SCHEME AND SYLLABUS 2023 ONWARDS

(OUTCOME BASED EDUCATION)

For

MBA (WATER AND RIVER MANAGEMENT)

UNIVERSITY OF KERALA

THIRUVANANTHAPURAM - 695034

Program Regulations and Syllabus - For those who joined in 2023– 24 onwards

1. **PROGRAM:** Master of Business Administration (**MBA**)

2. **PROGRAMMES OFFERED:**
   A.MBA (WATER AND RIVER MANAGEMENT)

3. **DURATION**: Two years Full Time (each year having Two Semesters)

4. **MEDIUM OF INSTRUCTION AND EXAMINATIONS**: English only.

5. **ELIGIBILITY FOR ADMISSION**:

   A. The candidate should have passed the degree from any Indian University, under the regular stream, recognized by the University of Kerala and shall be in the 10+2+3 pattern (or in 10+2+4 pattern). In all the cases the student should have passed the degree examination with not less than 50% marks/equivalent grade (no rounding off allowed)in Part III /core plus complimentary in BA, B.Sc., B.Com. etc., or 50% marks/equivalent grade (no rounding off allowed) in aggregate in case of B.E/ B.Tech, B.Sc. (Agri.) and other 4/5 year degree courses. The candidates, who have passed MA/M.Sc./M. Comor any other PG Degree recognized by the University of Kerala with 50% of marks/equivalent grade in aggregate, are also eligible for admission. SC/ST, SEBC and differently abled candidates shall be given relaxation as per University rules.
   B. The candidates should possess a valid score from any one of the entrance examinations conducted by K-MAT, C-MAT or CAT. The scores obtained during the previous academic year alone be considered.
   C. The provisional rank list for admission to the MBA programme will be prepared based on the score obtained by the candidate in the Entrance Test (80% weightage), Group Discussion (10% weightage) and Interview (10% weightage).
   D. Ten percentage of seats will be reserved for the Government sponsored officials from the state and Central Government. The candidates under this category are exempted from Entrance test but they have to appear Group Discussion and Interview.
   E. There will be a representative of the University in the Group discussion and Interview held at the colleges. Dean, Faculty of Management studies will forward the list of representatives to the University and upon approval, the University will intimate colleges.
   F. Candidates who have passed their Degree or Master's Degree from other Universities should produce the Eligibility Certificate issued by the University of Kerala (Course Equivalency Certificate) at the time of admission. Only those candidates who produce eligibility certificate and mark lists of Degree or Master's Degree from *other universities* at the time of counseling, will be considered for admission.
   G. Reservation of seats is as per the Government of Kerala and University of Kerala norms from time to time.

6. PROGRAMME EDUCATIONAL OBJECTIVES (PEOs)

Upon completing the degree, the student will be able to:

PEO - 1 Analyse social and environmental aspects with professional values, ethics and equity to transform the learned and acquired knowledge, skills, and expertise to the community

PEO - 2 Involve in lifelong learning to adapt educational needs in a changing world to maintain their competency and to contribute to the advancement of knowledge in a multi-disciplinary environment.

PEO - 3 Learn to adapt to a rapidly changing environment with learned and applied new Skills

PEO - 4 This programme will equip the candidate to be socially responsible and value driven citizens committed to sustainable development.

PEO - 5 To inculcate the spirit of teamwork, integrity, professional values so that the student will be able to perform effectively in an organizational set up or on their own entrepreneurial ventures

7. PROGRAMME OUTCOMES (POs)

Number	Programme Outcome
PO – 1	Demonstrate the ability to perform professionally in organizations or start-ups.
PO – 2	Perform in a social, cultural, and ethical responsibility as an individual or as a member of a team in a professional manner.
PO – 3	Exude positive attitude in all the sectors and are willing to support any professional initiatives with positive mind-set.
PO – 4	Adapt to sustain in emerging era and constantly upgrade skills towards independent and lifelong learning
PO – 5	Communicate complex concepts with professionalism by adapting appropriate resources and modern tools
PO – 6	Able to document their participation and contribution to student organizations, business or consulting projects, internship opportunities or other initiatives.
PO – 7	Able to conceptualize, organize and resolve complex business problems or issues by using the resources available under their discretion
PO – 8	Understand the impact of the professional management solutions in societal and environmental contexts and demonstrate the knowledge of and need for sustainable development.

PO – 9 Apply ethical principles and commit to professional ethics and responsibilities and norms of the management practice.

PO – 10 Able to identify, assess and shape entrepreneurial opportunities and to evaluate their potential for business success.

8. PROGRAMME SPECIFIC OUTCOMES (PSOs)

Number Programme Specific Outcomes

PSO 1 Apply the knowledge gained during the program to identify, Formulate and solve real life problems to meet the core competency with continuous up

PSO 2 Apply the knowledge of ethical and management principles required to work in a team with stewardship of the society.

PSO 3 Consolidate the acquired theoretical knowledge into practical skills and wisdom.

PSO 4 Discharge his/her social responsibility to the community at large and participate in volatile and disaster situations.

9. PROGRAMME STRUCTURE:

SEMESTER - I

Part	Course Code	Name of the course	Int	Ext	Tot	Cr
Core 1	MGT 511	PRINCIPLES & PRACTICES OF MANAGEMENT	25	75	100	4
Core 2	MGT 512	ORGANISATIONAL BEHAVIOUR	25	75	100	4
Core 3	MGT 513	DOMESTIC BUSINESS ENVIRONMENT AND VALUE BASED MANAGEMENT	25	75	100	4
Core 4	MGT 514	ACCOUNTING FOR MANAGERS	25	75	100	4
Core 5	MGT 515	MANAGERIAL ECONOMICS	25	75	100	4
Core 6	MGT 516	QUANTITATIVE TECHNIQUES	25	75	100	4
Core 7	MGT 517	ENVIRONMENTAL MANAGEMENT	25	75	100	4
		Total for semester – I	**175**	**525**	**700**	**28**

		SEMESTER - II				
Part	**Course Code**	**Name of the course**	**Int**	**Ext**	**Tot**	**Cr**
Core 8	MGT 521	EXECUTIVE BUSINESS COMMUNICATION	25	75	100	4
Core 9	MGT 522	MARKETING MANAGEMENT	25	75	100	4
Core 10	MGT 523	OPERATIONS RESEARCH	25	75	100	4
Core 11	MGT 524	BUSINESS LAW	25	75	100	4
Core 12	MGT 525	PRODUCTION AND OPERATIONS MANAGEMENT	25	75	100	4
Core 13	MGT 526	RESEARCH METHODOLOGY	25	75	100	4
Core 14	MGT 527	FINANCIAL MANAGEMENT	25	75	100	4
Core 15	MGT 528	MANAGING HUMAN RESOURCES	25	75	100	4
		Total for semester – II	**200**	**600**	**800**	**32**

SEMESTER – III

Part	**Course Code**	**Name of the course**	**Int**	**Ext**	**Tot**	**Cr**
Core 16	MGT 531	INNOVATION MANAGEMENT & ENTREPRENEURSHIP	25	75	100	4
Core 17	MGT 532	DATA ANALYTICS	25	75	100	4
Core 18	MGT 533	INFORMATION SYSTEMS AND CYBER SECURITY	25	75	100	4
ELECTIVE 1			25	75	100	3
ELECTIVE 2			25	75	100	3
ELECTIVE 3			25	75	100	3
ELECTIVE 4			25	75	100	3

ELECTIVE 5			25	75	100	3
Core 19	MGT 534	INTERNSHIP/MINI PROJECT	50	50	100	2
		Total for semester – III	**250**	**650**	**900**	**29**

SEMESTER - IV

Part	Course Code	Name of the course	Int	Ext	Tot	Cr
Core 20	MGT 541	STRATEGIC MANAGEMENT	25	75	100	4
ELECTIVE 6			25	75	100	3
ELECTIVE 7			25	75	100	3
ELECTIVE 8			25	75	100	3
Core 21	MGT 542	SUMMER PROJECT		150	150	6
Core 22	MGT 543	COMPREHENSIVE VIVA VOCE		50	50	2
		Total for semester –IV	**100**	**500**	**600**	**21**
		Total for all semesters	**675**	**2225**	**3000**	**110**
(50% in total for a pass in a course, no internal minimum, 38 marks required for a pass in external examination out of 75) . For internships separate minimum (50%) for Internal and external						

The list of electives offered during the III and IV semesters are as follows

A. WATER AND RIVER MANAGEMENT

Course Code	III Semester	CC	IV Semester
MGTWRM01	GLOBAL WATER SYSTEM AND MANAGEMENT	MGTWRM08	URBAN WATER MANAGEMENT
MGTWRM02	HYDROLOGICAL CYCLE AND RIVER BASIN MANAGEMENT	MGTWRM09	WATER QUALITY AND WATER MANAGEMENT TECHNOLOGIES

MGTWRM03	WATER USE AND CHANGING TREND OF WATER MANAGEMENT	MGTWRM10	WATER MANAGEMENT AND PARTICIPATION
MGTWRM04	SURFACE WATER MANAGEMENT	MGTWRM11	GEO-INFORMATICS AND WATER RESOURCES MANAGEMENT
MGTWRM05	GROUND WATER MANAGEMENT	MGTWRM12	WATER GOVERNANCE
MGTWRM06	LAND USE AND WATER MANAGEMENT	MGTWRM13	LAB COURSE- GEO-INFORMATICS
MGTWRM07	CLIMATE CHANGE AND WATER MANAGEMENT		

10. INTERNAL EVALUATION:

For the Theory Courses, the break-up of marks shall be as follows:

INTERNAL EXAMINATIONS	10 MARKS
SEMINARS	5 MARKS
ASSIGNMENTS	5 MARKS
ATTENDANCE/CLASS PARTICIPATION	5 MARKS
TOTAL	**25 MARKS**

A student will be allowed to write the end semester examination only if he/she obtains the minimum attendance stipulated by the University.

11. EXTERNAL EVALUATION:

An external evaluation of 75 marks will be conducted by the University in all four semesters for the courses excepting the MOOC, Project work and Comprehensive viva.

The pattern of examination:

FOR PAPERS OTHER THAN MGT 514, MGT 515, MGT 516, MGT 523, MGT 525, MGT 526, MGT 527 THE FOLLOWING PATTERN TO BE FOLLOWED:

PART A

5 QUESTIONS TO BE ANSWERED. ONE QUESTION EACH FROM EACH UNIT TO BE INCLUDED. (5 x 4 = 20 MARKS)

PART B

5 QUESTIONS EACH FROM EACH UNIT TO BE ASKED. 3 QUESTIONS TO BE ANSWERED (3 x 10=30 MARKS)

PART C

1 CASE STUDY/ RESEARCH ORIENTED QUESTION (25 MARKS)

IN THE CASE OF MGT 514, MGT 515, MGT 516, MGT 523, MGT 525, MGT 526, MGT 527 SUBJECTS:

PART A

5 QUESTIONS TO BE ANSWERED. ONE QUESTION EACH FROM EACH UNIT TO BE INCLUDED. (5 x 5 = 25 MARKS)

PART B

5 QUESTIONS TO BE ANSWERED WITH INTERNAL CHOICE. ONE QUESTION EACH FROM EACH UNIT TO BE ASKED. (5 x 10=50 MARKS)
MINIMUM OF THREE PROBLEMS TO BE GIVEN IN PART B

Requirement for a Pass

50% in total for a pass in a course, no internal minimum (Other than for Internships), 38 marks required for a pass in external examination out of 75. For Internships, Separate minimum of 50% required for both internal and external evaluation /viva voce.

12. MOOC:

According to the guidelines of UGC, the students are encouraged to avail this option of enriching by enrolling themselves in the MOOC provided by various portals such as SWAYAM, NPTEL, etc. As per University Grants Commission (UGC) notification

published in the gazette of India about UGC (Credit Framework for Online Learning Courses through SWAYAM) Regulation, 2016 on 19th July 2016, The Massive Open Online Course (MOOC) through SWAYAM platform is compulsory. A student has to compulsorily undertake 2 MOOC Courses, One in each year, through the Swayam/NPTEL platform and successfully clear the papers for the course thus selected and it should be in the area related to their specialization but with focus on employability. The institute shall recommend courses in the first year and the student shall be given opportunity to select a course in the second year, with the advice of his mentor or faculty. The students must compulsorily submit the certificates of MOOC courses that they have opted during the comprehensive viva-voce examination at the end of the fourth semester. If a student fails to undertake the courses or has successfully done only one course, they will not be permitted to appear for the Comprehensive Viva Voce Examination. The University will constitute a Board of Examiners for conducting the comprehensive viva-voce. Students securing less than 25 marks in the comprehensive viva-voce out of 50 & those who don't have the certificates of MOOC Courses will have to repeat the same during the next year. Such students will be given a total of three chances to clear the same. The details can be had from http://ugcmoocs.inflibnet.ac.in/ugcmoocs/.

Note

It's the student's responsibility to ensure that they register for the MOOC Course, they complete the MOOC course, they appear and pass the exams for the course they have enrolled and handover the certificate to the institute. The institute shall give charge of MOOC Courses to a faculty and ensure that students are joining for courses.

13. **PROJECT WORK**: Details are given along with the syllabus in Annexure

14. **TRANSITORY REGULATIONS:**

Wherever there has been a change of syllabi, examinations based on the existing syllabus will be conducted for two consecutive years after implementation of the new syllabus in order to enable the students to clear the arrears. Beyond that, the students will have to take up their examinations in equivalent subjects, as per the new syllabus, on the recommendation of the Chairman, BOS in Business Management (PG) endorsed by the Dean, Faculty of Management studies concerned.

15. Any other regulations not found in this, the University's broad regulations will come into force.

16. Notwithstanding anything contained in the above pages as Rules and Regulations governing the Two Year Master's Programme, the Syndicate is vested with the powers to revise them from time to time on the recommendations of the Academic Council.

University of Kerala

Master of Business Administration Syllabus

Semester 1:

I SEMESTER:

MGT 511 PRINCIPLES & PRACTICES OF MANAGEMENT
MGT 512 ORGANISATIONAL BEHAVIOUR
MGT 513 DOMESTIC BUSINESS ENVIRONMENT AND VALUE BASED MANAGEMENT
MGT 514 ACCOUNTING FOR MANAGERS
MGT 515 MANAGERIAL ECONOMICS
MGT 516 QUANTITATIVE TECHNIQUES.
MGT 517 ENVIRONMENTAL MANAGEMENT

MGT 511: PRINCIPLES & PRACTICES OF MANAGEMENT

Semester **: I**

Course Code **: MGT 511**

Credit **: 4**

Course **: PRINCIPLES & PRACTICES OF MANAGEMENT**

Aim **:**

- To provide an insight into the principles of management and the practical aspects that is connected to the same.
- To provide an outline of concepts,
- To provide an understanding of modern organizations in terms of the management of people,

Course Objective : To understand (a) How do organizations function and why? (b) What sort of problems do they face, (c) why, and how do they cope with them? (d) How do they influence individual behavior and vice versa?

Teaching Strategy:
Lecture Sessions will be supplemented by project based (tutorial) assignments. Feedback will be given orally during tutorials. Written feedback is given for both individual and group assignments

Study:	Lect**:(L)** Sem**/(T)**	Library/	Directed(**DS**) Other:	Formal	Total
Hours:	25 Tut: 10	Pract: 10	Study: 50 05	Exams: 2	100

Key Graduate Attributes								
Academic and professional Knowledge	**Communication**	**Team Work and Leadership**	**IT Literacy**	**Global Perspective and Cross Cultural Adaptability**	**Critical and Analytical thinking**	**Social Responsibility and Ethics**	**Entrepreneurship Skills**	**Life - long Learning**
√	√	√	√	√	√	√	**No**	√

Course Outcomes:

a) Knowledge-

By the end of this course, students should be better able to

- Understand what management is and why it is important
- Understand the changes in theories about how managers should behave to motivate and control employees
- Understand the nature of managerial decision making
- Identify the main steps of the planning process and explain the relationship between planning and strategy
- Describe the types of organizational structures managers can design, and explain why they choose one structure over another
- Explain what leadership is and what makes for an effective leader

Skills-

Critical Thinking Skills - to include creative thinking, innovation, inquiry and analysis, evaluation and syntheses of information

Communication Skills – to include effective development, interpretation, and expression of ideas through written, oral, and visual communication

Teamwork – to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal

Decision Making Skills – Collection, evaluation, and syntheses of information

Outline Syllabus:

UNIT I

Management concepts – Definition, Manager – Management – Management as a fundamental Process, Management process in detail, The input – Process – Output approach, Qualities of Good Managers, Roles of Managers, The **Evolution of Management Thought** - "Early **Management Thought**," "The Scientific **Management** Era," "The Social Person Era," and "The Modern Era." "Early **Management Thought**".

UNIT II

Contributions of F.W. Taylor - Henry Fayol - Behavioral School of Management Approach - Styles of management - European - American - Japanese – Indian. Taylor - Management Philosophy - "Scientific Management", Fayol - General theory of administration.

UNIT III

Basic functions in Management – PODSCORB – Henry Fayol's Study – Management Functions - POLC - Planning , Organising, Leading & Controlling . Planning – Definition – Types of Planning on the basis of Nature, Time and Use Nature - Operational Planning, Strategic Planning, Contingency Planning / Time - Long Term , Intermediate, Short Term Plans / Use - Single Plan, Standing Plan, Planning Process – Analysis of the Environment – SWOT Matrix as a planning tool, Organizing – Definition, Importance of organizing, Organisational Structure – Purpose, Types .

UNIT IV

Leading –Managing, Motivating & Directing People, Control – Definition, Purpose, Types - feed forward **controls**, concurrent **controls** and feedback **controls,** Motivation – Definition, Frameworks of Motivation, Types, Theories of motivation Content & Process Theories, Leadership – Definition, Theories and Models of leadership, Types of Leadership, Qualities of a good leader, leaders role in team development.

UNIT V

Decision Making – Definition - Factors affecting decision making process, organizational culture -Hofstede's Cultural Dimensions Theory- Managers Challenges in the 21st century , The Changing role with the advent of technology.

References

1. Koontz , H. and Weihrich,H. (2015). Essentials of Management 10th Edition, New Delhi, McGraw-Hill Companies.
2. Chandrasekar KS, AM Sumi, Ashadevi J and M Al Ameen (2019), History of Management Thought, Vijaynicole imprints.
3. Srinivasan, R. and Chunawalla,S.A. (2014). Principles of Management, Mumbai, Himalaya Publishing
4. Chandan, J.S. (2016). Principles of Management, New Delhi, Vikas Publications.
5. Stoner, J.A., Freeman, R.E. and Gilbert, D.R. (2018) .Management 6th Edition. New York, Pearson Education.
6. Drucker,P.F. (2001). Management challenges for the 21st Century, New York, Harper Collins.
7. www.swayam.gov.in

Additional Reading:

- Vikalpa , Journal of the Indian Institute of Management
- Harvard Business Review
- Economic & Political Weekly
- The Effective Executive, Peter Drucker (Harper Business, 2006)
- Good to Great: Why Some Companies Make the Leap and Others Don't by James C. Collins (Harper Collins, 2001)
- Competing for The Future by Gary Hamel, C. K. Prahalad (Harvard Business School Press, 1994)
- 7 Habits of Highly Effective People: Powerful Lessons In Personal Change by Stephen R. Covey (Simon and Shuster, 1990)

MGT 512: ORGANISATIONAL BEHAVIOUR

Semester **: I**
Course Code **: MGT 512**
Credit **: 4**
Course **: ORGANISATIONAL BEHAVIOUR**

Aim **:**

- To Understand organizations - show how a multiplicity of perspectives can be used to make managerial action effective
- Suggest concepts, frameworks, and models for understanding organizational phenomena at the level of the individual, the group, and the organization.
- facilitate participants in reflective thinking which, while it guides you towards specific actions with respect to organizational problems, also stimulates a critical dissection of organizational reality
- stimulate reflective action, and participants will be encouraged to explore ways as to how this can be achieved in organizational contexts
- develop an understanding of the impact of people management on organizational performance
- Stimulate critical reflection on organizational psychology.

Course Objective : To throw light on the individual behavior, group behavior and the organizational wide behavior and how managers consider behavior as an important tool in making decisions.

Teaching Strategy : Lecture Sessions will be supplemented by project based (tutorial) assignments. Feedback will be given orally during tutorials. Written feedback is given for both individual and group assignments.

Study:	Lect**:(L)** Sem**/(T)**	Library/	Directed(**DS**)	Other:	Formal	Total
Hours:	25 Tut: 10	Pract: 10	Study: 50	05	Exams: 2	100

Key Graduate Attributes								
Academic and professional Knowledge	**Communication**	**Team Work and Leadership**	**IT Literacy**	**Global Perspective and Cross Cultural Adaptability**	**Critical and Analytical thinking**	**Social Responsibility and Ethics**	**Entrepreneurship Skills**	**Life - long Learning**
√	√	√	**No**	√	√	√	√	√

Course Outcomes:

a) Knowledge-

- To understand a range of the theoretical understandings available in OB
- To be able to critically engage with both theoretical and practical constructions of issues and questions in OB
- To be able to reflect on individual and group behaviour in a theoretically informed way

b) Skills-

- Interactive: be aware of the potential impacts of various forms of interaction
- Social Participation: assess how to go about intervening in an organizational situation
- Reflective: make psychology judgements about the management of others
- Decision Making: make decisions about the appropriate use of HRM techniques
- Evaluative: recruitment and selection and performance management of employees

Outline Syllabus:

UNIT I

Introduction to OB : Definition of OB- levels of analysis-contributing disciplines to the understanding of OB,, OB - Contemporary application & challenges of OB, The Hawthorne Experiments & its Importance, Models of OB - Developing a comprehensive and Holistic

Model of OB, Frameworks in OB – Behavioristic, Social Learning and Cognitive frameworks, Behavioural indices-efficiency and effectiveness.

UNIT II

Basics in OB - P**erception:** definition-factors affecting perception- perception process: simple & complex- selective perception-social perception-impression formation and management. **Values:** Definition- types of values- Bruce Maglino's workplace values- Emotions – Types – Universal Emotions, Emotional Intelligence, **Personality**: Definitiontheories- personality tests and measurement - personality typology- application in organization, **Anxiety** and its Management strategies.

