicators (KPIs) and Performance Metrics. Measuring Behaviors and Results. Gathering Performance Information, Presentation of Information, Interpretation and Taking Corrective Action. Determining the Overall Rating of Performance.

MODULE - V: EMPLOYEE DEVELOPMENT, REWARD & LEGAL SYSTEMS (08)

Personal Development Plans: Objectives, Content and Activities. Direct Supervisor's role. 360-Degree Feedback Systems. Ongoing Feedback. PM Skills for Managers: Coaching, Using Different Styles of Coaching and Involving in Ongoing Coaching Process. Reward Systems: Traditional vs Contingent Pay Plans, Pay for Performance. Pay Structures: Job Evaluation, its Methods, and Broad-banding. PMS and Law, Legal Principles affecting PMS.

V.TEXT BOOKS:

1. Mamta Mohapatra, Swati Dhir, Talent Management, Sage Publications, 1e, 2021.
2. Sonal Minocha, Dean Hristov: An Integrated Approach, Sage Publications, 1e, 2019.
3. Gowri Joshi, Veena Vohra, Talent Management, Cengage Learning, 1e, 2018.
4. Lance A. Berger, Dorthony R. Berger, TMH Education, 3e, 2018.
5. Jean Barbazette, "Training Needs Assessment: Methods, Tools, and Techniques" Wiley, 2014

VI. REFERENCE BOOKS:

1. Seema Sanghi, The Handbook of Competency Mapping, Sage Publishers, 3e, 2016.
2. Herman Aguinis, Performance Management, Pearson, 3e, 2013.
3. B.Rathan Reddy, "Effective Human Resource Training and development Strategy", Himalaya, 2009
4. Donald L. Kirkpatrick and James D. Kirkpatrick, "Evaluating Training programs", Tata McGraw Hill, 2009

VII. WEB REFERENCES:

1. <https://www.pdfdrive.com/employee-training-development-5th-edition-e163863603.html>
2. <https://www.pdfdrive.com/training-and-development-and-employee-performance-in-district-assemblies-e117414389.html>

VIII. E-TEXT BOOKS:

1. <http://trainingstation.walkme.com/5-best-employee-training-books/>
2. <https://www.free-books.net/ebook/Human-Resources-Management-Course>
3. <http://www.e-booksdirectory.com/listing.php?category=439>



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal - 500 043, Hyderabad, Telangana

COURSE CONTENT

LEARNING AND DEVELOPMENT								
III Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE37	Elective	L	T	P	C	CIA	SEE	Total
		4	-	-	4	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Human Resource Management								
SDGs Mapped: SDG 4 (Quality Education), SDG 8 (Decent Work & Economic Growth)								

I. COURSE OVERVIEW:

This course on Training and Development provides a comprehensive understanding of how organizations enhance employee capabilities and performance through structured learning interventions. It covers the principles of learning, training strategy, instructional design, technology-enabled training, employee and management development, and contemporary issues. The course emphasizes both traditional and modern approaches to learning, with a focus on developing talent to meet organizational objectives in a dynamic business environment.

II. COURSES OBJECTIVES:

The students will try to learn:

- I. The concepts, theories, and processes of learning in organizational contexts.
- II. The training strategy, needs assessment, and instructional design.
- III. The training methods, technology-enabled learning, and evaluation techniques.
- IV. The approaches of employee and management development programs.
- V. The contemporary issues in training and development including diversity, global assignments, and gig economy contexts.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Explain fundamental learning concepts, theories, and phases relevant to training and development.
- CO2 Apply strategic training and development frameworks, including Training Needs Assessment (TNA) and program design.
- CO3 Analyze t Design employee and management development interventions such as coaching, mentoring, and career planning effectiveness of different training methods and technology-enabled learning platforms.
- CO4 Design employee and management development interventions such as coaching, mentoring, and career planning.
- CO5 Evaluate training effectiveness using models like Kirkpatrick's and ROI, ensuring transfer of learning.
- CO6 Examine contemporary training issues including onboarding, diversity, cross-cultural training, and career management for emerging workplace contexts.

IV.COURSE CONTENT:

MODULE – I: INTRODUCTION TO LEARNING (09)

Definition and characteristics of learning, Phases of learning. Theories of learning: Reinforcement Theory, Social Learning Theory, Goal Setting Theory, Need Theories (Maslow, Herzberg), Expectancy Theory, Adult Learning Theory (Andragogy), Information Processing Theory. The Learning Process and Cycle (Kolb's Model). Instructional emphasis for different learning outcomes.

MODULE - II: TRAINING STRATEGY AND DESIGNING TRAINING (08)

Evolution of the training function, Strategic Training and Development process, Training needs in various strategic contexts (growth, stability, retrenchment), Structure and models of training departments, Training Needs Assessment (TNA): tools, techniques, and process. Designing a training program: setting objectives, content design, selecting methods Trainer competencies and styles, Evaluating training effectiveness: Kirkpatrick's and ROI models, post-training support and transfer of learning.

MODULE - III: TRAINING METHODS AND TECHNOLOGY ENABLED LEARNING (10)

Traditional training methods: Presentation (Lectures, Demonstrations), Hands-on (Simulations, Case Studies, Role Plays), Group building (Team building, Action Learning). E-learning and online modules.

Impact of technology on learning: Multimedia, Virtual Classrooms, Computer-Based Training (CBT), Mobile Learning and Blended Learning Models, Learning Management Systems (LMS), Digital training administration tools.

MODULE - IV: EMPLOYEE AND MANAGEMENT DEVELOPMENT (10)

Meaning and importance of employee development, Essentials of management development programs (MDPs), Approaches to development: Formal education, Assessment and Development centers, Job experiences and job rotations, Coaching, mentoring, and interpersonal feedback, Development planning process, Organizational strategies for career and leadership development, E-learning in employee development, Electronic MDPs and executive coaching.

MODULE - V: CONTEMPORARY ISSUES IN TRAINING AND DEVELOPMENT (08)

Orientation/Onboarding training programs, Diversity and inclusion training, Sexual harassment prevention training, Team and cross functional team training, Cross-cultural training for global assignments, Competency mapping and training for talent management, Career management systems: planning, paths, plateaus, and career transitions, Training for virtual work environments, hybrid roles, and gig economy.

V.TEXT BOOKS:

1. Raymond A. Noe, Amitabh Deo Kodwani, "Employee Training and Development", 7e, McGraw Hill, 2019.
2. P. Nick Blanchard, James W. Thacker, A. Anand Ram, "Effective Training: Systems, Strategies, and Practices", 4e, Pearson, 2012.
3. Rolf Lynton & Uday Pareek, "Training for Development", 3e, Sage Publishers, 2012.

VI. REFERENCE BOOKS:

1. Jean Barbazette, Training Needs Assessment: Methods, Tools, and Techniques, Wiley, 2014.
2. G. Pandu Naik, Training and Development: Text, Research and Cases, Excel Books, 2011.
3. Steve W.J. Kozlowski & Eduardo Salas – Learning, Training, and Development in Organizations, Routledge, 2010 (Advanced reference)

VII. Web References:

1. <https://play.google.com/books/reader?id=pUCPwDG8Qj8C&hl=en&pg=GBS.PR8>
2. <https://play.google.com/books/reader?id=EXiJDwAAQBAJ&hl=en&pg=GBS.PR11>

VIII. E-Text Books:

1. <https://www.pdfdrive.com/predictive-hr-analytics-mastering-the-hr-metric-e188006190.html>
2. <https://www.pdfdrive.com/hr-metrics-and-workforce-analytics-e20835652.html>



INSTITUTE OF AERONAUTICAL ENGINEERING

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COURSE CONTENT

EMPLOYEE RELATIONS								
III Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE38	Elective	L	T	P	C	CIA	SEE	Total
		4	-	-	4	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Human Resource Management								
SDGs Mapped: SDG 8 (Decent Work & Economic Growth), SDG 16 (Peace, Justice and Strong Institutions)								

I. COURSE OVERVIEW:

This course on Industrial Relations and Labour Laws provides students with a comprehensive understanding of the dynamic relationship between employers, employees, trade unions, and the state. It examines the evolution of industrial relations in India, collective bargaining, tripartism, and the role of social dialogue in shaping workplace harmony. The course also covers key labor legislations and recent labor code reforms, equipping students with the knowledge to critically analyze and apply industrial relations practices in a changing business environment.

II. COURSES OBJECTIVES:

The students will try to learn:

- I. The main differentiating features and characteristics of the strategic human resource management paradigm towards the firm performance.
- II. The key aspects of investment patterns towards the development of resources and forecasting the human resources needs of an organization.
- III. The design strategic pay plans that are cost effective, that increase productivity of the work force, and comply with the legal framework.
- IV. The strategic international human resource management issues and cope up with the strategies with respect to global strategic alliances.
- V. The implications of labor legislations and recent reforms for organizations, employees, and society.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Explain the evolution, concepts, and frameworks of industrial relations in India and compare them with global practices.
- CO2 Analyze the structure, functions, and challenges of trade unions and collective bargaining in modern organizations.
- CO3 Evaluate the role of tripartism, social dialogue, and government interventions in shaping industrial relations.
- CO4 Interpret and apply provisions of major labor legislations including wages, compensation, social security, and workplace rights.
- CO5 Assess the implications of recent labor code reforms on employers, employees, and industrial peace.
- CO6 Propose effective strategies for managing disputes, grievances, and fostering productive employee relations in organizations.

IV.COURSE CONTENT:

MODULE – I: INDUSTRIAL RELATIONS (10)

Economy and the Labour Force in India, Approaches to Industrial Relations, Industrial Relations in Comparative Framework, Management and Employer Organizations, Introduction, Origin and Growth of IR. **Trade Unions:** Introduction, Definition and Objectives, Growth and Structure of Trade Unions in India, Trade Unions Act, 1926 and Legal framework, Union Recognition, Union Problems, Non-Union Firms, Management of Trade Unions in India.

MODULE - II: COLLECTIVE BARGAINING (10)

Nature and Legal Framework of Collective Bargaining, Levels of Bargaining and Agreements, Change in the Labor Management Relations in the Post-Liberalized India, Changes in the Legal Framework of Collective Bargaining, Negotiated Flexibility, Productivity Bargaining, Improved Work Relations, Public Sector Bargaining and Social Security, Negotiating Techniques and Skills, Drafting of an Agreement.

MODULE - III: TRIPARTISM AND SOCIAL DIALOGUE (05)

Types and Levels of Tripartism, Social Dialogue and the Reform Process,

Strengthening Tripartite Social Dialogue, Role of Government in Industrial Relations.

MODULE - IV: LABOR LEGISLATION – I (10)

Factories Act, 1948, Employee Compensation Act, 1923, ESI Act, 1948, The Payment of Wages Act, 1936, Minimum Wages Act, 1948, The Payment of Bonus Act, 1965. The Prohibition of Sexual Harassment of Women at Workplace Act, 2013, The Maternity Benefit Act, 1961, The Payment of Gratuity Act, 1972, The Unorganized Workers' Social Security Act, 2008.

MODULE - V: LABOR LEGISLATION – II (10)

Industrial Disputes Act, 1948, Meaning, Nature and Scope of Industrial Disputes, Causes and Consequences. Dispute Settlement Machinery. Grievance Handling, Causes of Grievances, Standing Orders Act 1948. 2021-22 Reforms into Labor Laws: Right to Minimum Wages (Code on Wages, 2019), Social Security for Everyone (Social Security Code, 2020), Right of Security to Workers in all situations (OSH Code (Occupational Safety, Health and Working Conditions Code) – 2020), Towards end to Disputes (Industrial Relations (IR) Code, 2020), Welfare of Interstate Migrant Workers.

V.TEXT BOOKS:

1. SC Srivastava, Industrial Relations and Labour Laws, 8e, Vikas Publishing House Ltd., 2022
2. C.S. Venkat Rathnam, Industrial Relations, Oxford University Press, New Delhi, 2nd Edition 2019.
3. D.P.Sahoo, Employee Relations, Text & Cases, 1e, Sage Publications, 2020.
4. Parul Gupta, Industrial Relations & Labour Laws for Managers, Sage Publications, 2019.
5. Arun Monappa, Industrial Relations, Tata McGraw Hill Publishing Company Limited, New Delhi, 2017.

VI. REFERENCE BOOKS:

1. C.B. Mamoria, Mamoria & Gankar, Dynamics of Industrial Relations, Himalaya Publishing House Pvt Ltd, 13e, 2014.
2. P.N. Singh and Neeraj Kumar, "Employee Relations Management", Pearson Education, 2010.

VII. WEB REFERENCES:

1. <https://play.google.com/books/reader?id=mM8oCwAAQBAJ&hl=en&pg=GBS.PR7>
2. https://play.google.com/books/reader?id=Dtm_DgAAQBAJ&hl=en&pg=GBS.PR11

VIII. E-TEXT BOOKS:

1. <https://www.pdfdrive.com/strategic-human-resource-management-e15459785.html>
2. <https://www.pdfdrive.com/strategic-human-resource-management-e6137887.html>



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal - 500 043, Hyderabad, Telangana

COURSE CONTENT

BUSINESS INTELLIGENCE								
III Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE39	Elective	L	T	P	C	CIA	SEE	Total
		4	-	-	4	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Management of Information Systems								
SDGs Mapped: SDG 9 (Industry, Innovation and Infrastructure), SDG 4 (Quality Education)								

I. COURSE OVERVIEW:

This course imparts knowledge for students are designed to equip aspiring business leaders with the essential knowledge and skills to harness the power of data for strategic decision-making, informed insights, and sustainable organizational growth. In today's dynamic business landscape, the ability to transform raw data into actionable intelligence is a critical skill for effective management and leadership. This course offers a comprehensive exploration of business intelligence concepts, tools, techniques, and their integration within modern business contexts.

II. COURSES OBJECTIVES:

The students will try to learn:

- I. The data ware housing, data mining for business intelligence.
- II. The business rules and data mining for business intelligence.
- III. How data-processing machines used for auto-abstracting and auto-encoding of documents.
- IV. The timeliness and quality of inputs to the decision process.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Recall the fundamental concepts and principles of business intelligence with sources of data within an organization.
- CO2 Contrast fundamental concepts and principles of business intelligence.
- CO3 Describe the role of data warehousing in supporting business intelligence
- CO4 Apply data visualization tools to create informative and interactive dashboards.
- CO5 Analyze case studies involving in business intelligence.
- CO6 Evaluate the ethical and legal implications of business intelligence practices.

IV.COURSE CONTENT:

MODULE – I: INTRODUCTION TO BUSINESS INTELLIGENCE (10)

The business pressure, responses and support model, definition of business intelligence, architecture of business intelligence, styles of business intelligence, vents driven alerts, a cyclic process of intelligence creation. The value of business intelligence, value driven and information use, performance metrics and key performance indicators, horizontal use cases for business intelligence.

MODULE - II: DATA WARE HOUSING (10)

Definitions and concepts, data ware housing process an innovation, data warehousing Implementation, data warehousing administration, security issues and future trends. Business performance management, overview strategic plan, monitor, performance measurement, business performance management methodologies, business performance management techniques, performance dashboard and scorecards.

MODULE - III: DATA MINING FOR BUSINESS INTELLIGENCE (05)

Data mining concepts and definitions, data mining applications, artificial neural networks for data mining. Text and web mining, natural language processing.

Text mining applications, text mining process, tools, web mining overview, web content overview, web structure mining, web usage mining.

MODULE - IV: BUSINESS RULES (10)

The value preposition of business rules, business rules approach, business rule system sources of business rules and management approach.

MODULE - V: BUSINESS INTELLIGENCE IMPLEMENTATION (10)

Business intelligence and integration implementation, connecting in business intelligence systems, issues of legality, privacy and ethics, social networking and business intelligence.

V.TEXT BOOKS:

1. U.Dinesh Kumar, “Business Analytics”, Wiley, 2017.
2. Laursen, Thorlund, “Business Analytics for Managers”, 2nd Ed., Wiley, 2017.
3. Sahil Raj, “Business Analytics”, 3rd Ed., Cengage Learning, 2015
4. Albright, Winston, “Business Analytics - Data Analysis and Decision Making”, 5th Ed., Cengage Learning, 2015.
5. Jac Fitz, Mattox II, “Predictive Analytics for Human Resources”, 3rd Ed., Wiley, 2015

VI. REFERENCE BOOKS:

1. Philo Janus, Stacia Misner, “Building Integrated Business Intelligence Solutions with SQL Server”, TMH, 1st Edition, 2011.
2. Nina God bole and Sunlit Belpre, “Cyber Security”, Wiley India, 2nd Edition, 2012.

VII. WEB REFERENCES:

1. <http://www.redbooks.ibm.com/redbooks/pdfs/sg245415.pdf>
2. <http://www.win.tue.nl/~mpechen/courses/TIES443/handouts/lecture02.pdf>

VIII. E-TEXT BOOKS:

1. <http://bookboon.com/en/making-the-most-of-big-data-ebookFreemanagementebooks.com>
2. <http://download.101com.com/tdwi/ww24/whatworks24digitaledition.pdf>



INSTITUTE OF AERONAUTICAL ENGINEERING

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COURSE CONTENT

DATABASE MANGEMENT SYSTEMS								
III Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE40	Elective	L	T	P	C	CIA	SEE	Total
		4	-	-	4	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Management of Information Systems								
SDGs Mapped: SDG 9 (Industry, Innovation and Infrastructure), SDG 4 (Quality Education)								

I. COURSE OVERVIEW:

This course imparts knowledge and tailored for MBA students provides a comprehensive understanding of the fundamental concepts, principles, and practical applications of managing and utilizing databases in modern business environments. In today's data-driven world, the ability to effectively manage, retrieve, and analyze data is crucial for informed decision-making and efficient business operations. This course is designed to equip MBA students with the knowledge and skills needed to leverage databases for strategic advantage and organizational success.

II. COURSES OBJECTIVES:

The students will try to learn:

- I. The role of database management system in an organization and learn the database concepts.
- II. The Design databases using data modeling and data normalization techniques.
- III. The various queries using relational algebra and calculus.
- IV. The concept of a database transaction and related database facilities.
- V. How to evaluate a set of queries in query processing.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Recall fundamental concepts of database management systems, including data models, schemas, and normalization techniques.
- CO2 Identify basic SQL syntax for querying and manipulating databases.
- CO3 Summarize the ethical and legal considerations associated with database management and data privacy.
- CO4 Utilize SQL queries to extract specific information from a database.
Implement basic security measures to safeguard database integrity.
- CO5 Evaluate the trade-offs between different database architectures for specific organizational needs.
- CO6 Analyze a given database design for potential inefficiencies and suggest improvements.

IV.COURSE CONTENT:

MODULE – I: CONCEPTUAL MODELING (10)

Introduction to file and database systems: Database system structure, data models, introduction to network and hierarchical models, ER model, relational model.

MODULE - II: RELATIONAL APPROACH (08)

Relational algebra and calculus: Relational algebra, selection and projection, set operations, renaming, joins, division, examples of algebra queries, relational calculus, tuple relational calculus, domain relational calculus, expressive power of algebra and calculus.

MODULE - III: BASIC SQL QUERY (10)

SQL data definition; Queries in SQL: updates, views, integrity and security, relational database design. Functional dependencies and normalization for relational databases up to five normal forms.

MODULE - IV: TRANSACTION MANAGEMENT (09)

Transaction processing: Introduction, need for concurrency control, desirable properties of transaction, schedule and recoverability, serializability and schedules; Concurrency control: Types of locks, two phases of locking, deadlock, time stamp based concurrency control, recovery techniques, concepts, immediate update, deferred update, shadow paging.

MODULE - V: DATA STORAGE AND QUERY PROCESSING (08)

Record storage and primary file organization, secondary storage devices, operations on files, heap file, sorted files, hashing techniques, and index structures for files; Different types of indexes, B tree, B+ tree, query processing.

V.TEXT BOOKS:

1. Jeff Hoffer, V.Ramesh, Heikki Topi, “Modern Database Management”, Pearson, August, 2019.
2. Wilfried Lemahieu, Seppe Vanden Broucke, Bart Baesens, “Principles of Database Management”, Cambridge Univeristy Press, July 2018.
3. Carlos Coronel, Steven Morris, “Database Systems: Design, Implementation, & Management”, 13th Edition, Cengage Learning, Jan, 2018.
4. Mukesh Changra Negi, “Fundamental of Database Management System”, BPB, 1st Edition, Jan, 2019.
5. R.S.Negi, “Database Management System”, Astha Publishers & Distributors, Jan, 2014

VI. REFERENCE BOOKS:

1. Ramez Elmasri, Shamkant B.Navathe, "Fundamental Database Systems", Pearson Education, 3rd Edition, 2003.
2. Raghu Ramakrishnan, "Database Management System", Tata McGraw-Hill Publishing Company, 3rd Edition, 2003.
3. Hector Garcia Molina, Jeffrey D. Ullman, Jennifer Widom, "Database System Implementation", Pearson Education, United States, 1st Edition, 2000.

VII. WEB REFERENCES:

1. https://www.youtube.com/results?search_query=DBMS+online+classes
2. <http://www.w3schools.in/dbms/>
3. <http://beginnersbook.com/2015/04/dbms-tutorial/>

VIII. E-TEXT BOOKS:

1. <http://www.e-booksdirectory.com/details.php?ebook=10166>
2. <http://www.e-booksdirectory.com/details.php?ebook=7400re>



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COURSE CONTENT

MANAGING DIGITAL PLATFORMS								
III Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE41	Elective	L	T	P	C	CIA	SEE	Total
		4	-	-	4	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Management of Information Systems								
SDGs Mapped: SDG 9 (Industry, Innovation and Infrastructure), SDG 8 (Decent Work & Economic Growth)								

I. COURSE OVERVIEW:

This course provides an understanding of digital platforms and their role in transforming modern enterprises. It introduces to the architecture, governance, and optimization of platforms, while highlighting the challenges and opportunities in the digital ecosystem. Students will explore intellectual property issues, pricing policies, and the global perspective of digital technologies. The course also emphasizes innovation, branding, and cross-media strategies through practical insights and case studies, preparing learners to manage and leverage digital platforms effectively.