UNIT III

Basics in OB – Learning. Definition-Learning Curves and theories-Behaviourmodificationanditsorganizational application- , **Motivation** - Definition , Motivational Framework- Theories of motivation: Content theories – process theories – Applications, **Stress –** Definition, Types and Models of Stress, Stress Mitigation Methods

UNIT IV

Interpersonal d y n a m i c s - Developing interpersonal awareness-JohariWindowTransactional analysis – Types of Transactions, Games and Script Analysis, Empathyand Assertiveness, **Groups –** Definitionandclassificationofgroups , Groups Vs Teams, Group Decision making. Roles,norms,andstatus- Groupdecisionmaking-Teams-Developing highperformance teams. **Leadership -** Definition - Leaders vs. Managers, Types of Leaders, Leadershiptheories and models, **PowerandPolitics.** Definition-Basesofpowerpowertacticsandstrategies–political implicationsofpower-, Power Vs Authority, **Conflict & Its Management -** Different views of conflict - conflict process - Levels of conflict , Conflict resolution strategies.

UNIT V

Culture & Change Management (9 Hours)- Organizational Culture – Definition, Types of Culture , Organizational Change and Development – Change - Definition , Models of Change, Resistance to change – How to overcome resistance.

References

1. Robbins, S.P. (2019) . Essentials of Organisational Behaviour. New Delhi, Pearson education
2. Luthans, F. (1998). Organisational Behaviour. Boston, Mc Graw Hill

3.Manojkrishnan CG, Chandrasekar K.S, Ramanakumar KPV "Stress & Stress Management in the I.T Industry , Vijay Nicole Imprints Pvt Ltd, (2016)

4. Parikh, M. and Gupta,R. (2017). Organisational Behaviour. New Delhi, Mc Graw Hill.

5. Umasekaran (2004). Organisational Behaviour, New Delhi, Tata Mc Graw Hill

Additional Reading www.swayam.gov.in (

- NPTEL Courses)
- MargieParikh and Rajen
- Gupta,"OrganisationalBehaviour", McGraw Hill.

Muchinsky, PM. & Culbertson, SS. Psychology Applied To Work, Summerfield.

MGT 513: DOMESTIC BUSINESS ENVIRONMENT AND VALUE BASED MANAGEMENT

Semester : I
Course Code : MGT 513
Credit : 4
Course : DOMESTIC BUSINESS ENVIRONMENT AND VALUE BASED MANAGEMENT

Aim :

- Understand Economic Environment in which Businesses function
- Understand Social Environment in which Businesses function
- Understand Cultural influences in which Businesses function

Course Objective: to get an exposure on the domestic business environment and recent trend.

Teaching Strategy: Lecture Sessions will be supplemented by project based (tutorial) assignments. Feedback will be given orally during tutorials. Written feedback is given for both individual and group assignments.

Study:	Lect**:(L)** Sem**/(T)**	Library/	Directed(**DS**)	Other:	Formal	Total
Hours:	25 Tut: 10	Pract: 10	Study: 50	05	Exams: 2	100

Key Graduate Attributes								
Academic and professional Knowledge	**Communication**	**Team Work and Leadership**	**IT Literacy**	**Global Perspective and Cross Cultural Adaptability**	**Critical and Analytical thinking**	**Social Responsibility and Ethics**	**Entrepreneurship Skills**	**Life - long Learning**
√	√	√	√	√	√	√	√	√

Course Outcomes:

a) Knowledge-

- to understand need and importance of various social economic and cultural environmental aspects in India.

b) Skills-

- Planning: To prepare an environment friendly strategyas an ingredient of business strategy
- Information: to evaluate the effectiveness of flow of information with a given macro- system

Outline Syllabus:

UNIT I

Understanding Domestic Business Environment - Concept- Significance-environmental factors- Relationship between business and environment – Inclusive growth - Rural development -The implications of economic environment to business

UNIT II

Economic Environment- Fiscal Management – Budget and Economic Survey - Direct Taxes vs Indirect Taxes - Goods and Services Tax (GST) Concepts and Features –Customs duty- – Monetary Policy and Tools- Sectors of economy and their relative changing importance - Post Liberalization Developments

UNIT III

Social and Cultural Environment in which managers function- Indian social structure- Sociological systems that have a bearing on Management - Customs-and Culture- transitions – demographic changes and Demographic Dividend - Savings and consumption habits- Business implications- Technological Environment - R & D in India- implications to business – National Knowledge Commission – Concept of BPO, KPO and LPO – NITI AYOG- – Capital market: SEBI, FII, investments, NBFCs- Mutual Funds- Insurance .

UNIT IV

Ethics: Principles and characteristics of ethics - the concept of business ethics - factors affecting business ethics -importance of business ethics - advantages of business ethics,
Ethical Philosophies and theories an overview ,Ethics and Values - Values – importance - sources of value systems – types of values - loyalty and ethical behavior - values across cultures – ethics -– Features and best practices in ethics programme - creating a control system - compliance orientation Vs value orientation - code of ethics Vs code of conduct - ethics training and communication - ethics committee - functions of ethics committee - integrity , Ethics Programme - Ethics audit - ethical dilemma - understanding and resolving an ethical dilemma, Case Study.

UNIT V

Ethical decision making – process - ethical leadership and its importance - whistle blowing – definition – types - ethical dilemma in whistle blowing - Ethics in Indian Business Context across functional areas – Corporate Social Responsibility- Case studies.

Role of Business in Society - Value Based Management- Creative Accounting- Shared Values- Corporate Governance Norms in India-Public Policy Markets and Shared Value

References

1. Cherunilam ,F. (2018). Business Environment – Text and Cases, Mumbai, Himalaya Publishing house.
2. Saleem, S. (2010). Business Environment (2nd Ed). New Delhi, Pearson India.
3. Mittal, V. (2011). Business Environment. New Delhi, Excel Books
4. Senthil, K. and Senthil, R. (2006). Business Ethics and Values, Mumbai, Himalaya Publishing House.
5. Marianne, J.M. (2008). Cases in Business Ethics. New Delhi, Cengage Learning India Pvt Ltd.
6. www.swayam.gov.in

Additional Reading

https://www.sebi.gov.in/

Porter, R, (2013) '*Creating shared Value as Business Strategy'*

file:///C:/Users/Dell/Desktop/CreatingShared%20Value.pdf Meyer,

H (2018) *'Creating Shared Value' Cambridge University*
file:///C:/Users/Dell/Desktop/specialreport-creatingsharedvalue.pdf

MGT 514: ACCOUNTING FOR MANAGERS

Semester : I
Course Code : MGT 514
Credit : 4
Course : ACCOUNTING FOR MANAGERS

Aim :

- To introduce the student, the basics of accounting, management accounting, financial reporting etc.
- The development of the ability to understand the nature of the information presented by accountants, particularly in balance sheets, profit and loss accounts and cash flow statements.
- To know the strengths and weaknesses of accounting information as a basis for decision taking.
- To comprehend the financial performance measures used to assess the extent to which an organization reaches its objectives.

Course Objectives: To enable the students to independently read and analyze financial statement of an organization.

Teaching Strategy: Lecture Sessions will be supplemented by project based (tutorial) assignments. Feedback will be given orally during tutorials. Written feedback is given for both individual and group assignments.

Study:	Lect**:(L)**	Sem**/(T)**	Library/	Directed(**DS**)	Other:	Formal	Total
Hours:	25	Tut: 10	Pract: 10	Study: 50	05	Exams: 2	100

Key Graduate Attributes								
Academic and professional Knowledge	**Communication**	**Team Work and Leadership**	**IT Literacy**	**Global Perspective and Cross Cultural Adaptability**	**Critical and Analytical thinking**	**Social Responsibility and Ethics**	**Entrepreneurship Skills**	**Life - long Learning**
√	√	√	√	**No**	√	√	√	√

Course Outcomes:

a) Knowledge- the terminology used in financial and

- management accounting;
- the methods used by accountants in the preparation of financial statements and reports;
- the techniques used in making financial decisions;
- the methods used to measure an organisation's financial performance the terminology used in financial and management accounting;
- the methods used by accountants in the preparation of financial statements and reports;
- the techniques used in making financial decisions; and the methods used to measure an organisation's financial performance

b)Skills- • interpretative: the information disclosed in accounting reports, including the reports that are published by public companies in their Annual Report; the risk- return trade off

- Informative: use accounting information to assess the profitability, liquidity and capital structure of firms;
- Analytical: determine the stock market ratios that are used to judge the performance of companies that are quoted on a stock exchange;
- Planning: relevant costs that should be used in making financial decisions;
- Utilize a spreadsheet for financial calculations and analysis.

Outline Syllabus:

UNIT I

Accounting – Branches of accounting – Financial Accounting – Importance and Functions – Book Keeping – Systems of Book Keeping- Double Entry Book Keeping - Journal – Ledger – Cash Book – Bank Reconciliation Statement- Trial Balance- Generally Accepted Accounting Principles (GAAP)- Accounting concepts and conventions.

UNIT II

Capital and Revenue – Depreciation – Methods of charging depreciation – Final Accounts- Trading and Profit and Loss Account- Balance sheet.

UNIT III

Management Accounting- Meaning, Definition, Nature, Objectives, Scope, Importance. Distinction between financial, cost and management accounting systems. Financial statement analysis – tools – comparative financial statements, common-size financial statements, trend analysis, Ratio Analysis – Du Pont analysis.

UNIT IV

Funds Flow Analysis – Schedule of Changes in Working Capital – Funds Flow StatementCash Flow Analysis – Cash Flow Statement.

UNIT V

Human Resource Accounting, Forensic Accounting, Sustainability Reporting, Responsibility Accounting – International Accounting Standards – IFRS.

References

1. Shukla, M.C.(1995).Advanced Accountancy,. New Delhi, S. Chand & Co.
2. Jain, S.P. &Narang K.L (1998). Advanced Accountancy, Luknow, Kalyani Publishers.
3. Maheswari, S.N &Maheswari ,S.K. (2018). Financial Accounting (6th ed).New Delhi, Vikas Publications.
4. Gupta, R.L & Gupta, V.K. (2014). Financial Accounting. New Delhi, Sultan Chand & Sons.
5. www.swayam.gov.in

Additional Reading

Jain and Narang, Financial Accounting and Analysis, Kalyani Publishers.

Khan and Jain, Accounting for Management TMH, 2001.

Walter B.Megis, Charles E.Johnson and Robert F.Megis, Accounting the basis for Business Decisions, Tata McGrawHill, 1999.

MGT 515: MANAGERIAL ECONOMICS

Semester : I
Course Code : MGT 515
Credit : 4
Course : MANAGERIAL ECONOMICS

Aim :

- To introduce the concept of economics to potential managers
- To introduce the key economic concepts, principles and policy instruments in the context of the business environment.
- To enable the students to become effective business managers by attaining an understanding of the micro environments of business.
- To develop economic understanding of the debates related to macro-economic growth and sustainable economic development.

Course Objective : To make potential managers understand the influence of economics in management decision making.

Teaching Strategy: Lecture Sessions will be supplemented by project based (tutorial) assignments. Feedback will be given orally during tutorials. Written feedback is given for both individual and group assignments.

Study:	Lect**:(L)** Sem**/(T)**		Library/	Directed(**DS**) Other:		Formal	Total
Hours:	25	Tut: 10	Pract: 10	Study: 50	05	Exams: 2	100

Key Graduate Attributes								
Academic and professional Knowledge	**Communication**	**Team Work and Leadership**	**IT Literacy**	**Global Perspective and Cross Cultural Adaptability**	**Critical and Analytical thinking**	**Social Responsibility and Ethics**	**Entrepreneurship Skills**	**Life - long Learning**

√	√	√	√	√	√	√	**No**	√

Course Outcomes:

a) ***Knowledge***-Knowledge outcomes include familiarity with, and the ability to interpret, significant information, major issues and contemporary events in economics**.**

b) ***Cognitive Skills***-Cognitive skills include an understanding of, and ability to apply, concepts, principles and theories in the analysis of issues and to solve uncomplicated problems. Cognitive skills are evidenced by familiarity with the major techniques of enquiry, and the ability to gather, analyses and report on qualitative and quantitative data.

Outline Syllabus:

UNIT I

Definition of Managerial Economics – Decision making – Fundamental Concepts affecting Business Decisions – The Incremental Concepts, Marginal Concepts-, Equi-marginal Concept – The TimePerspective, Discounting principle, Opportunity Cost principle.

UNIT II

Utility analysis and the demand curve – Equilibrium of the consumer, indifference curve Analysis, price effect, income effect and substitution effect – Elasticity of Demand – Demand Forecasting.

UNIT III

The production function – Production with one variable input – Law of variable proportions – Production with two variable inputs – Production Isoquant – Iso cost lines estimating production Functions – cost concepts and Break-Even Analysis.

UNIT IV

Market Structure – Perfect and Imperfect competition – Monopoly, Duopoly, Monopolistic Competition and Oligopoly Models. Introduction to Game Theory – Pricing Methods

UNIT V

Indian Economy Salient Features: National Income – Concepts – Gross Domestic Product, Gross National Product, Net National Product –Business Cycles and Contra cyclical Policies - Factors influencing International Trade and Global Business Environment - Balance of Payments – Disequilibrium, methods to correct disequilibrium- Banking and Financial Institutions In India: An Introduction

References:

1. Stiglitz,J.E. and Walsh .C.E. (2006) Principles of Micro Economics. London, WW Norton.
2. Stiglitz,J.E. and Walsh .C.E. (2006) Principles of Macro Economics. London, WW Norton
3. Mankiv, G. (2019). Principles of Economics, Boston, Cengage Learning
4. Hirschey, M. (2008). Fundamentals of Managerial Economics, 8th Ed., Cincinnati, South-western College Publications.
5. Gupta, G.S. (2018). Managerial Economics, New Delhi, Tata McGraw Hill
6. Ricky W. G and Mike W. P. (2018). International Business, 7th Edition, New York, Pearson.
7. Kapila, U. (2019). Indian Economy Performance And Policies 20th Edition Paperback, Gurgaon, Academic Foundation
8. www.swayam.gov.in

Additional Reading http://commerce.gov.in

Business Line

Economic Times Business

Standard www.rbi.org.in

www.imf.org.in

https://in.reuters.com/

MGT 516: QUANTITATIVE TECHNIQUES

Semester : I
Course Code : MGT 516
Credit : 4
Course : QUANTITATIVE TECHNIQUES

Aim :

- To provide an insight into the basic statistics, probability, estimations and correlations for managerial decision making
- To lay the foundations for the skills of analysis and the use of mathematical and statistical techniques to enable student to solve problems.
- To challenge trying to solve problems.
- To enable the students to comprehend quantitative methods for business.

Course Objective: to engender a sound "numerical common sense"; namely the skill to correctly interpret information presented in numerical form which is largely demanded by the modern business world.

Teaching Strategy: Lecture Sessions will be supplemented by project based (tutorial) assignments. Feedback will be given orally during tutorials. Written feedback is given for both individual and group assignments.

Study:	Lect**:(L)**	Sem**/(T)**	Library/	Directed(**DS**)	Other:	Formal	Total
Hours:	25	Tut: 10	Pract: 10	Study: 50	05	Exams: 2	100

Key Graduate Attributes								
Academic and professional Knowledge	**Communication**	**Team Work and Leadership**	**IT Literacy**	**Global Perspective and Cross Cultural Adaptability**	**Critical and Analytical thinking**	**Social Responsibility and Ethics**	**Entrepreneurship Skills**	**Life - long Learning**
√	√	√	√	**No**	√	**No**	√	√

Course Outcomes:

a) Knowledge-

- have a critical understanding of alternative means of presenting data
- understand the nature and use of commonly used summary statistics
- understand the use of simple statistical distributions to support decision making
- be aware of issues in the design and execution of data collection processes be
- able to assess the quality of information provided by a sample
- understand the concepts of simple regression analysis and its use for estimation

b) **Skills:**

- Computer: use a spreadsheet to manipulate and study a data set and to design an appropriate presentation of key issues
- Numerical: design (and critically appraise designs for) a process for collecting data to inform decision making
- Analytical: use a spreadsheet to determine summary statistical measures and to conduct a simple regression analysis
- Investigative: Summarising data, drawing inferences
- Problem Solving: to derive, formulate and apply solutions for specific problems.Be able to integrate different concepts to solve complex mathematical problems

Outline Syllabus:

UNIT I

Basic Statistics: Basic Concepts of Statistics, Charts and Diagrams, Measures of Central Tendency and Dispersion, Sampling Methods - Probability and Non-Probability Sampling, Sampling and Non-Sampling Error.

UNIT II

Probability: Random Variable, Basic Concepts, Random Variable, Theorems: Addition, Multiplication, Conditional Probability, Baye's Theorem, Business Applications of Probability

UNIT III

Probability Distributions: Normal, Binomial, Poisson, Exponential Distributions

UNIT IV

Statistical Estimation: Basic Concepts, Point and Interval Estimation, Sampling Distribution, Standard Error, Testing of Hypothesis, t-test, z-test, Chi Square test, f-test, ANNOVA, MANOVA.

UNIT V

Correlation and Regression: Simple, Partial and Multiple Correlation, Regression, Business Applications, Time Series Analysis, Software Packages SPSS, AMOS.

References

1. Levin R.L. and Rubin, D.S. (2010).Statistics for Management, New York, Pearson Education (7th Ed.),
2. Tulsian, P.C. and Pandey,V. (2004). Quantitative Techniques. New Delhi, Pearson Education.
3. Vora, N. D. (2006). Quantitative Techniques in Management. New Delhi, Tata Mc. Graw Hill Education.
4. Beri, G. C. (2005). Business Statistics. New Delhi, Tata Mc. Graw Hill Education.
5. Gupta, S.P.(2010). Statistical Methods. New Delhi, Sultan Chand & Sons.
6. Kothari, C.R.(2004). Research Methodology (2nd Ed.),New Delhi, New Age International (P) Ltd

7..Jasrai,L. (2020). Data analysis using SPSS, New Delhi, Sage books.

8. www.swayam.gov.in

MGT 517: ENVIRONMENTAL MANAGEMENT

Semester : I
Course Code : MGT 517
Credit : 4
Course : ENVIRONMENTAL MANAGEMMENT

Aim :

- Business Planning for the Green Economy
- Strategic Environmental Management
- Sustainability as a managerial function.
- Promoting Eco-preneurship
- Strategies for risk assessment and environmental management
- To provide an understanding of issues in Environmental Management To
- provide tools in environmental management
- to study and propose appropriate solutions to environmental degradation issues

Course Objective: To familiarize the student with the need and importance for environmental management, environmental policies and procedures of environmental auditing and impact assessment from a management angle.

Teaching Strategy: Lecture Sessions will be supplemented by project based (tutorial) assignments. Feedback will be given orally during tutorials. Written feedback is given for both individual and group assignments.

Study:	Lect**:(L)**	Sem**/(T)**	Library/	Directed(**DS**)	Other:	Formal	Total
Hours:	25	Tut: 10	Pract: 10	Study: 50	05	Exams: 2	100

Key Graduate Attributes								
Academic and professional Knowledge	**Communication**	**Team Work and Leadership**	**IT Literacy**	**Global Perspective and Cross Cultural Adaptability**	**Critical and Analytical thinking**	**Social Responsibility and Ethics**	**Entrepreneurship Skills**	**Life - long Learning**

√	√	√	√	√	√	√	√	√

Course Outcomes:

a) Knowledge- • to understand need and importance of various environmental laws implemented in India.

- to understand Environmental management systems, its significance and certification procedure.
- knowledge on steps, procedures and methodologies of Environmental Impact Assessment.

b) Skills-

- Planning: To prepare an environment friendly strategy as an ingredient of business strategy
- Compliance: To comply with regulations and goals.
- Information: to evaluate the effectiveness of flow of information with a given system

Outline Syllabus:

UNIT I

Concept of Sustainable Development: 2030 Agenda for Sustainable Development- Millennium Development Goals- Environmental Management: Introduction, definition, and scope. Need for EM. Ethics and Environment, Environmental policies and programmes in India.

UNIT II

Environment Impact on Business: Social, Economic, Political, Cultural, Legal and constitutional sub-systems of environment and their impact on Business., Environmental Regulations –Importance of Environment Protection Act, Air Act, Water Act, Wildlife Protection act and Forest conservation act. Learning Outcome:

UNIT III

Environmental Impact Assessment (EIA): Introduction, purpose and evolution of EIA, steps involved in EIA process. -Environmental clearance procedure. EIA methodologies in brief.

Impact prediction, evaluation, and mitigation.

UNIT IV

Environmental Auditing (EA): Introduction, objectives, and scope. Types of Environmental audits. Basic structure of EA. General steps in EA. Role of EA in industrial projects. Life Cycle Assessment (LCA) and its purpose. Procedure for LCA.

UNIT V

Different applications of LCA. Environmental Management Systems (EMS): Significance and core elements of EMS. EMS standards – ISO 14000 – principles and structure, ISO 14001 and OHSAS 18001 certification procedure.

References:

1. Singh K and Shishodia A (2007) Environmental Economics- Theory and Applications Sage Text
2. Cherunilam ,F. (2018). Business Environment – Text and Cases, Mumbai, Himalaya Publishing house.
3. Kulkarni V and Ramachandra T V,(2009). Environmental Management, TERI Press, New Delhi
4. www.swayam.gov.in

Additional Reading

NPTEL material on Environmental Management – *https://nptel.ac.in/courses/120108004/* https://sustainabledevelopment.un.org/?menu=1300 https://www.un.org/millenniumgoals/ https://www.un.org/millenniumgoals/news.shtml https://niti.gov.in/verticals/sustainable-dev-goals http://www.mospi.gov.in/sustainable-development-goalssdgs

University of Kerala

Master of Business Administration Syllabus

Semester 2:

II SEMESTER:

MGT 521 EXECUTIVE BUSINESS COMMUNICATION
MGT 522 MARKETING MANAGEMENT
MGT 523 OPERATIONS RESEARCH
MGT 524 BUSINESS LAW
MGT 525 PRODUCTION AND OPERATIONS MANAGEMENT
MGT 526 RESEARCH METHODOLOGY
MGT 527 FINANCIAL MANAGEMENT
MGT 528 HUMAN RESOURCES MANAGEMENT

MGT 521: EXECUTIVE BUSINESS COMMUNICATION

Semester **: II**
Course Code **: MGT 521**
Credit **: 4**
Course **: EXECUTIVE BUSINESS COMMUNICATION**
Aim **:**

- To provide an understanding on the various dimensions of business communication
- To foster the soft skills for effective management
- To develop reading, presentation, listening, writing skills
- To apply techniques for conveying messages to audience, master various types of graphic aids

Course Objective: To develop competencies include the ability to communicate effectively, orally and in writing, both for personal communication and for writing formal reports.