II. COURSES OBJECTIVES:

The students will try to learn:

- I. The evolution, growth, and challenges of digital platforms in business ecosystems.
- II. The architecture, governance, and optimization strategies of digital platforms.
- III. The role of intellectual property, pricing, and competition in digital technologies.
- IV. Global opportunities, policies, and strategies shaping the future of digital platforms.
- V. Branding, digital media, and innovation through electronic forms of digital technologies.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Recall fundamental concepts of cloud computing and digital platforms relevant to business.
- CO2 Explain the architecture, governance, and optimization strategies of digital platforms.
- CO3 Apply cloud-based and digital technologies to solve managerial and operational problems.
- CO4 Analyze intellectual property, pricing policies, and legal issues in the digital economy
- CO5 Evaluate the opportunities, risks, and global perspectives of digital platforms in business strategy
- CO6 Create innovative business models and marketing strategies leveraging digital and cloud technologies. (Create)

IV.COURSE CONTENT:

MODULE – I: INTRODUCTION TO DIGITAL PLATFORMS (08)

Types of Digital platforms; Emergence of digital platforms Eco system, Digital eco system; Growth of Digital Enterprises in India; Opportunities of Digital Enterprises; Phases of Industrial transition; Growth-Concept and Issues; Development- Concept and Issues; Challenges of Digital Enterprises. Business Models for Digital Platforms.

MODULE - II: DIGITAL PLATFORM ARCHITECTURE (10)

Platform Architecture, Types and concept of Platform Architecture; Governance-Factors involved in Digital Governance; Media Optimization, Latest trends in Media optimization; Channel Optimization; Resource profile of channel optimization, Audience platform utilization

MODULE - III: DIGITAL TECHNOLOGY AND INTELLECTUAL PROPERTY (09)

Overview of Platform competition, Platform Technologies, Development of platform technologies, Political culture, Concepts involved in political culture.

Intellectual properties in Digital Economy, Instruments of Digital Economy, Pricing policies, Overview of pricing policies, Types of pricing policies

MODULE - IV: FUTURE PERSPECTIVE OF DIGITAL TECHNOLOGY (10)

Overview on global divide, Major policies, Opportunities in Global divide, Future of digital platforms, Strategies in digital platforms, Participation of Digital platforms in global scenario.

MODULE - V: ELECTRONIC FORMS OF DIGITAL TECHNOLOGY (08)

Digital Media, Roots of marketing strategy, Cross media marketing strategy, marketing self, Branding, Branding strategies, Overview of Innovation, Digital business innovation, Types and concepts involved in Digital business innovation, Case Studies.

V.TEXT BOOKS:

1. Michael A. Cusumano, Annabelle Gawer, David B. Yoffie, The Business of Platforms: Strategy in the Age of Digital Competition, Innovation, and Power, Harper Business
2. Swaminathan T. N., Karthik Kumar, Digital Marketing: From Fundamentals to Future, Andrew McAfee and Erik Brynjolfsson, Cengage Learning India
3. Dave Chaffey, Fiona Ellis-Chadwick, Digital Marketing, Pearson
4. Abhishek Das, Applications of Digital Marketing for Success in Business, BPB Publications

VI. REFERENCE BOOKS:

1. Chris Westfall, The New Elevator Pitch: The Definitive Guide to Persuasive Communication in the Digital Age, Marie Street Press.
2. Feras Alhlou, Shiraz Asif, Eric Fettman Google Analytics Breakthrough: From Zero to Business Impact, Wiley.
3. Sumesh Singh Dadwal, Innovations in Technology and Marketing for the Connected Consumer; IGI Global.

VII. WEB REFERENCES:

1. <https://www.pdfdrive.com/cloud-security-a-comprehensive-guide-to-secure-cloud-computing-e16098716.html>
2. <https://www.pdfdrive.com/secure-cloud-computing-e26598533.html>

VIII. E-TEXT BOOKS:

1. <http://www.e-booksdirectory.com/details.php?ebook=10166>
2. <http://www.e-booksdirectory.com/details.php?ebook=7400re>



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal - 500 043, Hyderabad, Telangana

COURSE CONTENT

STARTUP AND MSME MANAGEMENT								
III Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE42	Elective	L	T	P	C	CIA	SEE	Total
		4	-	-	4	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Entrepreneurship and Design Thinking								
SDGs Mapping: SDG 8 (Decent Work & Economic Growth), SDG 9 (Industry, Innovation and Infrastructure)								

I. COURSE OVERVIEW:

This course aims to enhance students' understanding of the entrepreneurial ecosystem with a focus on startups and Micro, Small, and Medium Enterprises (MSMEs). It introduces the dynamics of the startup economy, requirements for venture creation, legal and financial aspects, and the management of MSMEs. Students will gain practical insights into entrepreneurial opportunities, challenges, and institutional support available in India. The framework prepares learners to critically analyze and apply entrepreneurial principles for building sustainable ventures and contributing to economic growth.

II. COURSES OBJECTIVES:

The students will try to learn:

- The fundamentals of entrepreneurship, startups, and MSMEs, along with their role in economic development.
- The benefits and challenges of adopting cloud computing for businesses across different industries. Examine the processes involved in identifying opportunities, mobilizing resources, and financing startups.
- The legal, regulatory, and policy frameworks affecting startups and MSMEs.
- Managing MSMEs, addressing challenges, and ensuring sustainable growth
- The institutional support systems, policies, and schemes for entrepreneurs, including women entrepreneurs.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Describe the fundamentals of startups, entrepreneurial ecosystems, and MSME policies in India.
- CO2 Explain startup requirements, capital resources, financing options, and feasibility analysis.
- CO3 Analyze the growth stages, legal environment, and leadership challenges faced by startups and new ventures.
- CO4 Apply management strategies for MSMEs, including product line management, client communication, and revival practices.
- CO5 Evaluate institutional and financial support systems for startups and MSMEs.
- CO6 Create entrepreneurial solutions by integrating innovative strategies, risk management, and sustainability practices.

IV. COURSE CONTENT:

MODULE – I: INTRODUCTION TO STARTUP AND MSME (10)

The Rise of the Startup Economy, The Six Forces of Change, The Startup Equation, The Entrepreneurial Ecosystem, Entrepreneurship in India. Concept & Definition of Employment, Export and Business Opportunities in MSMEs. Issues and Challenges of MSMEs, MSME Policies in India.

MODULE - II: STARTUP REQUIREMENTS (10)

The Big Idea, Generate Ideas with Brainstorming, Business Startup, Ideation, Venture Choices. Identifying Startup Capital Resource Requirements, Estimating Startup Cash Requirements, Developing Financial Assumptions, Constructing a Process Map, Positioning the Venture in the Value Chain, Launch strategy to reduce Risks, Startup Financing Metrics, Feasibility Analysis, The Cost and Process of Raising Capital, Unique Funding Issues of High-tech Ventures, Funding with Equity, Financing with Debt, Funding Startups with Bootstrapping, Crowd Funding.

MODULE - III: STARTUP AND LEGAL ENVIRONMENT (05)

Stages of Growth in a New Venture, Growing with the Market, Growing within the Industry, Venture Life Patterns, Reasons for New Venture Failures, Scaling Ventures, Preparing for Change, Leadership Succession.

Support for Growth and Sustainability of the Venture. The Legal Environment, Approval for New Ventures, Taxes or Duties Payable for New Ventures.

MODULE - IV: MANAGEMENT OF MSME (10)

Management of Product Line; Communication with Clients, Credit Monitoring System, Management of NPAs, Restructuring, Revival and Rehabilitation of MSME, Problems of Entrepreneurs, Sickness in MSME, Reasons and Remedies, Evaluating Entrepreneurial Performance.

MODULE - V: INSTITUTIONAL SUPPORT FOR MSMEs (10)

Forms of Financial Support, Long-term and Short-term Financial Support, Sources of Financial Support, Dealing with Failure: Bankruptcy, Exit Strategies: Selling the Business, Crashing-out but Staying in-being Acquired, Going Public (IPO) and Liquidation. District Industries Centers (DIC), Small Industries Service Institute (SISI), Entrepreneurship Development Institute of India (EDII), National Institute of Entrepreneurship & Small Business Development (NIESBUD), National Entrepreneurship Development Board (NEDB), Schemes for Women Entrepreneurs.

V. TEXT BOOKS:

1. Bruce R. Barringer, R. Duane Ireland, Entrepreneurship successfully, launching new ventures, Pearson, 2019.
2. Donald F Kuratko, Jeffrey S. Hornsby, New Venture Management: The Entrepreneur's Road Map, 2e, Routledge, 2017.
3. Kathleen R Allen, Launching New Ventures, An Entrepreneurial Approach, Cengage Learning, 2016.

VI. REFERENCE BOOKS:

1. Anjan Rai Chaudhuri, Managing New Ventures Concepts and Cases, Prentice Hall International, 2010.
2. S.R. Bhowmik & M. Bhowmik, Entrepreneurship, New Age International, 2007.
3. Steven Fisher, Ja-nae' Duane, The Startup Equation -A Visual Guidebook for Building Your Startup, Indian Edition, Mc Graw Hill Education India Pvt. Ltd, 2016.

VII. WEB REFERENCES:

1. <https://www.inc.com/encyclopedia/business-information-sources.html>
2. <https://www.investopedia.com/terms/s/startup.asp>

VIII. E-TEXT BOOKS:

1. https://en.wikipedia.org/wiki/Startup_company
2. <https://msdn.microsoft.com/en-us/library/hh708954.aspx>
3. <https://clarity.fm/startupadvice>



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal - 500 043, Hyderabad, Telangana

COURSE CONTENT

FAMILY BUSINESS MANAGEMENT								
III Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE43	Elective	L	T	P	C	CIA	SEE	Total
		4	-	-	4	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Entrepreneurship and Design Thinking								
SDGs Mapped: SDG 8 (Decent Work & Economic Growth), SDG 10 (Reduced Inequalities)								

I. COURSE OVERVIEW:

This course provides an in-depth understanding of the dynamics, challenges, and opportunities in family-owned businesses. It explores governance models, succession planning, successor development, and strategies for sustaining transgenerational entrepreneurship. Students will gain insights into ownership challenges, strategic regeneration, and cultural transformation to ensure continuity and competitiveness. The course prepares learners to evaluate and implement effective governance frameworks while fostering innovation and long-term growth in family enterprises.

II. COURSES OBJECTIVES:

The students will try to learn:

- I. The unique organizational form and understand its succession and continuity models.
- II. Ownership challenges, shareholder responsibilities, and governance mechanisms in family firms.
- III. The attributes of next-generation leaders and evaluate succession strategies for sustainable leadership.
- IV. Various life cycle stages and develop strategic planning approaches for transgenerational entrepreneurship.
- V. Assess the future of family businesses through change management, cultural renewal, and institutionalization of innovation.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Explain the synthesis, evolution, and competitive dynamics of family businesses, including succession and continuity models
- CO2 Apply governance frameworks to address ownership challenges and ensure effective shareholder and family governance.
- CO3 Evaluate successor attributes, leadership development approaches, and succession planning mechanisms in family enterprises.
- CO4 Analyze strategic planning models and propose approaches for leveraging family business competencies into sustainable competitive advantage.
- CO5 Analyze strategic planning models and propose approaches for leveraging family business competencies into sustainable competitive advantage.
- CO6 Assess cultural transformation, organizational development, and institutionalization processes to ensure long-term continuity of family

IV.COURSE CONTENT:

MODULE – I: INTRODUCTION TO FAMILY BUSINESS (06)

Family Business as a unique synthesis, Succession and Continuity: The three generation rule, Building Family business that last, The systems theory model of Family Business, Agency Theory of Family business, The stewardship perspective of family business, Competitive Challenges and Competitive advantages of family businesses, The role of Genograms and family messages to understand the family system. Family emotional intelligence, The ECI-U Model.

MODULE - II: OWNERSHIP CHALLENGES AND FAMILY GOVERNANCE (09)

Shareholder Priorities – Managers vs. Owners - Responsibilities of shareholders to the company - Effective Governance of the shareholder - firm relationship – Family Governance: Structure, Challenges to family governance, managing the challenges of succession, Enterprise Sustainability: Twelve elements of strategic –fit and its implications on family firms.

MODULE - III: SUCCESSOR DEVELOPMENT (12)

Characteristics of next-generation leaders - Next-generation attributes interests and abilities for responsible leadership- Next-generation personalities-managing interdependence- CEO as an architect of succession and continuity - Types of CEO Spouse and the transfer of power

MODULE - IV: STRATEGIC PLANNING AND TRANSGENERATIONAL ENTREPRENEURSHIP (08)

Life cycle stages influencing family business strategy - Turning core competencies into competitive advantage. The unique vision of family-controlled businesses - Strategic regeneration- The Business Rejuvenation matrix - Intrapreneurship.

MODULE - V: THE FUTURE OF FAMILY BUSINESS (10)

New Leaders of the Evolution - Three states of evolution-Continuity and culture - changing the culture - The change formula - Organization Development approaches to change - Commitment planning - Organic competencies and business's future - Thriving through competition - Institutionalizing the change.

V.TEXT BOOKS:

1. Keep Hunt, “The Family Business”, Graphic Arts Books, April 2024.
2. Josh Baron, Rob Lachenauer, “Harvard Business Review Family Business Handbook”, Harvard Business Review Press, Jan 2023.
3. Thomas Zellweger, “Managing the family business”, Edward Elgar Publishing Ltd, April 2021.
4. Ernesto J.Poza, Mary S. Daughterty, Family Business, 4e, Cengage Learning, 3rd Edition, 2020.
5. Laura Hougaz, Entrepreneurs in Family Business Dynasties: Stories of Italian-Australian Family Businesses over 100 years, Springer, 7th Edition, 2015.

VI. REFERENCE BOOKS:

1. John L. Ward, Keeping the Family Business Healthy: How to Plan for Continuing Growth, Profitability and Family Leadership, Palgrave Macmillan, 3rd Edition, 2011.
2. M. Nordqvist, T. Zellweger, Trans generational Entrepreneurship: Exploring Growth and Performance in Family Firms across Generations, Edward and Elgar Publishing Limited, 4th Edition, 2010.

VII. Web References:

1. https://www.researchgate.net/.../304540682_List_of_References_for_Family_Business
2. <https://www.e-elgar.com/shop/books/business-and-management/family-business-bam>

VIII. E-Text Books:

1. https://www.sk.sagepub.com/reference/hdbk_familybusiness
2. <https://www.encyclopedia.com/reference/encyclopedias-almanacs.../family-business>



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal - 500 043, Hyderabad, Telangana

COURSE CONTENT

CREATIVITY, INNOVATION AND ENTREPRENEURSHIP								
III Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE44	Elective	L	T	P	C	CIA	SEE	Total
		4	-	-	4	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Entrepreneurship and Design Thinking								
SDGs Mapped: SDG 8 (Decent Work & Economic Growth), SDG 9 (Industry, Innovation and Infrastructure)								

I. COURSE OVERVIEW:

This course provides a comprehensive understanding of creativity and innovation, focusing on the processes, environments, and tools that foster creative thinking and problem-solving. Students will explore creativity at the individual and organizational levels, examine barriers to creativity, and learn strategies to overcome them. The course also emphasizes innovation management, ideation methods, and the role of leadership in driving innovation, with a micro and macro perspective on organizational and economic contexts.

II. COURSES OBJECTIVES:

The students will try to learn:

- The knowledge of creative cerebration, creative Personality and motivation, creative Environment, creative technology.
- The structuring of ill, defined problems, creative problem solving-models of creative problem solving mechanisms of divergent thinking.
- The knowledge on creative intelligence abilities, a model of creative intelligence, convergent thinking ability, traits congenial to creativity.
- The systems approach to innovation, innovation in the context of emerging economies, organizational factors affecting innovation at the firm level.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- Recall and describe the concepts, types, and criteria of creativity and methods for evaluating its quality.
- Apply models of creative problem-solving and techniques of divergent and convergent thinking.
- Analyze creative intelligence abilities, personality traits, and strategies for overcoming blocks to creativity.
- Evaluate innovation management processes, including ideation approaches and theories of new product development.
- Assess micro and macro perspectives of innovation, focusing on leadership, organizational factors, and emerging economies.
- Create innovative frameworks and solutions by integrating creativity, intelligence, and innovation strategies.

IV.COURSE CONTENT:

MODULE – I: THE CREATIVITY PHENOMENON (08)

Creative cerebration, creative Personality and motivation, creative Environment, creative technology, creativity training, puzzles of creativity, spiritual and social roots of creativity, essence, elaborative and expressive creativities, quality of creativity, existential, entrepreneurial and empowerment creativities criteria for evaluating creativity, credible evaluation, improving the quality of our creativity.

MODULE - II: MASTERING CREATIVE PROBLEM SOLVING: (09)

Structuring of ill, defined problems, creative problem solving-models of creative problem solving mechanisms of divergent thinking, useful mechanisms of convergent thinking, and techniques of creativity problem solving.

MODULE - III: CREATIVE INTELLIGENCE (09)

Creative intelligence abilities, A model of creative intelligence, convergent thinking ability, traits congenial to creativity, creative personality and forms of creativity, motivation and creativity.

Blocks to creativity, fears and disabilities, strategies for unblocking, energy for your creativity, designing creativogenic environment.

MODULE - IV: INNOVATION MANAGEMENT (09)

Concept of innovation, levels of innovation, incremental vs. radical innovation, inbound and outbound ideation-open and other innovative ideation methods, theories of outsourcing new product development: Transaction cost, resource based, resource dependence, knowledge based theories.

MODULE - V: MICRO AND MACRO PERSPECTIVES OF INNOVATION (10)

Systems approach to innovation, innovation in the context of emerging economies, organizational factors affecting innovation at the firm level, leadership and Innovations, open innovation, innovation framework, innovations developed by open technology communities.

V.TEXT BOOKS:

1. H. James Harrington, Creativity, Innovation, and Entrepreneurship: The Only Way to Renew Your Organization”, Taylor & Francis Inc., 2018.
2. U.Jerinabi, P.Santhi, “Creativity, Innovation and Entrepreneurship”, allied Publisher Ltd, May 2016.
3. Dr.Kalpna Maheshwari, “Creativity & Innovation”, Indra Publishing House, 2016.
4. Urvashi Makkar, Rinku Sanjeev, Sunayana Jain, “Innovation & Creativity Management”, Bharti Publications, 1st Edition, 2015.
5. Vinnie Jauhari, Sudanshu Bhushan,” Innovation Management, Oxford Higher Education”, 7th Edition, 2014.

VI. REFERENCE BOOKS:

1. Brian Clegg, Paul Birch,” Creativity”, Kogan Page, 7th Edition,2009.
2. P. N. Rastogi, “Managing Creativity for Corporate Excellence”, Macmillan publishers, 4th Edition, 2009.

VII. WEB REFERENCES:

1. www.open.edu/openlearn/money.../creativity...innovation/content-section---references
2. www.fpspi.org/pdf/InnovCreativity.pdf

VIII. E-TEXT BOOKS:

1. <https://books.google.co.in/books?isbn=8184248024>
2. https://www.researchgate.net/.../200746590_Entrepreneurial_Creativity_and_Innovation.



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal - 500 043, Hyderabad, Telangana

COURSE CONTENT

DATA VISUALIZATION LABORATORY								
III Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE45	Core	L	T	P	C	CIA	SEE	Total
		1	-	2	2	40	60	100
Contact Classes: 10	Tutorial Classes: Nil	Practical Classes: 25			Total Classes: 35			
Prerequisite: Basic concepts of Information Technology								
SDGs Mapped: SDG 4 (Quality Education), SDG 9 (Industry, Innovation and Infrastructure)								

I. COURSE OVERVIEW:

The main aim of the course is to help the students gain a well-rounded introduction to it for manager's laboratory learning and its significance in their day to day life. Moreover, the course pays special attention to develop understand and implement computer programs in the areas related to algorithms, system software, multimedia, web design, big data analytics, and networking for efficient analysis and design of computer-based systems of varying complexity., career building and different methods of job searching.

II. COURSES OBJECTIVES:

The students will try to learn:

- I. The application of Statistical tools to Research Problem / Projects.
- II. The statistical tools for decision making.
- III. How to work with MS Excel for hypotheses testing.
- IV. The different types of formulas and functions in MS Excel.
- V. The results for better decision making.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Analyze the functions in MS-Office and statistical packages to prepare presentations
- CO2 Identify, formulate, and solve managerial problems by creating templates.
- CO3 Understand the various formats in business instructions.
- CO4 Enhancing knowledge of contemporary issues securing data from external sources.
- CO5 Illustrate various parts of corporate reports and business proposals.
- CO6 Ensuring measures of dispersion for data analysis.

IV. COURSE CONTENT:

WEEK – 1: INTRODUCTION TO DATA

Data, information and knowledge – measurement scales – variable selection – type conversion – statistical

WEEK-2: INTRODUCTION TO VISUALIZATION

Model – algorithmic model – history of visualization – gestalt’s principles – seven stages of data visualization – data science process – types of charts – chart selection guide

WEEK-3: UNDERSTANDING VISUALIZATION

Best visualization practices – effectiveness of visual encodings – color design principles

WEEK-4: VISUALIZATION PRINCIPLES

Edward Tufte’s design principles – data – ink ratio – minimizing chart junk – minimizing lie factor

WEEK-5: UNDERSTANDING INTERFACE

Connecting to data sources – tables – charts – dashboards – stories

WEEK-6: DEPLOYMENT OF STRUCTURED DATA

Deployment of Unstructured data Visualization of unstructured data

WEEK-7: TEXT DATA

Text data visualization – forms of text data

WEEK-8: WORD MEASUREMENT

Word cloud – word tree

WEEK-9: PLOTS

Joint plot – subjectivity and objectivity

WEEK-10: VISUALIZING NETWORKS

Visualizing networks – visual storytelling

WEEK-11: DASHBOARDS

Storytelling frameworks – data storytelling

WEEK-12: STORY NARRATION

Narrative storytelling – analytical dashboard – misleading charts and graphs – cherry picking data

WEEK-13: CORRELATION AND CAUSATION

Correlation and causation – Simpson’s paradox

WEEK-14: SCALING

Scaling – drill down bias – data discrepancy

V. TEXTBOOKS:

1. Jonathan Schwabish, Data Visualization in Excel, Routledge
2. Sharada Sringswara, Purvi Tiwari, U. Dinesh Kumar, Data Visualization, Wiley, 2022

VI. REFERENCE BOOKS:

1. Mathew O. ward, Georges Grinstein, Daniel Keim, Interactive data Visualization, Routledge, 2015.
2. Seema Acharya, Mastering Data Visualization using Tableau, Wiley, 2024

Note: Laboratory work can be done using Spreadsheets /Power BI/ Tableau



INSTITUTE OF AERONAUTICAL ENGINEERING

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COURSE CONTENT

SUMMER INTERNSHIP								
III Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE46	Core	L	T	P	C	CIA	SEE	Total
		-	-	4	2	100	-	100
Contact Classes: Nil	Tutorial Classes: Nil	Practical Classes: 45			Total Classes: 45			
Prerequisite: Basic concepts of management								
SDGs Mapped: SDG 8 (Decent Work & Economic Growth), SDG 4 (Quality Education)								

I. COURSE OVERVIEW:

The Summer Internship course provides students with practical exposure to real-world business environments. Students engage with organizations, professionals, or entrepreneurs to understand business operations, decision-making, and challenges. The internship helps students apply theoretical knowledge, develop analytical and problem-solving skills, and gain insights into business practices across industries. Through observation and hands-on experience, students enhance creativity, critical thinking, and the ability to propose solutions for organizational issues, preparing them for future managerial roles.