Teaching Strategy:

Lecture Sessions will be supplemented by project based (tutorial) assignments. Feedback will be given orally during tutorials. Written feedback is given for both individual and group assignments

Study:	Lect**:(L)** Sem**/(T)**	Library/	Directed(**DS**) Other:	Formal	Total
Hours:	25 Tut: 10	Pract: 10	Study: 50 05	Exams: 2	100

Key Graduate Attributes								
Academic and professional Knowledge	**Communication**	**Team Work and Leadership**	**IT Literacy**	**Global Perspective and Cross Cultural Adaptability**	**Critical and Analytical thinking**	**Social Responsibility and Ethics**	**Entrepreneurship Skills**	**Life - long Learning**
√	√	√	√	√	√	√	**No**	√

Course Outcomes:

a) Knowledge-

- Cross cultural
- Ethical Values
- Report Writing
- Conducting Meetings.

b) Skills-

- Planning: To prepare for promoting business strategy
- Communication
- Reading, Writing, Reporting,
- Listening
- Presentation
- Team
- Interactive
- Negotiation

Outline Syllabus:

UNIT I

Principles of Business Communication-Types of Business Communication-Methods and Media of Communication- Process& Models of Business Communication - Barriers to Organizational Communication- Overcoming barriers and Strategies for improving Business Communication ,Types of Organizational Communication- Communication for interpersonal influences .

UNIT II

Effective Leadership Communication - Cross Culture Communication -Negotiation with superiors, peers, other colleagues- Collective Bargaining and Negotiating with Collective Organizational Representatives, Verbal and Nonverbal Communication in business -Public Speaking Skills- Business presentations – Role of audio-visual aids and computers in oral presentations- Interviewing- Types, Art of negotiation- Listening skills - listening process, types of listening, deterrents to listening process, essentials of good listening, Mannerisms -

UNIT III

Written communication- the mechanics of writing, Structures and methods of written communication - Letter for different kinds of situations – Enquiries-Customers' complaintsCollection letters - Sales promotion letters.- Memoranda- Directives and instructions- Notices -Reports-Memo - Agenda - Proposals -Minutes -Professional papers - Agreement documents -Press releases - Preparation of resumes.

UNIT IV

Conducting Meetings-Procedure – Preparing agenda, minutes and resolutions-Conducting seminars and conferences- Group Discussion-Drafting Speech-Report writing - Structure of reports - Formal Reports –Technical Reports- Norms for including Exhibits & Appendices.

UNIT V

Business Attire & Professionalism: Dressing sense, selecting the right clothing for a business wardrobe, Business style and professional image, Dress code, Guidelines for appropriate business attire, Grooming for success, Guidelines for appropriate business attire, Multicultural dressing, Body Language at Work - building posture, facial expressions and eye contact, gestures for effective communication. Dining Etiquette: Planning a meal, issuing invitations, How to proceed through a receiving line, seating guidelines, navigating a place setting, appropriate table manners.

References

1. Courtland, B.L.and John V,T. (2005). Business Communication Today. New Jersey, Prentice Hall International.

2. Apai and Rhoda (2014).Principles and Practice of Business Communication, Mumbai, Sheth Publishers.

3. Argenti P.A.Corporate Communication (6th Ed),New York, Irwin McGraw Hill.

4. Krishna Mohan (2018).Developing Communication Skills, New Delhi, MacMillan India

5. The Essentials of Business Etiquette: How to Greet, Eat, and Tweet Your Way to Success,

Barbara Pachter

Additional Reading

Guffey,M.,E. and Loewy, D. (2010). Business Communication, Cincinnati, South-Western Collage publishing.

Reader's Digest - Various Issues

MGT 522: MARKETING MANAGEMENT

Semester : **II**
Course Code : **MGT 522**
Credit : **4**
Course : **MARKETING MANAGEMENT**
Aim :

- To develop the different analytical perspectives and management decision tools.
- To equip the students with the concepts of Planning, designing and implementing marketing strategy to achieve the long-term objectives that is critical for any firm in a competitive market situation.

Course Objective: The objective of this course is to equip the students with the concepts and practices of modern marketing and to provide the understanding of different marketing processes for an effective decision making.

Teaching Strategy:
Lecture Sessions will be supplemented by project based (tutorial) assignments. Feedback will be given orally during tutorials. Written feedback is given for both individual and group assignments

Study:	Lect**:(L)** Sem**/(T)**		Library/	Directed(**DS**) Other:		Formal	Total
Hours:	25	Tut: 10	Pract: 10	Study: 50	05	Exams: 2	100

Key Graduate Attributes								
Academic and professional Knowledge	**Communication**	**Team Work and Leadership**	**IT Literacy**	**Global Perspective and Cross Cultural Adaptability**	**Critical and Analytical thinking**	**Social Responsibility and Ethics**	**Entrepreneurship Skills**	**Life - long Learning**
√	√	√	**No**	√	√	√	√	√

Course Outcomes:

a) Knowledge:

- The students are expected to be familiar with the basic concepts and components of the marketing management and to be knowledgeable in marketing principles
- Develop skills in applying the analytic perspectives, decision tools, and concepts of marketing to decisions involving segmentation, targeting and positioning; product offering; pricing; distribution channels and marketing communications
- The students will be equipped with the concepts and practices of modern marketing and to provide the understanding of different marketing processes for an effective decision making.

b) Skills-

- By the end of the course the students would be able to gain the following skills: Interactive, Social Participation, Reflective, Decision Making & Evaluative.

Outline Syllabus:

UNIT I

Introduction to Marketing Management: Concept - nature and importance of marketing - evolution of marketing concept - marketing environment - micro environment of marketing and macro environment of marketing – domestic marketing and international marketing - fundamentals of strategic marketing planning - marketing organization - customer lifetime value - marketing organization and control systems - organizing marketing department - marketing control techniques - annual plan control - profitability control - strategic control

UNIT II

Consumer Behaviour: Consumer and business markets - buying roles - steps involved in buying process - factors influencing buying decision - consumer adoption process - changing pattern of consumer behaviour

UNIT III

Marketing Research and Selecting the Target Markets: Marketing Information System and Research - demand estimation and sales forecasting - market segmentation - targeting and positioning – levels and patterns of segmentation - effective segmentation - market targeting - positioning methods and strategies

UNIT IV

Product and Pricing Decisions: Concept of product - product line and product mix -new product development – packaging and labelling - Branding – Concepts of branding, brand types, brand equity, branding strategies- product life cycle stages and strategic marketing decisions - Services marketing - Pricing concepts, factors influencing price decisions - pricing strategies

UNIT V

Promotion and Distribution Decisions: Promotion mix - integrated marketing communication – advertising - sales promotion - personal selling – publicity - public relations - direct marketing - distribution channels - physical distribution systems - channel intermediaries - channel management - wholesaling and retailing - retail marketing - emerging trends in marketing - social marketing – digital marketing - green marketing –Retro marketing- marketing analytics -- Current developments in Marketing, Ethics in Marketing

References

1. Chandrasekar K.S (2019),Marketing Management: Text & Cases, Vijaynicole imprints.
2. Kotler Philip (2016), Marketing Management, Pearson India Education.
3. Saxena, Rajan (2004) Marketing Management, Tata McGraw Hill.
4. Ramaswamy, V.S. and Namakumari S (2018), Marketing Management, Sage.

Additional Reading

1. Stanton, W.J, Michael Etezel and Bruce J.Walker (1997) Fundamentals of Marketing, McGraw Hill
2. Kotler, Keller, Jha & Koshy(2003) Marketing Management - A South Asian Perspective, Pearson

MGT 523: OPERATIONS RESEARCH

Semester : II
Course Code : MGT 523
Credit : 4
Course : OPERATIONS RESEARCH
Aim :

- To understand the meaning, purpose, and tools of Operations Research
- Explain the Applications of Operations Research to Management

Course Objective: Offer insights into the various operations research models and its importance in business decision

Teaching Strategy:
Lecture Sessions will be supplemented by project based (tutorial) assignments. Feedback will be given orally during tutorials. Written feedback is given for both individual and group assignments

Study:	Lect**:(L)** Library/ Sem**/(T)**	Directed(**DS**) Other:	Formal	Total
Hours:	30 Tut: 5 Pract: 10	Study: 50	05 Exams: 2	100

Key Graduate Attributes								
Academic and professional Knowledge	**Communication**	**Team Work and Leadership**	**IT Literacy**	**Global Perspective and Cross Cultural Adaptability**	**Critical and Analytical thinking**	**Social Responsibility and Ethics**	**Entrepreneurship Skills**	**Life - long Learning**
√	√	√	√	√	√	√	**No**	√

Course Outcomes:

a) Knowledge- • to predict and compare the outcomes of alternative decisions, strategies or controls. the application of scientific methods to improve the effectiveness of operations, decisions, and management.

- create models and propose innovative approaches,
- To develop scientifically based information that gives an insight into and guides decision making.

b) Skills-

- Planning: To prepare an operations strategy to be an ingredient of business strategy
- Analytical: To be equipped with linear programming, game theory, decision theory, queuing theory, inventory models and simulation

Outline Syllabus:

UNIT I

Introduction to Operations Research: Objectives and Business Applications of Operations Research, Models: Introduction, Linear Programming Problem (LPP) Formulation, Graphical Method, Simplex Method, Dual LPP, Basic Concepts of Sensitivity Analysis.

UNIT II

Transportation Models: Northwest Corner Method (NWC), Least Cost Method (LCM), Vogels Approximation Method, Assignment Model, Hungarian Method, Minimization of Cost.

UNIT III

Network Models: Critical Path Method (CPM), Program Evaluation Review Technique (PERT), Crashing, Resource Smoothing, Resource Leveling.

UNIT IV

Queuing Theory: M/M/1 Queue (System with Single Server), M/M/2 (System with Two Servers), Monte Carlo Simulation, Applications in Queuing and Inventory.

UNIT V

Decision Theory: Decision Making under Risk and uncertainty, Game Theory, Decision Tree, OR, Softwares

References

1. Taha, H.A. (2008). Operations Research,- An Introduction. New Delhi, Pearson Education.
2. Sharma, J.K. (2017) .Operations Research - Theory and Applications, New Delhi, Macmillan.
3. Hiller, F. S. and Jliederman,G. (2017). Introduction to Operations Research, New Delhi, Tata Mc.Graw Hill

Additional Reading

- Swarup,K.G. and, Mamohan ,P.K. (2010).Operations Research - Principles and Practice, (10th Ed.), New Delhi, Sulthan Chand & Sons
- Mital, K.V. and Mohan C. (2004). Optimization Methods in OR System Analysis, New Delhi, New Age (P) Ltd.
- www.swayam.gov.in

MGT 524: BUSINESS LAW

Semester : **II**
Course Code : **MGT 524**
Credit : **4**

Course : **BUSINESS LAW**
Aim :

- To enhance knowledge on regulations which are essential for business such as labour laws, sale of goods act, industrial contract act, companies act, negotiable instruments act etc.

Course Objectives: to provide an insight into legal aspects covering the business and its importance in management decision making

Teaching Strategy:

Lecture Sessions will be supplemented by project based (tutorial) assignments. Feedback will be given orally during tutorials. Written feedback is given for both individual and group assignments

Study:	Lect**:(L)**	Sem/**(T)**	Library/	Directed(**DS**)	Other:	Formal	Total
Hours:	25	Tut: 10	Pract: 10	Study: 50	05	Exams: 2	100

Key Graduate Attributes								
Academic and professional Knowledge	**Communication**	**Team Work and Leadership**	**IT Literacy**	**Global Perspective and Cross Cultural Adaptability**	**Critical and Analytical thinking**	**Social Responsibility and Ethics**	**Entrepreneurship Skills**	**Life - long Learning**
√	√	√	√	√	√	√	**No**	√

Course Outcomes:

a) Knowledge-

- Legal knowledge that enables business
- liability and contracts in the corporate sector.

b) Skills-

1. Analytical skills to explore business environment.
2. Communication skills which help you familiarize with legal terminology
3. collaboration skills between different departments.
4. Teamwork skills: collaborating and contributing to group projects; demonstrating leadership.
5. Problem-solving skills: showing initiative in identifying and solving problems; implementing and monitoring solutions.
6. Self-management skills: taking responsibility; building confidence in your vision; working under pressure; demonstrating resilience.

Outline Syllabus:

UNIT I

The Industrial Contract Act, 1872, Nature and Classification of contracts - Essential elements of a valid contract - Offer and Acceptance - Consideration - Capacity of Parties - Provisions relating to free consent, void agreements - Provisions Relating to Performance and Discharge of Contracts - Quasi contracts - Breach of Contract and its remedies, Legality of Object and Consideration.

UNIT II

Sale of Goods Act, 1930- Contract of sale of goods-Meaning essentials of a contract for sale - Formalities of a Contract of sale - Provisions relating to Conditions and Warranties - Provisions Relating to Transfer of Property or Ownership - Provisions Relating to performance of contract of sale - Rights of unpaid Seller -Classification of Goods, Transfer

of Property in Goods, Rules as to delivery of Goods, Buyers right against seller and Auction Sale

UNIT III

The Negotiable Instruments Act, 1881, Negotiable Instruments, Meaning, characteristics, types, parties - holder and holder in due course - Negotiation and types of endorsements, Dishonor of negotiable instruments - noting and protest - liability of Parties on negotiable instrument, Indian Partnership Act, 1932 - Important features - Formation of partnership firms, Kinds of partners - Rights and duties of partners - Dissolution of partnership

UNIT IV

The Companies Act, 1956 - Company definition, meaning, features and types of Companies. Incorporation of a Company - Memorandum of Association, Articles of Association and Prospectus - Share Capital - Management and Meetings - Winding up of companies, Law of Agents, Rights and Duties of Agents, Kinds of Agent, Creation and Termination of Agency, Sub Agents and Substituted Agents

UNIT V

Labour Laws: Major Provisions of Industrial Disputes Act1947, Factories Act, 1948, The Trade Union Act, 1926, The minimum Wages Act, 1948, Workmen's Compensation Act, 1923, The Maternity Benefit Act 1961 , Payment of Bonus Act 1965, Payment of Wages Act 1936, Employees Provident Funds and Miscellaneous Provisions **Act**, 1952.

References

1. Dagar, I. and Agnihotri , A (2020).Business Law Text and Problems,New Delhi, Sage Publications
2. Kapoor, N.D.(2014). Elements of Mercantile Law(34TH Ed.),New Delhi, S.Chand& Sons.
3. Malik, P.L. (2018). A handbook of Labour and Industrial Law, Bengaluru, Eastern Book Company
4. Law for Business 19th edition, Ashcroft, Ashcroft, and Patterson, Cengage Learning, 2017, ISBN: 9781305654921.

Additional Reading

- S.N.Maheshwari & Maheshwari, Business Regulatory Framework, Himalaya Publishing House.2006
- S.S.Gulshan, Business Law, 2/e, Excel Books,
- 2005 Relevant BARE Acts.
- www.swayam.gov.in

MGT 525: PRODUCTION AND OPERATIONS MANAGEMENT

Semester : **II**
Course Code : **MGT 525**
Credit : **4**
Course : **PRODUCTION AND OPERATIONS MANAGEMENT**
Aim :

- To introduce the operations function, in service and manufacturing organizations
- To address key aspects of design,
- To plan and control operations
- To understand operations in a global context.

Course Objectives: critically analyze an organization's approaches to the design of its products, services, and processes.

Teaching Strategy:
Lecture Sessions will be supplemented by project based (tutorial) assignments. Feedback will be given orally during tutorials. Written feedback is given for both individual and group assignments

Study:	Lect**:(L)** Sem**/(T)**	Library/	Directed(**DS**) Other:	Formal	Total
Hours:	30 Tut: 10	Pract: 5	Study: 50 5	Exams: 2	100

Key Graduate Attributes								
Academic and professional Knowledge	**Communication**	**Team Work and Leadership**	**IT Literacy**	**Global Perspective and Cross Cultural Adaptability**	**Critical and Analytical thinking**	**Social Responsibility and Ethics**	**Entrepreneurship Skills**	**Life - long Learning**
√	√	√	√	√	√	**No**	√	√

Course Outcomes:

a) Knowledge- the choices and trade-offs inherent in developing an

- operations strategy.
- the nature of operations as an integrative function and the significance of information and change management.
- issues of integration of the operations with other management functions.
- the different approaches which may be taken in the design of products, services and processes.
- the appropriate techniques to employ when planning operational capacity at different levels.
- the strengths and weakness of a range of operational performance measures.

b) Skills-

- Planning: prepare an operations strategy which complements an organisation's business strategy
- Learning: appreciate capacity management issues and the identification of system constraints.
- Interpretative: make appropriate measures of an organisation's operational performance.
- Professional: develop quality plans and implement appropriate means of quality control.

Outline Syllabus:

UNIT I

Production as an organization function - Importance of Production Function - Scope of Production and Operations Management, Types of Production Systems, Strategic Operations Management, Operations Strategies, Elements of Operations Strategy, 5 Ps of Operations.

UNIT II

Plant location & Layout, Nature - Location Theories, Steps in Location, Location Models, Plant Layout, Factors influencing lay out, Principles of lay out, Lay out Tools and Techniques, Materials Handling, Material Handling Principles, Types, Selection and Design of Handling System.

UNIT III

Materials Management, Vendor rating, Inventory Models, EOQ, Reorder point, EOQ with Discounts, MRP-I, MRP-II, Selective Inventory Control (SIC), Just In Time (JIT), Basics of Kanban, VMI and ERP, Work Study, Work Measurement. Quality Management, Statistical Quality Control (SQC), Total Quality Management (TQM), Kaizen, Six sigma, ISO Systems, SCM Basic Concepts.

UNIT IV

Production /Operations Planning & Control, Role of production planning & control in Operations Management, Factors determining production planning, Aggregate Planning, Master Production Schedule, Scheduling, Loading, Routing, Product Planning for Various Production Systems, Line Balancing and sequencing, EBQ, Capacity Planning, Basics of Maintenance management, Maintenance Decisions, overview of FMS and Robotics.

UNIT V

Logistics: Definition, History and Evolution- Objectives, Logistics Management: Definition and Evolution -Achievement of competitive advantage through logistics Framework-Role of Logistics management-Integrated Logistics Management - Model – Flow of process activities (in brief), Third party logistics provider-Fourth party Logistics providers (4 pl)- Stages-Role of logistics providers, Strategic role of Logistics Management

References

1. Starr. M. K. (1972). Production Management - Systems and Synthesis, New York, Prentice Hall
2. Pannerselvam, R. (2012). Production and Operations Management, New Delhi, Prentice Hall of India
3. Buffa, E.S. and Sarin, R.K. (2007). Modern Production/Operations Management, New Delhi, Wiley India
4. Gaither, N. (2002).Production and Operations Management. Cincinnati, South Western College Publications.

5. Bedi, K. (2016). Production and Operations Management. New Delhi, Oxford University Press.

6. David J. Bloomberg, Stephen LeMay& : Logistics, Prentice-Hall of India Pvt Joe B. Hanna Ltd.,New Delhi, 2003

7. Satish C. Ailawadi& Rakesh Singh : Logistics Management, Prentice-Hall of India Pvt Ltd., New Delhi, 2005

8. Logistics Management, Ismail Reji, Excel Book, First Edition, 2008

Additional Reading

- Mikell P. Groover, Automation, Production Systems, and Computer-Integrated Manufacturing, Pearson, 2007.
- Amitabh Raturi, Production and Inventory Management,SouthWesternCollege, 2008.
- Adam Jr. Ebert, Production and Operations Management, PHI Publication, 1992.
- Operations Management by William J. Stevenson. Eighth Edition, Irwin / McGrawHill, 2005.
- Fundamentals of Logistics Management, David Grant, Douglas M. Lambert, James R. Stock, Lisa M. Ellram, McGraw Hill Higher Education, 1997.
- www.swayam.gov.in

MGT 526: RESEARCH METHODOLOGY

Semester : II
Course Code : MGT 526
Credit : 4
Course : RESEARCH METHODOLOGY

Aim :

- To make managers think like researchers
- To enable students to undertake research
- To understand the research process
- To enable the research reporting.

Course Objectives: to teach the method of conducting high quality research from social as well as business perspective.

Teaching Strategy:

Lecture Sessions will be supplemented by project based (tutorial) assignments. Feedback will be given orally during tutorials. Written feedback is given for both individual and group assignments

Study:	Lect**:(L)** Sem**/(T)**	Library/	Directed(**DS**)	Other:	Formal	Total
Hours:	30 Tut: 10	Pract: 5	Study: 50	5	Exams: 2	100

Key Graduate Attributes								
Academic and professional Knowledge	**Communication**	**Team Work and Leadership**	**IT Literacy**	**Global Perspective and Cross Cultural Adaptability**	**Critical and Analytical thinking**	**Social Responsibility and Ethics**	**Entrepreneurship Skills**	**Life - long Learning**
√	√	√	√	√	√	√	**No**	√

Course Outcomes:

a) Knowledge-

- Knowledge on laws and theories that explain a phenomenon or behavior of interest
- Acquisition of knowledge using the scientific method
- Theory-building (inductive research) and Theory Testing (deductive research)
- Concepts, Constructs, and Variables
- Operational definitions
- Theorization
- Models

b) Skills-

- Analytical skills: Logical: Scientific inferences must be based on logical principles of reasoning.
- Problem-solving skills: Exploratory Descriptive Explanatory Self-management skills: taking responsibility; building confidence in your vision; working under pressure; demonstrating resilience

Outline Syllabus:

UNIT I

Business Research: Definition, meaning, concept, nature, scope, need and managerial value, Research as the application of scientific method, Importance of research in managerial decision making; the Research Process and types of Research, Defining the Research Problem: Problem Formulation and Statement of Research Problem .

UNIT II

Research Design: Exploratory, Descriptive, Diagnostic/ Conclusive and Experimental Research - Details and applications, Operational and administrative structure for research, Sampling and Sampling Designs.

UNIT III

Methods & Techniques of Data Collection: Primary and Secondary Data - Meaning, Observational and other survey methods of Data collection, Development and designing of tools of data collection, Measurement scales, Measurement of attitudes, Validity and Reliability of the tools of data collection.

UNIT IV

Fieldwork in research and data processing, Classification and Tabulation, Analysis and interpretation of Data, Testing of Hypothesis, an overview of Parametric and Non-parametric tests, Essential ideas of Multivariate analysis of data - an overview of dependence and interdependence methods , Statistical Packages - SPSS.

UNIT V

Reporting of Research - Types of Reports - Substance of Reports - Format of Report, Presentation of Reports, – procedure of preparation of reference and bibliography.

References

1. Wilson, J. (2017). Essentials of Business Research, 2e, New Delhi, Sage Publications
2. Jonathan, J. (2010). Essentials of Business Research. New Delhi, SagePublications.
3. Bryman A and Bell, E. (2018) .Business Research Methods (3rd Edn.). New Delhi, Oxford University Press
4. Kothari, C.R. (2013).Research Methodology - Methods & Techniques. New Delhi, New Age international.

Additional Reading

1. Krishnaswami, O.R. and Ranganatham, M. (2005). Methodology of Research in Social Sciences. New Delhi, Himalaya Publishing
2. Panneerselvam, R. (2014). Research methodology, New Delhi, Prentice Hall of India

3. www.swayam.gov.in

MGT 527: FINANCIAL MANAGEMENT

Semester : II
Course Code : MGT 527
Credit : 4
Course : FINANCIAL MANAGEMENT
Aim :

- To develop an understanding of principles of finance
- To use this understanding for decision taking purposes
- To understand financial policies of companies (capital budgeting, forms of financing etc.).
- To understand the role of financial markets ;
- To appreciate risk and uncertainty for financial decision taking
- To evaluate decision rules for investment and financing proposals;

Course Objective: To study various financial decision making methods and learn how to integrate such techniques in monitoring the real performance of a business organization.

Teaching Strategy:

Lecture Sessions will be supplemented by project based (tutorial) assignments. Feedback will be given orally during tutorials. Written feedback is given for both individual and group assignments

Study:	Lect**:(L)** Sem**/(T)** Total	Library/	Directed(**DS**) Other:		Formal	
Hours:	30 Tut: 5	Pract: 10	Study: 50	5	Exams: 2	100

Key Graduate Attributes								
Academic and professional Knowledge	**Communication**	**Team Work and Leadership**	**IT Literacy**	**Global Perspective and Cross Cultural Adaptability**	**Critical and Analytical thinking**	**Social Responsibility and Ethics**	**Entrepreneurship Skills**	**Life - long Learning**

√	√	√	√	**No**	√	√	**No**	√

Course Outcomes

a) Knowledge

- knowledge of the terms and concepts employed in
- finance; the working and functions of the financial
- system roles played by the key financial markets and
- institutions;

the major theoretical advances in finance over the last three decades which have a bearing on managerial practices.

b) Skill-

- Valuation: To develop models for the valuation of securities and
- companies; Critical: risk return tradeoff - diversification and portfolios;
- interpretative: financial institutions;
- Planning: develop a financial plan for a business; and
- Analytical: Use of spreadsheet for financial calculations and analysis.

Outline Syllabus:

UNIT I

Nature and Scope of Financial Management: Meaning and Definition of Business Finance and Financial Management; Finance Functions; Objectives of Financial Management; Financial Decisions; Role and Functions of Finance Manager.

UNIT II

Capital Structure Decisions: Internal financing, Loan financing, Alternative forms of finance. Cost of Different Sources of Capital: Concept of cost of capital, Significance of cost of capital, Computation of Component costs of capital: Cost of Debt; Cost of Preference Share Capital, Cost of Equity, Cost of Retained Earnings, Computation of Composite Cost of Capital. Theories of Capital Structure: Net Income Approach; Net Operating Income

Approach; Traditional Approach and Modigliani-Miller Approach; Concept of Optimum Capital Structure; Factors affecting Capital Structure. Operating and Financial Leverages:

Meaning of leverage, Types of Leverages; Operating, Financial and Composite Leverages.

UNIT III

Investment decisions: Time Value of Money – Concept, Future Value of a single amount; Present Value of a single amount; Future Value of an Annuity; Present Value of an Annuity. Capital Budgeting Decisions: Concept of capital budgeting, Need, types and importance of capital investment decisions; Capital budgeting appraisal methods: Payback period method,

Net Present Value Method, Internal Rate of Return method, and Present Value Index Method

UNIT IV

Management of Working Capital – Concept, types, importance and factors affecting working capital, Sources of working capital , Dividend Decision: Dividend Policy: Dividend and its forms, Objectives of Dividend Policy, Relevance and Irrelevance Theories of Dividend Decision: Walter's Approach; Gordon's Approach

UNIT V

Management of Cash and Marketable Securities: Motives for Holding Cash; Objectives of Cash Management; Factors Determining Cash Needs; Basic Strategies of Cash Management; Cash Management Techniques / Processes; Marketable Securities; and Cash Management Practices in India.**Receivable Management -** Objectives; Credit Policies; Credit Terms; and Collection Policies, **Inventory Management -** Objectives; and Techniques.

References

1. Van Horne, J. and Wachowicz Jr., J.M. (2008). Fundamentals of Financial Management, New Delhi, Prentice Hall of India.
2. Aravind.M. (2019). Principles of Financial Management: Practice and Decisions. New Delhi, Viva Books.
3. Brealey, R., Myers, S,C., Allen, F. and Mohanty, P. (2017).Principles of Corporate Finance. New Delhi, Tata McGraw Hill Publishing Company Ltd.

4. Pandey I. M.. (2016) . Financial Management. New Delhi, Vikas Publishing House Pvt. Ltd
5. Palanivelu, V.R, (2018 Revised Ed), Financial Management, S Chand & Company Ltd, New Delhi.

Additional Reading

- Chandra, P. (2019). Financial Management – Theory and Practice. New Delhi, Tata McGraw Hill Publishing Company Ltd.
- Khan M. Y., Jain P. K. (2018) .Financial Management – Text and Problems. New Delhi, Tata McGraw Hill Publishing Company Ltd.
- www.swayam.gov.in

MGT 528: MANAGING HUMAN RESOURCES

Semester : **II**
Course Code : **MGT 528**
Credit : **4**
Course : **HUMAN RESOURCES MANAGEMENT**
Aim :

- To provide you with a repertoire of concepts, which will enhance understanding of organizational events and processes
- To enable to make judgments about behavior,
- To influence organizational phenomena effectively.

Course Objective: To provide an understanding of modern organisations in terms of the management of people, the strategies and processes of HRM, and to provide the basis for a critical review of HRM systems and techniques.

Teaching Strategy:
Lecture Sessions will be supplemented by project based (tutorial) assignments. Feedback will be given orally during tutorials. Written feedback is given for both individual and group assignments

Study:	Lect**:(L)** Sem**/(T)**	Library/	Directed(**DS**)	Other:	Formal	Total
Hours:	25 Tut: 10	Pract: 10	Study: 50	5	Exams: 2	100

Key Graduate Attributes								
Academic and professional Knowledge	**Communication**	**Team Work and Leadership**	**IT Literacy**	**Global Perspective and Cross Cultural Adaptability**	**Critical and Analytical thinking**	**Social Responsibility and Ethics**	**Entrepreneurship Skills**	**Life - long Learning**
√	√	√	√	√	√	√	√	√

Course Outcomes:

a) Knowledge-

- Alternative theories on how best to manage people in organisations
- Different models of HRM
- Theories and practices underlying performance management
- Contextualizing Concepts of culture, leadership, power and politics
- Decision making processes in HRM

b) Skills-

- Analytical: Apply suitable models and frameworks to the analysis of social situations and problems at the level of the individual, group and organisation
- Information: Be aware of the potential impacts of various forms of organizational interaction
- Social Skills: Assess how to go about intervening in a social situation
- Decision Enabling: make decisions about the appropriate use of HRM techniques
- Evaluation: Recruitment and selection of employees

  Learning Skills: Performance management and training and development

Outline Syllabus:

UNIT I

Evolution & Growth of HRM –Significance of HRM, Definition, Scope, Functions & Objectives of HRM, Roles of HR Managers in Modern day Organizations, HRM vs. Personnel Management, HRM & Human Capital Management – Contemporary HR Practices & Challenges, Introduction to HR Analytics, HRAccounting, HR Audit, HRIS.

UNIT II

Analysis & designing of jobs–Job Analysis – Definition, Process, Job Description vs. Specification – Job Design – Various Methods – Human Resource Planning(HRP)– Objective– factors affecting HRP – Process, Methods of Demand & Supply Forecasting– Recruitment – Definition, Methods, Process, Yield Ratio – Selection – Definition, Process & Methods, Selection Tests & its Importance – Interviews – Virtual interview–Placement

– Induction/Orientation – Transfer – Promotion & Demotion – Definition & Types – Reasons for Demotion. **CASE DISCUSSION**

UNIT III

Performance Assessment &Human Resource Development: Performance appraisal – Definition, Process, Methods – Past Oriented & Future Oriented – Employee Training – Definition, Importance of Training, Training Need Assessment/Identification (TNA/TNI) – On the Job vs. Off the Job Training – Evaluation of Training – Training vs. Development – Management Development – Definition, Process, **CASE DISCUSSION**

UNIT IV

Wages & Salary Administration: Job evaluation – Definition, Process & Methods - Qualitative & Non Qualitative Methods, Basics of compensation – Definition, Types of Compensation – Direct / Indirect, Fixed / Variable Compensation – Wages vs. Salary – Wage Determination – Wage Theories & Concepts – Minimum Wage, Fair Wage, Living Wage, Wage Determination.

UNIT V

Employee Relations: Industrial Relations – Definition, Objectives of IR – Parties to IR – TradeUnions in India – Participative Management – Definition, Methods of WPM – Collective Bargaining – Definition, Types, Process – Employee Discipline& Grievance – Definition, Settlement of Grievance – Open Door vs. Step Ladder Technique – Industrial Disputes – Definition – Dispute Settlement Machinery – Bipartite & Tripartite bodies in India – Employee Separation Methods - Unethical Practices in HR.Industrial Disputes act, 1947, Factories act, 1948, The Trade Union Act, 1926 - **CASE DISCUSSION**

References

1. Crawshaw, J., Budhwar, P., & Davis, A. (Eds.). (2017). Human resource management: Strategic and international perspectives. Sage Publications.
2. Bhattacharya Kumar Dipak (2017). HR Analytics – Understanding Theories & Applications, Sage Publications.
3. Sanghi,S. (2014). Human Resource Management. Vikas Publications.
4. Aswathappa,K. (2013). Human Resource Management 7E. Tata McGraw Hill.
5. Rao, V. S. P. (2010). Human Resource Management 3E–Text and Cases Excel Books. New Delhi.
6. Randhawa, G. (2007). Human Resource Management. Atlantic Publishers & Dist.

7. Armstrong, M. (2006). A handbook of human resource management practice. Kogan Page Publishers.

Additional Reading

- Industrial Disputes act, 1947, Factories act, 1948, The Trade Union Act, 1926,
- Vikalpa , Journal of the Indian Institute of Management
- Harvard Business Review
- Economic & Political Weekly
- The Effective Executive, Peter Drucker (Harper Business, 2006)

University of Kerala

Master of Business Administration Syllabus

Semester 3:

III SEMESTER:

Core Papers

MGT 531 INNOVATION MANAGEMENT & ENTREPRENUERSHIP
MGT 532 DATA ANALYTICS
MGT 533 INFORMATION SYSTEMS AND CYBER SECURITY

ELECTIVE 1
ELECTIVE 2
ELECTIVE 3
ELECTIVE 4
ELECTIVE 5

Elective List

GLOBAL WATER SYSTEM AND MANAGEMENT

HYDROLOGICAL CYCLE AND RIVER BASIN MANAGEMENT

WATER USE AND CHANGING TREND OF WATER MANAGEMENT

SURFACE WATER MANAGEMENT

GROUND WATER MANAGEMENT

LAND USE AND WATER MANAGEMENT

CLIMATE CHANGE AND WATER MANAGEMENT

MGT 531: INNOVATION MANAGEMENT AND ENTREPRENEURSHIP

Semester : **III**
Course Code : **MGT 531**
Credit : **4**
Course : **INNOVATION MANAGEMENT**

Course Objective:

This course on Innovation Management and Entrepreneurship focusses to provide the MBA participants with adequate skills, analytical tools, perspectives, and experiences that enables them to emerge as successful and autonomous entrepreneurs, family-business entrepreneurs, or entrepreneurs in corporate settings. The course also focusses on innovation as a source of gaining sustainable competitive advantage for firms around the world. Bringing sustained success year after year through innovation has become a managerial challenge. This course also focusses on the practices and processes that managers use to manage innovation effectively.

Teaching Strategy:

Lectures supported by power point presentation, video materials, seminars during which case studies will be discusses and students will solve specific practical assignments. On-line reading materials and discussions. Face-to-face and e-Learning – working in groups on case studies; face-to face and on-line discussions; written assignments. Written feedback is given for both individual and group assignments

Study:	Lect**:(L)** Sem**/(T)**	Library/	Directed(**DS**) Other:	Formal	Total
Hours:	30 Tut: 5	Pract: 10	Study: 50 5	Exams: 2	100

Key Graduate Attributes								
Academic and professional Knowledge	**Communication**	**Team Work and Leadership**	**IT Literacy**	**Global Perspective and Cross Cultural Adaptability**	**Critical and Analytical thinking**	**Social Responsibility and Ethics**	**Entrepreneurship Skills**	**Life - long Learning**
√	√	√	√	√	√	√	√	√

Course Outcomes:

a) Knowledge-

Upon completion of the course students will be aware of the basics in Innovation and Entrepreneurship, Steps for starting a new venture and its funding agencies, Role of Central Government and State Government in promoting Entrepreneurship Innovation policy, Types of innovations. They will be getting an overall understanding about innovation process and models describing the innovation process.

b) Skills-

- Interpretative
- Analytical and
- Evaluative skills

Outline Syllabus:

UNIT I

Entrepreneur - meaning- importance-Qualities, nature, types, traits, culture, similarities and economic and differences between Entrepreneur and Intrapreneur. Entrepreneurship development-its importance- Role of Entrepreneurship -Entrepreneurial environment. Role of consultancy organizations in promoting Entrepreneurs-Forms of business for Entrepreneurs.

UNIT II

Creating and starting the venture - Steps for starting a small industry - selection of types of organization , Managing, growing and ending the new venture - Preparing for the new venture launch -early management decisions Managing early growth of the new venture-new venture expansion strategies and issues - Going public - ending the venture, Venture Capital – Definition , Funding New Projects – Process – Examples for VC Firms, Issues and problems with VC Firms, International entrepreneurship opportunities.

UNIT III

Development and Government: Role of Central Government and State Government in promoting Entrepreneurship - Introduction to various incentives, subsidies and grants - Export Oriented Units - Fiscal and Tax concessions available. Women Entrepreneurs Reasons for low / no women Entrepreneurs their Role, Problems and Prospects, Corporate Entrepreneurship.

UNIT IV

Innovation: - Definition, Need & Objectives of innovation, Types of innovation in Entrepreneurship – Sustaining, Disruptive, New Market, Integrative, Process of innovation Phases – Idea Generation, Concept, Solution and Market, Role of R&D (RTD) in innovation , Technological innovation - its importance , Technological innovation in business – reasons for and examples, Issues in technological innovation and how to overcome, Technological change and innovation and its impact on employees in future. The innovation matrix and its components – Radically Disruptive, radically sustaining, Incrementally Disruptive & Incrementally Sustaining.

UNIT V

Innovation projects. Methods for evaluation of innovation projects. Closed innovations. Open innovations, Theories of innovation – E.M Rogers Diffusion of Innovation (DOI) Theory and its limitations, Schumpeter's Innovation Theory of Profit, Social Innovation – Definition, Process, Importance of social innovation, Examples of social innovation, architectural **and** modular innovation.

References

- Tidd, J., Bessan, J. (2013) Managing Innovation: Integrating Technological, Market and Organisational Change. 5th ed., Hoboken: John Wiley & Sons
- Trott, P. (2011) Innovation Management and New Product Development. 5th Edition. FT Prentice Hall.
- Drucker, P. F. (1985) Innovation and Entrepreneurship. New York: Harper Collins Publishers, Inc.

- Vasanth Desai " Dynamics of Entrepreneurial Development and Management Himalaya Publishing House.
- Robert D.Hisrich, Michael P.Peters, " Entrepreneurship Development, Tata McGraw Hill edition.

Additional Reading

- Davila, T., Epstain, M and Shelton, R. (2013) Making Innovation Work: How to Manage It, Measure It, and Profit from It, Updated Edition. Pearson Education Inc. 2013.
- www.swayam.gov.in

MGT 532: DATA ANALYTICS

Semester **: III**
Course Code **: MGT 532**
Credit **: 4**
Course **: DATA ANALYTICS**
Aim **:**

- To familiarize learners with the latest online technologies used in decision making
- To enable the learners, understand the importance of big data in strategic management
- To familiarize learners with various tools used in data analysis

Course Objective: The key objective of this **course** is to familiarize the students with most important information technologies used in manipulating, storing, and analyzing big **data**. We will examine the basic tools for statistical **analysis**, R and Python, and several machine learning algorithms.

Teaching Strategy:

In additional to the conventional classroom lectures, the students will be given hands on training in data analytic techniques and data analysis. Along with this the students have to submit deadline-based assignments and projects on the topics

Study:	Lect**:(L)** Sem**/(T)**	Library/	Directed(**DS**)	Lab	Formal	Total
Hours:	20 Tut: 5	Pract: 5	Study: 50	20	Exams: 2	100

Key Graduate Attributes								
Academic and professional Knowledge	**Communication**	**Team Work and Leadership**	**IT Literacy**	**Global Perspective and Cross Cultural Adaptability**	**Critical and Analytical thinking**	**Social Responsibility and Ethics**	**Entrepreneurship Skills**	**Life - long Learning**
√	√	√	√	√	√	√	√	√

Course Outcomes:

a) Knowledge-

- A clear understanding of modern trends in online data management
- Understanding of Big Data and its relevance in formulating online business strategies
- Application of theory to practice to better decision making
- Understanding the nuances of data analysis
- Imbibing business intelligence for optimising outputs
- A holistic approach to achieving the goals and objectives of business through latest online data optimising techniques

b) Skills-

- Ability to interpret from the various outputs the best option suitable to address the problem at hand
- Create data sets using data analysis techniques for strategic decision making
- Ability to use Big Data using the various online tools available for effective interpretations
- Ability to understand the various algorithms used in data analytics
- Ability to create new data sets according the problem at hand

Outline Syllabus:

UNIT I

Understanding Data: Types of data – Data cleaning and preparation- Information – Types of data – Structured and unstructured - Characteristics – Information systems in modern day business – Importance of Information Processing in Management

UNIT II

Online data storage: Relevance of online data processing – Cloud computing –Cloud based services offered by Amazon, Google and IBM – E-Commerce Applications

UNIT III

Big Data Analytics: Big Data- Characteristics and Relevance – Applications of Big Data – Data search algorithms in search engines – Digital advertisements – Recommender systems –

Customer Analytics – Compliance analytics – Fraud analytics – Operational analytics

UNIT IV

Machine learning: Types of learning algorithms – Machine learning models – Areas of application – Business intelligence – Data gathering – Data storage and knowledge management

UNIT V

Data Analysis: Introduction to R Programming, PYTHON, SPSS, AMOS and MS-Excel – Key data analysis techniques used in creating data sets for business –Types of analysis – Descriptive – Diagnostic – Predictive and Prescriptive

References

1. Maheswari A (2017) Data Analytics, McGraw Hill Educations
2. S, A.Vivek & Kumar, Rakesh S. (2019). Business Analytics: An Introduction. Kollam: SS Book Series
3. Siegel E (2013) Predictive Analytics, The Power To Predict Who Will Click, Buy, Lie Or Die R, Wiley
4. Simon P (2015)Too Big to Ignore, The Business Case for Big Data, Wiley
5. Croll A, Yoskovitz (2013), Lean Analytics, Use Data to Build a Better Startup Faster, O'Reilly Media
6. James G , Witten D, Hastie T and Tibshirani R (2013), Introduction to Statistical Learning with Applications in R, Springer Science and Business
7. Miles A, Huberman M and Saldana J (2018), Qualitative Data Analysis: A Methods Source Book, Sage Publications

Additional Reading

Online references

https://www.simplilearn.com/data-science-vs-big-data-vs-data-analytics-article
https://www.edureka.co/blog/what-is-data-analytics https://intellipaat.com/blog/what-is-data-analytics/ https://www.proschoolonline.com/blog/top-10-data-analytics-tools
https://cyfar.org/types-statistical-tests
https://towardsdatascience.com/statistical-tests-when-to-use-which-704557554740

MGT 533: INFORMATION SYSTEMS AND CYBER SECURITY

Semester **: III**
Course Code **: MGT 533**
Credit **: 4**
Course **:** CYBE R SECURITY AND INFORMATION SYSTEMS

As the threat of cyber security becomes a focus for companies all around the world, this course is designed to help provide you with the skills needed to manage the challenges in the field of cyber security management. The course will enable you to gain knowledge of digital information security concepts and an understanding of how they are applied.

Course Objective: The objective of the course is to introduce Information Systems and also the need to learn the cyber security.

Teaching Strategy:

In additional to the conventional classroom lectures, the students will be given hands on training in data analytic techniques and data analysis. Along with this the students have to submit deadline-based assignments and projects on the topics

Study:	Lect**:(L)** Sem**/(T)**		Library/	Directed(**DS**)	Lab	Formal	Total
Hours:	25	Tut: 5	Pract: 5	Study: 50	15	Exams: 2	100

Key Graduate Attributes								
Academic and professional Knowledge	**Communication**	**Team Work and Leadership**	**IT Literacy**	**Global Perspective and Cross Cultural Adaptability**	**Critical and Analytical thinking**	**Social Responsibility and Ethics**	**Entrepreneurship Skills**	**Life - long Learning**
√	√	√	√	√	√	√	√	√

Course Outcomes:

c) Knowledge-

- A better understanding of cyber operations
- Attain knowledge of advanced security and privacy issues in systems
- An understanding of information systems
- Understanding of cybersecurity tools, techniques
- To develop an understanding of security issues towards new architectures

Skills-

- Critical Thinking
- Cognitive skills and ability to identify, analyze and articulate the importance of managing IS-related risk and security issues in organizations, and the relationship

Outline Syllabus:

UNIT I

Management Information System (MIS) Concept and Role - Information Needs and Structure of MIS - Components and Structure- Organizational and Functional - information requirements by level of management activity – transaction processing systems – information support systems - role of MIS - impact of MIS - MIS as a support to the management - MIS and organizational effectiveness - System concept - MIS for a digital firm – Cyber security- A comprehensive overview of existing security vulnerabilities. Critical analysis of the stateof-the-art mitigation techniques and their pros and cons.- New cyber-attack patterns in emerging technologies.