II. COURSES OBJECTIVES:

The students will try to learn:

- I. Identify and approach organizations and professionals for internships using appropriate communication tools.
- II. The business models, operational processes, and management practices in real-world settings.
- III. The various practical situations and challenges in business organizations.
- IV. Develop professional skills such as observation, reporting, communication, and problem-solving.
- V. How to prepare a structured report and presentation reflecting their learning and experiences during the internship.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Recall the process of identifying and approaching organizations for internships.
- CO2 Explain the operational and managerial practices observed in the assigned organization or professional setup.
- CO3 Apply analytical skills to evaluate business processes and strategies.
- CO4 Analyze challenges and opportunities within the organization and suggest practical solutions.
- CO5 Develop a professional report and presentation based on real-world experience.
- CO6 Demonstrate enhanced creativity, decision-making, and problem-solving skills applicable to business scenarios.

IV.COURSE CONTENT:

APPROACH TO DECIDE SUMMER INTERNSHIP

Students should take covering letter/s, addressed to the organization/professional, before second mid of Second semester and approach the organizations. They can use their own contacts or seek assistance from the faculty and head of the MBA department of the college to pursue the process of getting the summer Internship. College is also expected to constantly approach companies and professionals and try to explore opportunities of providing summer internship to their MBA students. Students are also expected to put their serious efforts to get the summer internship because there is huge competition for getting summer internships and organizations are also expressing their inability to provide summer internship to the large number of students pursuing MBA.

Students may work in any organization like banks, hospitals, hotels, insurance companies, charitable trusts, NGOs, government departments etc., or work with any professional (like chartered accountants, doctor, lawyers, real estate, temples/ religious institutions etc.), small or big or any entrepreneur, manager of any business organization and understand how they are doing business. They can visit the shops, Petrol bunks, dealers, distributors, retailers, companies or their branch offices in their nearby cities, towns and villages to understand their business model.

REPORTS

A brief report of explaining their understanding and analysis of the organization they work should be presented. There is no need to present information available in the websites. Students should give reference to the web link with a brief note on what the web site contains.

Presentation of their experiences through working and observation during the summer internship will enable them to enhance their creativity towards solutions for the issues and challenges of the business organizations or professionals with whom they are associated.



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COURSE CONTENT

STRATEGIC MANAGEMENT								
IV Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE47	Core	L	T	P	C	CIA	SEE	Total
		4	-	-	4	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Fundamentals of Management								
SDGs Mapped: SDG 9 (Industry, Innovation and Infrastructure), SDG 8 (Decent Work & Economic Growth)								

I. COURSE OVERVIEW:

The course develops the strategic thinking and decision making abilities, especially in relation to understanding the employability of various strategies in different situations of the business world considerably more complex in the changing scenario. Both the challenges and opportunities facing organizations of all sizes are greater than ever. Organizations are required to continuously find better ways to compete in the rapidly changing global business environment. Survival and competition have become imperative for organizations in the current global scenario, which can be answered with the context of this course.

II. COURSE OBJECTIVES:

The students will try to learn:

- The central issues and problem in complex, comprehensive case to suggest alternative course of action; and present well supported recommendations for future action.
- The practical and integrative model of strategic management process that defines basic activities in strategic management.
- The competitive situation and strategic dilemma in dealing with dynamic global business environment in terms of rapidly changing market trends and technological advancement
- The challenges faced by managers in implementing and evaluating strategies based on the nature of business, industry and cultural differences.
- both qualitatively and quantitatively, the performance of people responsible for strategic decisions.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Describe major theories, strategic plans and concepts in the field of strategic management.
- CO2 Develop and execute strategies and will appreciate its integrative and interdisciplinary nature.
- CO3 Analyze the real situations for diagnosing and solving organizational problems by effective application of concepts, tools & techniques.
- CO4 Formulate the strategies and competitive analysis, strategy development processes for real-time business problems.
- CO5 Build the capability of making effective decisions in dynamic business environment.
- CO6 Improve capacity to think, evaluate and execute plans strategically.

IV. COURSE CONTENT:

MODULE -I - INTRODUCTION TO STRATEGIC MANAGEMENT- Classes: (08)

Concepts in Strategic Management, Strategic Management Process, developing a Strategic Vision, Mission, Objectives, Policies, Factors that Shape a Company's Strategy, Environmental Scanning: Industry and Competitive Analysis. Evaluating Company's Resources and Competitive Capabilities by using SWOT Analysis, Value Chain Analysis and Competitive Advantage.

UNIT-II- TOOLS AND TECHNIQUES FOR STRATEGIC ANALYSIS - Classes: (10)

Porter's Five Force Model, BCG Matrix, GE Model, TOWS Matrix, IE Matrix, the Grand Strategy Matrix. Market Life Cycle Model and Organizational Learning, Impact Matrix and the Experience Curve, Generic Strategies, Strategy Formulation, Types of Strategies: Offensive Strategy, Defensive strategy. Exit and Entry Barriers, Tailoring Strategy to Fit Specific Industry and Company Situations.

MODULE-III- STRATEGY IMPLEMENTATION- Classes: (08)

Strategy and Structure, Strategy and Leadership, Strategy and Culture Connection, Operationalizing and Institutionalizing Strategy, Strategies for Competing in Global Markets and Internet Economy.

Organizational Values and their Impact on Strategy, Resource Allocation as a Vital Part of Strategy, Planning Systems for Implementation.

MODULE -IV- TURNAROUND AND DIVERSIFICATION STRATEGIES- Classes: (10)

Turnaround Strategy, Management of Strategic Change, Strategies for Mergers, Acquisitions, Takeovers and Joint Ventures. Alliances and Cooperatives, Diversification Strategy: Why Firms Diversify, Different Types of Diversification Strategies, the Concept of Core Competence, Strategies and Competitive Advantage in Diversified Companies and its Evaluation. International Strategies.

MODULE -V- STRATEGIC EVALUATION AND CONTROL- Classes: (09)

Establishing Strategic Controls for Measuring Performance, Appropriate Measures, Role of the Strategist, Using Qualitative and Quantitative Benchmarking to Evaluate Performance, Strategic Information Systems, Problems in Measuring Performance, Guidelines for Proper Control, Strategic Surveillance, Strategic Audit, Strategy and Corporate Evaluation and Feedback in the Indian and International Context.

V. TEXT BOOKS:

1. Michael A Hitt, R Duane Ireland, Robert E. Hoskisson, Strategic Management: Competitiveness & Globalization – Concepts and Cases, Cengage, 12e, 2024.
2. Dr. C.B. Gupta, Strategic Management: Texts and Cases, S Chand, 2023
3. Azhar Kazmi, Adela Kazmi "Strategic management", 5th edition, in 2021.
4. Fred R David," Strategic Management: A Competitive Advantage Approach, Concepts and Cases," 17th edition, "Francis Marion University" in 2019
5. Pearson paper back "Strategic management concepts: A Competitive Advantage Approach", 16th edition, in 30-07-2018.

VI. REFERENCE BOOKS:

1. Allaire, Y., and M. E. Firsirotu, "Theories of organizational culture" Prentice Hall, 1st Edition, 1999.
2. Albrecht, K, "Brain Power: Learning to Improve Your Thinking Skills" Simon and Schuster Publications, 1st Edition, 1980.
3. Allen, R.W, 'Organizational politics: tactics and characteristics of its actors" 1st California Management Review, 1979.

VII. WEB REFERENCES:

1. https://play.google.com/store/audiobooks/details/Introbooks_Team_Introduction_to_Strategic_Manageme?id=AQAAAEcseWU52M
2. <https://bookboon.com/en/sgenesis-of-strategic-management-ebook>
3. <https://bookboon.com/en/principles-of-strategic-management-ebook>

VIII. E-TEXT BOOKS:

1. https://www.amazon.in/dp/B07VM7HLKS/ref=cm_sw_r_apan_glt_MSVMJJGPN721CSN5Y4HK.
2. https://www.amazon.in/dp/B06XKTVGZD/ref=cm_sw_r_apan_glt_BSSVY978TCTNBPGH31A0?_encoding



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal - 500 043, Hyderabad, Telangana

COURSE CONTENT

SERVICES AND RETAILING MANAGEMENT								
IV Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE48	Elective	L	T	P	C	CIA	SEE	Total
		4	-	-	4	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Marketing Management								
SDGs Mapped: SDG 8 (Decent Work & Economic Growth), SDG 12 (Responsible Consumption & Production)								

I. COURSE OVERVIEW:

The aim of this course is to equip with the knowledge and skills to manage service delivery, enhance customer satisfaction, and develop effective retail strategies. The course emphasizes the unique challenges of marketing services, designing service experiences, and understanding consumer behavior. Additionally, it explores the dynamics of retailing, merchandise management, store operations, and strategic approaches for pricing, location, and promotions in competitive markets.

II. OBJECTIVES:

The students will try to learn:

- I. The fundamental concepts, characteristics, and challenges of services marketing.
- II. Analyze consumer behavior and service expectations to design superior service experiences.
- III. Develop skills in designing, managing, and delivering services with a focus on quality and customer satisfaction.
- IV. Understand retail operations, merchandise management, and store management practices in both organized and unorganized sectors.
- V. Formulate effective retail strategies related to pricing, promotion, location, and e-tailing.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Recall key concepts, characteristics, and classifications of services and retailing.
- CO2 Explain consumer behavior, expectations, and satisfaction in service and retail contexts.
- CO3 Apply service design, service quality frameworks, and service recovery strategies to real-world situations.
- CO4 Analyze merchandise management, store layout, and retail operations for optimal performance.
- CO5 Develop retail strategies related to pricing, promotion, and location to enhance business performance.
- CO6 Evaluate emerging trends in services and retailing, including e-tailing and innovative service practices.

IV. COURSE CONTENT:

MODULE-I- INTRODUCTION TO SERVICES MARKETING - Classes: (08)

Services: Concepts, Characteristics and Classification of Services, Factors responsible for Growth of Services Sector, Challenges faced by the Services Sector, Services Marketing Mix, Service Marketing Triangle, Consumer Behaviour in Services, Consumer Expectations and Perception of Service, Customer Satisfaction, Listening to Customers through Research, Building Customer Relationships, Service Failure, Service Recovery Strategies.

MODULE -II- DESIGNING AND MANAGING SERVICES - Classes: (09)

Service Innovation: Design and Mapping Patterns, Service Quality and Quality Measurement, Gap model of Service Quality, Service Excellence, Service Standards: Factors & Types, Physical Evidence: Managing Physical Evidence, Servicescape and Designing the Servicescape, Service Blueprinting, Strategies to match Service Promises with Delivery, Service Guarantee, Ethics in Service Firms.

MODULE -III- INTRODUCTION TO RETAILING - Classes: (09)

Introduction to retailing, functions of retailing, types of retailing, Emergence of organized retailing, customer buying behaviour in retailing, retailing strategy, target market and retail format, growth strategies of retail in competitive markets.

RETAILING IN INDIA: The present Indian retail scenario, factors affecting retailing in India, retailing opportunities in India, Rural retailing, region wise analysis of Indian retailing.

MODULE -IV- MERCHANDISE AND STORE MANAGEMENT - Classes: (09)

Sources of merchandise, category management, allocation of merchandise, merchandise presentation techniques, logistics management, Objectives of good store design, store layout, types of store layout and design, Space planning, store atmospherics, traffic flow and analysis.

MODULE -V- LOCATION, PRICING AND PROMOTION STRATEGIES - Classes: (10)

Shopping centers, freestanding sites, location and retail strategies, factors affecting the demand for a region or trade area, factors affecting the attractiveness of a site, retail pricing strategies, pricing adjustments, using price to stimulate retail sales, promoting the merchandise, retail promotion strategies, E-tailing: Types, Benefits & Challenges.

V. TEXT BOOKS:

1. Douglas K. Hoffman & John E.G. Bateson, Services Marketing, 6e, Cengage, 2025.
2. Prof. Long Yáng “Retail management”, 8th edition, in 2021.
3. Dr.V. Chitra, Dr.V. Mahalakshmi “Retail management “in 2021.
4. Swapna Pradhan “Retail management Text and Cases”,6th edition, in July 2020.
5. Gibson “Retail management “,5th edition in September 2017.

VI. REFERENCE BOOKS:

1. S. Shahjahan, Services Marketing, Himalaya Publishing House, 2017
2. Swapna Pradhan,” Retail Management-Text and Cases”, TMH, 5th Edition, 2015.
3. Dr. Harjit Singh, “Retail Management a Global Perspective text and cases”, Chand, 3rd Edition, 2011.
4. Aditya Prakash Tripathi, Noopur Agrawal, “Fundamentals of Retailing” (text and cases), Himalaya Publication House, 1st Edition, 2009.

VII. WEB REFERENCES:

1. http://catalogue.pearsoned.ca/assets/hip/ca/hip_ca_pearsonhighered/samplechapter/0131203017.pdf
2. http://www.pondiuni.edu.in/storage/dde/downloads/markiii_rm.pdf

VIII. E-TEXT BOOKS:

1. <https://www.welingkaronline.org/autoptlibrary/librarynotices/retailmanagement.pdf>
2. https://www.amazon.in/dp/B07DX3P3H6/ref=cm_sw_r_apan_glt_90BT0TMXYS6VHR2ES9AD.
3. https://www.amazon.in/dp/B00HJMKIMC/ref=cm_sw_r_apan_glt_CQ9AT2T1GB1VDVBD8ERE
4. https://ebooks.lpude.in/management/mba/term_3/DMGT550_RETAIL_MANAGEMENT.pdf.



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal - 500 043, Hyderabad, Telangana

COURSE CONTENT

INTERNATIONAL MARKETING								
IV Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE49	Elective	L	T	P	C	CIA	SEE	Total
		4	-	-	4	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Marketing Management								
SDGs Mapped: SDG 8 (Decent Work & Economic Growth), SDG 17 (Partnerships for the Goals)								

I. COURSE OVERVIEW:

This course provides an understanding of international marketing concepts, global business environment, and strategies to compete in global markets. Students will explore the drivers of globalization, global consumer behavior, trade policies, market entry strategies, and international marketing mix. The course equips students with the ability to analyze international markets, develop global marketing programs, and implement effective strategies for exporting goods and services.

II. OBJECTIVES:

The students will try to learn:

- I. The scope, importance, and challenges of international marketing.
- II. The global environmental drivers, including political, economic, social, legal, and technological factors.
- III. The global consumer behavior and apply research for market selection and opportunity analysis.
- IV. The international marketing strategies including product, pricing, promotion, and distribution.
- V. The implement global marketing strategies, including negotiations, export procedures, and e-marketing channels.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Recall key concepts, importance, and stages of international marketing.
- CO2 Analyze global environmental factors affecting international marketing decisions.
- CO3 Evaluate global consumer behavior, assess target markets, and perform SWOT analysis for market entry.
- CO4 Apply international marketing mix strategies to develop global marketing programs.
- CO5 Formulate pricing, promotion, and distribution strategies for international markets.
- CO6 Implement and control global marketing strategies, including export documentation and procedures.

IV. COURSE CONTENT:

MODULE-I: INTRODUCTION TO INTERNATIONAL MARKETING - Classes: (10)

Environment and Sustainability, Scope, Importance of World Trade, Features, Opportunities and Challenges in International Marketing, Comparison of Domestic with International Marketing, Stages of International Marketing, Motivating Factors of International Marketing, Internationalization – Reasons and Strategies

MODULE -II-: GLOBAL ENVIRONMENTAL DRIVERS -Classes: (11)

WTO and Globalization: Issues, Types, Political, Economic, Social, Legal and Technological Environments, EXIM Policy, International Trade and its barriers, trade in Goods & Services, International Trade Agreements.

MODULE -III -GLOBAL CUSTOMERS -Classes: (10)

Drivers of Global Consumers, Influences of the Global Consumer: Role of Culture, Elements, Social Factors, Situational Factors, Industrial Buyer, Government Buyer, International Marketing Research: Opportunity Analysis, Market Selection, Assessing Market Size and Sales Potential, Government Policies of Target Markets, SWOT Analysis of Target Markets, Global Market Entry Modes – Strategies, Problems and Challenges.

MODULE -IV -GLOBAL MARKETING- Classes: (07)

Globalization Drivers: Market, Cost, Environmental, Competitive Factors, International Marketing Mix, Developing the Global Marketing Program, Segmentation of product & services, Marketing channels and Distribution Promotion Strategies, Pricing strategies: Factors influencing Pricing Decisions, Concept of International Product Life Cycle.

MODULE -V- IMPLEMENTING GLOBAL MARKETING STRATEGIES - Classes: (07)

Negotiation with customers and selection method – Cultural and International Negotiations, E-Marketing channels organization & controlling of the global marketing program, Export Documentation, Export Procedures, Steps in processing an Export Order.

V. TEXT BOOKS:

1. Philip Cateora and John Graham and Mary Gilly and Bruce Money “International Marketing” 18th edition, in 2020.
2. Vern Terpstra, James Foley and Ravi Sarathy “International Marketing” 11th edition, in 2019.
3. Michael R. Czinkota, Ilkka A. Ronkainen, “International Marketing”, Cengage publications, 10th Edition, 2017
4. Philip R. Cateora, John Graham and Mary C. Gilly “International Marketing”, 17th edition, in 2016.
5. Justin Paul, Ramneek Kapoor, “International Marketing” in 23rd April 2015.

VI. REFERENCE BOOKS:

1. Svend Hollensen, Madhumita Benerjee, “Global Marketing”, Pearson, 4th Edition, 2010
2. Rajagopal “International Marketing”, Vikas, 2nd Edition, 2011
3. P.K. Vasudeva, “International Marketing”, Excel Books, 4th Edition, 2012
4. Kiefer Lee, Steve Carter-Global Marketing Management, Oxford, 3rd Edition, 2011

VII. WEB REFERENCES:

1. <http://www.marketingteacher.com>
2. <http://www.ebsglobal.net/EBS/media/EBS/pdf>

VIII. E-TEXT BOOKS:

1. <https://www.sloanreview.mit.edu/article/theinternet.com>
2. <http://www.books.google.co.in/books/about/international>
3. https://www.amazon.in/dp/B01IKK44YO/ref=cm_sw_r_apan_glt_WMVWYE44DMXP1FRXM117
4. https://www.amazon.in/dp/B07JFKW8S4/ref=cm_sw_r_apan_glt_PP9B0YKQVK1FSDZT2M5F



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal - 500 043, Hyderabad, Telangana

COURSE CONTENT

MARKETING ANALYTICS								
IV Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE50	Elective	L	T	P	C	CIA	SEE	Total
		2	-	-	2	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Marketing Management								
SDGs Mapped: SDG 9 (Industry, Innovation and Infrastructure), SDG 12 (Responsible Consumption & Production)								

I. COURSE OVERVIEW:

This course introduces to Marketing Analytics, focusing on collecting, summarizing, and analyzing marketing data to make informed business decisions. Students will learn to use tools like MS Excel for data organization, pivot tables, and advanced analytics techniques. The course covers customer, pricing, segmentation, and promotion analytics, enabling students to extract insights, optimize marketing strategies, and enhance decision-making in marketing management.

II. COURSE OBJECTIVES:

The students will try to learn:

- The scope, need, and application of marketing analytics in business decision-making.
- How to organize and summarize marketing data using tools like MS Excel, pivot tables, and crosstabs.
- The customer behavior, map customer journeys, and calculate customer lifetime value (CLV).
- Pricing analytics, including demand estimation, price optimization, bundling, and price elasticity.
- How to conduct segmentation and promotion analytics to optimize marketing strategies and evaluate campaign effectiveness.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Recall the definitions, scope, and differences between marketing analytics and marketing research.
- CO2 Organize, summarize, and visualize marketing data using Excel tools, pivot tables, and slicers.
- CO3 Analyze customer data to build personas, track customer behavior, and compute customer lifetime value.
- CO4 Apply pricing analytics techniques to optimize product pricing, bundles, and assess price elasticity.
- CO5 Perform market segmentation using cluster analysis, decision trees, and conjoint analysis.
- CO6 Evaluate promotion effectiveness using ad stock models, media selection models, and pay-per-click analysis.

IV. COURSE CONTENT:

MODULE-I- Introduction to Marketing Analytics- Classes: (05)

Definition, Need and Scope of Marketing Analytics, Marketing Analytics Vs Marketing Research, Levels in Marketing Analytics, Adoption and Application of Marketing Analytics, Marketing Analytics and Business Intelligence. MS Excel as a Tool for conduction of Marketing Analytics. Using MS Excel to Organize and Summarize Marketing Data: Creation of Pivot Tables and Organizing Data. Summarizing Revenue Data: Month-wise and Product wise. Slicing & Dicing of Data: Pareto Principle, Report Filters and Slicers. Demographic Analysis: Analyzing Sales Data by Age, Gender, Income and Location, Construction of Crosstabs of Two Demographic Variables.

MODULE -II- Summarizing Marketing Data - Classes: (10)

Summarizing Revenue Data: Month-wise and Product-wise. Slicing & Dicing of Data: Pareto Principle, Report Filters and Slicers. Demographic Analysis: Analyzing Sales Data by Age, Gender, Income and Location, Construction of Crosstabs of Two Demographic Variables, Using GETPIVOT Function for Pulling Data, Adding Data Labels and Data Tables.

MODULE –III: Customer Analytics -Classes: (10)

Customer Journey Mapping and the Process of Mapping (How to). Metrics for Tracking Customer Experience: Customer Feedback Metrics & Behavior Derived Customer Metrics. Customer Persona, Building a Customer Persona and its Benefits, Parts of Buyer Persona.