UNIT II

Planning & Decision Making - Concepts in planning and control, Decision making and information systems - systems for decision support - Executive Support Systems (ESS) - Group Decision Support Systems (GDSS) - the process of developing DSS - individual and organizational model - - knowledge management- enterprise-wide knowledge management systems - knowledge work systems - intelligent techniques - Knowledge

Based Expert Systems (KBES) - Enterprise Resource Planning – Cloud based Decision support Decision Making -Executive Information Systems -

UNIT III

Information System for Control - System Analysis - System Design and Development - Data Base and Data Base Management Systems Databases and Information Management - - database models - capabilities of DBMS - RDBMS - using databases to improve business performance and decision making – client-server architecture. – Computer Based Management Information System • Computer Networking and Communication Technology -

Big Data Analytics and Cloud Computing - Information Systems for Managerial Decisions – The Future Cyber Security and its problems-Intervention Strategies:- Introduction to the Legal Perspectives of Cybercrimes and Cyber security, Cybercrime and the Legal Landscape, The Indian IT Act, - Cybercrime and Punishment, Cyber law.

UNIT IV

Systems development models - prototype approach – classical SDLC approach - structured system design - system development process - tools and techniques of system design - data flow diagram - data structure - system implementation success and failure - quality control of information system - introduction to emerging technologies

UNIT V

Securing Information Systems - System vulnerability and abuse - wireless security challenges - malicious software - hackers and cyber vandalism - computer crime and cyber terrorism - business values of security and control - firewalls – intrusion - detection systems - antivirus software - securing wireless networks - encryption and public key infrastructure – ensuring system availability - security issues for cloud computing and the mobile digital platform

References

- Biswas, ,Jaytilak (2020) Management Information Systems: Sage Texts
- Jawadekar, Waman S (2013) Management Information Systems: A Global Digital Enterprise Perspective, McGraw Hill Education (India) Private Limited

- Laudon Kenneth C. & Laudon Jane P. (2012) Management Information System, Pearson Education
- Belapure Sunit and Godbole Nina,(2011) Cyber Security: Understanding Cyber Crimes, Computer
- Forensics And Legal Perspectives, Wiley India Pvt. Ltd,
- Grady Mark F, Parisi,, Fransesco (2005) "The Law and Economics of Cyber Security", Cambridge
- University Press,
- O'Brien, James A Marakas George M and Behl Ramesh (2009) Management Information Systems,. Tata McGraw Hill Education Private Limited.

Additional Reading

Online references

- **www.swayam.gov.in**
- https://www.csis.org/news/cybersecurity-agenda-45th-president
- Jaccard, Julian Jang and Nepal, Surya (2014) A survey of emerging threats in cybersecurity *Journal of Computer and System Sciences* 80 (5) 973-993

MGTWRM 01- GLOBAL WATER SYSTEM AND MANAGEMENT

Semester: III **Module title: Global Water System and Management** **Credit: 3**	**CODE: MGTWRM01** **Module Type:** Single

Module Aim(s): The course aims to introduce the students to the concept of Geosystems, Natural Resources, Environmental Degradation, and Environmental Management

Course Objectives

- To introduce water as part of the Geosystem and total Environmental Management
- To introduce the environmental resources and its components, Environmental degradation and dimensions of Environmental Management.
- To provide an integrated knowledge on development management and environmental resource management institution.
- To understand general principles of natural resource management and Environmental Impact Assessment
- To apprise importance of EIA in assessing water resource project

Teaching Strategy	Lecture Sessions will be supplemented by project based (tutorial) assignments. Feedback will be given orally during tutorials. Written feedback is given for both individual and group assignments.

Hour Distribution

Study:	Lect:(L)	Sem/(T)	Library	Directed(DS)	Other:(Comp.lab)	Formal	Total
Hours:	30	Tut: 5	Pract: 10	Study: 50	Computer lab: 5	Exams: 2	100

Course Outcomes:

Knowledge	• Introduce and discuss the concept of geosystems and ecosystems • Providing an overview of environmental degradation and human dimensions of environmental change.

Skills	• Ability to evaluate the fundamentals of natural resources and their interrelationship with the environment • Ability to understand the tools of environmental management and its applications
General Competencies	• identify the role of environmental planning in water management

Key Graduate Attributes

Academic and professional Knowledge	Discussing the role of environmental planning in water management	Team Work and Leadership	IT Literacy	Global Perspective and CrossCultural Adaptability	Critical and Analytical thinking	Social Responsibility and Ethics	Entrepreneurship Skills	Life - long Learning
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

UNIT DETAILS

UNIT I

Introduction to Geosystems-Earth processes- Structure and composition of atmosphere, hydrosphere, lithosphere, biosphere, Linkage and Interaction. Minerals and rocks, Environment and components- Ecosystems- classification Ecosystem essentials– Biomes.

UNIT II

Introduction to Natural Resource Bases: Concept, classification, factors influencing resource availability, distribution and uses. Interrelation of water resources with other natural resources and the environment- Productivity issues. Ecological, Status of extraction of natural resources global and regional.

UNIT III

Environmental degradation – exploitation of natural resources Environmental pollution & control. Human dimension of environmental change, Integrated approach for resource development, conservation and management Need, Dynamics, Dimensions- economic, ecological & social. Development Management –sustainable agriculture – sustainable forestry management – water resources management-solid waste management – air quality management – coastal and marine resources management.

UNIT IV

Integrated Environmental Management –concept & Principles- managing the urban and rural environment. Environmental Management Systems (EMS) – International Standards for Environmental Management (ISO 14000 Family) Environmental Audit - Socio-ecological frame for environmental resource management. Environmental Impact Assessment (EIA) – Social Impact Assessment (SIA); Concept of Extended Environmental Impact Assessment;- Requirements, Principles, Guidelines and core values for EIA and SIA; Stakeholder involvement and Public Participation in the EIA process; Methods of Impact Identification and Analysis; Preparation of Environmental Impact Statement (EIS). Environmental Monitoring and EIA policies – academic and research institutions in environmental management.

UNIT V

Concepts and scope of environmental planning and management (EPM). Steps in Environmental planning, Identification and formulation of strategies of EPM. Water management as part of environmental planning. Major challenges in EIA and environmental planning in water resource development. Concept of EIA in water resource projects-multipurpose river valley projects, major irrigation projects/ canals, interlinking of rivers- tools for assessment and management, case studies.

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References:

- Robert. W. Christopherson, Geosystems, Pearson Prentice Hall, Eighth edition.2011
- Jacob Thomas, Environmental management, Pearson.2015
- NK Uberoi, Environmental management, Excel books.2004.
- KK Singh, Natural resources conservation and management, MD Publishing.2008
- Shahab Faizal and Abhalakshmi Singh, Urban Environmental Management, BR Publishing.2008
- Larry W Canter, Environmental impact of water resource projects, ,CRC Press1985
- Hirji, R.,& Ortolano, L, EIA effectiveness and mechanisms of control: case studies of water resources development in Kenya. International Journal of Water Resources Development, 7(3), 154-167.Taylor& Francis.1999
- Hirji, R., & Davis, R, Environmental flows in water resources policies, plans, and projects: case studies. World Bank.2009

E-Resource

- https://onlinecourses.nptel.ac.in/noc21_hs83/preview (Environment and Development)
- https://onlinecourses.nptel.ac.in/noc23_ge17/preview (Introduction to Environmental Engineering and Science - Fundamental And Sustainability Concepts)
- https://egyankosh.ac.in/handle/123456789/39209?mode=full(Environment Management System)

E-Content URL: Vidya-mitra/e-Pathashala

- https://www.youtube.com/playlist?list=PL_a1TI5C C9RFNPAAjxi8pBItMQ1NKySHS (Ecosystems Structures & functions)

- https://www.youtube.com/watch?v=ut0coahzX_Q(Environmental Geology – Natural Resources)
- https://www.youtube.com/watch?v=quRp2YUs3kY (Environmental Degradation)
- https://www.youtube.com/watch?v=_d9wQJcosEk (Environmental Management)
- https://www.youtube.com/watch?v=ad9KhgGw5i A(Environmental Impact Assessment)

MGTWRM 02- HYDROLOGICAL CYCLE AND RIVER BASIN MANAGEMENT

Semester: III **Module title: Hydrological Cycle and River Basin Management** **Credit: 3**	**CODE: MGTWRM02** **Module Type:** Single

Module Aim(s): To introduce the students to the concept of Hydrological Cycle, Surface Water Hydrology, Ground Water Hydrology, and Water Resource Planning and Management.

Course Objectives

- To evolve a holistic view of the water environments.
- To acquaint with diverse methods for the collection of the hydrological information essential to understand surface and groundwater hydrology
- To know the relevance of water cycle and the concept of water balance concept manage water supply and predict where there may be water shortages and thereby solve various hydrological problems.

Teaching Strategy	Lecture Sessions will be supplemented by project based (tutorial) assignments. Feedback will be given orally during tutorials. Written feedback is given for both individual and group assignments.

Hour Distribution

Study:	Lect:(L)	Sem/(T)	Library	Directed(DS)	Other:(Comp.lab)	Formal	Total
Hours:	30	Tut: 5	Pract: 10	Study: 50	Computer lab: 5	Exams: 2	100

Course Outcomes:

Knowledge	• Describe the relevance of the hydrological cycle and the concept of water balance • Summaries the diverse methods used to collect hydrological information and understand the components of surface water hydrology
Skills	• Gain insight into groundwater properties, monitoring, and groundwater resource estimation
General Competencies	• Ability to identify the concept and methods used for water resource planning and management

Key Graduate Attributes								
Academic and professional Knowledge	Communication	Team Work and Leadership	IT Literacy	Global Perspective and CrossCultural Adaptability	Critical and Analytical thinking	Social Responsibility and Ethics	Entrepreneurship Skills	Life - long Learning
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

UNIT DETAILS
UNIT 1
Introduction: Hydrological cycle, System approaches in hydrology, human impact on the hydrologic cycle, water balance equation and water balance of a system. Global water system project.
UNIT II
Surface Water Hydrology: Surface Water Systems, Drainage Basin as Geo-hydrological unit, – watershed management and its objectives, Basin Hydrological Phenomena- stream flow, stream flow measurement, rainfall-runoff relationships, Hydrograph analysis and runoff analysis. Extreme events
UNIT III
Groundwater Hydrology: formations according to their water-bearing properties, types of aquifer and aquifer properties, Darcy's law and elementary groundwater flow equation, aquifers, groundwater monitoring, groundwater resource estimation.
UNIT IV
Water Resource Planning, Management and Policy: Water resources management (demand and supply side), traditional and indigenous know-how for water conservation and management, water re-use potential, watershed management, rain water harvesting, artificial recharge of wells, wetland management, national and global water policies.

References:

1. Andrew, D. W. and Trimble, S, Environmental Hydrology, Lewis Publishers, CRC Press. 2nd Edition.2004

2. Beach, Tim and Jonathan, M.F, Wetland Hydrology: The International Encyclopaedia of Geography, Wiley Online Library.2017

3. Beek, E., Loucks, P.D, Water Resource Systems Planning and Management: An Introduction to Methods, Models and Applications, UNESCO, Paris.2005

4. Bhattacharya, S.K, Urban Domestic Water Supply in Developing Countries, CBS Publishers, CR Distributors, Delhi.1988

5. Chow, V.T., Maidment, D.R. and Mays, W.L. Applied Hydrology, McGraw-Hill International Editions, McGraw-Hill Book Company, New York.1988

6. Chow V.T, Handbook of Applied Hydrology, Tata McGraw Hill, New Delhi.2017

7. Jain, S.K., Aggarwal, P.K. and Singh, V.P, Hydrology and Water Resources of India, Springer, The Netherlands.2007

8. Jaya Rami Reddy, A Textbook of Hydrology, University Science Press.2011

9. Joseph Holden, Water Resources-An Integrated Approach, Routledge.2013

10. Karanth, K.R, Groundwater: Exploration, Assessment and Development, TataMcGraw Hill, New Delhi.1988

11. Mahajan G, Evaluation and Development of Groundwater, Ashish Publishing House, New Delhi.1989

12. Micklin, Philip, P, Man and the water cycle: Challenges for the 21st century, Geojournal, 39 (3): 285-298.1996

13. Mihir kumar Maitra, Watershed management – A compendium for field practitioners.2019. www.indiawaterportal.org

14. Pietro Laureano , Water Conservation Techniques in Traditional Human Settlements, Copal Publishing House.2001

15. . Raghunath, H.M, Groundwater, Wiley Eastern Ltd., New Delhi.1987

16. Rai, S.C, Hydrology and Water Resources: A Geographical Perspective, Ane Book Pvt. Ltd., New Delhi.2017

17. Subramanya, K, Engineering Hydrology, Tata McGraw Hill Education Pvt. Ltd. New Delhi.2010

18. Thornthwaite, C.W. and Mather, J.R, Instructions and Tables for Computing Potential Evapotranspiration and the Water Balance, Drexel Institute of Technology, Centerton, New Jersy.1957

19. Todd, D.K, Groundwater Hydrology, John Wiley, New York.1980

20. Viessman, W and Lewis, Introduction to Hydrology, Harper Collins College Publishers.1996

E-Resource:

- https://onlinecourses.nptel.ac.in/noc22_ce19/preview (Engineering Hydrology)
- https://onlinecourses.nptel.ac.in/noc23_ce38/preview (Surface Water Hydrology)
- . https://onlinecourses.swayam2.ac.in/cec22_ge39/preview
  (Water Resources and Watershed Management)

E-Content URL: Vidya-mitra/e-Pathashala

- **https://www.youtube.com/watch?v=KjaL1WMnNz_Q** (Introduction to Hydrology and Hydrogeology)
- https://www.youtube.com/watch?v=RB1Ag0IkvoY (Groundwater Hydrology)
- https://www.youtube.com/watch?v=dN38Jab-fSM (Hydrogeology and Hydrologic Cycle)
- https://www.youtube.com/watch?v=cm9NtYfl6SQ(Water Resources - Planning and Development-I)
- https://www.youtube.com/watch?v=Vw3RsBXUYe o (Watershed Management)

MGTWRM03 - WATER USE AND CHANGING TREND OF WATER MANAGEMENT

Semester: III **Module title: Water Use and Changing Trend of Water Management** **Credit: 3**	**CODE: MGTWRM01** **Module Type:** Single

Module Aim(s): To familiarize the student with the concept of sustainability, demand and suppl y of water, and the changing trends of water management

Course Objectives

- To develop a view on the hydro-social approach to water management.
- Understand concepts such as water footprints, water security, and water scarcity in order to develop better regional and global management plans.
- To introduce economic principles, concepts, and theory to build an economic foundation for understanding water issues.

Teaching Strategy	Lecture Sessions will be supplemented by project based (tutorial) assignments. Feedback will be given orally during tutorials. Written feedback is given for both individual and group assignments.

Hour Distribution

Study:	Lect:(L)	Sem/(T)	Library	Directed(DS)	Other:(Comp.lab)	Formal	Total
Hours:	30	Tut: 5	Pract: 10	Study: 50	Computer lab: 5	Exams: 2	100

Course Outcomes:

Knowledge	● Gain insight into water use scenarios and challenges ● Develop a view on the demand for water and water economics
Skills	● identify the concept of Water footprint, Water security, and Water scarcity ● Ability to Create awareness of water pricing and challenges
General Competencies	● Understand the economics of Water projects and evaluation methods
Key Graduate Attributes	

Academic and professional Knowledge	Communication	Team Work and Leadership	IT Literacy	Global Perspective and CrossCultural Adaptability	Critical and Analytical thinking	Social Responsibility and Ethics	Entrepreneurship Skills	Life - long Learning
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

UNIT DETAILS

UNIT 1

Introduction: General outlines; Water availability and uses: national and international scenario; Challenges in water management; Concept of sustainable water management with social viewpoints; The Dublin statement; Stakeholders' participation.

UNIT II

Concept, Estimation of water demand; Factors affecting demand; Components of demand; Demand fluctuations; Demand forecasting. Values of water and the use and nonuse; Valuation methods; Non-revenue waters (NRW) and unaccounted for water (UFW); Water management through economic instruments.

UNIT III

Fundamental concept of water footprint: types, assessment, calculation and importance; actions to reduce our own water footprint. Concept of embedded water, Concept of water security; distinction between water scarcity and water security; factors shaping water security; attempts to measure water scarcity and security.

UNIT IV

Water Pricing - Approach and Models: Significance of water pricing; Average and marginal cost pricing; short-run marginal cost pricing; Water pricing models; Conflicts in Water Pricing: Water pricing practices in India and abroad; relevant case studies.

UNIT V

Economics of Water Projects: Economics of sectorial water allocation; Capital budgeting in water projects; Costs concepts of capital budgeting; Financial evaluation of water projects; Methods of project evaluation.

.

References:

1. Colin H. Green; Handbook of Water Economics : Principles and Practice, Willy.2003
2. Ariel Dinar and Kurt Schwabe (editors), Handbook of Water Economics PublisherEdward Elgar.2015

3. Philippe Cullet, Water Law Poverty and Development, Water Sector Reforms in India by Publisher - Oxford .2009
4. M.G. Chandrakanth, Water Resource Economics: Towards a Sustainable Use of Water for Irrigation in India, Publisher – Springer.2015
5. Robert A. Young, Robert H. Haveman, Chapter 11 Economics of water resources: a survey, Handbook of Natural Resource and Energy Economics, Elsevier,Volume 2, pages 465-529.1985
6. Kimberly Burnett, Richard Howitt, James A. Roumasset, Christopher A. Wada, Routledge
7. Handbook of Water Economics and Institution, Routledge.2017
8. James- L.D. and Lee- R.R, Economics of Water Resources Planning, Mc GrawHillInc.1971.

E-Resource:

- https://onlinecourses.nptel.ac.in/noc21_ce48/preview (Water Economics and Governance)
- https://www.bu.edu/eci/files/2021/06/Water-Economics-and-Policy-2021-ECI-Teaching-Module.pdf (Water: Economics and Policy)
- https://onlinecourses.nptel.ac.in/noc23_ce37/preview (Water Supply Engineering)
- https://waterfootprint.org/media/downloads/TheWaterFootprintAssessmentManual_2.pdf (Water Footprint Assessment Manual)

E-Content URL:

- https://www.youtube.com/watch?v=HnNWjF73UI(Challenges in Water Management)
- .https://www.youtube.com/watch?v=haO3MMNTta8(Pricing Water: Sustainable Water Pricing)
- https://www.youtube.com/watch?v=9gaZUhbDrM (Water Management)
- https://www.youtube.com/watch?v=qFK7xrf6g20 (Water Demand)
- https://www.youtube.com/watch?v=86PKh2zNwQM (Socio-economic Aspects of Water)

MGTWRM04 - SURFACE WATER MANAGEMENT

Semester: III **Module title: Surface Water Management** **Credit: 3**	**CODE: MGTWRM04** **Module Type:** Single

Module Aim(s): To teach the basic concepts, technologies, and strategies of river basin management, catchment scale management, and wetland management.

Course Objectives

- To provide a brief view on River basin management and Wetland Management
- To develop strategies and technologies used in river basin management

Teaching Strategy	Lecture Sessions will be supplemented by project based (tutorial) assignments. Feedback will be given orally during tutorials. Written feedback is given for both individual and group assignments.

Hour Distribution

Study:	Lect:(L)	Sem/(T)	Library	Directed(DS)	Other:(Comp.lab)	Formal	Total
Hours:	30	Tut: 5	Pract: 10	Study: 50	Computer lab: 5	Exams: 2	100

Course Outcomes:

Knowledge	• Summarises the basic characteristics of wetlands • Discuss the concept, principles, and approaches in river basin management
Skills	• Ability to understand the strategies and technologies used in river basin planning and management • Ability to identify the concept of wetland management
General Competencies	• Identify the essential component of river basin management

Key Graduate Attributes

Academic and professional Knowledge	Communication	Team Work and Leadership	IT Literacy	Global Perspective and CrossCultural Adaptability	Critical and Analytical thinking	Social Responsibility and Ethics	Entrepreneurship Skills	Life - long Learning
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

UNIT DETAILS

UNIT 1

River Basin and River Basin Resources, River Catchments and Channel characteristics, River Corridor and River Continuum Concepts, Ecological Stresses to River Basins, River Basin as a Management Unit. Wetland-types functions, Wetland Ecology, River-Wetland Interactions- Drivers of Wetland Change- Human Interventions on wetlands and their Impacts.

UNIT II

Definition- objectives- Perspectives- approaches and significance, history of river basin management, Guiding Principles of River Basin Management, Integrated River Basin Management (IRBM)Theories, Principles, key activities, Benefits and challenges, IRBM Scenarios in Developed and Developing Countries, River Basin Management in India

UNIT III

Components of RBM: River Basin Information Management-Sediment Management-Discharge-Water Quality Management- Channel and River Bank Management- Catchment Management - Inter-basin river water transfers and water Disputes Surveys-Land use Management, and Irrigation Management, Preparation of River Basin Management Plans, Key Ingredients for successful River Basin Management, River Basin Organizations (RBOs)Types and Functions.

UNIT IV

History of Wetland Management and Management Issues, Key Aspects of Wetland Management Planning- Wetland Assessment -Wetland Monitoring - Wetland restoration and Enhancement, International Partnership – conventions Organizations and Initiatives -Ramsar Convention WETWin Project, Wetland Management Scenarios in the world and India, Integrating wetlands into river basin management.

UNIT V

River Basin Planning and Management Processes Operational Management - Instruments of Operational Management - Water Quality Management –Riparian Management- Water Charges and Cost Recovery - Issues related to Water Rights and Water Allocation. River Restoration- Planning and Design, Urban river restoration, Implementation, Monitoring, and Adoptive Management, Sediment Management in Rivers, Room For Rivers - Reallocation of Storage Volume - Pressure Flushing, Empty Flushing, Dredging, Dry Excavation and Structural Modifications. Modeling simulations as tools for decision support in RBM

.

References:

1. Newsom, M.D, Prologue. Land, Water, and Development: Sustainable
2. Management of River Basin Systems. Routledge.1992
3. Newsom, M.D, History of river basin management. Land, Water, and Development: Sustainable Management of River Basin Systems. Routledge.1992
4. Global Water Partnership and International Network of Basin
5. Organizations (INBO) A Handbook for Integrated Water Resources Management in Basins. 2010
6. River basin management: Integrating wetland conservation and wise use into river basin management. Ramsar Convention Secretariat.2010
7. . Loucks, Daniel P., Beek, Eelco van, Stedinger, Jery R., Dijkman, Jozef P.M., Villars, Monique T,Water resources systems planning and management: an introduction to methods, models and applications. UNESCO, Paris.2005
8. Pegram, Y. Li, T. Le. Quesne, R. Speed, J. Li, and F. Shen, River basin planning: Principles, procedures and approaches for strategic basin planning. Paris, UNESCO.2013
9. Brij Gopal, Handbook of Wetland Management, World Wide Fund for Nature.1995
10. International Workshop on River Basin Management-Proceedings, UNESCO.2000
11. Sediment problems and strategies for their management, Experience from very large river basinsUNESCO.2017

E-Resource

- http://cwc.gov.in/sites/default/files/nwauser/irbm-mcat3.pdf (Integrated River Basin Management &UNESCO Multi-criteria Analysis)
- https://nptel.ac.in/courses/10510145 (Sustainable River Basin Management, IIT Madras)
- https://egyankosh.ac.in/youtubevideo.jsp?src=AV8qrIyUoD0&title= Introduction%20to%20wetland%20biodiversity (Introduction to wetland biodiversity)

E-Content URL:

- https://www.youtube.com/watch?v=jsNt3F1erCQ (Inter-basin water transfer study of the Interlinking of River Projects, India)
- https://www.youtube.com/watch?v=YKNfYuMLZQ0&t=185s (Wetlands Conservation)
- https://www.youtube.com/watch?v=dONr20ryNew (Major Wetlands and Ramsar Sites in India)

MGTWRM05- GROUND WATER MANAGEMENT

Semester: III **Module title: Ground Water Management** **Credit: 3**	**CODE: MGTWRM05** **Module Type:** Single

Module Aim(s): This course aims to discuss the different aspects of ground water management

Course Objectives

- To illustrate fundamental concepts about ground water hydrology and management.
- To introduce groundwater quality assessment and monitoring plans for better management practices.
- To create knowledge about artificial recharge, groundwater modeling, and groundwater regulation concepts.

Teaching Strategy	Lecture Sessions will be supplemented by project based (tutorial) assignments. Feedback will be given orally during tutorials. Written feedback is given for both individual and group assignments.

Hour Distribution

Study:	Lect:(L)	Sem/(T)	Library	Directed(DS)	Other:(Comp.lab)	Formal	Total
Hours:	30	Tut: 5	Pract: 10	Study: 50	Computer lab: 5	Exams: 2	100

Course Outcomes:

Knowledge	• To illustrate fundamental concepts about ground water • To introduce groundwater development, management, and methods of estimation
Skills	• Ability to evaluate Ground water quality and its monitoring techniques. • Ability to familiarise the concept of groundwater modeling and Artificial recharge methods
General Competencies	• Understand the need for groundwater regulation, licensing, allocation, and institutions

Key Graduate Attributes

Academic and professional Knowledge	Communication	Team Work and Leadership	IT Literacy	Global Perspective and CrossCultural Adaptability	Critical and Analytical thinking	Social Responsibility and Ethics	Entrepreneurship Skills	Life - long Learning
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

UNIT DETAILS
UNIT 1
Introduction to ground water; Ground water table; Storage properties and Types of aquifers; Darcy's Law and hydro conductivity; Quantifying ground water flow; Ground and surface water interaction and Exchange; Groundwater levels variation.
UNIT II
Introduction to Groundwater Development and Management; Dynamic equilibrium in natural aquifers; Ground water budgeting: Groundwater balance and methods of estimation; Management potential of aquifers. Conjunctive use of surface and groundwater;
UNIT III
Basic concepts of groundwater modeling: Modelling as a tool for groundwater management, Use of various modeling packages; Groundwater Development in urban areas and Rain water harvesting, Artificial Recharge of Ground Water: Concept of artificial recharge concepts, recharge methods, recharges mounds, induced recharge.
UNIT IV
Ground water quality standards; Ground water monitoring programs: Methodology, Assessment of pollution, Aquifer vulnerability, Over-exploitation, Ground water Contamination, and Saline water intrusion, Ground water restoration: Risk-based corrective action, Source control measures, Plume treatment, and Site remediation
UNIT V
Regulation of groundwater within a river basin framework; Groundwater Licensing and allocation; Main interactions in groundwater licensing and allocation system; Allocation of non-renewable groundwater resources; Institutional framework and Stakeholder Participation; Groundwater management; Implementing a groundwater regulatory system.

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References:

1. C.W. Fetter, Applied hydrogeology, CBS publishers & Distributors ISBN 8123912641.2007
2. D. K. Todd, Groundwater Hydrology, Wiley, New York, 2nd edition.1980. pp.552 ISBN 0 471 08641 X.1980
3. Freeze & Cherry, Groundwater, Pearson Prentice hall Publishers.1979.ISBN13:9780133653120
4. Karanth.K. R, Ground Water Assessment development & management, Mc Graw – Hill Publishing Company .1987
5. Todd, D.K, Groundwater Hydrology, John Wiley, New York.1980
6. r.willes & w.w.g.yeh, Groundwater system planning & management, Prentice hall.1987
7. Integration of Groundwater Management into transboundary basin organizations in Africa training manual.2014

E-Resource:

- https://onlinecourses.nptel.ac.in/noc23_ge13/preview(Ground Water Hydrology and Management)
- http://ecoursesonline.iasri.res.in/mod/page/view.php?id=1852 (Ground Water Modeling)
- https://nptel.ac.in/courses/105105042(Ground Water (GW) Utilization and Historical Background, GW in hydrologic Cycle)

E-Content URL:

- https://www.youtube.com/watch?v=7iBKqw whb0Y&t=4s (Ground Water Hydrology)
- https://www.youtube.com/watch?v=8Y6JJe24WAs&t=43s (Assessment of Groundwater Quality)
- https://www.youtube.com/watch?v=HISloKqnao (Ground Water Modelling Concepts)
- https://www.youtube.com/watch?v=kRMY8o XTKME (Ground Water Resources Estimation and Production)

MGTWRM06- LAND USE AND WATER MANAGEMENT

Semester: III **Module title: Land Use and Water Management** **Credit: 3**	**CODE: MGTWRM06** **Module Type:** Single

Module Aim(s): This course is designed to develop and strengthen student s understanding of the basic concepts of land use and its relationship with the management of land and water.

Course Objectives

- To provide knowledge about land use planning sustainable land management
- To introduce the concept of integrated water management

Teaching Strategy	Lecture Sessions will be supplemented by project based (tutorial) assignments. Feedback will be given orally during tutorials. Written feedback is given for both individual and group assignments.

Hour Distribution

Study:	Lect:(L)	Sem/(T)	Library	Directed(DS)	Other:(Comp.lab)	Formal	Total
Hours:	30	Tut: 5	Pract: 10	Study: 50	Computer lab: 5	Exams: 2	100

Course Outcomes:

Knowledge	● Understand the concept of land use, land use planning and its evaluation methods ● Learn the agro- ecological regions of India and its role in land use planning.
Skills	● Apply the land restoration and conservation techniques ● Illustrate quality and different methods of irrigation for water management
General Competencies	● Ability to summaries the concept of Integrated Water Management
Key Graduate Attributes	

Academic and professional Knowledge	Communication	Team Work and Leadership	IT Literacy	Global Perspective and CrossCultural Adaptability	Critical and Analytical thinking	Social Responsibility and Ethics	Entrepreneurship Skills	Life - long Learning
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

UNIT DETAILS

UNIT 1

Land use – definition, types; land evaluation and land use type (LUT)–concept and application; Concept and techniques of land use planning; factors governing present land use; Land evaluation method sand soil-site suitability evaluation for different crops; land capability classification; land irrigability classification and constraints in application. Soil survey and its types; soil survey techniques- thematic soil maps, cartography, mapping units, techniques and application of remote sensing and GIS in soil survey

UNIT II

Sustainable land management – concept; Agro-ecological regions/sub-regions of India and their characteristics in relation to crop production. Status of land use planning in India. Approaches for managing soils and landscapes in the framework of agro-ecosystem.; Forestry – objectives, types; Social forestry – concept and importance, Forest policies of India and abroad

UNIT III

Soil/land degradation - type, factors, processes and impact. Extent, monitoring, diagnosis and mapping of land degradation by conventional and modern RS-GIS tools; land use policy, incentives and participatory approach for reversing land degradation; Land restoration and conservation techniques-erosion control, reclamation of salt-affected soils; mine land reclamation. Watershed development/management - concept, objectives, characterization, planning, execution, community participation and evaluation; rehabilitation of watershed

UNIT IV

Water requirement, irrigation needs, factors affecting irrigation need; water use efficiency; Different methods of irrigation- macro and micro; automated irrigation systems; irrigation efficiency; Quality of irrigation and management of saline water for irrigation; Soil moisture conservation, water harvesting, rain water management and its utilization for crop production.

UNIT V

Integrated water management in command areas, institution of water management in commands, farmer's participation in command areas; irrigation legislation. Economic analysis of irrigation and crop planning for optimum use of irrigation water

.

References:

1. Elangovan K, GIS Fundamentals, Applications and Implementations. New India Publ. Agency. 2006

2. A Framework for Land Evaluation, Handbook 32. FAO.1976

3. Biswas, T. D. and Narayanasamy, G. (Eds.), Soil Management in Relation to Land

Degradation and Environment. Bull. Indian Soc. Soil Sci., New Delhi.1996

4. Greenland, D. J. and Szabolcs, I, Soil Resilience and Sustainable Land Use. CABI. 1994

5. Lal, R., Blum, W. E. H., Vailentine, C. and Stewart, B. A, Methods for Assessment of Soil Degradation. CRC Press.1997

6. Majumdar, D. K, Irrigation Water Management: Principles and Practice. PHL Learning private publishers.2014

7. Mukund, J, A Text Book of Irrigation and Water Management Hardcover, Kalyani publishers.2013

8. Lenka, D, Irrigation and Drainage. Kalyani Publishers.1999

9. Michael, A. M, Irrigation: Theory and Practice. Vikas Publ.1978

10. Paliwal, K. V, Irrigation with Saline Water. IARI Monograph, New Delhi.1972

11. Panda, S. C, Principles and Practices of Water Management. Agrobios.2003

12. .Prihar, S. S. and Sandhu, B. S, Irrigation of Food Crops - Principles and Practices. ICAR.1987

13. Reddy, S. R, Principles of Crop Production. Kalyani Publishers.2000

14. Singh, P. and Maliwal, P. L, Technologies for Food Security and Sustainable Agriculture. Agrotech Publ.2005

E-Resource :

- https://nptel.ac.in/courses/105102159 (Introduction to Irrigation Water Management)
- https://archive.nptel.ac.in/content/storage2/courses/105101010/downloads/Lecture08.pdf
- https://archive.nptel.ac.in/content/storage2/courses/105101010/downloads/Lecture0 8.pdf

E-Content URL:

1. https://www.youtube.com/watch?v=ZtOMhdIo6ro (Land Use Planning I: Management and National Policies

2. https://www.youtube.com/watch?v=AJThWzrp1B0 (Land Use Planning II: Policy Framework and Utilization Trends)

3. https://www.youtube.com/watch?v=YwqRKNM4ljw (Soil Survey)

4. https://www.youtube.com/watch?v=cqEJvhMG-SE (Applications of Remote Sensing and GIS in Land Resource Management)

MGTWRM07- CLIMATE CHANGE AND WATER MANAGEMENT

Semester: III **Module title: Climate Change and Water Management** **Credit:**	**CODE: MGTWRM07** **Module Type:** Single

Module Aim(s): To introduce the concept of climate change and to understand different adaptation and mitigation strategies for water management.

Course Objectives

- To learn the ensuing climate changes, their magnitude, causes and strategies which can be adopted for the mitigation of climate change.
- To provide students with a strong foundation on the economics of climate change and also to enable them to understand key concepts in climate change adaptation, vulnerability and mitigation
- To provide a rationale for climate change mitigation and an understanding for implementing adaptive strategies.

Teaching Strategy	Lecture Sessions will be supplemented by project based (tutorial) assignments. Feedback will be given orally during tutorials. Written feedback is given for both individual and group assignments.

Hour Distribution

Study:	Lect:(L)	Sem/(T)	Library	Directed(DS)	Other:(Comp.lab)	Formal	Total
Hours:	30	Tut: 5	Pract: 10	Study: 50	Computer lab: 5	Exams: 2	100

Course Outcomes:

Knowledge	• Learn ensuing climate change, their trends, and causes • Understand the economics of climate change
Skills	• Ability to identify the adaptation policy responses to climate change • Ability to familiarise the climate change adaptive strategies for water management.
General Competencies	• Creating awareness about International institutional frameworks and local governance initiatives to mitigate climate change impacts
Key Graduate Attributes	

Academic and professional Knowledge	Communication	Team Work and Leadership	IT Literacy	Global Perspective and CrossCultural Adaptability	Critical and Analytical thinking	Social Responsibility and Ethics	Entrepreneurship Skills	Life - long Learning
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

UNIT DETAILS

UNIT 1

Difference between climatic variability and change - Climatic changes in the past, present trends of climate change- Evidences- causes and consequences of climate change

UNIT II

Cost- Benefit Studies of Global Climate Change-Climate Change and Inequality.

UNIT III

Climate change adaptation- economics of adaptation, measurement of adaptation cost, adaptation fund; mitigation – environmental policy instruments, decisions under risk and uncertainty, stock pollutants and discounting, Carbon Taxes, Tradable permits, and Other policy tools.

UNIT IV

Trade-off between adaptation and mitigation; vulnerability (measurement techniques) and loss and damage. Adaptive management strategies for water resources –Hydro-social approaches, Expansion of water storage and desalination facilities – Improvement in watershed and reservoir management. Enhancement of water use and irrigation efficiency and water re-use-Urban and rural flood management

UNIT V

The International Climate Change Legal and Institutional Framework and key issues under negotiation: International Climate Change Agreements and Local Governance, IPCC, Carbon foot print, Carbon credit, Initiatives of Governments- International treaties (Rio and beyond), adaptation fund.

.

References:

1) Adger, N. W, Successful adaptation to climate change across scales. Global Environmental Change, 15(2), 77–86. 2005

2) Adger, W. N, Vulnerability. Global Environmental Change, 16(3), 268–281.2006

3) Barry, R.G., and Chorley, R.J, Atmosphere, Weather and Climate, Routledge, London, 516 pp.2010

4) Byers R.H, General Meteorology, McGraw Hill BKCo New York.1974

5) Critchfield, H.J, General Climatology; Prentice Hall, London.2009

6) IPCC Climate change 2014: Impacts, adaptation, and vulnerability. Part A: Global and Sectoral Aspects. Contribution of working group II to the fifth assessment report of the Intergovernmental Panel on Climate Change. [V. R. Barros, C. B. Field, D. J. Dokken, M.D. 2014

7) Lebel, L., Lebel, P., Chitmanat, C., Uppanunchai, A., & Apirumaneku, C, Managing the risks from the water-related impacts of extreme weather and uncertain climate change on inland aquaculture in Northern Thailand. Water International, 43(2), 257– 280. 2018

8) Lele, S., Srinivasan, V., Thomas, B. K., & Jamwal, P, Adapting to climate change in rapidly urbanizing river basins: Insights from a multiple-concerns, multiple-stressors, and multi-level approach. Water International, 43(2), 281–304.2018

9) Nordhaus, W., and Boyer, J. Warming the World: Economic Models of Global Warming, MIT Press.2003

10) Nordhaus, W. A Question of Balance: Weighing the Options on Global Warming Policies, Yale University Press, New Haven, 2008.

11) Nordhaus, W.D. Managing the Global Commons: The Economics of Climate Change, MIT Press, 1994.

12) Stern, N. The Economics of Climate Change-The Stern Review, Cambridge University Press, 2006.

13) Stern, Nicholas , The Structure of Economic Modeling of the Potential Impacts of Climate Change: Grafting Gross Underestimation of Risk onto Already Narrow Science Models. Journal of Economic Literature 51(3).2013

14) Tol, Richard S.J, The Economics Effects of Climate Change, Journal of Economic Perspecitves 23(2). P 29-51.2009

15) Toman, M.A., Chakravorty, U., and Gupta, S. India and Global Climate Change:
Perspectives on Economics and Policy from a Developing Country, RFF Pr.2010

Newspaper Readings:

1) "Indias's growing water crisis, the seen and the unseen" Srikumar Chattopadhyay, The Hindu, September 15, 2022.

2) "India Scores a Win in Warsaw on Emissio n Cuts Affecting Farmers." Nithin Sethi, The Hindu, November 14th, 2013

E-Resource

1. https://www.rff.org/topics/

2. Energy Information Administration (EIA): https://www.eia.gov/environment/

3. Center for Climate and Energy Solutions: https://www.c2es.org/

4. Intergovernmental Panel on Climate Change: http://www.ipcc.ch/ UNFCCC Paris Agreement: https://unfccc.int/

5.process-and-meetings/the-paris-agreement/theparis-agreement
https://www.ipcc.ch/sr15/chapter/spm/

6. https://www.econlib.org/library/Columns/y2018/MurphyNordhaus.html

7. https://onlinecourses.swayam2.ac.in/nou21_ge37/preview

(Introduction to Climate Change Introduction to Climate Change)

8. https://openknowledge.worldbank.org/bitstream/handle/10986/34972/WorldBankReference-Guide-to-Climate-Change-Framework-Legislation.pdf?sequence=6

9. https://www.ipcc.ch/site/assets/uploads/2018/03/wg2TARchap18.pdf

E-Content URL:

1. https://www.youtube.com/watch?v=2- 6QwlKKtKI (Climate Change)

2. https://www.youtube.com/watch?v=GRNkRJx PB74 (UNFCCC, Kyoto Protocol and Paris Agreement)

3. https://www.youtube.com/watch?v=Q5T2m27kHw (Concept of population dynamics and climate change adaptation)

4. https://www.youtube.com/watch?v=UyCc346B5hI (Adapting cities to climate change)

5. https://www.youtube.com/watch?v=lGDRsQmt dHA (International conventions on climate change)

University of Kerala

Master of Business Administration Syllabus

Semester 4:

IV SEMESTER:

Core Paper
MGT 541 STRATEGIC MANAGEMENT

ELECTIVE 6
ELECTIVE 7
ELECTIVE 8

Elective List

URBAN WATER MANAGEMENT

WATER QUALITY AND WATER MANAGEMENT TECHNOLOGIES

WATER MANAGEMENT AND PARTICIPATION

GEO-INFORMATICS AND WATER RESOURCES MANAGEMENT

WATER GOVERNANCE

LAB COURSE-GEO-INFORMATICS

MGT 541: STRATEGIC MANAGEMENT

Semester **: IV**
Course Code **: MGT 541**
Credit **: 4**
Course **: STRATEGIC MANAGEMENT**
Aim **:**

- To strategize in modern, complex organizations.
- To practice the theory for managing continuity and strategic change.
- To learn and understand from a strategic perspective.

Course Objective: Learn to use theory, methods, tools, and techniques associated with the process of strategic design and implementation.

Teaching Strategy:

Lecture Sessions will be supplemented by project based (tutorial) assignments. Feedback will be given orally during tutorials. Written feedback is given for both individual and group assignments

Study:	Lect**:(L)** Sem**/(T)** Total		Library/	Directed(**DS**) Other:		Formal	
Hours:	30	Tut: 5	Pract: 10	Study: 50	5	Exams: 2	100

Key Graduate Attributes								
Academic and professional Knowledge	**Communication**	**Team Work and Leadership**	**IT Literacy**	**Global Perspective and Cross Cultural Adaptability**	**Critical and Analytical thinking**	**Social Responsibility and Ethics**	**Entrepreneurship Skills**	**Life - long Learning**
√	√	√	√	√	√	√	√	√

Course Outcomes:

c) Knowledge-

- The theoretical perspectives of authors who have been key influences in the field of management and strategy (e.g.Prahlad, Porter, Mintzberg).
- differences in the way that social, political, economic, technical, and environmental factors affect business activity across different cultures and society.
- sources of key information, data, and opinion in relation to international business across multiple contexts of operation.
- scenario planning as a method for analyzing complex ambiguous contexts. the
- language of strategic analysis including that rooted in Business Economics.
- Use alternative theoretical conceptualizations of power to understand and manage organizational change.
- Appreciate the complexity associated with managing across organizational boundaries.
- Work with contradictory notions of managerial best practice.

d) Skills-

- Interpretative: Consider the factors of globalization and localization in relation to contexts of business.
- Analytical:Analyse an organization's competitive position, isolate the key organizational competencies, and develop and evaluate business options in light of these.
- Analyse an organization's resource base to reveal rent generating competencies within the current strategic portfolio.
- Evaluative: Employ knowledge of the economics of supply and demand in identifying market forces that determine a firm's competitive position.
- Evaluate strategies adopted by organizations and relate these to competitive success.
- Understand and work with issues surrounding the effective management of strategic change.

Outline Syllabus:

UNIT I

Overview of Strategic Management – Business Policy and Strategic Management - Strategic Management Model – Porter's Five Force Analysis-McKinsey 7S Framework- Exploring the Business Environment

UNIT II

Business Vision, Mission, Objectives – Characteristics of Mission Statement Types of Strategies – Integration strategies – Intensive strategies – Diversification strategies- Michael Porter Generic Strategies.- Strategy-Analysis and Evaluation

UNIT III

Strategic formulation: Environmental Analysis – External and industry analysis – Internal analysis-Strategic analysis and choice – Input stage –Matching stage – decision stage – Cultural aspects of strategy choice- Making Strategy

UNIT IV

Strategic Implementation: The nature of strategic implementation- Resource allocation – Strategy and structure – Creating supportive culture – Implementing strategies in functional areas

UNIT V

Strategic Issue Exploration- Strategy Evaluation: The nature of strategy evaluation – Review and Control – Characteristics of effective evaluation systems – Criteria for strategy control –Mechanism for strategic control

References

1. Werther, Jr, W.B. and Chandler, D. (2020) Strategic Management and CSR Strategic Corporate Social Responsibility: Stakeholders in a Global Environment, New York, Sage 2020
2. Bhattacharyya, D.K. (2017). HR Analytics Understanding Theories and Applications. New Delhi, Sage Publications.
3. Thomas, J. (2015). Strategic Management-Text and Cases, New Delhi, Pearson

4. Hill, CW.L. Schilling ,M.A.and Jones, G.R. (2016). Strategic Management.Boston, Cengage Learning.

Additional Reading

1. Srinivasan. (2014).Strategic management: The Indian context, New Delhi, Prentice Hall of India
2. Azhar Kazmi (1992). Strategic Management. New Delhi, Tata McGraw Hill

www.swayam.gov.in

MGTWRM08- URBAN WATER MANAGEMENT

Semester: IV **Module title: Urban Water Management** **Credit: 3**	**CODE: MGTWRM08** **Module Type:** Single

Module Aim(s): The course introduces students to the concept of WASH and Integrated Urban Water Management, their impacts, and applications.

Course Objectives

- To provide an overview of WASH and Urban and rural WASH management
- To introduce the concept of integrated urban water management

Teaching Strategy	Lecture Sessions will be supplemented by project based (tutorial) assignments. Feedback will be given orally during tutorials. Written feedback is given for both individual and group assignments.