What Customer Wants: Using Conjoint Analysis for Levels in Consumer Decision Process in Product Choices and Product Attributes. Customer Lifetime Value (CLV). Calculating Customer Lifetime Value: Creating the Basic Customer Value Template, Measuring Sensitivity Analysis with Two-Way Tables, Estimating the Chance if Customer is still Active

MODULE –IV: Pricing Analytics - Classes: (10)

Pricing, Goals of Pricing, Price Elasticity, Estimating Linear and Power Demand Curves, Using Excel Solver to Optimize Price, Incorporating Complementary Products, Using Solver Table to Price Multiple Products and Finding Demand Curve for All Products. Price Bundling, Bundling Prices to Extract Consumer Surplus, Mixed Bundling, Using Evolutionary Solver to Find Optimal Bundle Prices. Price Skimming.

MODULE –V: Segmentation & Promotion Analytics - Classes: (10)

Segmentation Analytics: Cluster Analysis and its Applications, Location-wise Clustering, Using Solver to find Optimal Clusters. Using Conjoint Analysis to Segment a Market, Using Decision Trees for Segmenting the Market. Promotion Analytics: Promotions and Types of Promotions, Discounting & Types of Discounting. Measuring the Effectiveness of Advertising: The Ad stock Model. Media Selection Models: Linear Media Allocation Model, Quantity Discounts, Monte Carlo Media Allocation Simulation. Pay per Click Advertising

V. TEXT BOOKS:

1. Seema Gupta & Avadhoot Jathar, Marketing Analytics, Wiley, 2021.
2. Wayne L. Winston, Marketing Analytics: Data Driven Techniques with Microsoft Excel, 2014.
3. Chuck Hermann, Ken Burbary, Digital Marketing Analytics, Que Publishing, 2e, 2018.
4. Moustusy Maity and Pavankumar Gurazada, Marketing Analytics for Strategic Decision Making, Oxford Higher education, 2021

VI. REFERENCE BOOKS:

1. Mike Grigsby, Marketing Analytics, Kogan Page, 2015.
2. Robert Kozielski, Measuring Marketing Analytics, Emerald Publishing, 2018.

VII. WEB REFERENCES:

1. https://d1.islamhouse.com/data/en/ih_books/single/en_Consumer_Behavior.pdf
2. <http://www.ijcrar.com/vol-2-9/Pinki%20Rani.pdf>

VIII. E-TEXT BOOKS:

1. http://www.pondiuni.edu.in/storage/dde/downloads/markiii_cb.pdf
2. <http://nptel.ac.in/courses/110105029/pdf%20sahany/Module-1-1.pdf>



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal - 500 043, Hyderabad, Telangana

COURSE CONTENT

MARKETING ANALYTICS LABORATORY								
IV Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE51	Elective	L	T	P	C	CIA	SEE	Total
		-	-	4	2	40	60	100
Contact Classes: Nil	Tutorial Classes: Nil	Practical Classes: 40			Total Classes: 40			
Prerequisite: Marketing Management								
SDGs Mapped: SDG 9 (Industry, Innovation and Infrastructure), SDG 12 (Responsible Consumption & Production)								

I. COURSE OVERVIEW:

This course provides a comprehensive understanding of Marketing Analytics, emphasizing the use of data-driven insights to optimize marketing strategies. Students learn to organize, summarize, and analyze marketing data using MS Excel, pivot tables, slicers, and other analytical techniques. The course covers customer, pricing, segmentation, promotion, and media analytics, allowing students to make informed marketing decisions and measure campaign effectiveness. Practical exercises enhance hands-on experience with real-world datasets.

II. COURSE OBJECTIVES:

The students will try to learn:

- The scope, need, and application of marketing analytics in business decision-making.
- The Organize, summarize, and visualize marketing data using MS Excel tools, pivot tables, and crosstabs.
- The customer behavior, build personas, map customer journeys, and calculate Customer Lifetime Value (CLV).
- Pricing analytics, including demand estimation, price optimization, and bundling strategies.
- Conduct segmentation and promotion analytics to optimize marketing strategies and evaluate campaign effectiveness.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Recall the definitions, scope, and differences between marketing analytics and marketing research.
- CO2 Organize, summarize, and visualize marketing data using Excel tools, pivot tables, and slicers.
- CO3 Analyze customer data to build personas, track customer behavior, and compute Customer Lifetime Value.
- CO4 Apply pricing analytics techniques to optimize product pricing, bundles, and assess price elasticity.
- CO5 Perform market segmentation using cluster analysis, decision trees, and conjoint analysis.
- CO6 Evaluate promotion and media effectiveness using ad stock models, media allocation models, and simulations.

IV. COURSE CONTENT:

EXPERIMENT – 1: INTRODUCTION TO MARKETING ANALYTICS

MS Excel: Introduction, uses, and functions of Excel for marketing data organization. Definition, need, scope, levels, adoption, and application of Marketing Analytics.

EXPERIMENT – 2: MARKETING ANALYTICS VS MARKETING RESEARCH

Comparison of Marketing Analytics and Marketing Research using sample datasets. Visualizing differences in objectives and outcomes with Excel charts.

EXPERIMENT – 3: DATA ORGANIZATION IN EXCEL

Organizing marketing datasets, creating tables, applying data validation, sorting, and filtering.

EXPERIMENT – 4: PIVOT TABLES FOR MARKETING DATA

Creation of Pivot Tables to summarize revenue data month-wise and product-wise. Using Pivot Charts for visualization.

EXPERIMENT – 5: SLICING & DICING DATA

Applying Report Filters and Slicers, using Pareto Principle to identify top-performing products/customers.

EXPERIMENT – 6: DEMOGRAPHIC ANALYSIS

Analyzing sales data by Age, Gender, Income, and Location. Constructing crosstabs of two demographic variables using Excel Pivot Tables.

EXPERIMENT – 7: SEGMENTATION ANALYTICS – I

Cluster Analysis and its applications, location-wise clustering, using Solver to find optimal clusters.

EXPERIMENT – 8: SEGMENTATION ANALYTICS – II

Using Conjoint Analysis and Decision Trees to segment a market. Introduction to perceptual mapping and identification of white spaces.

EXPERIMENT – 9: POSITIONING ANALYTICS

Perceptual mapping, umbrella brands, and multidimensional scaling to visualize product positioning.

EXPERIMENT – 10: PRICING ANALYTICS – I

Pricing goals, price elasticity, estimating linear and power demand curves, using Excel Solver to optimize price for a single product.

EXPERIMENT – 11: PRICING ANALYTICS – II

Pricing multiple products, incorporating complementary products, using Solver Table. Price bundling, mixed bundling, and evolutionary Solver for optimal bundle pricing.

EXPERIMENT – 12: PROMOTION ANALYTICS

Promotions and discounting types, measuring effectiveness of advertising using the Adstock Model.

EXPERIMENT – 13: MEDIA SELECTION MODELS

Linear media allocation, quantity discounts, Monte Carlo media allocation simulation, and Pay-per-Click advertising using Excel simulation.

EXPERIMENT – 14: CUSTOMER ANALYTICS

Customer journey mapping, building customer personas, conjoint analysis for product choices, calculating Customer Lifetime Value (CLV), sensitivity analysis with two-way tables, and estimating probability of active customers.

V. SOFTWARE / SPREADSHEET TOOLS:

1. **Microsoft Excel:** <https://www.microsoft.com/en-us/microsoft-365/excel>
2. **Google Sheets:** <https://www.google.com/sheets/about/>
3. **R (for advanced segmentation/analytics):** <https://www.r-project.org/>
4. **Python (for simulations and advanced analytics):** <https://www.python.org/>

5. **Tableau (for dashboards and visualization):** <https://www.tableau.com/>
6. **Power BI:** <https://powerbi.microsoft.com/>

VI. TEXTBOOKS:

1. Winston, W. L., Marketing Analytics: Data-Driven Techniques with Excel, Wiley, 1st edition, 2014.
2. Malhotra, N., Marketing Research: An Applied Orientation, Pearson, 7th edition, 2019.
3. Sauro, J., Customer Analytics with Excel, Wiley, 1st edition, 2015.

VII. REFERENCE BOOKS:

1. Venkatesan, R., Marketing Analytics: Strategic Models and Metrics, Springer, 1st edition, 2017.
2. Berry, M. J. A., Data Mining Techniques for Marketing and CRM, Wiley, 3rd edition, 2011.
3. Hart Davis, G., How to Do Everything with Microsoft Excel, Tata McGraw Hill, Revised 1st edition, 2010.

VIII. WEB REFERENCES:

1. <https://www.analyticsvidhya.com>
2. <https://www.excel-easy.com>
3. <https://www.coursera.org/courses?query=marketing%20analytics>

IX. E-TEXT BOOKS:

1. <https://www.chegg.com/textbooks/marketing-analytics>
2. <https://www.cengage.com/product/title/marketing-analytics>
3. <https://books.google.com> › Marketing Analytics



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal - 500 043, Hyderabad, Telangana

COURSE CONTENT

INTERNATIONAL FINANCIAL MANAGEMENT								
IV Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE52	Elective	L	T	P	C	CIA	SEE	Total
		4	-	-	4	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Financial Management								
SDGs Mapped: SDG 8 (Decent Work & Economic Growth), SDG 17 (Partnerships for the Goals)								

I. COURSE OVERVIEW:

The course focuses on the principles and practices of International Financial Management (IFM). It emphasizes managing finances in a global context, understanding foreign exchange markets, international flows of funds, exchange rate dynamics, and asset–liability management. Students gain insights into international capital budgeting, financing methods, and risk management, preparing them to handle financial decisions for multinational corporations and cross-border investments.

II. COURSE OBJECTIVES:

The students will try to learn:

- The scope, importance, and nature of international financial management and differences from domestic financial management.
- The international flows of funds, balance of payments, and global monetary systems.
- The functioning, structure, and instruments of foreign exchange markets.
- How to evaluate exchange rate mechanisms, manage foreign exchange risk, and apply international parity conditions.
- Asset–liability management techniques, including international capital budgeting, financing, portfolio management, and trade finance.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Recall the concepts, scope, and importance of international financial management and differentiate it from domestic financial management.
- CO2 Analyze international fund flows, balance of payments, and trends in global trade and Indian BOP.
- CO3 Understand foreign exchange market structures, instruments, participants, and trading mechanisms.
- CO4 Evaluate exchange rate movements, government interventions, and foreign exchange risk management strategies.
- CO5 Apply techniques of asset–liability management, international financing, and capital budgeting decisions in multinational contexts.
- CO6 Examine international financial instruments, investment strategies, and trade finance regulations.

IV. COURSE CONTENT:

MODULE-I: INTRODUCTION- Classes: (09)

An overview, importance, nature and scope of international financial management, domestic FM Vs. IFM, International Business Methods, recent changes and challenges in international financial management.

MODULE –II: INTERNATIONAL FLOW OF FUNDS - Classes: (09)

Balance of Payments (BOP), fundamentals of BOP, Accounting components of BOP, factors affecting international trade flows, agencies that facilitate international flows. Indian BOP trends.

International Monetary System: Evolution, gold standard, Bretton Woods's system, the flexible exchange rate regime, evaluation of floating rates, the current exchange rate arrangements, the economic and monetary union (EMU)..

MODULE –III: FOREIGN EXCHANGE MARKET-Classes: (09)

Function and Structure of the Forex markets, major participants, types of transactions and settlements dates, foreign exchange quotations, Process of arbitrage, speculation in the forward market.

Currency futures and options markets, overview of the other markets, Euro currency market, Euro credit market, Euro bond market, international stock market.

MODULE –IV: EXCHANGE RATES - Classes: (09)

Measuring exchange rate movements, factors influencing exchange rates. Government influence on exchange rates, exchange rate systems, Managing Foreign exchange Risk. International arbitrage and interest rate parity. Relationship between inflation, interest rates and exchange rates, purchasing power parity, international Fisher effect, Fisher effect, interest rate parity, expectations theory.

MODULE –V: ASSET–LIABILITY MANAGEMENT - Classes: (09)

Foreign direct investment, international capital budgeting, international capital structure and cost of capital, International portfolio management. International financing: Equity, Bond financing, parallel loans, international cash management, accounts receivable management, inventory management. Payment methods of international trade, trade finance methods, export and import bank of India, and recent amendments in EXIM policy, regulations and guidelines.

V. TEXT BOOKS:

1. P G Apte, Sanjeevan Kapshe, "International Financial management", 8th edition in 2020.
2. Thummuluri Siddaiah, "International Financial Management an Analytical Framework", 3rd edition, in 2018.
3. Apte "International Financial Management", 8th edition, 1-7-2017.
4. Bahuguna Pallavi." International Financial Management", 8th edition, in 2016.
5. Cheol S. Eun "International Financial Management", 27-7-2017.

VI. REFERENCE BOOKS:

1. Sharan. V, "International Financial Management" PHI Publications, 5th Edition, 2012.
2. P. G. Apte, "International Financial Management", TMH publications, 3rd Edition, 2012.
3. Madhu Vij," International Financial Management", Excel Publications, 4th Edition, 2012.

VII. WEB REFERENCES:

1. https://en.wikipedia.org/.../Journal_of_International_Financial_Management_and_Accounting. 1467-646X web.
2. <https://www.cengage.co.in/.../finance/international-financial-management/international-financial-management>.

VIII. E-TEXT BOOKS:

1. <https://www.indiaclass.com/financial-management-reference-books>.
2. <https://www.loc.gov/rr/business/BERA/issue7/finance.html>.
3. https://www.amazon.in/dp/B00K7YG378/ref=cm_sw_r_apan_glt_D3CPTZ93T5W5TFD9CWPY?_encoding=UTF8&psc=1.
4. https://www.amazon.in/dp/B00K7YG378/ref=cm_sw_r_apan_glt_D3CPTZ93T5W5TFD9CWPY?_encoding=UTF8&psc=1.



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal - 500 043, Hyderabad, Telangana

COURSE CONTENT

BANKING, INSURANCE AND RISK MANAGEMENT								
IV Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE53	Elective	L	T	P	C	CIA	SEE	Total
		4	-	-	4	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Financial Management								
SDGs Mapped: SDG 8 (Decent Work & Economic Growth), SDG 9 (Industry, Innovation and Infrastructure)								

I. COURSE OVERVIEW:

Banking, insurance, and risk management are critical components of the financial system. These areas involve the management and assessment of financial risk and the provision of financial services to individuals and businesses. This course focuses on the objectives and importance of managing financial risk, including credit risk, market risk, and operational risk within organizations and the management of financial risk across markets.

II. OBJECTIVES:

The students will try to learn:

- I. Banking business in the country to know the new dimensions of banking system in India.
- II. Banking sector reforms and regulations to understand and minimize deficiencies in Indian Banking system.
- III. Business and economics of insurance for changing mind-set and implement latest trends in Insurance business.
- IV. Reforms in the insurance sector for better promotion of insurance services.
- V. Risk management techniques and non-insurance methods to explore diversified investment opportunities.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- | | |
|-----|--|
| CO1 | Familiarize the banking system to enumerate financial services providing in the real world. |
| CO2 | Analyze various reforms & deficiencies in Indian banking system to promote legal and ethical financial system. |
| CO3 | Promote the principles and characteristics of insurance to encourage insurance contracts. |
| CO4 | Examine various insurance products and the role of agents and brokers to improve insurance mechanism. |
| CO5 | Describe regulatory frameworks that govern the insurance industries to ensure consumer protection. |
| CO6 | Identify the techniques and measurements of risks to communicate ethical financial products. |

IV. COURSE CONTENT:

MODULE-I- INTRODUCTION TO BANKING BUSINESS: (08)

Introduction to Banking sectors, History of banking business in India, Structure of Indian banking system, Types of accounts, advances and deposits in a bank New Dimensions and products, E-Banking, Mobile, Banking, Net Banking, CRM, cheque system and KYC System.

MODULE -II- BANKING REFORMS AND REGULATIONS: (10)

Banking regulation Act-1949, Reserve Bank of India Act-1934, Establishment of RBI, Functions and credit control system, Role of commercial banks and its functions, Banking sector reforms in India and deficiencies in Indian banking including problems accounts and Non-Performing Assets.

MODULE -III-INTRODUCTION TO INSURANCE -Classes: (09)

Introduction to insurance, Need and importance of Insurance, principles of Insurance, characteristics of insurance contract.

Branches of insurance and types of insurance, life insurance and its products: Role of Agents and brokers.

MODULE -IV-INSURANCE BUSINESS ENVIRONMENT: (10)

Regulatory and legal frame work governing the insurance sector, history of IRDA and its functions: Business and economics of insurance, need for changing mindset and latest trends.

MODULE -V-INTRODUCTION TO RISK MANAGEMENT: (08)

Introduction to Risk, meaning and types of risk in business and individual, Risk management process, methods, Risk identification and measurement, Risk management techniques, Non insurance methods.

V. TEXT BOOKS:

1. Scott Harrington Gregory Niehaus “Risk Management and Insurance “, in July 2017.
2. Mohan Prakash N.R. “Banking, Risk & Insurance Management “in 2016.
3. Prof. Roy “Banking and risk management “in 2016.
4. R.K.Mishra, Inder Sekhar Yadav “Risk Management in Banking, Insurance and Financial Services “, in 2015.

VI. REFERENCE BOOKS:

1. Scott E. Harrington Gregory R. Niehaus,” Risk Management and Insurance”, TMH, 2nd Edition, 2009.
2. George E. Rejda, “Principles of risk Management and Insurance”, Pearson Education Publications, 9th Edition, 2009.
3. G. Koteswar, “Risk Management Insurance and Derivatives”, Himalaya Publications, 5th Edition, 2008.

VII. WEB REFERENCES:

1. <http://www.ebooksdirectory.com>
2. <http://Campusguides.lib.utah.edu>

VIII. E-TEXT BOOKS:

1. <http://www.bookboon.com>
2. <http://www.freemagagement.com>
3. <http://www.emeraldinsight.com>
4. https://www.amazon.in/dp/B005TGXITA/ref=cm_sw_r_apan_glt_545V2ND0FSEN42JB5BAP.
5. <https://www.kobo.com/us/en/ebook/risk-management-and-regulation-in-banking>.
6. <https://www.kobo.com/us/en/ebook/risk-management-and-financial-institutions-5>.



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal - 500 043, Hyderabad, Telangana

COURSE CONTENT

FINANCIAL ANALYTICS								
IV Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE54	Elective	L	T	P	C	CIA	SEE	Total
		2	-	-	2	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Financial Management								
SDGs Mapped: SDG 9 (Industry, Innovation and Infrastructure), SDG 8 (Decent Work & Economic Growth)								

I. COURSE OVERVIEW:

This course introduces to advanced techniques of financial statement analysis, time value of money concepts, risk-return analysis, capital budgeting, and valuation of equity and bonds. It emphasizes the use of spreadsheets and financial models for practical applications, preparing students to make informed investment, financing, and portfolio management decisions. The course equips students with tools to analyze financial statements, assess project viability, evaluate securities, and apply quantitative techniques in financial decision-making.

II. OBJECTIVES:

The students will try to learn:

- The techniques for analyzing financial statements including horizontal, vertical, trend, and ratio analysis.
- The time value of money, and analyze risk and return for investment decisions.
- Evaluate capital budgeting projects using traditional and advanced techniques for effective decision-making.
- How to assess equity valuation using portfolio analysis, CAPM, security market line, and industry/economic analysis.
- The valuation methods, duration, immunization strategies, and term structure modeling.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- | | |
|-----|--|
| CO1 | Recall and apply techniques of financial statement analysis, including ratio, trend, and cash flow analysis using spreadsheets. |
| CO2 | Compute future and present values, annuities, perpetuities, and perform risk-return analysis using statistical measures. |
| CO3 | Evaluate investment projects using Payback, ARR, NPV, IRR, Profitability Index, and advanced capital budgeting techniques. |
| CO4 | Analyze and value equity using CAPM, portfolio variance, beta estimation, and security market line, considering industry and economic factors. |
| CO5 | Compute bond valuation, duration, and implement immunization strategies; model term structure and calculate expected bond returns. |
| CO6 | Integrate financial analysis, risk assessment, and valuation techniques for informed corporate financial decision-making. |

IV. COURSE CONTENT:

MODULE-I: TECHNIQUES OF FINANCIAL STATEMENT: (09)

Horizontal, Vertical Analysis, Trend Analysis, Ratio Analysis, Liquidity, Profitability, Solvency and Turnover Ratio, Valuation of Ratios, Statement of Cash Flow, Classification of Cash Flow, Computing Net Cash Flow: Operating, Investing and Financing Activities. Reporting and Interpretation using Spreadsheet.

MODULE –II: TIME VALUE OF MONEY AND RISK AND RETURN: (09)

Future Value: Simple, Compound Interest and Annuity, Present Value: Discounted, Annuity, Equated Loan Amortization, Perpetuity using Spreadsheets. **Risk and Return:** Holding Period Returns, Arithmetic Mean vs Geometric Mean, Risk: Standard Deviation, Coefficient of Variation, Beta, Covariance of Stock.

MODULE –III: CAPITAL BUDGETING TECHNIQUES: (09)

Payback Period, Accounting Rate of Return, Net Present Value, Internal Rate of Return, Profitability Index, Decision Tree, Cash Flow in Capital Budgeting.

Cost of Capital, Advance Capital Budgeting Techniques, Adjusted Present Value Approach, Competing Project Risk using Spreadsheets.

MODULE –IV: EQUITY VALUATION: (09)

Calculation of Portfolio Mean and Variance, Capital Asset Pricing Model (CAPM), Variance: Covariance Matrix, Estimating Beta and Security Market Line. Industry Analysis, Economic Analysis and Technical Analysis in Stock, Real Option in Capital Budgeting.

MODULE –V: BOND VALUATION: (09)

Duration, Duration of Bond with Uneven Payments, Immunization Strategies, Modeling the Term Structure, Calculating Expecting Bond Return in a Single and Multi-period Framework, Semi-annual Transition Matrix, Computation of Bond Beta.

V. TEXT BOOKS:

1. Sheeba Kapil, Financial Valuation and Modeling, Wiley, 1e, 2022.
2. R. Narayanaswamy, Financial Accounting-Managerial Perspective, PHI, 7e, 2022.
3. Timothy Mayes, Financial Analysis with MS Excel, Cengage, 7e, 2013.
4. N R Parasuraman, Financial Management-step by step approach, Cengage, 1e, 2014.

VI. REFERENCE BOOKS:

1. Simon Bennings, Financial Modeling-Using Excel, MIT Press, Cambridge, 3e
2. Vijay Gupta, Financial Analysis using Excel, VJ Books Inc, Canada.

VII. WEB REFERENCES:

1. <https://bookboon.com/en/derivative-markets-an-introduction-ebook>
2. https://en.wikipedia.org/wiki/Book:Financial_Derivatives

VIII. E-TEXT BOOKS:

1. <http://www.pondiuni.edu.in/sites/default/files/downloads/Financial-analytics-260214.pdf>
2. <http://down.cenet.org.cn/upfile/10/2007188195141.pdf>
3. <http://polymer.bu.edu/hes/rp-hull12.pdf>
4. https://www.amazon.in/dp/B01FFRTZW6/ref=cm_sw_r_apan_glt_T3GT8DYS9DPTKE0H5T.
5. https://www.amazon.in/dp/B00K7YG27O/ref=cm_sw_r_apan_glt_FJ3Z3G106SD6GWZH0Y.
6. https://ebooks.lpude.in/commerce/mcom/term_4/DCOM510_FINANCIAL_ANALYTICS.Pdf



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal - 500 043, Hyderabad, Telangana

COURSE CONTENT

FINANCIAL ANALYTICS LABORATORY								
IV Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE55	Elective	L	T	P	C	CIA	SEE	Total
		-	-	4	2	40	60	100
Contact Classes: 00	Tutorial Classes: Nil	Practical Classes: 40			Total Classes: 40			
Prerequisite: Financial Management								
SDGs Mapped: SDG 9 (Industry, Innovation and Infrastructure), SDG 8 (Decent Work & Economic Growth)								

I. COURSE OVERVIEW:

This laboratory course provides practical exposure to financial statement analysis, ratio computations, cash flow analysis, time value of money, risk-return evaluation, capital budgeting, and security valuation using MS Excel or similar spreadsheet tools. Students gain hands-on experience in applying theoretical concepts to real-world financial data, visualizing results, and making informed financial decisions. The lab emphasizes analytical thinking, modeling skills, and effective interpretation of financial information for corporate finance and investment purposes.

II. OBJECTIVES:

The students will try to learn:

- How to organize and manage financial data using spreadsheet tools for analysis and reporting.
- How to perform and interpret ratio analysis, cash flow analysis, and other financial statement techniques.
- Time value of money concepts and risk-return analysis for decision-making.
- The capital budgeting projects and compute advanced investment metrics using spreadsheets.
- The value equity and bonds using practical tools, including portfolio modeling, CAPM, and term structure modeling.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- | | |
|-----|--|
| CO1 | Use spreadsheets to organize, summarize, and visualize financial data for effective decision-making. |
| CO2 | Compute and interpret financial ratios and cash flows to assess company performance. |
| CO3 | Apply time value of money concepts to evaluate investment and financing decisions. |
| CO4 | Conduct risk-return analysis and compute metrics such as Beta, standard deviation, and covariance. |
| CO5 | Evaluate capital budgeting projects using NPV, IRR, ARR, payback period, decision trees, and advanced techniques. |
| CO6 | Analyze and value equity and bonds, including portfolio mean-variance, CAPM, Security Market Line, bond duration, and term structure modeling. |

IV. COURSE CONTENT:

EXPERIMENT – 1: INTRODUCTION TO FINANCIAL STATEMENTS ANALYSIS

MS - EXCEL/SPSS: Introduction, uses, functions and Excel for financial data organization.

EXPERIMENT – 2: RATIO ANALYSIS – I

Liquidity Ratios, Profitability Ratios, Solvency Ratios, Turnover Ratios: Computation and Interpretation using spreadsheets.

EXPERIMENT – 3: RATIO ANALYSIS – II & VALUATION

Valuation of Ratios, constructing ratio reports, visualization using Excel charts.

EXPERIMENT – 4: CASH FLOW ANALYSIS

Statement of Cash Flow: Classification of cash flows, computing net cash flow from operating, investing, and financing activities, reporting and interpretation in Excel.

EXPERIMENT – 5: TIME VALUE OF MONEY – I

Future Value calculations: Simple interest, Compound interest, Annuity, using Excel formulas and functions.

EXPERIMENT – 6: TIME VALUE OF MONEY – II

Present Value calculations: Discounted cash flow, Annuity, Equated Loan Amortization, Perpetuity, using spreadsheet functions.

EXPERIMENT – 7: RISK AND RETURN ANALYSIS

Holding period returns, Arithmetic Mean vs Geometric Mean, measuring risk: Standard Deviation, Coefficient of Variation, Beta, Covariance of stocks in Excel.

EXPERIMENT – 8: CAPITAL BUDGETING – I

Payback Period, Accounting Rate of Return (ARR), Net Present Value (NPV), Internal Rate of Return (IRR) computation using spreadsheets.

EXPERIMENT – 9: CAPITAL BUDGETING – II

Profitability Index, Decision Trees, Cash Flow estimation in Capital Budgeting, Cost of Capital calculation, Advanced techniques like Adjusted Present Value, Competing Project Risk using Excel.

EXPERIMENT – 10: EQUITY VALUATION – I

Portfolio Mean and Variance calculation, Capital Asset Pricing Model (CAPM), Covariance matrix construction, estimating Beta and Security Market Line using spreadsheets.

EXPERIMENT – 11: EQUITY VALUATION – II

Industry Analysis, Economic Analysis, Technical Analysis of stocks, applying real options in capital budgeting using Excel.

EXPERIMENT – 12: BOND VALUATION – I

Duration of bonds, Duration with uneven payments, Immunization strategies, spreadsheet modeling for bond valuation.

EXPERIMENT – 13: BOND VALUATION – II

Modeling the term structure of interest rates, computing expected bond return in single and multi-period frameworks, Semi-annual Transition Matrix in Excel.

EXPERIMENT – 14: ADVANCED BOND ANALYSIS

Computation of Bond Beta, integrated case study on bond and equity portfolio valuation, reporting insights using Excel dashboards.

V. SOFTWARE / SPREADSHEET TOOLS:

1. **Microsoft Excel:** <https://www.microsoft.com/en-us/microsoft-365/excel>
2. **Google Sheets:** <https://www.google.com/sheets/about/>
3. **R (for advanced portfolio & CAPM analysis):** <https://www.r-project.org/>

4. **Python (for financial modeling):** <https://www.python.org/>
5. **Investopedia Simulator (for practical stock/bond exercises):** <https://www.investopedia.com/simulator/>

VI. TEXTBOOKS:

1. Brigham, E. F., & Ehrhardt, M. C., *Financial Management: Theory & Practice*, Cengage, 15th edition, 2019.
2. Ross, S. A., Westerfield, R., & Jaffe, J., *Corporate Finance*, McGraw-Hill, 12th edition, 2019.
3. Pandey, I. M., *Financial Management*, Vikas Publishing, 12th edition, 2020.

VII. REFERENCE BOOKS:

1. Bodie, Z., Kane, A., & Marcus, A., *Investments*, McGraw-Hill, 12th edition, 2020.
2. Gitman, L. J., *Principles of Managerial Finance*, Pearson, 15th edition, 2019.
3. Damodaran, A., *Investment Valuation*, Wiley, 3rd edition, 2012.

VIII. WEB REFERENCES:

1. <https://www.investopedia.com>
2. <https://www.finviz.com>
3. <https://www.macrotrends.net>



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal - 500 043, Hyderabad, Telangana

COURSE CONTENT

COMPENSATION AND REWARD MANAGEMENT								
IV Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE56	Elective	L	T	P	C	CIA	SEE	Total
		4	-	-	4	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Human Resource Management								
SDGs Mapped: SDG 8 (Decent Work & Economic Growth), SDG 5 (Gender Equality)								

I. COURSE OVERVIEW:

Compensation and reward management statements are very useful to the business concerns to interpret and analyze the organization growth of different companies. This course uses the growth statements as means of business communication. This course uses the analytical techniques and arriving at conclusions from market information for the purpose of effective decision making

II. COURSE OBJECTIVES:

The students will try to learn:

- I. The theoretical and economic foundations of compensation management.
- II. The wage and salary administration at both macro and micro levels, including job evaluation and Indian practices.
- III. The employee benefits and incentives with performance management systems.
- IV. How to implement performance-based pay systems, executive compensation, and incentive plans.
- V. The compensation strategies that recognize employee value, support teamwork, and align with organizational objectives.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- | | |
|-----|--|
| CO1 | Explain the theoretical, economic, and behavioral dimensions of compensation management. |
| CO2 | Analyze wage and salary administration, job evaluation techniques, and compensation practices in India and multinational organizations. |
| CO3 | Evaluate compensation practices in multinational organizations and understand pay commissions, wage boards, and salary structures. |
| CO4 | Design and implement employee benefits and incentives linked with performance appraisal systems. |
| CO5 | Assess performance-based pay systems, executive compensation, and incentive packages. |
| CO6 | Formulate strategic compensation plans that motivate employees, recognize contributions, support teamwork, and align with organizational objectives. |

IV. COURSE CONTENT:

MODULE-I- INTRODUCTION TO COMPENSATION MANAGEMENT: (09)

Compensation, theoretical dimension, economic and behavioral; designing the pay model strategic compensation plan; wage and salary administration at the macro level.

MODULE -II-WAGE AND SALARY ADMINISTRATION: (09)

Wage and salary administration at the micro level job evaluation, definition, traditional and new techniques; compensation structure, Indian practices; wage boards, pay commissions, compensation management in multinational organizations.

MODULE -III-CONCEPTS OF EMPLOYEE BENEFITS: (10)

Incentives, fringe benefits; establishing a link with performance appraisal and compensation management.

Performance linked compensation; benefits and services

MODULE -IV-PERFORMANCE BASED PAY: (09)

Managerial remuneration pays commission; performance-based pay system incentives, executives' compensation plan and packages

MODULE -V-COMPENSATION STRATEGIES: (08)

Compensation strategy: Recognizing the worth and value of employee's knowledge and skill, rewarding employees' contributions and results achieved, supporting team work, compensation package according to current lifestyle and new thinking in the new millennium.

V. TEXT BOOKS:

1. Dr. Vinay Ojha "Compensation and Reward Management" 7th edition, in 2019.
2. Pradip Kumar Das "Compensation and Reward Management", "Himalaya publishing house", in 2019.
3. George Milkovich, "Compensation and Reward Management" "McGraw-Hill Higher Education," 2019.
4. Sharma RC "Compensation and Reward Management" in 2017.
5. Ojha Vinay "Compensation and Reward Management," in 2016.

VI. REFERENCE BOOKS:

1. Thomas. P. Plannery, David, "People Performance and Pay", Free Press, 1st Edition, 2002.
2. Michael Armstrong, "Hand book of Reward Management", Crust Publishing House, 2nd Edition, 2003.
3. Joseph. J. Martocchio, "Strategic Compensation - A Human Resource Management Approach", Prentice Hall, 4th Edition, 2005.

VII. WEB REFERENCES:

1. <https://www.scribd.com/doc/94052058/human-resource-management-notes>
2. www.studynama.com > ... > mba/pgdmhr lecture notes, ebooks and handouts

VIII. E-TEXT BOOKS:

1. <https://www.studynama.com/community/threads/348-compensation-management-pdf-notes-ebook-download-for-mba-hr-students>
2. <http://www.eiilmuniversity.co.in/downloads/compensation-management.pdf>.
3. https://www.amazon.in/dp/B0082BYR8U/ref=cm_sw_r_apan_glt_ZNQ8DCMHCC5RRF0GYW8Z.
4. https://www.amazon.in/dp/B00AQKYRRQ/ref=cm_sw_r_apan_glt_5JDG8ADGJ1DH81KHBZXW.
5. https://www.amazon.in/dp/B00AQKYRRQ/ref=cm_sw_r_apan_glt_5JDG8ADGJ1DH81KHBZXW.



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal - 500 043, Hyderabad, Telangana

COURSE CONTENT

INTERNATIONAL HUMAN RESOURCE MANAGEMENT								
IV Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE57	Elective	L	T	P	C	CIA	SEE	Total
		4	-	-	4	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Human Resource Management								
SDGs Mapped: SDG 8 (Decent Work & Economic Growth), SDG 17 (Partnerships for the Goals)								

I. COURSE OVERVIEW:

International Human Resource Management involves a future-oriented process of developing and implementing HR programs that solve business problems and directly contribute to major long-term business objectives. Specific topics covered in this course include International Human Resource Management theories and practices, social environment and staffing skills, National and International organizations of human resource management approaches, methods and practices of Europe, Japan and American approaches to human resource management with appropriate case studies.

II. OBJECTIVES:

The students will try to learn:

- The various models of International Human Resource management
- The international Human Resource planning and Recruitment and selection
- The Performance Management, Training and development
- The components and structure of international Compensation Package,
- The role of International industrial relations

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Understand the International human resource management models
- CO2 Explain global HRM planning Process, issues in supply of International human resources.
- CO3 Assess the key areas of performance appraisal system.
- CO4 Evaluate the need for global training and development.
- CO5 Identify complexities in compensation management and factor that effect international compensation.
- CO6 Examine the role of trade union in MNC's and the concept of collective negotiations, disputes conflicts.

IV. COURSE CONTENT:

MODULE-I: INTERNATIONAL HUMAN RESOURCE MANAGEMENT MODEL: (09)

Harvard Model, 5Ps Model of HRM, Social and culture and context of HRM, managing culture diversity, strategies for managing workforce diversity, IHRM over view. Organizational structure and HRM.

MODULE –II: INTERNATIONAL HUMAN RESOURCE PLANNING & RECRUITMENT AND SELECTION: (08)

International Division of Labor, Global Human Resource Planning, Issues in Supply of International Human Resources, Why Do MNCs Require Different Categories of Employees, Recruitment, Selection.

MODULE –III: PERFORMANCE MANAGEMENT, TRAINING AND DEVELOPMENT: (10)

Challenges of International Performance Management, Areas to be Appraised, Organizational Role Expectations, Methods of performance appraisal,

Introduction, Why Global Training? Training methods, Areas of Global Training and Development

MODULE –IV: COMPENSATION AND BENEFITS: (10)

Complexities in International Compensation Management, Objectives of International Compensation Management, Factors that Affect International Compensation, Components/Structure of International Compensation Package, Executive Compensation, Approaches to International Compensation Management.

MODULE –V: INTERNATIONAL INDUSTRIAL RELATIONS: 08

Three Actors of Industrial Relations, Trade Unions, Concerns of Trade Unions in Multinational Companies, Collective Negotiations, Disputes or Conflicts, Quality Circles and Participative Management, Shifts in Global Business, Shifts in Human Resource Management, Shifts in Industrial Relations

V. TEXT BOOKS:

1. Tarique, T&F/Routledge “International Human Resource Management” 5th edition, 2020.
2. Kandula Srinivas R “International Human Resource Management” 2nd edition, 2018.
3. Peter J. Dowling Marion Festing, Allen D. Engle, “International Human Resource Management “, 3rd edition, 2017.

VI. REFERENCE BOOKS:

1. P.L. Rao “International Human Resource Management” Excel Books, first Edition, New Delhi.
2. K. Aswathappa & Sadhna Dash, “International Human Resource Management “Second Edition, McGraw hill Publication, New Delhi.
3. Tony Edwards “International Human resource Management “4th edition, Pearson publication, New Delhi.
4. P. Subba Rao, International Human Resource Management, second edition, Himalaya publishing house, New Delhi.

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1. <https://play.google.com/books/reader?id=9eTSAwAAQBAJ&hl=en&pg=GBS.PT1>
2. <https://play.google.com/books/reader?id=3phMDwAAQBAJ&hl=en&pg=GBS.PR5>
3. <https://play.google.com/books/reader?id=j-zcDgAAQBAJ&hl=en&pg=GBS.PR4>
4. <https://play.google.com/books/reader?id=0cwgAQAAQBAJ&hl=en&pg=GBS.PA20.w.1.0.76>

VIII. E-TEXTBOOKS:

1. https://www.amazon.in/dp/b001g0obfs/ref=cm_sw_r_apan_glt_mwanfyddehpcqzqmfj3v
2. https://www.amazon.in/dp/b00aoonezk/ref=cm_sw_r_apan_glt_54q17wa19n9qry85p1ka.
3. https://www.amazon.in/dp/b008iiqvdp/ref=cm_sw_r_apan_glt_ngvg4htr4tk2egb8b2c0?_encoding=utf8&pvc=1.
4. <https://www.pdfdrive.com/5-international-human-resources-management-e27035115.html>
5. <https://www.pdfdrive.com/international-human-resources-management-e25138235.html>



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal - 500 043, Hyderabad, Telangana

COURSE CONTENT

HR METRICS AND ANALYSIS								
IV Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE58	Elective	L	T	P	C	CIA	SEE	Total
		2	-	-	2	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Human Resource Management								
SDGs Mapped: SDG 9 (Industry, Innovation and Infrastructure), SDG 8 (Decent Work & Economic Growth)								

I. COURSE OVERVIEW:

This course imparts knowledge in respect of HR analytics and HRIS and also HR metrics. The course also provides the information relating to equality to be maintained and the diversity strategies. The course intends to give specific evaluating methods of reliability and validity of HR data and to take necessary measures to control employee turnover and measures to be taken for improvement of employee performances and its evaluation methodologies and performance monitoring techniques and also concentrates on necessary measures to be taken to control the stress levels of employees.

II. COURSE OBJECTIVES:

The students will try to learn:

- The role and importance of HR analytics, and the ability to track, store, retrieve, analyses and interpret HR data.
- The theory, concepts about the methodology and situations in which the organization have to be diversified.
- Types of recruitment and selection methods for the purpose of attaining the competitive personnel to deal with critical job roles.
- The performance of various employees in the organization for providing training and development programs.
- Concept of stress management and mediation and modernization of organizations.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- Summarize on HR analytics evolution and metrics and framework for implementing in modern organizations.
- Demonstrate the inclusion and measuring and testing diversity with respect to human resources in organizations
- Differentiate the reliability and validity of selection models and bases for selection
- Examine the performance of employees and the measures to be taken to control employee turnover.
- Implement the effectiveness of predicting employee performance, assessing training needs with detail report that critically analyze.
- Describe the various methods of performance monitoring for the performances employees are to be monitored.

IV. COURSE CONTENT:

MODULE-I- INTRODUCTION TO HR ANALYTICS: (09)

HR Analytics-Evolution of HR Analytics, HR information systems and data sources, HR Metric and HR Analytics, Evolution of HR Analytics; HR Metrics and HR Analytics; Intuition versus analytical thinking; HRMS/HRIS and data sources; Analytics frameworks like LAMP, HCM:21(r) Model.

MODULE -II-DIVERSITY ANALYSIS: (08)

Equality, diversity and inclusion, measuring diversity and inclusion, Testing the impact of diversity, Workforce segmentation and search for critical job roles.

MODULE -III-RECRUITMENT AND SELECTION ANALYTICS: (10)

Evaluating Reliability and validity of selection models, finding out selection bias,

Predicting the performance and turnover

MODULE -IV-PERFORMANCE ANALYSIS: (10)

Predicting employee performance, training requirements, evaluating training and development, Optimizing selection and promotion decisions.

MODULE -V-MONITORING IMPACT OF INTERVENTIONS: (08)

Tracking impact interventions, Evaluating stress levels and value-change. Formulating evidence-based practices and responsible investment. Evaluation mediation process, moderation and interaction analysis.

V. TEXT BOOKS:

1. Michael J.Walsh, "HR Analytics Essentials", Vibrant Publishers, Jan, 2021.
2. Bharti Motwani, "HR Analytics:Application and Design", Wiley Publisher, June 2021.
3. Poonam Kaushal, Sakshi Vashisht, "HR Metrics and Analytics", Walnut Publication, 2020.
4. Jac FITZ-ENZ, "The NEW HR Analytics", HarperCollins Focus Publisher, 2018.
5. Dipak Kumar Bhattachar, "HR Analytics", Sage Publications India Private, May 2017

VI. REFERENCE BOOKS:

1. Sund mark, Lyndon "Doing HR Analytics: Handbook with R examples. First Edition, Lyndon Sund mark publication, USA.
2. Ramesh Soundrrajan, Kul deep Singh," Winning on HR Analytics "First Edition, Sage publications.
3. Pratush Banerjee, Jatin Pandey, Manish Guptha, "Practical Applications of HR Analytics" First Edition, Sage publications.

VII. WEB REFERENCES:

1. <https://play.google.com/books/reader?id=pUCPwDG8Qj8C&hl=en&pg=GBS.PR8>
2. <https://play.google.com/books/reader?id=EXiJDwAAQBAJ&hl=en&pg=GBS.PR11>
3. <https://play.google.com/books/reader?id=BTxwDQAAQBAJ&hl=en&pg=GBS.PT26.w.0.0.252>

VIII. E-TEXT BOOKS:

1. <https://www.pdfdrive.com/predictive-hr-analytics-mastering-the-hr-metric-e188006190.html>
2. <https://www.pdfdrive.com/hr-metrics-and-workforce-analytics-e20835652.html>



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal - 500 043, Hyderabad, Telangana

COURSE CONTENT

HR METRICS AND ANALYSIS LABORATORY								
IV Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE59	Elective	L	T	P	C	CIA	SEE	Total
		-	-	4	2	40	60	100
Contact Classes: Nil	Tutorial Classes: Nil	Practical Classes: 40			Total Classes: 40			
Prerequisite: Human Resource Management								
SDGs Mapped: SDG 9 (Industry, Innovation and Infrastructure), SDG 8 (Decent Work & Economic Growth)								

I. COURSE OVERVIEW:

This lab provides hands-on training in applying HR analytics tools and techniques to real-world HR data. Students will learn to collect, clean, and analyze workforce data using Excel/SPSS, apply HR metrics, and build dashboards. The course emphasizes descriptive, diagnostic, predictive, and prescriptive analytics for effective HR decision-making.

II. COURSE OBJECTIVES:

The students will try to learn:

- I. Introduce students to HR analytics frameworks, models, and tools.
- II. Develop skills in HR data collection, cleaning, and preparation.
- III. Enable computation and interpretation of key HR metrics.
- IV. Provide practical exposure to descriptive, diagnostic, predictive, and prescriptive HR analytics techniques.
- V. Apply visualization and reporting methods for effective HR decision-making.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Demonstrate understanding of HR analytics concepts, frameworks, and models.
- CO2 Organize, clean, and validate HR datasets using Excel/SPSS.
- CO3 Compute, analyze, and interpret key HR metrics for workforce management.
- CO4 Apply statistical methods to diagnose HR issues and predict workforce trends.
- CO5 Develop HR dashboards and visualization reports for decision support.
- CO6 Integrate descriptive, diagnostic, predictive, and prescriptive analytics to solve HR problems.