Hour Distribution

Study:	Lect:(L)	Sem/(T)	Library	Directed(DS)	Other:(Comp.lab)	Formal	Total
Hours:	30	Tut: 5	Pract: 10	Study: 50	Computer lab: 5	Exams: 2	100

Course Outcomes:

Knowledge	• Describe the concept, principles, and approaches of WASH • Discuss the elements of Integrated Urban Water management
Skills	• Gain insight into the project management skills of WASH sectors • Acquire the skills to implement the projects and govern the WASH programmes
General Competencies	• Understand the tools for rural and Urban WASH management

Key Graduate Attributes

Academic and professional Knowledge	Communication	Team Work and Leadership	IT Literacy	Global Perspective and CrossCultural Adaptability	Critical and Analytical thinking	Social Responsibility and Ethics	Entrepreneurship Skills	Life - long Learning
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

UNIT DETAILS

UNIT 1

WASH- Definitions, Concepts, Principles and approaches,Water Borne and Water Based Diseases, Sustainable Sanitation, Hygiene and disease transmission routes, Sanitation and Hygiene to Combat Neglected Tropical Diseases, Sanitation in Rural- Urban- Social, Political, Cultural and technical Dimensions of Human excreta and Toilets, Sanitation systems for institutions, Faecal sludge and seepage management (FSSM)

UNIT II

Concept of Integrated Urban Water Management, Influencing Factor and associated issues for the rapid urbanisations, Components of IUWM and its significance in Indian scenario, Storm / Flood Management: Overview and challenges to urban area;

UNIT III

Rural WASH management, Urban WASH management, WASH in emergency, WASH and climate change, WASH in schools, WASH in healthcare facilities, Hygiene promotion strategy in a community, WASH and health guidelines, Menstrual Health and Menstrual Hygiene Management

UNIT IV

Project Management for WASH sectors, Inclusive WASH programmes, Communication and Social Behaviour change strategies for WASH, Methods and technologies for Temporary and Emergency Sanitation Arrangements, Water Transport and Distribution: Main objectives and components, Operation and maintenance.

UNIT V

Introduction to City Resilience and Water Resilient Cities, Approaches in uncertainty, Emergency,Governance and Role of Institutions, Role of Panchayati Raj/Institutional mechanism at village level in WASH sector, WASH Performance and Impact Measurement (Evaluation)- Entrepreneurship Opportunities in WASH, Successful project implementation from Government and Non-government organization, Case studies

References:

1.Bonitha R., Beaglehole R.,Kjellstorm, "Basic Epidemiology", 2nd Edition, World Health Organization.2006

2. Van Note Chism, N. and Bickford, D. J, Improving the environment for learning: An expanded agenda. New Directions for Teaching and Learning, 2002: 91–98. doi: 10.1002/tl.83Improving the Environment for learning: An Expanded Agenda.2002

3. National Research Council. Global Issues in Water, Sanitation, and Health: Workshop Summary. Washington, DC: The National Academies Press, 2009.

4. Sen, Amartya , Economic Inequality. Enlarged edition, with annex by James Foster and Amartya Sen, Oxford: Claredon Press, 1997.

5. Intersectoral Water Allocation Planning and Management, World Bank Publishers .2000

E-Resource:

1.https://www.un.org/waterforlifedecade/waterandsustainabledevelopment2015/imag es/wash_eng.pdf

2. https://www.cdc.gov/healthywater/pdf/global/programs/global-wash-overviewfactsheet.pdf

3. https://archive.nptel.ac.in/courses/124/105/124105158/(urban utilities and planning)

4. https://www.unicef.org/media/91266/file/UNICEF-Strategy-for-WASH-20162030.pdf

5. https://nptel.ac.in/courses/105101215 (Rural Water Resources Management)

E-Content URL:

1. https://www.youtube.com/watch?v=rTmU8QtiFgI (Water and Health)

2. https://www.youtube.com/watch?v=gFHLrEMa_2M (Water borne diseases)

3. https://www.youtube.com/watch?v=TMyKMqC6tiE (National Law & Policy on Sanitation)

4. https://www.youtube.com/watch?v=Ni9GxM42kzI (Urban Flooding)

5. https://www.youtube.com/watch?v=MI3zaBXSwII (National Rural Water Supply and Sanitation Programme)

6. https://www.youtube.com/watch?v=5wHWvJ-OKTc (National Health Mission)

7.https://www.youtube.com/watch?v=Csk5zsDrgA8&list=PL_a1TI5CC9RFOI7fD4_jjgFnLbkcYa92G (Evolution of Health Policy in India)

MGTWRM09- WATER QUALITY AND WATER MANAGEMENT TECHNOLOGIES

Semester: IV **Module title: Water Quality and Water Management Technologies** **Credit: 3**	**CODE: MGTWRM09** **Module Type:** Single

Module Aim(s): This course aims to facilitate the student's understanding of water quality criteria, control, and management

Course Objectives

- To acquaint the students to the concept of water quality and monitoring
- To understand the broad concept waste water management techniques

Teaching Strategy	Lecture Sessions will be supplemented by project based (tutorial) assignments. Feedback will be given orally during tutorials. Written feedback is given for both individual and group assignments.

Hour Distribution

Study:	Lect:(L)	Sem/(T)	Library	Directed(DS)	Other:(Comp.lab)	Formal	Total
Hours:	30	Tut: 5	Pract: 10	Study: 50	Computer lab: 5	Exams: 2	100

Course Outcomes:

Knowledge	• Express the fundamental concepts in Water quality management • Describe the irrigation water quality and strategies for water use and reuse
Skills	• Understand and apply different models of water quality management • Evaluate water pollution and understand the pollution prevention techniques
General Competencies	• Ability to identify about wastewater management and technologies

Key Graduate Attributes

Academic and professional Knowledge	Communication	Team Work and Leadership	IT Literacy	Global Perspective and CrossCultural Adaptability	Critical and Analytical thinking	Social Responsibility and Ethics	Entrepreneurship Skills	Life - long Learning
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

UNIT DETAILS

UNIT 1

Water quality-Surface water & Groundwater – Physical and chemical properties of water –. Water quality indicators Water quality criteria (CPCB) – Water quality standards - Wastewater discharge standards- Water quality indices -. Impairment of natural water bodies. Sampling design - Samplers and automatic samplers - Data collection platforms – Field kits – Water quality data storage, analysis and inference – Software packages

UNIT II

Water quality for irrigation – Salinity and permeability problem – Root zone salinity - Irrigation practices for poor quality water – Saline water irrigation – Future strategies Multiple uses of water – Reuse of water in agriculture

UNIT III

Water quality monitoring, Water Pollution-Sources and Types of pollution – Toxic Metals and Other Inorganic Pollutants& Organic Pollutants - BOD – DO relationships – impacts on water resources – NPS pollution and its control – Eutrophication control - Water treatment technologies - Constructed wetland.

UNIT IV

Sources of Water Supplies; Water Transmission; – Low-cost wastewater treatment technologies--Physical and Chemical Treatment Processes for Water Supply- Wastewater Characteristics-Collection Facilities- Pre-treatment; Primary, Secondary, and Tertiary Treatment Technologies;

UNIT V

Water quality-Mathematical models-Overview of different types of models-Steps in model development - Importance of model building - balance –calibration, and verification of model- conservation of mass- mass balance analysis chemical reaction kinetics – Law of mass action, Rate constants, reaction order, types of reactions, equilibrium principles.

.

References:

1. Gilbert M. Masters and Wendell P. Ela, Introduction to Environment Engineering and Science. 3rd ed. Pearson.2017

2. Garg S.K, Sewage Disposal, and Air Pollution Engineering, 20th ed, Vol. II, New Delhi, Khanna Publisher. 2007

3. Garg S.K, Water Supply Engineering, 18th ed, Vol. I, New Delhi, Khanna Publisher.2007

4. Birde G.S. and Birde J.S, Water Supply and Sanitary Engineering, 7th ed., New Delhi, Dhanpat Rai Publishing. 2004

5. Chatterjee A.K, Water Supply, Waste Disposal, and Environmental Engineering, 8th ed., New Delhi, Khanna Publisher. 2010

6. Eckenfelder W.Jr, Industrial Water Pollution Control, 3rd ed., New York, McGraw-Hill. 1999

7. Metcalf and Eddy, Wastewater Engineering: Treatment and Reuse, 4th ed., New Delhi, Tata McGraw-Hill.2003

8. Nathanson J.A, Basic Environmental Technology: Water Supply, Waste Management and Pollution Control, 4th ed., New Delhi, PHI Learning.2009

9. George Tchobanoglous, Franklin Louis Burton, Metcalf & Eddy, H. David Stense, Wastewater Engineering: Treatment and Reuse, McGraw-Hill, 2002.

E-Resource:

1. https://nptel.ac.in/courses/105106119(Introduction to Water and Waste Water Engineering)

2. http://jnkvv.org/PDF/20042020125515204200744_1.pdf

3.https://www.mpcb.gov.in/sites/default/files/waterquality/reports/QAQC%20An%20Overview-%20VAM.pdf

E-Content URL:

1.https://www.youtube.com/watch?v=O0_ MeicI4ZY (Water Quality Standards (CHE))

2. https://www.youtube.com/watch?v=_OM yqnP3Osg (Water Quality and its Management)

3. https://www.youtube.com/watch?v=va2A PIXN4Yc (Water Quality Standards and their monitoring and surveillance)

4. https://www.youtube.com/watch?v=xz01i fKeUUA (Analytical Techniques for Measuring Water Quality Parameters-Part1 (CHE))

5. https://www.youtube.com/watch?v=Y_w c26n9d8s (Waste Water Treatment 1)

6. https://www.youtube.com/watch?v=jQnb2nZfzSM (Water Quality Modelling)

MGTWRM10 - WATER MANAGEMENT AND PARTICIPATION

Semester: IV **Module title: Water Management and Participation** **Credit: 3**	**CODE: MGTWRM10** **Module Type:** Single

Module Aim(s): To introduce students to the concepts, Principles, and Practices of Integrated Water Resources Management and Exposes them to processes, challenges, constraints, and opportunities for its implementation

Course Objectives

- Learn the concepts and evaluation of integrated water resource management
- To know the IWRM planning process at international and national levels

Teaching Strategy	Lecture Sessions will be supplemented by project based (tutorial) assignments. Feedback will be given orally during tutorials. Written feedback is given for both individual and group assignments.

Hour Distribution

Study:	Lect:(L)	Sem/(T)	Library	Directed(DS)	Other:(Comp.lab)	Formal	Total
Hours:	30	Tut: 5	Pract: 10	Study: 50	Computer lab: 5	Exams: 2	100

Course Outcomes:

Knowledge	• Understand the concept, evolution, and relevance of Integrated Water Resource Management • Familiarise IWRM planning processes and their implementation
Skills	• Analyze the role of the participatory approach in the IWRM • Ability to assess IWRM components and its institutional framework
General Competencies	• Understand the current status of the implementation of IWRM at the National and International levels
Key Graduate Attributes	

Academic and professional Knowledge	Communication	Team Work and Leadership	IT Literacy	Global Perspective and CrossCultural Adaptability	Critical and Analytical thinking	Social Responsibility and Ethics	Entrepreneurship Skills	Life - long Learning
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

UNIT DETAILS

UNIT 1

Relevance of Integrated approaches in WRM- Shifting Water Resource Management Paradigms, IWRM Definitions-Goals, Evolution of IWRM Concept, Key principles of IWRM- Fundamental Elements of IWRM process, Linking IWRM to development issues, Global Status of IWRM.

UNIT II

IWRM Components: Enabling Environment- Policies and Legislations, Institutional Framework- Central to Local River Basin and Public- Private, Management Instruments- Assessment, Information and Allocation instruments.

UNIT III

IWRM Planning Process - Work Plan and stakeholder selection- Establish Strategic Vision-Situation Analysis Water Management Strategy Operations-Plan Preparation and Approval-Implementation and Evaluation, Specialised Skills in IWRM Planning, Watershed Level IWRM.

UNIT IV

Stakeholder Groups in IWRM, Stakeholder Participation- Types of Stakeholder Participation- Process of Stakeholder participation-Transparency- Potential Partners and their contribution-conflict management, Capacity Development in IWRM-Levels of Capacity Development and Challenges

UNIT V

Conditions and Opportunities for IWRM Implementation- Role and Functions of RBOs-Key Implementation Constraints-Institutional and Legislative Reforms, IWRM Institutions in India- Data and Tools for IWRM in India National Water Policy on IWRM (2012)- Guidelines for IWRM-2016, International Cooperation in IWRM, Successful experiences of IWRM in developed and developing countries.

.

References:

1. Cecilia Tortajada, Integrated Water Resources Management, From concept to implementation, Routledge.2016

2. Global Water Partnership, A Handbook for Integrated Water Resources Management in Basins, GWP & INBO.2009

3. Neil S. Grigg, Integrated Water Resource Management, An Interdisciplinary Approach, Springer.2016

4. Adey Nigatu Mersha, Integrated Water Resources Management: A Systems Perspective of Water Governance and Hydrological Conditions, CRC Press, London.2021

5. Dietrich Borchardt, Ralf Ibisch, Integrated Water Resources Management in a Changing World, IWA Publishing, London.2013

6. Towards Integrated Water Resources Management International experience in the development of river basin organizations, UNEP.2014

7. Mollinga .P. et al, Integrated Water Resources Management, Water in South Asia Volume I, Sage Publications.2006

8. National Workshop on Integrated Water Resources Management, CWC .2015

9. Rahaman, M.M. & Varis, O, Integrated water resources management: evolution, prospects and future challenges. Sustainability: Science, Practice, & Policy1(1):1521.2005

10. IWRM Guidelines at River Basin Level, UNESCO.2008

E-Resource :

1. https://reliefweb.int/node/732411(Integrated water Resource Management)

2. http://nwm.gov.in/?q=integrated-water-resource-management

3. https://www.academia.edu/34356324/Integrated_Water_Resources_Management

E-Content URL:

1. https://www.youtube.com/watch?v=ZTMv MLzDZ8E (Integrated Water Resources Management IWRM)

2. https://www.youtube.com/watch?v=eG4_7 oGnOq0 (Integrated Water Resources Management-II (Implementation and Capacity Development))

3. https://www.youtube.com/watch?v=WaVPl hApf6s (National Water Policy-2012)

MGTWRM11- GEOINFORMATICS AND WATER RESOURCE MANAGEMENT

Semester: IV **Module title: Geoinformatics and Water Resource Management** **Credit: 3**	**CODE: MGTWRM11** **Module Type:** Single

Module Aim(s): To understand the application of Geo informatics in Water Resource

Course Objectives

- To understand the principles of Geomatics for watershed management.
- To familiarize with the applications of Remote Sensing, GIS and GPS in water management and with the software available for analysis and modeling

Teaching Strategy	Lecture Sessions will be supplemented by project based (tutorial) assignments. Feedback will be given orally during tutorials. Written feedback is given for both individual and group assignments.

Hour Distribution

Study:	Lect:(L)	Sem/(T)	Library	Directed(DS)	Other:(Comp.lab)	Formal	Total
Hours:	30	Tut: 5	Pract: 10	Study: 50	Computer lab: 5	Exams: 2	100

Course Outcomes:

Knowledge	• Acquire knowledge in remote sensing sensors and platforms, their properties, and calibration
Skills	• Achieve skill to perform effective use of image analysis and GIS techniques along with other geomatics tools for watershed management and modeling. • Develop abilities in RS/GIS for data acquisition and processing through to effective display of results
General Competencies	• Achieve skills in handling instruments, tools, techniques, and modeling while using remote sensing technology

Key Graduate Attributes

Academic and professional Knowledge	Communication	Team Work and Leadership	IT Literacy	Global Perspective and CrossCultural Adaptability	Critical and Analytical thinking	Social Responsibility and Ethics	Entrepreneurship Skills	Life - long Learning
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

UNIT DETAILS

UNIT 1

Physics of remote sensing, electromagnetic radiation (EMR), Atmospheric windows, Spectral reflectance of Earth's surface features, types of Sensors and platforms, Concept of Photogrammetry– Definition-Geometry of Vertical Photographs, Flight Planning Mission; Overlapping concept – Stereoscopic Neat Model-B\H Ratio-Parallax-Scale of Vertical Photographs- Ortho-photos. - Monitoring atmosphere, land and water resources - LANDSAT, SPOT, ERS, IKONOS and others, Indian Space Programme. Fundamentals of \processing and analysis of remotely sensed data by Analog, Digital and \hybrid systems and the equipment/software requirements, Digital analysis of CCTS, Supervised and unsupervised classification techniques. Satellite Data analysis, Visual interpretation, Digital image processing, Image pre-processing, Image enhancement, Data Merging. Indices; NDVI-SAVINDWI-EVI

UNIT II

Basic components of GIS, Map projections and co-ordinate system, Spatial data structure: raster, vector, Spatial Relationship, Topology, Geo-database models: hierarchical, network, relational, object-oriented models, Integrated GIS database, common sources of error, Data quality: Macro, Micro and Usage level components, Meta data, Spatial data. Thematic mapping – Measurement in GIS: length, perimeter and areas, Query analysis, Reclassification, Buffering, Neighbourhood functions, Map overlay: vector and raster overlay – Interpolation, Network analysis, Digital elevation modeling. Analytical Hierarchy Process, Object-oriented GIS – AM/FM/GIS – Web-Based GIS

UNIT III

Definitions and fundamentals of Geodesy, Introduction to GPS, Transit, NAVSTAR GPS, IRNSS, GLONASS, GALILEO; GPS segments space, control, and user, GPS codes- C/A, P, GPS receivers, GPS Survey Methods-static vs kinematic, single point vs relative positioning, GPS Applications. Recent Trends in Remote Sensing; LIDAR Drone Mapping- Hyper spectral Remote Sensing.

UNIT IV

Spatial data sources, 4M GIS approach water resources system, Thematic maps, Rainfall-runoff modeling, Groundwater modeling, Water quality modeling, Flood inundation mapping, and Modelling, Drought monitoring, Cropping pattern change analysis, Performance evaluation of irrigation commands. Site selection for artificial recharge - Reservoir sedimentation.

References:

1. ArcGIS 10.1 Manuals, ESRI.2013

2. Aronoff S, Geographic Information Systems: A Management Perspective, WDL Publications.1989

3. Manual of Remote Sensing. Volumes I & II, Second Edition ASPRS; Subsequent edition.1983

4. Burrough, P.A., Principles of GIS for Land Resource Assessment, Oxford Publications, 2005

5. Chrisman N R, Exploring Geographic Information System, Wiley. 2001

6. Charles Elach & Jakob van Zyl, Introduction to the physics and techniques of Remote Sensing, John Wiley & Sons publications.2006

7. Christian Matzler Thermal microwave radiation: Applications for remote sensing, The Institution of Engineering and Technology, London. 2006

8. Fraser, Taylor D R, Geographic Information Systems, Pergamon. 2013

9. Ian Heywood et.al, An Introduction to Geographical Information System, Pearson Education Private Limited, Delhi. 2002

10. James B Campbell and Randolph H W, Introduction to Remote Sensing, Guilford Press, New York. 2011

11. Jenson J R, Remote sensing of the Environment, Pearson Education Pvt. Ltd, Delhi. 2004

12. Kang Tsung Chang, Introduction to Geographic Information Systems, Tata Mc Graw Hill Publishing Company Ltd, New Delhi. 2008

13. Lillesand T M, Kiefer R W and J W Chipman, Remote sensing and Image Interpretation, John Wiley, New Delhi. 2008

14. Loo C P and Albert K W Y, Concepts and Techniques of Geographic Information Systems, Prentice Hall of India, New Delhi. 2008

15. Marble, D.F & Calkins, H.W, Basic Readings in Geographic Information System, Spad System Ltd. 1990

16. Marcus Borengasser, William S. Hungate, Russell Watkins, Hyperspectral Remote sensing – Principles and Applications. Routledge. 2008

17. Michael N DeMers, Fundamentals of Geographic Information System, John Wiley and Sons, New Delhi. 2005

18. Panda B C, Remote Sensing -Principles and Applications, Viva Books, New Delhi. 2005

19. Rampall K K Handbook of Aerial Photography and Interpretation, Concept Publishing Co. New Delhi,1999

20. Rees, W. G, Physical Principles of Remote Sensing, Cambridge University Press, 2001

21. Paul Curran P.J, Principles of Remote Sensing, ELBS Publications. 2004

22. Pinliang Dong, Qi Chen, Lidar Remote sensing and applications, Routledge. 2018

23. Sabins, F F, Remote Sensing; Principles and Interpretation, W.H Freeman & Co. New York. 1987

24. Star J and Estes, Geographic Information Systems: An Introduction, Prentice Hall. 1989

25. Tereshenkov, A, Web GIS Application in Local Government, VDM Verlag. 2009

26. J. V. Sickle, GPS for Land Surveyors Publisher: Ann Arbor Press, Michigan (USA), pages 284. 2001

E-Resource:

1.https://www.mcgill.ca/cariwin/files/cariwin/day06_lyewayee_gis_water_resources_ii.pdf

2. https://mgimond.github.io/Spatial/introGIS.html

3. https://ocw.tudelft.nl/courses/spatial-tools-in-waterresourcesmanagement/?view=lectures

4.https://www.powershow.com/view/264197-YWNiZ/Applications_of_GIS_to_Water_Resources_Engineering_powerpoint_ppt_presentation

5.https://nptel.ac.in/courses/105107157

6.https://static1.squarespace.com/static/5eb18d627d53aa0e85b60c65/t/5eea1a53fcebef2ab3d56041/1592400480971/Prof-Nagesh-Kumar-RS_GIS_WRA.pdf

E-Content URL:

1. https://www.youtube.com/watch?v=Nz9GX5mkzs (Introduction to GIS)

2.https://www.youtube.com/watch?v=iqqDZv6Mguk&list=PL_a1TI5CC9REYXQHaIvDhcrbqx7e6ssvS (Principles of Remote Sensing)

3.https://www.youtube.com/watch?v=Za0slVqz AFA (GIS Modelling 1)

4. https://www.youtube.com/watch?v=GYNvW2bLJKE (Web Mapping &Web GIS)

MGTWRM12- WATER GOVERNANCE

Semester: IV **Module title: Water Governance** **Credit: 3**	**CODE: MGTWRM12** **Module Type:** Single

Module Aim(s): To understand the complex challenges of water governance and increased understanding of water governance principles and policies

Course Objectives

- To understand the complex challenges of water governance and increased understanding of water governance principles and policies.
- Critically assess underlying theories in water governance and policy implementation and
- Explain and critically reflect on how policy is made at field level (role of multi-level institutions and multi-actors)

Teaching Strategy	Lecture Sessions will be supplemented by project based (tutorial) assignments. Feedback will be given orally during tutorials. Written feedback is given for both individual and group assignments.