IV. COURSE CONTENT:

EXPERIMENT – 1: INTRODUCTION TO HR ANALYTICS

MS - EXCEL/SPSS: Introduction, uses, functions and Excel for HR data organization. Overview of HRM, HCM, and HR Analytics, business impact, and levels of analytics.

EXPERIMENT – 2: HR ANALYTICS MODELS – I

Applying LAMP Model and HC Bridge Model to sample HR datasets using Excel. Mapping metrics to HR analytics frameworks.

EXPERIMENT – 3: HR ANALYTICS MODELS – II

Application of Bersin's HR Analytics Maturity Model and HR Value Chain Model for workforce data. Using Excel for visualization and reporting.

EXPERIMENT – 4: DATA COLLECTION & CLEANING

Capturing HR data, identifying types/scales, cleaning datasets, handling missing values, and validation using Excel/SPSS.

EXPERIMENT – 5: HR METRICS COMPUTATION – I

Computing key HR metrics: Turnover Rate, Absenteeism Rate, Time-to-Hire, Cost-per-Hire using spreadsheet formulas.

EXPERIMENT – 6: HR METRICS COMPUTATION – II

Computing metrics for Training Effectiveness, Performance Ratings, Employee Engagement, and Compensation using Excel formulas.

EXPERIMENT – 7: DESCRIPTIVE HR ANALYTICS

Building HR dashboards using Pivot Tables, slicers, and charts in Excel. Visualizing recruitment, performance, and engagement metrics.

EXPERIMENT – 8: DIAGNOSTIC HR ANALYTICS – I

Root cause analysis for employee attrition and absenteeism. Hypothesis testing using Chi-square in Excel/SPSS.

EXPERIMENT – 9: DIAGNOSTIC HR ANALYTICS – II

Correlation analysis and simple linear regression to analyze relationships between HR metrics (e.g., training vs performance).

EXPERIMENT – 10: PREDICTIVE HR ANALYTICS – I

Multiple regression analysis to predict employee attrition, satisfaction, or performance using Excel/SPSS/R.

EXPERIMENT – 11: PREDICTIVE HR ANALYTICS – II

Factor analysis and cluster analysis for workforce segmentation and understanding employee demographics.

EXPERIMENT – 12: ANALYSIS OF VARIANCE (ANOVA)

Comparing means of HR metrics across departments, locations, or job levels using one-way ANOVA in Excel/SPSS.

EXPERIMENT – 13: PRESCRIPTIVE HR ANALYTICS – I

Decision trees for HR interventions (e.g., retention strategies), scenario planning using Excel What-If analysis.

EXPERIMENT – 14: PRESCRIPTIVE HR ANALYTICS – II

Integrated case study: end-to-end HR Analytics project using descriptive, diagnostic, predictive, and prescriptive techniques. Reporting insights via dashboards in Excel/Tableau/Power BI.

V. SOFTWARE / SPREADSHEET TOOLS:

1. Microsoft Excel: <https://www.microsoft.com/en-us/microsoft-365/excel>
2. Google Sheets: <https://www.google.com/sheets/about/>
3. SPSS: <https://www.ibm.com/products/spss-statistics>
4. R: <https://www.r-project.org/>

5. Python: <https://www.python.org/>
6. Tableau: <https://www.tableau.com/>
7. Power BI: <https://powerbi.microsoft.com/>

VI. TEXTBOOKS:

1. Marler, J. H., & Boudreau, J. W., *An Evidence-Based Review of HR Analytics*, Routledge, 2017.
2. Angrave, D., *HR Analytics: Understanding People Better*, Kogan Page, 2016.
3. Levenson, A., *Strategic Analytics: Advancing Strategy Execution and Organizational Effectiveness*, Wiley, 2018.

VII. REFERENCE BOOKS:

1. Fitz-enz, J., *The New HR Analytics: Predicting the Economic Value of Your Company's Human Capital*, AMACOM, 2010.
2. Becker, B., & Huselid, M., *HR Analytics: Insights for Strategic Human Resource Management*, Harvard Business Review, 2018.
3. Davenport, T. H., Harris, J., & Shapiro, J., *Competing on Talent Analytics*, Harvard Business Review, 2010.

VIII. WEB REFERENCES:

1. <https://www.peplemattersglobal.com>
2. <https://www.shrm.org/resourcesandtools/hr-topics/technology/pages/hr-analytics.aspx>
3. <https://www.analyticsvidhya.com>



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal - 500 043, Hyderabad, Telangana

COURSE CONTENT

ENTERPRISE RESOURCE PLANNING								
IV Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE60	Elective	L	T	P	C	CIA	SEE	Total
		4	-	-	4	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Business Analytics								
SDGs Mapped: SDG 9 (Industry, Innovation and Infrastructure), SDG 8 (Decent Work & Economic Growth)								

I. COURSE OVERVIEW:

This course provides an in-depth understanding of Enterprise Resource Planning (ERP) systems and their role in integrating business processes. Students will explore ERP modules, implementation methodologies, and enterprise applications, while analyzing case studies on ERP adoption and value creation. Emphasis is placed on ERP's impact on business performance, value chains, and organizational change management.

II. OBJECTIVES:

The students will try to learn:

- The enterprise resources, business processes, and information systems.
- The characteristics, evolution, and benefits of ERP systems and related technologies.
- The ERP modules and their applications across business functions.
- The ERP implementation strategies, methodologies, and challenges.
- ERP project management, success factors, and post-implementation support.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Explain enterprise resources, business processes, and process modeling techniques.
- CO2 Analyze ERP systems, related technologies, and their organizational benefits.
- CO3 Demonstrate understanding of major ERP modules and domain-specific ERP solutions.
- CO4 Evaluate ERP's role in value chain management, competitive advantage, and e-business integration.
- CO5 Apply ERP implementation methodologies, including package selection, planning, and training.
- CO6 Assess ERP project team roles, success/failure factors, post-implementation support, and security measures.

IV. COURSE CONTENT:

MODULE-I: ENTERPRISE: (08)

Overview of Enterprise Resources & Business Functions, Classifications of Business Processes, Business Process Management System; Information: Characteristics and Value of information in enterprise; Information System: Components of an Information System, Characteristics and uses of Decision Support System, Executive Information System & Management Information System; Business Process Modeling: Automation and Structuring of Business Processes, Business Process Reengineering (BPR). Cross Functional and Integrated Enterprise Systems; Case Studies

MODULE –II: ENTERPRISE SYSTEMS AND ENTERPRISE RESOURCES PLANNING (ERP) - Classes: (10)

Characteristics of Enterprise Systems, Enterprise Applications and ERP, Evolution of ERP System, Benefits of an ERP System; ERP Related Technologies: Database & Data Warehouse, Data Mining, OnLine Analytical Processing, and Workflow Management Systems.

MODULE –III: ERP MODULES -Classes: (09)

Finance, Production planning, Sales & Distribution, Human Resource Management (HRM), Inventory Control System, Quality Management, ERP in Supply Chain Management and Customer Relationship Management.

ERP Solutions in the markets and ERP Domains: Sector specific ERP Solutions, Introduction and Characteristics of SAP, BAAN and Oracle ERP. Case Studies

MODULE –IV: EXECUTION OF ERP AND VALUE CHAIN: (09)

Impacts of ERP on Value Chain (Porter's Value Chain Model), Competitive Advantages of ERP; Future Directions in ERP: New Trends in ERP, ERP to ERP II, ERP and e-business, SOA Factors in ERP; ERP Implementation: Evaluation and Selection of ERP Package, Project Planning, Testing & End User's Training, Post Evaluation and Maintenance, Issues and Challenges in ERP Implementation, Latest ERP Implementation Methodologies; Case Studies

MODULE –V: ERP PROJECT TEAM: (09)

Composition, Organization and Working of ERP Implementation Team, Success and Failure Factors in ERP Project. Post ERP Implementation: Organizational Change Management, Post Implementation Review, Post Implementation Support, ERP Security. Case Studies

V. TEXT BOOKS:

1. ERP Demystified: Leon, Alexis (McGraw-Hill Education).
2. Concepts in Enterprise Resource Planning: Joseph, A. Brady, Ellen, F. Monk and Wangner, Bret J. (Thomson Learning).
3. Enterprise Resource Planning: Concepts and Planning; Garg, V.K. and Venkitakrishnan, N.K.(PHILearning).
4. Enterprise Resource Planning – A Managerial Perspective: DP Goyal (TMH).

VI. REFERENCE BOOKS:

1. Paul Greenberg, CRM at the Speed of Light: Social CRM Strategies, Tools, and Technologies for Engaging Your Customer, McGraw Hill.
2. Alexis Leon, Enterprise Resource Planning, 2nd Edition, McGraw Hill, 2008

VII. WEB REFERENCES:

1. <https://www.goo.gl/gBUrvc>
2. <https://www.goo.gl/9Nahvr>

VIII. E-TEXT BOOKS:

1. [https://ccdcoe.org/publications/books/Enterprise Resource Planning_Manual.pdf](https://ccdcoe.org/publications/books/Enterprise%20Resource%20Planning_Manual.pdf)
2. <https://transition.fcc.gov/cyber/cyberplanner.pdf>
3. https://www.amazon.in/dp/B07YG4QSZR/ref=cm_sw_r_apan_glt_2FGRNQAEBE4AEV5JQRB7?_encoding=UTF8&psc=1.
4. https://www.amazon.in/dp/B084RH7JNC/ref=cm_sw_r_apan_glt_XSZ2G0M4SF8VE5G45NN5?_encoding=UTF8&psc=1.



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal - 500 043, Hyderabad, Telangana

COURSE CONTENT

BUSINESS DATA MINING, WAREHOUSING AND VISULIZATION								
IV Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE61	Elective	L	T	P	C	CIA	SEE	Total
		4	-	-	4	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Business Analytics								
SDGs Mapped: SDG 9 (Industry, Innovation and Infrastructure), SDG 12 (Responsible Consumption & Production)								

I. COURSE OVERVIEW:

This course provides foundational knowledge and hands-on skills in data mining, data preprocessing, warehouse management, and business data visualization. Students will explore techniques to clean, transform, and reduce data, apply logistic regression for classification problems, and design dashboards for effective decision-making. Emphasis is placed on practical applications, case studies, and IT tools for solving real-world business problems.

II.OBJECTIVES:

The students will try to learn:

- I. The fundamental concepts of data mining, data warehouses, and societal implications.
- II. The preprocessing techniques for cleaning, transforming, and reducing data.
- III. The various warehousing operations, efficiency measurement, and workforce management.
- IV. The various classification methods using logistic regression and performance evaluation.
- V. The ability to visualize business data through dashboards and monitoring systems.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Explain the concepts of data mining, types of data, and major issues in mining.
- CO2 Apply preprocessing techniques such as cleaning, reduction, and transformation to real-world datasets.
- CO3 Analyze warehouse operations and evaluate efficiency, workforce design, and risk management.
- CO4 Build and evaluate logistic regression models for classification problems using business datasets.
- CO5 Design and develop dashboards for data visualization and business activity monitoring.
- CO6 Integrate data mining, warehouse management, and visualization techniques for effective business decision-making.

IV. COURSE CONTENT:

MODULE-I: INTRODUCTION TO DATA MINING, WAREHOUSE AND VISULIZATION: (08)

Data Mining; Kinds of data that can be mined-Database Data, Data Warehouses, Transactional Data, Other Kinds of Data; Major Issues in Data Mining-Mining Methodology, User Interaction, Efficiency and Scalability, Diversity of Database Types, Data Mining and Society.

MODULE –II: DATA PRE-PROCESSING: (10)

Data Preprocessing: An Overview-Reasons to process the data, Major Tasks in Data Preprocessing; Data Cleaning-Missing Values, Noisy Data, Data Cleaning as a Process; Data Reduction-Principal Component Analysis, Histograms, Clustering, Sampling, Data Cube Aggregation; Data Transformation and Data Discretization-Data Transformation by Normalization, Discretization by Binning, Discretization by Histogram Analysis.

Case Study: Handling Missing Values in Melbourne Housing Price Data.

MODULE –III: MANAGING WAREHOUSE EFFICIENCY: (09)

Order picking - Picking methods-pick path - Measuring Warehouse Efficiency - Warehouse Workforce design and development - cross docking.

Warehousing Operations: warehousing operations- inbound process, outbound processes, Functions of Warehouse- break-bulk, cross docking, order mixing, Risk management

MODULE –IV: CLASSIFICATION PROBLEMS – I-LOGISTICS REGRESSION: (10)

Overview of Classification; Binary Logistic Regression; Classification-Encoding Categorical Features, Building Logistic Regression Model, Printing Model Summary, Predicting on Test Data; Measuring Accuracies-Creating Confusion Matrix, Receiver Operating Characteristic (ROC) and Area Under the Curve; Finding Optimal Classification Cut-off -Youden's Index and Cost-Based Approach.

Case Study: Predicting Employee Attrition on HR Attrition Dataset.

MODULE –V: DATA VISUALISATION FOR BUSINESS: (08)

Introduction to Data Visualization for businesses, Visualization of Numerical and Non-Numerical Data Creation of Dashboards using IT Tools, Business Activity Monitoring through Dashboard.

V. TEXT BOOKS:

1. Ikkvinderpal “Data Mining & Warehousing”, 1st edition, 2020.
2. Max Bramer and Springer “Principles of Data Mining 2020” 8th edition, 2020.
3. Szabo, Gungar Polatkan, Oscar Boykin, Chalkiopoulos, “Social Media Data Mining and Analytics”, 3rd edition. Wiley, 2019.
4. Pang-Ning Tan, “Introduction to Data Mining, Global Edition”, 4th edition, May 2019.
5. Ian H. Witten, Eibe Frank, Mark A. Hall, Christopher J. Pal, “Data Mining: Practical Machine Learning Tools and Techniques”, 4th edition. Elsevier, 2017.

VI. REFERENCE BOOKS:

1. Luis Torgo, “Data Mining with R: Learning with Case Studies”, 2nd edition, CRC Press, 2011.
2. Jiawei Han, Jian Pei, Micheline Kamber, “Data Mining: Concepts and Techniques”, 3rd edition, Elsevier, 2010.
3. Joseph B. Pigus, “Data Mining with Neural Networks”, 2nd edition, TMH, 2017.
4. Robert Layton, “Learning Data Mining with Python”, 2nd edition, PACKT Publishing, 2015.

VII. WEB REFERENCES:

1. https://www.amazon.in/dp/B07YG4QSZR/ref=cm_sw_r_apan_glt_2FGRNQAEBE4AEV5JQRB7?_encoding=UTF8&psc=1

VIII. E-TEXT BOOKS:

1. https://www.amazon.in/dp/B00UVBJSQA/ref=cm_sw_r_apan_glt_1Y1H0P2MRK1KM0SFG1AJ?_encoding=UTF8&psc=1.
2. https://www.amazon.in/dp/B075GB7FT5/ref=cm_sw_r_apan_glt_G8RNA0P6W9YSQZ2N0P16?_encoding=UTF8&psc=1.



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal - 500 043, Hyderabad, Telangana

COURSE CONTENT

MACHINE LEARNING AND ARTIFICIAL INTELLIGENCE								
IV Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE62	Elective	L	T	P	C	CIA	SEE	Total
		2	-	-	2	40	60	100
Contact Classes: 20	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 20			
Prerequisite: Business Analytics								
SDGs Mapped: SDG 9 (Industry, Innovation and Infrastructure), SDG 8 (Decent Work & Economic Growth)								

I. COURSE OVERVIEW:

This course introduces the concepts and applications of machine learning and artificial intelligence (AI) with a focus on supervised and unsupervised learning techniques, recommender systems, decision tree classification, and problem-solving methods in AI. Students will gain both theoretical knowledge and hands-on experience through case studies in employee churn prediction, movie recommendations, and credit risk analysis. The course also explores the foundations of AI, intelligent agents, and classical as well as modern problem-solving approaches.

II. OBJECTIVES:

The students will try to learn:

- The machine learning concepts, types, and algorithms with real-world applications.
- The building recommender systems using user-based, item-based, and matrix factorization techniques.
- The construct and evaluate decision tree models for classification problems.
- The foundations, history, and role of intelligent agents in AI.
- The problem-solving strategies including search methods, optimization, adversarial search, and constraint satisfaction problems.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Explain the types of machine learning algorithms and apply supervised learning methods such as KNN, Random Forest, and Boosting.
- CO2 Build and evaluate recommender systems using similarity measures and matrix factorization techniques.
- CO3 Construct, visualize, and assess decision tree classifiers using different criteria on real-world datasets.
- CO4 Describe the foundations of artificial intelligence, intelligent agents, and their applications in problem-solving.
- CO5 Apply classical and informed search strategies, heuristic approaches, and optimization methods to solve AI problems.
- CO6 Analyze and design AI-driven solutions such as chatbots, adversarial search models, and constraint satisfaction systems for decision-making.

IV. COURSE CONTENT:

MODULE-I-MACHINE LEARNING: (08)

What is Machine Learning; Types of Machine Learning Algorithms-Supervised, Unsupervised and Reinforcement Learning. Supervised Learning-K Nearest Neighbors, Random Forest and Boosting
Case Study: Predicting Employee Churn Using KNN, RF and Boosting.

MODULE -II-RECOMMENDER SYSTEMS USING MACHINE LEARNING: (10)

User Based Similarity-Calculating Cosine Similarity Between Users, Filtering Similar Users, Challenges with User Based Similarity. Item Based Similarity-Calculating Cosine Similarity between Movies, Finding Most Similar Movies. Matrix Factorization

MODULE -III-DECISION TREE CLASSIFICATION: (09)

Introduction to Decision Tree; Building Decision Tree Classifier using Gini Criteria; Measuring Test Accuracy; Displaying the Tree; Building Decision Tree Classifier using Entropy Criteria; Finding Optimal Criteria;

Maximum Depth of the Tree and Benefits and Disadvantages of Decision Tree

Case Study: Applying Decision Tree Classification on German Credit Data.

MODULE -IV-ARTIFICIAL INTELLIGENCE: (10)

Introduction-Meaning and Foundations of AI, History of AI, Intelligent Agents-Agents and Environments, Concept of Rationality, Nature of Environments, The Structure of Agents, AI: The present and Future.

Problem Solving-I: Solving Problems by Searching-Problem Solving Agents, Searching for Solutions, Uninformed Search Strategies, Informed Search Strategies, Heuristic Functions.

MODULE -V-PROBLEM SOLVING: (08)

Beyond Classical Search-Local Search Algorithms and Optimization Problems, Beyond Classical Search, Adversarial Search, Constraint Satisfaction Problems, Chabot –Introduction, Characteristics and its importance

V. TEXT BOOKS:

1. Sergio's Theodoratos, Elsevier "Machine Learning A Bayesian and Optimization Perspective ", 1st edition, 2020.
2. Dr. Dheeraj Mehrotra "Basics of Artificial Intelligence & Machine Learning ", 3rd edition, 2019.
3. Wei- Meng Lee, "Python Machine Learning", Wiley, 3rd edition, 2019.
4. David L. Poole, Alan K. Mackworth "Artificial Intelligence", 2nd edition, 2018.

VI. REFERENCE BOOKS:

1. Paul Deitel, Harvey Deitel, "Python for Programmers- with introductory AI Case Studies", 1st edition, Pearson Education, 2019.
2. Puneet Mathur, "Machine Learning Applications Using Python: Cases Studies from Healthcare, Retail, and Finance", 1st edition, Apress, 2019.
3. Joshua Eckroth, "Python AI Projects for Beginners", 1st edition, Packt Publishers, 2018.

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2. https://www.amazon.in/dp/B07F63RMSW/ref=cm_sw_r_apan_glt_1TZMKKBJ2RDBMZY2J2SX

VIII. E-TEXT BOOKS:

1. https://www.amazon.in/dp/B00LPGBV60/ref=cm_sw_r_apan_glt_MS59JPFTKSCVQMHFG9PF



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COURSE CONTENT

MACHINE LEARNING AND ARTIFICIAL INTELLIGENCE LABORATORY								
IV Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE63	Elective	L	T	P	C	CIA	SEE	Total
		-	-	4	2	40	60	100
Contact Classes: Nil	Tutorial Classes: Nil	Practical Classes: 40			Total Classes: 40			
Prerequisite: Business Analytics								
SDGs Mapped: SDG 9 (Industry, Innovation and Infrastructure), SDG 8 (Decent Work & Economic Growth)								

I. COURSE OVERVIEW:

This course provides hands-on exposure to machine learning, recommender systems, decision tree classification, and artificial intelligence (AI) techniques using Python and relevant libraries. Students will implement supervised learning algorithms, recommender systems, decision tree classifiers, and AI problem-solving strategies including search algorithms, adversarial search, and constraint satisfaction problems. The course emphasizes practical skills in data analysis, model evaluation, and AI agent design, equipping students to solve real-world business and computational problems.

II. OBJECTIVES:

The students will try to learn:

- Introduce students to Python programming environment, data handling, and exploratory data analysis for machine learning.
- Develop practical skills in supervised learning algorithms such as KNN, Random Forest, and Boosting for predictive modeling.
- Teach implementation of recommender systems using user-based, item-based, and matrix factorization techniques.
- Provide hands-on experience with decision tree classification and AI problem-solving methods, including search algorithms and intelligent agents.
- Enable students to apply AI techniques for adversarial search, constraint satisfaction problems, and chatbot design in practical scenarios.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Recall the fundamental concepts of machine learning, AI, and Python libraries used for data analysis.
- CO2 Apply supervised learning algorithms (KNN, Random Forest, Boosting) to solve classification problems and evaluate model performance.
- CO3 Implement user-based, item-based, and matrix factorization recommender systems for personalized recommendations.
- CO4 Analyze decision tree classifiers using Gini and Entropy criteria and optimize tree performance for real datasets.
- CO5 Design and implement AI solutions using search algorithms, adversarial search, and constraint satisfaction techniques.
- CO6 Evaluate AI applications such as intelligent agents and chatbots, and assess their relevance for practical business and computational problems.

IV. COURSE CONTENT:

EXPERIMENT – 1: INTRODUCTION TO MACHINE LEARNING ENVIRONMENT

Python, Jupyter Notebook/Colab setup, importing datasets, basic libraries (NumPy, Pandas, Scikit-learn, Matplotlib), exploratory data analysis.

EXPERIMENT – 2: SUPERVISED LEARNING – K-NEAREST NEIGHBORS (KNN)

Implement KNN for classification, distance metrics (Euclidean, Manhattan), hyperparameter tuning, case: employee churn dataset.

EXPERIMENT – 3: SUPERVISED LEARNING – RANDOM FOREST CLASSIFIER

Building a Random Forest model, feature importance, cross-validation, model evaluation metrics (accuracy, precision, recall, F1).

EXPERIMENT – 4: SUPERVISED LEARNING – BOOSTING ALGORITHMS

Implementation of AdaBoost/Gradient Boosting/XGBoost, comparison with RF and KNN, case: employee churn prediction.

EXPERIMENT – 5: USER-BASED RECOMMENDER SYSTEM

Calculate cosine similarity between users, find top similar users, challenges of scalability, build a user-user recommendation engine.

EXPERIMENT – 6: ITEM-BASED RECOMMENDER SYSTEM

Calculate item similarity (cosine similarity between movies/products), recommend top N items, comparison with user-based filtering.

EXPERIMENT – 7: MATRIX FACTORIZATION FOR RECOMMENDER SYSTEMS

Implement Singular Value Decomposition (SVD), Alternating Least Squares (ALS), performance evaluation with RMSE/MAE.

EXPERIMENT – 8: DECISION TREE CLASSIFICATION – GINI CRITERIA

Build Decision Tree using Gini Index, visualize tree, compute accuracy, advantages/disadvantages of decision trees.

EXPERIMENT – 9: DECISION TREE CLASSIFICATION – ENTROPY CRITERIA

Build Decision Tree using Entropy (Information Gain), tune max depth, case study: German Credit Data classification.

EXPERIMENT – 10: ARTIFICIAL INTELLIGENCE – INTELLIGENT AGENTS

Types of agents, structure of agents, simple agent-environment simulation (Grid World/Reflex Agent).

EXPERIMENT – 11: PROBLEM SOLVING WITH UNINFORMED SEARCH

Implement BFS, DFS for problem-solving (maze/pathfinding), compare time and space complexity.

EXPERIMENT – 12: PROBLEM SOLVING WITH INFORMED SEARCH

Implement A* search with heuristic functions (Manhattan, Euclidean), analyze optimality and efficiency.

EXPERIMENT – 13: ADVERSARIAL SEARCH AND GAME AGENTS

Implement Minimax algorithm with Alpha-Beta pruning, create a simple game-playing agent (Tic-Tac-Toe).

EXPERIMENT – 14: CONSTRAINT SATISFACTION & CHATBOT DESIGN

Constraint satisfaction problem solving (N-Queens / Sudoku / Map Coloring). Rule-based Chatbot using NLP (Python NLTK/spaCy), chatbot importance in business applications.

V. SOFTWARE / TOOLS

1. Python (Anaconda / Jupyter / Google Colab): <https://www.python.org/>
2. Scikit-learn (Machine Learning library): <https://scikit-learn.org/>
3. NumPy & Pandas (Data handling): <https://numpy.org/> | <https://pandas.pydata.org/>
4. Matplotlib / Seaborn (Visualization): <https://matplotlib.org/> | <https://seaborn.pydata.org/>
5. NLTK / spaCy (for Chatbot & NLP tasks): <https://www.nltk.org/> | <https://spacy.io/>

6. R (optional for ML/AI analytics): <https://www.r-project.org/>
7. Tableau / Power BI (for visualization & dashboards): <https://www.tableau.com/>
<https://powerbi.microsoft.com/>

VI. TEXTBOOKS

1. Sergio's Theodoratos, Machine Learning: A Bayesian and Optimization Perspective, 1st edition, Elsevier, 2023.
2. Dheeraj Mehrotra, Basics of Artificial Intelligence & Machine Learning, 3rd edition, 2022.
3. Wei-Meng Lee, Python Machine Learning, 3rd edition, Wiley, 2021.
4. David L. Poole & Alan K. Mackworth, Artificial Intelligence, 2nd edition, 2018.
5. Steven W. Knox, Machine Learning: A Concise Introduction, 4th edition, Wiley, 2018.

VII. REFERENCE BOOKS

1. Paul Deitel & Harvey Deitel, Python for Programmers with Introductory AI Case Studies, Pearson, 2019.
2. Puneet Mathur, Machine Learning Applications Using Python: Case Studies from Healthcare, Retail, and Finance, Apress, 2019.
3. Joshua Eckroth, Python AI Projects for Beginners, Packt Publishers, 2018.
4. Shalev-Shwartz & Ben-David, Understanding Machine Learning: From Theory to Algorithms, Cambridge University Press, 2014.
5. Stephen Marsland, Machine Learning – An Algorithmic Perspective, 2nd edition, CRC Press, 2014.
6. Saroj Kaushik, Artificial Intelligence, Cengage Learning India, 2014.

VIII. WEB REFERENCES

1. <https://scikit-learn.org>
2. <https://www.analyticsvidhya.com>
3. <https://towardsdatascience.com>
4. <https://www.kaggle.com>
5. <https://www.tensorflow.org>



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal - 500 043, Hyderabad, Telangana

COURSE CONTENT

ENTREPRENEURIAL FINANCE AND MARKETING								
IV Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE64	Elective	L	T	P	C	CIA	SEE	Total
		4	-	-	4	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Entrepreneurship and Design Thinking								
SDGs Mapped: SDG 8 (Decent Work & Economic Growth), SDG 9 (Industry, Innovation and Infrastructure)								

I. COURSE OVERVIEW:

This course provides an in-depth understanding of the entrepreneurial mindset, processes, and practices essential for launching, managing, and sustaining successful ventures. It focuses on the evolution and trends of entrepreneurship, the individual and corporate entrepreneurial mindset, opportunity identification, creativity, innovation, entrepreneurial marketing, growth strategies, and market development approaches. Students will gain both theoretical insights and practical knowledge necessary to become effective entrepreneurs or intrapreneurs in a competitive and dynamic environment.

II. OBJECTIVES:

The students will try to learn:

- I. The revolution, evolution, and contemporary trends in entrepreneurship.
- II. The entrepreneurial mindset, personality traits, and motivations.
- III. The identification, creativity, and innovation in launching ventures.
- IV. The entrepreneurial marketing and growth strategies.
- V. The development strategies including segmentation, targeting, positioning, and communication.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Recall the evolution, process, and impact of entrepreneurship, and recognize trends shaping entrepreneurship in the 21st century.
- CO2 Explain the characteristics of the individual and corporate entrepreneurial mindset, and assess stress, ego, and motivations influencing entrepreneurs.
- CO3 Apply creativity, imagination, and innovation techniques in identifying and evaluating entrepreneurial opportunities.
- CO4 Analyze entrepreneurial marketing challenges, growth objectives, and organizational structures for sustaining ventures.
- CO5 Evaluate entrepreneurial marketing challenges and growth strategies for sustaining competitive advantage.
- CO6 Create effective market development strategies through segmentation, targeting, positioning, pricing, distribution, and communication.

IV. COURSE CONTENT:

MODULE-I: UNDERSTANDING ENTREPRENEURIAL MINDSET: (08)

The Revolution impact of entrepreneurship, the evolution of entrepreneurship approaches to entrepreneurship process approach, twenty first century trends in entrepreneurship

MODULE –II: THE INDIVIDUAL ENTREPRENEURIAL MINDSET: (09)

The individual entrepreneurial mind set and personality: the entrepreneurial journey, stress and the entrepreneur, the entrepreneurial ego entrepreneurial motivations, corporate entrepreneurial mind nature of corporate entrepreneur conceptualization of corporate entrepreneurship strategy sustaining corporate entrepreneurship.

MODULE –III: LAUNCHING ENTREPRENEURIAL VENTURES: (09)

Opportunities identification, entrepreneurial imagination and creativity the nature of the creativity process innovation.

Entrepreneurship methods to initiate ventures creating new ventures, acquiring an established entrepreneurial venture franchising hybrid disadvantage of franchising.

MODULE –IV: ENTREPRENEURIAL MARKETING AND GROWTH: (10)

Meaning, characteristics, functions, marketing challenges, marketing mix (6P's). Identifying entrepreneurial marketing opportunities, market research, demand forecasting, Concept of enterprise growth, forms, types, structures of organizational growth, Gazelles and Mice, growth objectives – operative and strategic targets, growth analysis.

MODULE –V: ENTREPRENEURIAL MARKET DEVELOPMENT STRATEGIES: (09)

Positioning, segmentation, targeting, entrepreneurial communication strategy, entrepreneurial pricing strategy, entrepreneurial distribution strategy, building customer relationships, marketing plans.

V. TEXT BOOKS:

1. Kent Billingsley “Entrepreneur to Millionaire: How to Build a Highly Profitable, Fast-Growth Company and Become Embarrassingly Rich Doing It”, 2nd edition, 2021.
2. Mirdul Amin Sarkar “Entrepreneurship in Independent Market Research & Strategic Digital Marketing “, 3rd edition, 2020.
3. Ronald W Melicher, “Entrepreneurial Finance” 4th edition, 2019.
4. Jeffrey R. Cornwall David O Vang “Entrepreneurial Financial Management: An Applied Approach “, 4th edition, 2019.

VI. REFERENCE BOOKS:

1. Vasanth Desai, “Dynamics of Entrepreneurial Development and Management”, HPH Millenium, 1st edition, 2007.
2. P. Narayana Reddy, “Entrepreneurship Development–Text and Cases”, Cengage Learning, 1st edition, 2007.

VII. WEB REFERENCES:

1. <http://www.freebookcentre.net/business-books-download/entrepreneurial-development.html>
2. <http://depintegraluniversity.in/userfiles/entrepreneurship%20development.pdf>

VIII. E-TEXT BOOKS:

1. <http://bookboon.com/en/entrepreneurship-ebooks>
2. <http://pdf-directory.org/ebook.php?id=rejjanenzvyc>
3. https://www.amazon.in/dp/B00QITGLEG/ref=cm_sw_r_apan_glt_322YCBBS0RS8E7N9CZRC.
4. https://www.amazon.in/dp/B086Z93CWG/ref=cm_sw_r_apan_glt_XBZBMFSMMQ886K6EFYA4.



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal - 500 043, Hyderabad, Telangana

COURSE CONTENT

SOCIAL ENTREPRENEURSHIP								
IV Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE65	Elective	L	T	P	C	CIA	SEE	Total
		4	-	-	4	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Entrepreneurship and Design Thinking								
SDGs Mapped: SDG 1 (No Poverty), SDG 10 (Reduced Inequalities), SDG 3 (Good Health & Well-being)								

I. COURSE OVERVIEW:

This course introduces to the concepts of entrepreneurship and social entrepreneurship, focusing on entrepreneurial characteristics, value creation, and the development of social enterprises. It explores models and frameworks of the social entrepreneurship process, examines case studies of successful social enterprises, and highlights ethical considerations and challenges. Students will gain the knowledge and skills required to identify opportunities, design sustainable ventures, and apply ethical principles in entrepreneurial practice.

II. COURSE OBJECTIVES:

The students will try to learn:

- I. The meaning, characteristics, and scope of entrepreneurship and entrepreneurial development.
- II. The differences between business and social entrepreneurship, highlighting their significance in India and globally.
- III. The models, frameworks, and sources of the social entrepreneurship process.
- IV. The real-world practices of social entrepreneurship through case studies of successful enterprises.
- V. The challenges faced in implementing social entrepreneurship initiatives.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Recall the concepts, types, and characteristics of entrepreneurs and entrepreneurship, including value creation.
- CO2 Explain the meaning, features, and differences between business and social entrepreneurship, with reference to India and developing countries.
- CO3 Apply models and frameworks such as Timmons, PCDO, and Case Models to analyze the social entrepreneurship process.
- CO4 Analyze the qualities and skills required for successful social entrepreneurs in various contexts.
- CO5 Evaluate real-world case studies of social enterprises to assess their impact, sustainability, and innovation.
- CO6 Design ethical and practical strategies to address challenges in social entrepreneurship, ensuring accountability and stakeholder engagement.

IV. COURSE CONTENT:

MODULE-I-INTRODUCTION TO ENTREPRENEUR AND ENTREPRENEURSHIP: (08)

Meaning and definition Entrepreneur, Entrepreneurship. Types of Entrepreneurs –Social entrepreneur, Serial entrepreneur, Life style entrepreneur. Types of Entrepreneurships –creative entrepreneurship, inclusive entrepreneurship, knowledge entrepreneurship. Entrepreneurial characteristics: Inspiration, creativity, direct action, courage and fortitude. Characteristics of entrepreneur: innovate, introduces new technologies, catalyst, creative, generating opportunity for profit or reward. Entrepreneurship development in India, Scope of entrepreneur development, Concepts of Value Creation.

MODULE -II-SOCIAL ENTREPRENEUR, ENTREPRENEURSHIP AND ENTERPRISES: (10)

Meaning, definition of social entrepreneur, social entrepreneurship, social enterprises, Characteristics of Social Entrepreneurship - pursuit of new opportunities and exploration of hidden resources to serve those missions, decision- making power not based on capital ownership, participatory and collaborative nature involving various stakeholders, change opportunities lying in the hands of every individual, Characteristics of Social Entrepreneur-social catalysts, socially aware, opportunity seeking, innovative, resourceful, accountable, Differences between Business and Social entrepreneur, Entrepreneurship and Social Entrepreneurship, Social Entrepreneurship in developing countries and in India.

MODULE -III-THE SOCIAL ENTREPRENEURSHIP PROCESS: (09)

The Timmons Model of the Entrepreneurship Process, The PCDO (The People, Context, Deal, and opportunity) framework, The Case Model, The Social Entrepreneurship Framework, Sources of Social Entrepreneurship - Public Sector, Private Sector, Voluntary Sector.

7 Qualities and Skills of Social Entrepreneur - Entrepreneurial, innovative, transformatory, leadership, storytelling, people, visionary opportunities, alliance building, questions and doubts, accountability, missing skills, succession, scale.

MODULE -IV-SOCIAL ENTREPRENEURSHIP IN PRACTICE: (10)

Bangladesh Rural Advancement Committee (BRAC), The Grameen Bank (GB), The Self Employment Women's Association (SEWA), Aravind Eye Hospital, Barefoot College, Bhartiya Samruddhi Investment & Consulting Services (BASIX), Narayana Hrudayalaya Institute of Medical Sciences, Technology Informatics Design Endeavour (TIDE). Boundaries of Social Entrepreneurship – Social service provision, Social activism.

MODULE-V- ETHICAL ENTREPRENEURSHIP AND CHALLENGES IN SOCIAL ENTREPRENEURSHIP: (08)

Ethical entrepreneurship: Meaning. Empirical ethics, eternal ethics, Entrepreneur and customer, Entrepreneur and employee, Entrepreneur and Government. Challenges in Social Entrepreneurship

V. TEXT BOOKS:

1. Robert A. Philips Margret Bonefiel Ritesh Sharma, "Social entrepreneurship, the next big business opportunity" Global Vision Publishing House, New Delhi, 2nd edition, 2011.
2. Mel Young, "Social Entrepreneurship: A New Way of Thinking about Business", 2nd edition 2021.
3. Kickul, Thomas S. Lyons, Taylor and Francis, "Understanding Social Entrepreneurship the Relentless Pursuit of Mission in an Ever Changing World", 3rd edition, in 2020.

VI. REFERENCE BOOKS:

1. Jill Kickul and Thomas S. Lyons, Routledge, understanding social entrepreneurship, the relentless pursuit of mission in an ever changing world, New York, 2012.
2. Vasanth Desai, Entrepreneurial development, Himalaya Publishing House, 2008.
3. Bornstein, David, how to change the world: social entrepreneurs and the power of new ideas New York, NY: oxford university press, 2004.

VII. WEB REFERENCES:

1. <https://www.amazon.in/Social-Entrepreneurship-Sustainable-Development>

VIII. E-Text Books:

1. https://www.amazon.in/dp/B006QV7ZRI/ref=cm_sw_r_apan_glt_3K966HJ31FHHNF0ANFME



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal - 500 043, Hyderabad, Telangana

COURSE CONTENT

TECHNOLOGY BUSINESS INCUBATION								
IV Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE66	Elective	L	T	P	C	CIA	SEE	Total
		2	-	-	2	40	60	100
Contact Classes: 20	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 20			
Prerequisite: Entrepreneurship and Design Thinking								
SDGs Mapped: SDG 9 (Industry, Innovation and Infrastructure), SDG 8 (Decent Work & Economic Growth)								

I. COURSE OVERVIEW:

This course provides students with an understanding of small and medium enterprises (SMEs) and their role in the Indian economy. It covers the processes of identifying business opportunities, establishing and managing SMEs, and leveraging institutional and governmental support. Students will explore challenges faced by SMEs, strategies for managing growth and performance, and the policies and initiatives that promote entrepreneurship. The course equips learners with practical knowledge to set up, operate, and sustain SMEs effectively.

II. OBJECTIVES:

The students will try to learn:

- I. The concept, significance, and challenges of SMEs in India's economy.
- II. The business opportunities and formalities for establishing SMEs, including environmental and social considerations.
- III. The types of institutional and financial support available for SMEs at central and state levels.
- IV. Develop skills for managing SMEs, including product lines, client communication, credit monitoring, and handling NPAs.
- V. Familiarize students with government policies and agencies promoting entrepreneurship and supporting SME development.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Recall the definitions, role, and scope of SMEs in India and their contribution to employment and exports.
- CO2 Explain the steps and formalities involved in setting up an SME, including opportunity identification and sector-specific considerations.
- CO3 Apply knowledge of financial and institutional support to plan and secure resources for SMEs.
- CO4 Analyze management challenges in SMEs, including NPAs, restructuring, and performance evaluation.
- CO5 Evaluate government policies, incentives, and support mechanisms available for SMEs to ensure sustainable growth.
- CO6 Design strategies to overcome SME challenges, implement effective management practices, and leverage institutional and policy support.

IV. COURSE CONTENT:

MODULE-I-INTRODUCTION FOR SMALL AND MEDIUM ENTREPRENEURSHIP (SME) -

Classes: (06)

Concept & Definition, Role of Business in the modern Indian Economy SMEs in India, Employment and export opportunities in MSMEs. Issues and challenges of MSMEs

MODULE -II-SETTING OF SMES: (10)

Identifying the Business opportunity, Business opportunities in various sectors, formalities for setting up an enterprise - Location of Enterprise – steps in setting up an enterprise – Environmental aspects in setting up, Incentives and subsidies, Rural entrepreneurship – Women entrepreneurship

MODULE -III-INSTITUTIONS SUPPORTING MSMEs: (07)

Forms of financial support, long term and short-term financial support, Sources of Financial support, Development Financial Institutions, Investment Institutions, Central level institutions, State level institutions, and other agencies

Commercial Bank – Appraisal of Bank for loans. Institutional aids for entrepreneurship development – Role of DST, SIDCO, NSIC, IRCI, NIDC, SIDBI, SISI, SIPCOT, Entrepreneurial guidance bureaus

MODULE -IV-MANAGEMENT OF MSME: (12)

Management of Product Line; Communication with clients - Credit Monitoring System - Management of NPAs - Restructuring, Revival and Rehabilitation of MSME, Problems of entrepreneurs – sickness in SMI – Reasons and remedies, Evaluating entrepreneurial performance.

MODULE -V-ROLE OF GOVERNMENT IN PROMOTING ENTREPRENEURSHIP: (10)

MSME policy in India, Agencies for Policy Formulation and Implementation: District Industries Centers (DIC), Small Industries Service Institute (SISI), Entrepreneurship Development Institute of India (EDII), National Institute of Entrepreneurship & Small Business Development (NIESBUD), National Entrepreneurship Development Board (NEDB).

V. TEXT BOOKS:

1. Rajeev Babel “Treatise on Micro Small and Medium Enterprises” 2nd edition, 2021.
2. Taxman “MSME Ready Reckoner Professional Book”, 2nd edition, 2021.
3. CA Kamal Garg, Bharat “Handbook on Micro Small and Medium Enterprises”, 3rd edition, 2020.
4. Krishnan L Ratha. “Small and Medium Enterprises under Globalization Challenges and Opportunities “, 1st edition, 2017.

VI. REFERENCE BOOKS:

1. Suman Kalyan Chaudhury, “Micro Small and Medium Enterprises in India Hardcover”, Raj Publications, 2nd edition, 2013.
2. Aneet Monika Agarwal, “Small and Medium Enterprises in Transitional Economies” challenges and opportunities”, DEEP and DEEP Publications, 4th edition, 2015.

VII. WEB REFERENCES:

1. <https://msme.gov.in/sites/default/files/Sch-vol1-151214.pdf-.sri.pdf>
2. [www.dcmsme.gov.in/Terms%20of%20Reference%20\(ToR\).pdf](http://www.dcmsme.gov.in/Terms%20of%20Reference%20(ToR).pdf)

VIII. E-TEXT BOOKS:

1. <https://msme.gov.in/Media-and-press-release/e- book>
2. <https://www.pwc.in/assets/pdfs/publications-2011/innovation-msme-2011.pdf>
3. https://www.amazon.in/dp/B089ZCQ4KB/ref=cm_sw_r_apan_glt_7WZFTXTWT7V77TS8JGVR.
4. https://www.amazon.in/dp/B089YSNHP2/ref=cm_sw_r_apan_glt_DYY28P0BYB9QTE8Z7XS4.
5. https://www.amazon.in/dp/B08J45L49D/ref=cm_sw_r_apan_glt_6CXF7J4SQ9Q0TZH14R0H.



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal - 500 043, Hyderabad, Telangana

COURSE CONTENT

BUSINESS INCUBATION – IDEA LABORATORY								
IV Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE67	Elective	L	T	P	C	CIA	SEE	Total
		-	-	4	2	40	60	100
Contact Classes: Nil	Tutorial Classes: Nil	Practical Classes: 40			Total Classes: 40			
Prerequisite: Entrepreneurship and Design Thinking								
SDGs Mapped: SDG 9 (Industry, Innovation and Infrastructure), SDG 8 (Decent Work & Economic Growth), SDG 12 (Responsible Consumption & Production)								

I. COURSE OVERVIEW:

This course provides hands-on exposure to the setup, management, and evaluation of Technology Business Incubators (TBIs). Students will learn to assess policy frameworks, analyze incubator performance, plan feasibility studies, and design financial, operational, and marketing strategies for TBIs. The course emphasizes practical skills in data analysis, visualization, and simulation using tools like MS Excel, PowerPoint, and Power BI, enabling students to understand global and Indian perspectives on business incubation.