Hour Distribution

Study:	Lect:(L)	Sem/(T)	Library	Directed(DS)	Other:(Comp.lab)	Formal	Total
Hours:	30	Tut: 5	Pract: 10	Study: 50	Computer lab: 5	Exams: 2	100

Course Outcomes:

Knowledge	• Familiarize with the basic principles and concepts of water governance • Create knowledge about institutional frameworks and the need for participatory approaches in water governance
Skills	• Insights on multi-level water policies • Identify the major water governance challenges at the grassroots level
General Competencies	• Understand the concepts of water policy and governance theories

Key Graduate Attributes

Academic and professional Knowledge	Communication	Team Work and Leadership	IT Literacy	Global Perspective and CrossCultural Adaptability	Critical and Analytical thinking	Social Responsibility and Ethics	Entrepreneurship Skills	Life - long Learning
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

UNIT DETAILS
UNIT 1
Definitions; Concepts; Principles of water governance; Major water governance challenges including challenges of multi-level water governance and trans boundary water governance, Urban water governance
UNIT II
Definitions – Institution, Actors; Formal and informal institutions; Multi-level structure of institution, Centralised and decentralized Structure in water governance; Multiple actors and their roles; Need for participatory approaches in water governance and major challenges associated
UNIT III
Selected public policy and water governance theories and frameworks: Multiple Streams Approach by John W Kingdon; Water Governance Indicator Framework from OECD; Water Governance Assessment Tool by DROP Governance Team
UNIT IV
Major national and state level policies (National Water Policy1987, 2002, 2012 and State Water Policy of Kerala-2008), Mihir Shah committee report, International policy frameworks (ex. European Water Framework Directives -2000, USA and Australian experiences)
UNIT V
To identify the major grass-root level water governance challenges; Understand more about water policy implementation at the ground level; Identify multi-level governance structures and become familiar with the role of different institutions and actors

.

References:

1. Cecilia Tortajada, Water Governance: Some Critical Issues, International Journal of Water Resources Development, 26:2, 297- 307, 2010 DOI: 10.1080/07900621003683298

2. Joyeeta Gupta, Claudia Pahl-Wostl, Ruben Zondervan, 'Glocal' water governance: a multi-level challenge in the Anthropocene. Current Opinion in Environmental Sustainability, 5(6). 2013 https://doi.org/10.1016/j.cosust.2013.09.003.

3. Moss, T., Newig, J, Multilevel Water Governance and Problems of Scale: Setting the Stage for a Broader Debate. Environmental Management 46, 1–6, 2010 https://doi.org/10.1007/s00267-010-9531-1

4.Von Korff, Y., K. A. Daniell, S. Moellenkamp, P. Bots, and R.M. Bijlsma, Implementing participatory water management: recent advances in theory, practice, and evaluation. Ecology and Society, 2012 http://dx.doi.org/10.5751/ES-04733-170130

E-Resource:

1.https://www.ippapublicpolicy.org/file/paper/1433956183.pdf,

2.https://www.ecologic.eu/sites/default/files/publication/2013/Governance-Assessment-ToolDROP-2013.pdf,

3.https://www.oecd.org/cfe/regionaldevelopment/OECD-Principles-on-WaterGovernance.pdf,

4.https://ec.europa.eu/environment/water/water-framework/index_en.html

E-Content URL:

1. https://www.youtube.com/watch?v=YN KSZhrVIns (Water Governance)

2. https://www.youtube.com/watch?v=K9 TMTesOr0c (National Law and

Policy on Water)

3. https://www.youtube.com/watch?v=9Ph FTwUlZ5U (National Water Resource Policy)

4. https://www.youtube.com/watch?v=tAd IxxIQKes(Legal Initiatives to Protect and Regulate Ground Water)

MGTWRM13- LAB COURSE – GEO-INFORMATICS

Semester: IV **Module title: Lab course- Geo-Informatics** **Credit: 3**	**CODE: MGTWRM13** **Module Type:** Single

Module Aim(s): This course aims to provide the students with practical knowledge in GIS and Remote Sensing and their application in water and river management

Course Objectives

- To recognize the importance of geomatics as a means of assessing land
- To become familiar with the programmes available for modeling and analysis, such as Remote Sensing, GIS, and GPS in land evaluation.

Teaching Strategy	Lecture Sessions will be supplemented by project based (tutorial) assignments. Feedback will be given orally during tutorials. Written feedback is given for both individual and group assignments.

Hour Distribution

Study:	Lect:(L)	Sem/(T)	Library	Directed(DS)	Other:(Comp.lab)	Formal	Total
Hours:	30	Tut: 5	Pract: 10	Study: 50	Computer lab: 5	Exams: 2	100

Course Outcomes:

Knowledge	• Acquire skills to use GIS in creating the spatial database • Create knowledge in remote sensing data handling • Develop skills to perform different spatial analysis techniques. • Get trained in using different mapping tools.
Skills	• skills to use GIS in creating the spatial database • Apply GIS and Remote Sensing tools in Water and River Management
General Competencies	• Understand about how to use remote sensing, GIS, and processing data for land management.

Key Graduate Attributes								
Academic and professional Knowledge	Communication	Team Work and Leadership	IT Literacy	Global Perspective and CrossCultural Adaptability	Critical and Analytical thinking	Social Responsibility and Ethics	Entrepreneurship Skills	Life - long Learning
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

UNIT DETAILS

UNIT 1

Spatial database creation- Google Earth, QGIS-Software Demonstration-Data Importing and Visualization, Geo-referencing of Toposheet, Digitization, Editing Vector Data, Attribute Data Management, Checking Data Quality

UNIT II

Remote sensing data handling- Geometric Correction, Image Enhancement, Image Transformation, Aerial Photo Interpretation, Visual Image Interpretation, Digital Image Processing – Image Classification (Unsupervised), Image Classification (Supervised), Ground Truthing, and Accuracy Assessment.

UNIT III

Spatial analysis- Geometric Measurements, Query and Retrieval, Proximity Analysis, Overlay Analysis, Topographic Analysis, DEM Generation, Change Analysis, Spatial Interpolation, Hotspot Analysis, Map Composition,

UNIT IV

Mapping tools-GPS/DGPS Survey, Cadastral Survey- ETS, RTK, Level Survey -Auto Level, Mobile GIS -Web GIS

UNIT V

Application of geo-informatics- Land use / Land Cover Mapping, Land Suitability and Capability Evaluation, Terrain Evaluation, Monitoring of Water Quality and Quantity, Calculation of Water Footprint, Water Balance, Water Budget, and Carbon Neutrality Assessment, Hazard-Vulnerability and Risk Mapping and Analysis - Geological-Water& Climate related- CBRN& Accidents.

References:

1. Longley, Paul A., Michael F. Goodchild. Geographic Information Systems and Science. John Wiley & Sons, 2010. ISBN: 047087001X

2. O'Sullivan, D. and D. Unwin. Geographic Information Analysis. John Wiley & Sons, 2003.

3. P.K Garg., Surveying and Geomatics.All India Council for Technical Education (AICTE), New Delhi,2022. ISBN : 978-81-959863-7-8

4. Ramakant Agrawal., Parshottam Sarathe.Advanced Surveying: Theory and Practice. All India Council for Technical Education (AICTE), New Delhi, 2022.ISBN : 978-81-959863-3-0

5. Wim H. Bakker., Wim Feringa.Principles of Remote sensing. The International Institute for Geo-Information Science and Earth Observation (ITC), Netherlands. 2009

6.Survey of India notes on RTK and CORS https://www.surveyofindia.gov.in/webroot/UserFiles/files/Note%20on%20RTK%20and%20CORS.pdf

E-Resource:

- https://www.mcgill.ca/cariwin/files/cariwin/day06_lyewayee_gis_water_resources_ii.pdf
- https://mgimond.github.io/Spatial/introGIS.html
- https://ocw.tudelft.nl/courses/spatial-tools-in-waterresourcesmanagement/?view=lectures
- https://www.powershow.com/view/264197-YWNiZ/Applications_of_GIS_to_Water_Resources_Engineering_powerpoint_ppt_presentation
- https://static1.squarespace.com/static/5eb18d627d53aa0e85b60c65/t/5eea1a53fcebef2ab3d56041/1592400480971/Prof-Nagesh-Kumar-RS_GIS_WRA.pdf
- https://archive.nptel.ac.in/courses/121/107/121107009(Introduction to Remote Sensing)
- https://nptel.ac.in/courses/105107155(Introduction to Geographic Information Systems,)
- https://nptel.ac.in/courses/105107158(Digital Land Surveying and Mapping (DLS&M))
- https://skillsforafrica.org/course/67
- https://fdc-k.org/trainings/684/GIS-Application-in-Disaster-Risk-Reduction-Course/GIS/4561
- https://geog.ufl.edu/wp-content/uploads/sites/60/GIS6325-GIS-ANALYIS-OF-HAZARD-VULNERABILITY-FALL-2020-ASH.pdf
- https://iopscience.iop.org/article/10.1088/1755-1315/622/1/012005/pdf
- https://in.coursera.org/specializations/gis-mapping-spatial-analysis

E-Content URL:

1. https://www.youtube.com/watch?v=Nz9GX5mkzs (Introduction to GIS)

2.https://www.youtube.com/watch?v=iqqDZv6Mguk&list=PL_a1TI5CC9REYXQHaIvDhcrbqx7e6ssvS (Principles of Remote Sensing)

3. https://www.youtube.com/watch?v=Za0slVqz AFA (GIS Modeling 1)

4. https://www.youtube.com/watch?v=GYNvW2bLJKE (Web Mapping &Web GIS)

5. https://www.youtube.com/watch?v=Iu9vrE48_I4 (GPS Surveying -Various methods)

6. https://www.youtube.com/watch?v=cqEJvhMG-SE(Applications of Remote Sensing and GIS in Land Resource Management)

7.https://www.youtube.com/watch?v=TCBpKvr3AI8&list=PL7mCX6pQ2k2N56bVHNZzmFWREqgXisPB(Supervised classification using SCP for Q GIS)

8. https://www.youtube.com/watch?v=Ceyhm3DlZNY&list=PL7mCX6pQ2k2MPB69JMQfl6uTJgN-l2LVk&index=2(Land Cover Classification using the Semi-Automatic Classification Plugin version 7)

9.https://www.youtube.com/watch?v=3PoYtHdqFBk&list=PL7mCX6pQ2k2N56bVHNZzmFWREqgXisPBO&index=2 (Supervised Classification for Flood Monitoring Using the Semi-Automatic Classification Plugin)

UNIVERSITY OF KERALA

MBA (WATER AND RIVER MANAGEMENT)

Guidelines for:

Mini Project/Internships

Summer Project

MOOC

Viva Voce

MGT 534 - INTERNSHIPS / MINI PROJECT

SEMESTER – 3
Course Title – INTERNSHIPS / MINI PROJECTCODE- MGT 534
Credit: 3 **Module Type:** Single

Module Aims:

From the student perspective, an internship assists with career development by providing real work experiences that provide students with opportunities to explore their interests and develop professional skills and competencies. During internships, students are provided with opportunities to apply what they learned in classes to actual practice. It is expected that students will also be challenged to examine how their attitudes, beliefs, and values influence the helping process.

From the organisation perspective, an internship provides a unique training experience designed to enhance the professional development and functioning of the student/supervisee. In accepting students as interns, the organisation representative recognizes that the internship is a learning process designed to promote professional growth of the supervisee.

Module objectives:

- Practical Learning - Enhances a student's academic, career, and personal development Career
- Exploration
- Leadership & Skill Development
- Networking and Establishing Mentors and References
- Resume Enhancement

Note:- Students pursuing MBA programme through the **distance education mode** will have to undertake a mini project in the place of internship.

Learning Strategy:

Guidelines for Internship

Internship will be considered as a core course in the Third semester. Students are advised to opt for live assignments / real-world experience that enables them to put everything they've learned into action. ***Internships*** may be paid or unpaid by the Organisation.

As part of the internship, a student will have work in an organisation for 30-45 days under a faculty as a supervisor and maintain a Log Book/Work Diary in which they will be making entries about the daily work assigned to them. It is highly advisable that a student undergoes an internship in the area in which they are looking to build up a career (For e.g. Marketing, Sales, Advertising, HR, BSFI, Media, Tourism etc.)

Period of Study - Internships will be for a duration of Minimum Thirty (30) days and will be held during the months of April/May.

Key Graduate Attributes

Academic and professional Knowledge	**Communication**	**Team Work and Leadership**	**IT Literacy**	**Global Perspective and CrossCultural Adaptability**	**Critical and Analytical thinking**	**Social Responsibility and Ethics**	**Entrepreneurship Skills**	**Life - long Learning**
√	√	√	✓	✓	√	√	•	• -

Learning Outcome from an Internship

Knowledge

- to gain first-hand exposure of working in the real world.
- to harness the skill, knowledge, and theoretical practice they learnt in the institute a nice
- learning curve for **students** with little experience of the professional world.

Skills

- Understand a variety of Communication techniques and Basic listening skills.
- Understanding ethical and legal issues related to Business
- Ability to collate data from assessments and reports and secondary sources
- Ability to gather information through primary sources.
- Awareness of how interpersonal and intrapersonal values and beliefs affect professional relationships.
- Understanding and ability to function in interdisciplinary teams.
- Learning to respond to supervision appropriately.

Generic Competency

- A good internship results in development of professional aptitude and strengthens personal character.
- It also provides a greater door to opportunity. By Doing an **internship**, candidates give themselves the broadest spectrum of opportunity when seeking and applying for a job after **college**.

Internship Evaluation

For Internships, 50 marks will be for internal evaluation and 50 marks will be for External evaluation. To pass the examination, Separate minimum of 50% is required for both internal and external evaluation /viva voce. Means the candidate have to score 25 marks separately for Internal evaluation and External evaluation to pass in the paper. The internal examination shall be conducted by a competent panel of examiners constituted by the respective institutes. ***It is advised to the institutes/ colleges to evaluate the student based on his learning.*** The external evaluation will be conducted by the examiners appointed by the University and the internal evaluation by a panel constituted by the college/institute. Students pursuing MBA programme through the **distance education mode** will have to undertake a mini project in the place of internship. The project should be application oriented based on a contemporary theme and should provide ample scope for applying the

knowledge acquired by the student in research methods and quantitative tools during the first two semesters. The criteria for evaluation are detailed below.

Evaluation Criteria for Internships - Regular Mode

External (By University)

Criteria	**Marks**
Relevance of the Internship Completed & Company Selected	10
Internship Viva	20
Final Report	20
Total Marks	**50**

Internal (By the Institute)

Criteria	**Marks**
Log Book	20
Internship Presentation	10
Internal Viva	20
Total Marks	**50**

Evaluation Criteria-Distance Education Mode
Mini Project

External (By University)

Criteria	**Marks**
Final Report	25
Mini Project Viva	25
Total Marks	**50**

Internal (By IDE)

Criteria	**Marks**
Project Report	25
Presentation	25
Total Marks	50

MGT 542 - SUMMER PROJECT

SEMESTER – 4
Course Title - SUMMER PROJECTCODE- MGT 542
Credit: 3 **Module Type:** Single

Module Aims:

The Summer Project is fully linked with industry. Every student of the Programme would work under the mentorship of a corporate executive. The student would learn practical side of Management from the corporate mentor throughout the two months of study. It's an opportunity for the students to get exposed to the management concepts they have learned in the classrooms and practice the same through their corporate mentors..

Objectives

- To create an environment of interaction between academia and industry for mutual benefit, and to provide suitable placement opportunities for MBA students
- To encourage MBA students to conduct innovative, high-quality summer projects
- To provide a platform for nationwide exposure to high-quality summer projects
- Practical Learning - Enhances a student's academic, career, and personal development

Learning Strategy:

Summer Project will be considered as a core course in the Fourth Semester. Students are advised to opt for live assignments / real-world experience that enables them to put everything they've learned into action.. Summer projects can be paid / unpaid by the organisation. During the fourth semester, every student of MBA (Full-time/Evening/Distance Education) programme is required to undertake a project of a problem centered nature under the guidance and supervision of a member of the faculty and the report on the same has to be submitted before the commencement of the fourth semester university examination. The contact hours required for the completion of the project is notionally fixed at 160 hours distributed over a continuous period of two months. Students shall be deputed for the project work immediately after the completion of the fourth semester class work.

Period of Study - Summer Project will be for a duration of Minimum Sixty (60) days including Project preparation and submission and will be held during the months of April/May.

Key Graduate Attributes

Academic and professional Knowledge	**Communication**	**Team Work and Leadership**	**IT Literacy**	**Global Perspective and CrossCultural Adaptability**	**Critical and Analytical thinking**	**Social Responsibility and Ethics**	**Entrepreneurship Skills**	**Life - long Learning**
√	√	√	✓	✓	√	√	•	• -

Learning Outcome from a Summer Project

Knowledge

- to gain hands on exposure of working in the real world.
- to harness the skill, knowledge, and theoretical practice they learnt in the institute a
- nice learning curve for **students** with little experience of the professional world.

Skills

- Apply broad technical and professional skills effectively within business arena
- Critically evaluate and apply sustainability principles to decisions in business contexts
- Apply critical thinking to address strategic business issues
- Communicate information clearly and fluently in oral and written form appropriate for stakeholders
- Critical thinking, creativity, and analytical skills

Generic Competency

- Business knowledge and concepts
- Business practice-oriented skills
- Communication and interpersonal skills
- Attitudes and values

Evaluation of the Summer Project

The project work report will be evaluated for 100 marks. There will be external evaluation for the project and report. The external evaluation for 150 marks will be conducted by examiners duly appointed by the University for the purpose. Out of the total 150 marks, 50 marks will be awarded for viva-voce and 100 marks for the report.

Guidelines for Final Project

General Format of the Summer Project Report

The report shall be printed and bound (preferably hard paper bound) with not less than 100 (A4 size) pages.

- Matter should be typed with Double line spacing
- Fond Size should be 12 with style Times New Roman
- One Inch Margin should be left on Top and Bottom of the page, as well as Left and Right side of the typed pages.
- Both primary and secondary data may be used for the study
- Statistical tools should be used for data analysis in the appropriate context.
- The content of the Report should be sequenced as follows.

A. Preface Section:

- Title Page of the Report
- Declaration by the student
- Certificate from Supervisory Faculty counter Signed by Head of the Institution.
- Acknowledgement
- Chapter Content
- Table Content.
- Graph/ Chart/ Figure Content

B. Executive Summary / Abstract

C. Chapterisation

Chapter-I

Introduction (should contain specific area of study, statement of the Research Problem, Significance or Scope of the study, Objectives of the study, Hypothesis if any, Methodology (sample

design and size, data source, tools used for analysis etc) or case study, Chapter Scheme, limitations of the study.

Chapter-II

Review of related Literature -is a comprehensive summary of previous research on the topic of study. The **literature review** surveys scholarly articles, books, and other sources relevant to a particular area of research. The **review** should enumerate, describe, summarize, objectively evaluate and clarify this previous research. (Minimum 25 Reviews from Various Sectors) and identifying the Research Gap.

Chapter-III

Profile of the industry and Organization/Unit of Study – This section includes Industry Profile & Company Profile. **Industry profiles** are in-depth documents that give insight into an **industry**, where it came from, and where it appears to be going. A typical **report** looks at the **industry** leaders, forces affecting the **industry** and financial data for the **industry. Company Profile -** This report provides an expanded directory display for a business. This report can include sales and sales trend information, business size, expanded SIC and line of business details, key principals, and business URLs.

Chapter-IV

Data analysis and Interpretation -is the process of assigning meaning to the collected information and determining the conclusions, significance, and implications of the findings. **Analysis** involves estimating the values of unknown parameters of the population and testing of hypotheses for drawing inferences.

Chapter-V

Findings, recommendations and Conclusions - summarize the key ***findings***, outcomes or information in your report; acknowledge limitations, Draw a conclusion to your report summarizing the study and then and make ***recommendations*** for future work (where applicable)

Bibliography - list of sources you referred to (Text Books/ Journals/ Web Sites) when writing the project and for conducting the study.

- Monson, C. M., Fredman, S. J., & Adair, K. C. (2008). Cognitive-behavioral conjoint therapy for posttraumatic stress disorder: Application to operation enduring and Iraqi freedom veterans. *Journal of Clinical Psychology*, 64, 958-971.

• Ginsberg, J. P., Ayers, E., Burriss, L., & Powell, D. A. (2008). Discriminative delay Pavlovian eyeblink conditioning in veterans with and without posttraumatic stress disorder. *Journal of Anxiety Disorders*, 22, 809-823.

Appendix

Appendices can **consist** of figures, tables, maps, photographs, raw data, computer programs, musical examples, interview questions, sample questionnaires / Schedules which you don't want to include along with the main content of your report

MGT 543 COMPREHENSIVE VIVA VOCE

Objective

The objective of **comprehensive viva-voce** is to assess the overall knowledge of the student in the relevant field of Management Engineering acquired over 4 semesters of study. The **viva** shall normally cover the subjects taught in all the semesters of MBA Programme or preferably based on the electives.

Evaluation

The comprehensive viva-voce carries 50 marks. The University will constitute a Board of Examiners for conducting both the project viva-voce and the comprehensive viva-voce. Students securing less than 25 marks in the comprehensive viva-voce will have to repeat the same during the next year. Such students will be given a total of three chances to clear the same.

A student has to compulsorily undertake 2 MOOC Courses, One in each year, through the SWAYAM/NPTEL platform and successfully clear the papers for the course thus selected and it should be in the area related to their specialization but with focus on employability. The institute shall recommend courses in the first year and the student shall be given opportunity to select a course in the second year, with the advice of his mentor or faculty. The students must compulsorily submit the certificates of MOOC courses that they have opted during the comprehensive viva-voce examination at the end of the fourth semester. If a student fails to undertake the courses or has successfully done only one course, they will not be permitted to appear for the Comprehensive Viva Voce Examination. The University will constitute a Board of Examiners for conducting the comprehensive viva-voce. Students securing less than 25 marks in the comprehensive viva-voce out of 50 & those who don't have the certificates of MOOC Courses will have to repeat the same during the next year. Such students will be given a total of three chances to clear the same.

Note

It's the student's responsibility to ensure that they register for the MOOC Course, they complete the MOOC course, they appear and pass the exams for the course they have enrolled and handover the certificate to the institute. The institute shall give charge of MOOC Courses to a faculty and ensure that students are joining for courses.