II. OBJECTIVES:

The students will try to learn:

- I. The concepts, importance, and global growth of Technology Business Incubators.
- II. The government policies, legal frameworks, and TBI operational models in India.
- III. Skills required to planning, feasibility assessment, financial modeling, and incubator design.
- IV. The tenant selection, marketing, and organizational management of incubators.
- V. The TBI performance using data visualization, dashboards, and comparative studies.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Explain the key concepts, characteristics, and importance of Technology Business Incubators.
- CO2 Analyze government policies, legal frameworks, and TBI models in India for effective incubation planning.
- CO3 Apply feasibility study techniques, financial planning, and operational design to simulate a TBI setup.
- CO4 Design incubator structures, marketing strategies, and tenant selection processes using Excel and PowerPoint.
- CO5 Evaluate TBI performance by comparing metrics such as management, sponsors, focus areas, staff, and outputs.
- CO6 Assess global incubation practices and simulate TBI-led business incubation outcomes using dashboards and visualization tools.

IV. COURSE CONTENT:

EXPERIMENT – 1: INTRODUCTION TO TECHNOLOGY BUSINESS INCUBATION (TBI)

Understanding concepts, characteristics, and importance of TBIs. Overview of origin and growth of TBI movement globally and in India.

EXPERIMENT – 2: POLICY FRAMEWORK FOR TBI IN INDIA

Studying current government policies for TBI promotion. Comparative analysis of national vs global TBI initiatives using case studies.

EXPERIMENT – 3: STATUS OF TBIs IN INDIA

Analyzing current TBIs: types, number, focus areas, and performance indicators. Data compilation and visualization in Excel.

EXPERIMENT – 4: PREPARATORY AND FEASIBILITY PROCESS

Steps to plan a TBI: conducting feasibility studies, market and technical assessment, and preparing a business plan template in Excel.

EXPERIMENT – 5: KEY PLAYERS AND LEGAL INCORPORATION

Identifying stakeholders, legal structures, and incorporation procedures for a TBI. Mapping responsibilities using flowcharts in Excel/PowerPoint.

EXPERIMENT – 6: LOCATION, BUILDING, AND FACILITY DESIGN

Analyzing criteria for incubator location, physical space requirements, and service/facility design. Create layout simulations using MS Excel or PowerPoint.

EXPERIMENT – 7: INCUBATOR FINANCIAL PLANNING

Estimating investment costs, financial projections, and sources of funds for TBI setup. Preparing budget sheets and funding models in Excel.

EXPERIMENT – 8: INCUBATOR BENEFITS & VALUE CREATION

Analyzing and presenting incubator benefits to startups: mentorship, networking, funding access. Creating visual dashboards to represent benefits.

EXPERIMENT – 9: TBI ORGANIZATION AND MANAGEMENT

Designing incubator organization structure, training management teams, and roles/responsibilities mapping. Visualize hierarchy charts in Excel or PowerPoint.

EXPERIMENT – 10: MARKETING AND TENANT SELECTION

Strategies to market incubator services and select tenant startups. Simulate tenant scoring and ranking using Excel decision matrices.

EXPERIMENT – 11: TBI OPERATIONS AND EXIT POLICY

Designing operational workflows, tracking tenant progress, counseling, mentoring, and defining exit policies. Flowchart creation in Excel/PowerPoint.

EXPERIMENT – 12: TBI PERFORMANCE ASSESSMENT IN INDIA

Analyze TBIs by age, management, sponsors, focus area, staff strength, physical space, and outputs. Compare Institute-promoted vs Industry-promoted vs Sector-focused TBIs using Excel dashboards.

EXPERIMENT – 13: GOVERNMENT INITIATIVES AND R&D CONTRIBUTIONS

Track R&D input/output contribution of TBIs related to government programs. Visualize trends, grants, and patent outputs using Excel/Power BI.

EXPERIMENT – 14: GLOBAL PERSPECTIVE AND OUTCOME ASSESSMENT

Study global TBI types, classification, functions, and performance assessment. Simulate TBI-led business incubation processes and measure outcomes/achievements in Excel or Power BI dashboards.

V. SOFTWARE / TOOLS:

1. Microsoft Excel: <https://www.microsoft.com/en-us/microsoft-365/excel>
2. Google Sheets: <https://www.google.com/sheets/about/>
3. PowerPoint: <https://www.microsoft.com/en-us/microsoft-365/powerpoint>
4. Power BI: <https://powerbi.microsoft.com/>
5. Tableau: <https://www.tableau.com/>

VI. TEXTBOOKS:

1. Barringer, B. R., & Ireland, R. D., *Entrepreneurship: Successfully Launching New Ventures*, Pearson, 6th edition, 2018.
2. Taneja, S., *Technology Business Incubation in India*, Wiley India, 2017.
3. Hackett, S. M., & Dilts, D. M., *A Systematic Review of Business Incubation Research*, Journal of Technology Transfer, 2004.

VII. REFERENCE BOOKS:

1. OECD, *Science, Technology and Industry Outlook*, OECD Publishing, 2019.
2. Phan, P. H., Siegel, D. S., & Wright, M., *Science Parks and Incubators: Industry Impacts*, Research Policy, 2005.
3. Pauwels, C., Clarysse, B., Wright, M., & Van Hove, J., *Understanding a New Generation Incubator*, Technovation, 2016.

VIII. WEB REFERENCES:

1. <https://www.startupindia.gov.in>
2. <https://www.niti.gov.in>
3. <https://www.incubationnetwork.in>



INSTITUTE OF AERONAUTICAL ENGINEERING

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Dundigal - 500 043, Hyderabad, Telangana

COURSE CONTENT

MAIN PROJECT AND VIVA VOCE								
IV Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE69	Core	L	T	P	C	CIA	SEE	Total
		-	-	9	4	-	100	100
Contact Classes: Nil	Tutorial Classes: Nil	Practical Classes: 45			Total Classes: 45			
Prerequisite: All the Courses								
SDGs Mapped: SDG 8 (Decent Work & Economic Growth), SDG 9 (Industry, Innovation and Infrastructure)								

I. COURSE OVERVIEW:

The aim of this course begins with an emphasis on project planning and formulation, guiding students in selecting relevant and challenging topics aligned with their specialization. Participants delve into extensive literature reviews, market analyses, and feasibility studies to develop a robust foundation for their projects. The course emphasizes the importance of critical thinking, creativity, and innovation in approaching business challenges.

II. OBJECTIVES:

The students will try to learn:

- I. The specializations to solve real-world business problems.
- II. Analytical, research, and decision-making skills through a comprehensive applied project.
- III. The functional concepts from finance, marketing, operations, HR, and strategy for business analysis.
- IV. The communication, presentation, and interpersonal skills for professional and organizational contexts.
- V. The problem-solving abilities by proposing actionable solutions or strategies.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Conduct applied research and gather relevant data for business decision-making.
- CO2 Analyze complex business situations using quantitative and qualitative tools.
- CO3 Synthesize knowledge from multiple MBA disciplines to provide holistic solutions.
- CO4 Prepare a professional project report and present findings effectively.
- CO5 Evaluate business strategies, models, and interventions for feasibility and impact.
- CO6 Demonstrate professional competence, ethical awareness, and critical thinking during viva voce.

IV. INTRODUCTION:

In its effort towards contribution of knowledge generation and dissemination the program is expected to

1. Enhance employability by upgrading their professional and managerial skills
2. Nurture creativity and entrepreneurship by gaining business acumen through case studies
3. Educate how to communicate and negotiate effectively to achieve organizational and individual goals.
4. Instill sensitivity among the students to become thought provoking leaders to face the challenges of a dynamically unstable environment.
5. Sensitize them to understand ethical issues and dilemmas that businesses often face.

V. REPORT

A detailed report of the project and observation should be submitted.

MALPRACTICES RULES

DISCIPLINARY ACTION FOR / IMPROPER CONDUCT IN EXAMINATIONS

S..No	Nature of Malpractices/Improper conduct	Punishment
	<i>If the candidate:</i>	
1. (a)	Possesses or keeps accessible in examination hall, any paper, note book, programmable calculators, cell phones, pager, palm computers or any other form of material concerned with or related to the subject of the examination (theory or practical) in which he is appearing but has not made use of (material shall include any marks on the body of the candidate which can be used as an aid in the subject of the examination)	Expulsion from the examination hall and cancellation of the performance in that subject only.
(b)	Gives assistance or guidance or receives it from any other candidate orally or by any other body language methods or communicates through cell phones with any candidate or persons in or outside the exam hall in respect of any matter.	Expulsion from the examination hall and cancellation of the performance in that subject only of all the candidates involved. In case of an outsider, he will be handed over to the police and a case is registered against him.
2.	Has copied in the examination hall from any paper, book, programmable calculators, palm computers or any other form of material relevant to the subject of the examination (theory or practical) in which the candidate is appearing.	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted to appear for the remaining examinations of the subjects of that Semester / year. The Hall Ticket of the candidate is to be cancelled and sent to the Controller of Examinations.
3.	Impersonates any other candidate in connection with the examination.	The candidate who has impersonated shall be expelled from examination hall. The candidate is also debarred and forfeits the seat. The performance of the original candidate, who has been impersonated, shall be cancelled in all the subjects of the examination (including practical and project work) already appeared and shall not be allowed to appear for examinations of the remaining subjects of that semester/year. The candidate is also debarred for two consecutive semesters from class work and all semester end examinations. The continuation of the course by the candidate is subject to the academic regulations in connection with forfeiture of seat. If the imposter is an outsider, he will be handed over to the police and a case is registered against him.

4.	Smuggles in the Answer book or additional sheet or takes out or arranges to send out the question paper during the examination or answer book or additional sheet, during or after the examination.	Expulsion from the examination hall and cancellation of performance in that subject and all the other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The candidate is also debarred for two consecutive semesters from class work and all semester end examinations. The continuation of the course by the candidate is subject to the academic regulations in connection with forfeiture of seat.
5.	Uses objectionable, abusive or offensive language in the answer paper or in letters to the examiners or writes to the examiner requesting him to award pass marks.	Cancellation of the performance in that subject.
6.	Refuses to obey the orders of the Controller of Examinations/Additional Controller of Examinations/any officer on duty or misbehaves or creates disturbance of any kind in and around the examination hall or organizes a walk out or instigates others to walk out, or threatens the COE or any person on duty in or outside the examination hall of any injury to his person or to any of his relations whether by words, either spoken or written or by signs or by visible representation, assaults the COE or any person on duty in or outside the examination hall or any of his relations, or indulges in any other act of misconduct or mischief which result in damage to or destruction of property in the examination hall or any part of the Institute premises or engages in any other act which in the opinion of the officer on duty amounts to use of unfair means or misconduct or has the tendency to disrupt the orderly conduct of the examination.	In case of students of the college, they shall be expelled from examination halls and cancellation of their performance in that subject and all other subjects the candidate(s) has (have) already appeared and shall not be permitted to appear for the remaining examinations of the subjects of that semester/year. The candidates also are debarred and forfeit their seats. In case of outsiders, they will be handed over to the police and a police case is registered against them.
7.	Leaves the exam hall taking away answer script or intentionally tears of the script or any part thereof inside or outside the examination hall.	Expulsion from the examination hall and cancellation of performance in that subject and all the other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The candidate is also debarred for two consecutive semesters from class work and all semester end examinations. The continuation of the course by the candidate is subject to the academic regulations in connection with forfeiture of seat.
8.	Possess any lethal weapon or firearm in the examination hall.	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The candidate is also debarred and forfeits the seat.

9.	If student of the college, who is not a candidate for the particular examination or any person not connected with the college indulges in any malpractice or improper conduct mentioned in clause 6 to 8.	Student of the colleges expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The candidate is also debarred and forfeits the seat. Person(s) who do not belong to the College will be handed over to police and, a police case will be filed against them.
10.	Comes in a drunken condition to the examination hall.	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year.
11.	Copying detected on the basis of internal evidence, such as, during valuation or during special scrutiny.	Cancellation of the performance in that subject and all other subjects the candidate has appeared including practical examinations and project work of that semester/year examinations.
12.	If any malpractice is detected which is not covered in the above clauses 1 to 11 shall be reported to the University for further action to award suitable punishment.	

FREQUENTLY ASKED QUESTIONS AND ANSWERS ABOUT AUTONOMY

1 Who grants Autonomy? UGC, Govt., AICTE or University

In case of Colleges affiliated to a university and where statutes for grant of autonomy are ready, it is the respective University that finally grants autonomy but only after concurrence from the respective state Government as well as UGC. The State Government has its own powers to grant autonomy directly to Govt. and Govt. aided Colleges.

2 Shall IARE award its own Degrees?

No. Degree will be awarded by Jawaharlal Nehru Technological University, Hyderabad with a mention of the name IARE on the Degree Certificate.

3 What is the difference between a Deemed University and an Autonomy College?

A Deemed University is fully autonomous to the extent of awarding its own Degree. A Deemed University is usually a Non-Affiliating version of a University and has similar responsibilities like any University. An Autonomous College enjoys Academic Autonomy alone. The University to which an autonomous college is affiliated will have checks on the performance of the autonomous college.

4 How will the Foreign Universities or other stake – holders know that we are an Autonomous College?

Autonomous status, once declared, shall be accepted by all the stake holders. The Govt. of Telangana mentions autonomous status during the First Year admission procedure. Foreign Universities and Indian Industries will know our status through our website.

5 What is the change of Status for Students and Teachers if we become Autonomous?

An autonomous college carries a prestigious image. Autonomy is actually earned out of our continued past efforts on academic performances, our capability of self- governance and the kind of quality education we offer.

6 Who will check whether the academic standard is maintained/improved after Autonomy? How will it be checked?

There is a built in mechanism in the autonomous working for this purpose. An Internal Committee called Academic Programme Evaluation Committee, which will keep a watch on the academics and keep its reports and recommendations every year. In addition the highest academic council also supervises the academic matters. The standards of our question papers, the regularity of academic calendar, attendance of students, speed and transparency of result declaration and such other parameters are involved in this process.

7 Will the students of IARE as an Autonomous College qualify for University Medals and Prizes for academic excellence?

No. IARE has instituted its own awards, medals, etc. for the academic performance of the students. However for all other events like sports, cultural on co-curricular organized by the University the students shall qualify.

8 Can IARE have its own Convocation?

No. Since the University awards the Degree the Convocation will be that of the University, but there will be Graduation Day at IARE.

9 Can IARE give a provisional degree certificate?

Since the examinations are conducted by IARE and the results are also declared by IARE, the college sends a list of successful candidates with their final Grades and Grade Point Averages including CGPA to the University. Therefore with the prior permission of the University the college will be entitled to give the provisional certificate.

10 Will Academic Autonomy make a positive impact on the Placements or Employability?

Certainly, the number of students qualifying for placement interviews is expected to improve, due to rigorous and repetitive classroom teaching and continuous assessment. Also the autonomous status is more responsive to the needs of the industry. As a result therefore, there will be a lot of scope for industry oriented skill development built-in into the system. The graduates from an autonomous college will therefore represent better employability.

11 What is the proportion of Internal and External Assessment as an Autonomous College?

Presently, it is 70 % external and 30% internal. As the autonomy matures the internal assessment component shall be increased at the cost of external assessment.

12 Is it possible to have complete Internal Assessment for Theory or Practical's?

Yes indeed. We define our own system. We have the freedom to keep the proportion of external and internal assessment component to choose.

13 Why Credit based Grade System?

The credit based grade system is an accepted standard of academic performance the world over in all Universities. The acceptability of our graduates in the world market shall improve.

14 What exactly is a Credit based Grade System?

The credit based grade system defines a much better statistical way of judging the academic performance. One Lecture Hour per week of Teaching Learning process is assigned One Credit. One hour of laboratory work is assigned half credit. Letter Grades like A, B, C, D, etc. are assigned for a Range of Marks. (e.g. 91% and above is A+, 80 to 90 % could be A etc.) in Absolute Grading System while grades are awarded by statistical analysis in relative grading system. We thus dispense with sharp numerical boundaries. Secondly, the grades are associated with defined Grade Points in the scale of 1 to 10. Weighted Average of Grade Points is also defined Grade Points are weighted by Credits and averaged over total credits in a Semester. This process is repeated for all Semesters and a CGPA defines the Final Academic Performance

15 What are the norms for the number of Credits per Semester and total number of Credits for UG/PG program?

These norms are usually defined by UGC or AICTE. Usually around 25 Credits per semester is the accepted norm.

16 What is a Semester Grade Point Average (SGPA)?

The performance of a student in a semester is indicated by a number called SGPA. The SGPA is the weighted average of the grade points obtained in all the courses registered by the student during the semester.

$$SGPA = \frac{\sum_{i=1}^n (C_i G_i)}{\sum_{i=1}^n C_i}$$

Where, C_i is the number of credits of the i^{th} course and G_i is the grade point scored by the student in the i^{th} course and I represent the number of courses in which a student registered in the concerned semester. SGPA is rounded to two decimal places.

17 What is a Cumulative Grade Point Average (CGPA)?

An up-to-date assessment of overall performance of a student from the time of his first registration is obtained by calculating a number called CGPA, which is weighted average of the grade points obtained in all the courses registered by the students since he entered the Institute.

$$CGPA = \frac{\sum_{j=1}^n (C_j S_j)}{\sum_{j=1}^n C_j}$$

Where, S_i is the SGPA of the i^{th} semester and C_i is the total number of credits in that semester and j represent the number of courses in which a student's is registered up to the semester. CGPA is rounded to two decimal places.

18 Is there any Software available for calculating Grade point averages and converting the same in to Grades?

Yes, the institute has its own MIS software for calculation of SGPA, CGPA, etc.

19 Will the teacher be required to do the job of calculating SGPAs etc. and convert the same into Grades?

No. The teacher has to give marks obtained out of whatever maximum marks as it is. Rest is all done by the computer.

20 Will there be any Revaluation or Re-Examination System?

No. There will double valuation of answer scripts. There will be a Makeup Examination after a reasonable preparation time after the End Semester Examination for specific cases mentioned in the Rules and Regulations. In addition to this, there shall be a 'summer term' (compressed term) followed by the End Semester Exam, to save the precious time of students.

21 How fast Syllabi can be and should be changed?

Autonomy allows us the freedom to change the syllabi as often as we need.

22 Will the Degree be awarded on the basis of only final year performance?

No. The CGPA will reflect the average performance of all the semester taken together.

23 What are Statutory Academic Bodies?

Governing Body, Academic Council, Examination Committee and Board of Studies are the different statutory bodies. The participation of external members in everybody is compulsory. The institute has nominated professors from IIT, NIT, University (the officers of the rank of Pro-vice Chancellor, Deans and Controller of Examinations) and also the reputed industrialist and industry experts on these bodies.

24 Who takes Decisions on Academic matters?

The Governing Body of institute is the top academic body and is responsible for all the academic decisions. Many decisions are also taken at the lower level like Boards of Studies. Decisions taken at the Board of Studies level are to be ratified at the Academic Council and Governing Body.

25 What is the role of Examination committee?

The Examinations Committee is responsible for the smooth conduct of internal, End Semester and make up Examinations. All matters involving the conduct of examinations, spot valuations, tabulations and preparation of Grade Cards etc. fall within the duties of the Examination Committee.

26 Is there any mechanism for Grievance Redressal?

The institute has grievance redressal committee, headed by Dean - Student affairs and Dean - IQAC.

27 How many attempts are permitted for obtaining a Degree?

All such matters are defined in Rules and Regulation

28 Who declares the result?

The result declaration process is also defined. After tabulation work wherein the SGPA, CGPA and final Grades are ready, the entire result is reviewed by the Moderation Committee. Any unusual deviations or gross level discrepancies are deliberated and removed. The entire result is discussed in the Examinations and Result Committee for its approval. The result is then declared on the institute notice boards as well put on the web site and Students Corner. It is eventually sent to the University.

29 Who will keep the Student Academic Records, University or IARE?

It is the responsibility of the Dean, Academics of the Autonomous College to keep and preserve all the records.

30 What is our relationship with the JNT University?

We remain an affiliated college of the JNT University. The University has the right to nominate its members on the academic bodies of the college.

31 Shall we require University approval if we want to start any New Courses?

Yes, it is expected that approvals or such other matters from an autonomous college will receive priority.

32 Shall we get autonomy for Doctoral Programs also?

No, presently we have autonomous status only for UG and PG programs.



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal, Hyderabad - 500 043

UNDERTAKING BY STUDENT/PARENT

“To make the students attend the classes regularly from the first day of starting of classes and be aware of the College regulations, the following Undertaking Form is introduced which should be signed by both student and parent. The same should be submitted to the Dean of Academics”.

I, Mr./Ms. -----joining I semester for the academic year 2025-26 in Institute of Aeronautical Engineering, Hyderabad, do hereby undertake and abide by the following terms, and I will bring the ACKNOWLEDGEMENT duly signed by me and my parents and submit it to the Dean of Academic.

1. I will attend all the classes as per the timetable from the starting day of the semester specified in the institute Academic Calendar. In case, I do not turn up even after two weeks of starting of classes, I shall be ineligible to continue for the current academic year.
2. I will be regular and punctual to all the classes (theory/practical/drawing) and secure attendance of not less than 75% in every course as stipulated by Institute. I am fully aware that an attendance of less than 65% will makes me lose one year.
3. I will compulsorily follow the dress code prescribed by the college.
4. I will conduct myself in a highly disciplined and decent manner both inside the classroom and on campus, failing which suitable action may be taken against me as per the rules and regulations of the institute.
5. I will concentrate on my studies without wasting time in the Campus/Hostel/Residence and attend all the tests to secure more than the minimum prescribed Class / Sessional Marks in each course. I will submit the assignments given in time to improve my performance.
6. I will not use Mobile Phone in the institute premises and also, I will not involve in any form of ragging inside or outside the campus. I am fully aware that using mobile phone to the institute premises is not permissible and involving in Ragging is an offence and punishable as per JNTUH/UGC rules and the law.
7. I will pay tuition fees, examination fees and any other dues within the stipulated time as required by the Institution / authorities, failing which I will not be permitted to attend the classes.
8. I will not cause or involve in any sort of violence or disturbance both within and outside the college campus.
9. If I absent myself continuously for 3 days, my parents will have to meet the HOD concerned/Principal.
10. I hereby acknowledge that I have received a copy of MB25 academic regulations, syllabus copy and hence, I shall abide by all the rules specified in it.

ACKNOWLEDGEMENT

I have carefully gone through the terms of the undertaking mentioned above and I understand that following these are for my/his/her own benefit and improvement. I also understand that if I/he/she fail to comply with these terms, shall be liable for suitable action as per Institute/JNTUH/AICTE/UGC rules and the law. I undertake that I/he/she will strictly follow the above terms.

Signature of Student with Date

Signature of Parent with Date
Name and Address with Mobile Number