Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore
Shri Vaishnav School of Management

Choice Based Credit System (CBCS) in Light of NEP-2020
MBA-INTERNATIONAL BUSINESS - III SEMESTER (2021-2023)

MBAI301C ADVANCEDHUMAN VALUES AND PROFESSIONAL ETHICS

COURSE CODE	CATEGORY	COURSE NAME	TEACHING & EVALUATION SCHEME								
			THEORY			PRACTICAL		L	T	P	CREDITS
			END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*				
MBAI301C	AECC	Advanced Human Values and Professional Ethics	60	20	20	-	-	3	-	-	3

Legends: **L** - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical: **C** - Credit; **AECC**- Ability Enhancement Compulsory Course

***Teacher Assessment** shall be based on following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

Course Objective

The objective of the course is to disseminate the theory and practice of moral code of conduct and familiarize the students with the concepts of "right" and "good" in individual, social and professional context

Examination Scheme

The internal assessment of the students' performance will be done out of 40 Marks. The semester Examination will be worth 60 Marks. The question paper and semester exam will consist of two sections A and B. Section A will carry 36 Marks and consist of five questions, out of which student will be required to attempt any three questions. Section B will comprise of one or more cases / problems worth 24 marks.

Course Outcomes

1. Help the students to understand right conduct in life.
2. To equip students with understanding of the ethical philosophies, principles, models that directly and indirectly affect personal and professional life.

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MBAI301C	AECC	Advanced Human Values and Professional Ethics	60	20	20	-	-	3	-	-	3

Legends: **L** - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical: **C** - Credit; **AECC**- Ability Enhancement Compulsory Course

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COURSE CONTENT

Unit I: Inculcating Values at Workplace

1. Values: Concept, Sources, Essence
2. Classification of Values.
3. Values in Indian Culture and Management: Four False Views, Value Tree
4. Eastern and Western Values; Values for Global Managers

Unit II: Professional Ethics

1. Ethics: Concept, Five P's of Ethical Power, Organisational Tools to Cultivate Ethics
2. Theories of Ethics: Teleological and Deontological
3. Benefits of Managing Ethics in an Organisation
4. Ethical Leadership

Unit III: Indian Ethos and Management Style

1. Indian Ethos and Workplace
2. Emerging Managerial Practices
3. Ethical Considerations in Decision Making and Indian Management Model
4. Core Strategies in Indian Wisdom and Ethical Constraints

Unit IV: Human Behavior – Indian Thoughts

1. Guna Theory
2. Sanskara Theory
3. Nishkama Karma
4. Yoga: Types, Gains; Stress and Yoga

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MBAI301C	AECC	Advanced Human Values and Professional Ethics	60	20	20	-	-	3	-	-	3

Legends: **L** - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical: **C** - Credit; **AECC-** Ability Enhancement Compulsory Course

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Unit V: Spirituality and Corporate World

1. Spirituality: Concept, Paths to Spirituality
2. Instruments to achieve spirituality
3. Vedantic Approach to Spiritual and Ethical Development
4. Indian Spiritual Tradition.

Suggested Readings

1. Kausahl, Shyam L. (2006). ***Business Ethics – Concepts, Crisis and Solutions***. New Delhi: Deep and Deep Publications Pvt. Limited
2. Murthy, C.S.V. (2012). ***Business Ethics –Text and Cases.*** Himalaya Publishing House: Mumbai
3. Chakraborty, S. K. (1999). ***Values and Ethics for Organizations***. Oxford university press
4. D.Senthil Kumar and A. SenthilRajan (2008). ***Business Ethics and Values.*** Himalaya Publishing House: Mumbai

Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore

Shri Vaishnav Institute of Technology

Master of Technology (Geo Technical Engineering/ Transportation Engineering/ Water Resource Engineering) SEMESTER I

COURSE CODE	Category	COURSE NAME	TEACHING & EVALUATION SCHEME								
			THEORY			PRACTICAL		Th	T	P	CREDITS
			END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*				
MTCE2101	BS	System Mathematics & Mathematical Modeling	60	20	20	-	-	3	0	0	3

Legends: **L** - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical; **C** - Credit;
***Teacher Assessment** shall be based following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

Course Educational Objectives (CEOs):

Course Objectives: - The course is designed to enable students to: • enhance ability to think in a critical manner • Formulate and develop mathematical arguments in a logical manner • Improve their skills in acquiring new understanding and experience • Acquire an understanding of advanced mathematical analysis.

Course Outcomes (COs):

After the successful completion of this course students will be able to:

A. understand different aspects of system analysis.
B. transform industrial problems into mathematical models.
C. analyse the PERT/ CPM technics and dynamic programming in multistage solution problem with real life applications.
D. apply the concept of the probabilities and simple linear regression model to real life examples and sampling plans in production process.

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MTCE2101	BS	System Mathematics & Mathematical Modeling	60	20	20	-	-	3	0	0	3

Syllabus

Unit I

Concept of a system and system analysis, Mathematical modeling, Introduction to Mathematical Programming Techniques viz. – Linear Programming, non – Linear programming, Dynamic Programming, game theory etc. Transportation problems their formulations and solutions.

Unit II

Linear programming, formulation, Graphical solution, Simplex method, BIG-M & Two Phase methods, Duality in LP, Revised simplex.

Unit-III

Network analysis, CPM-PERT techniques, Project Optimality analysis, Updating Dynamic programming, Stagecoach Problem and its D.P. solution.

Unit-IV

Measures of central tendency, Central Limit theorem, Statistical frequency distributions, Additional and multiplication law of probability, Bayes' Theorem, Binomial, Poisson, Normal, and 't', 'F'& Square Distributions, Tolerance limits, Confidence limits, Test of significance.

Unit-V

Linear and non-linear Regression analysis, Testing of Hypothesis, Acceptance sampling, Fundamentals of Simulation.

References:

1. Operation Research by Phillips & Ravindran
2. Operation Research by TAHA
3. Probability, Statistics & Decision in Civil Engineering by Benjamin & Cornell
4. Optimization by S.S. Rao

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MTCE 3102	DCC	Design of Diversion Structures	60	20	20	30	20	2	1	2	4

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Course Educational Objectives (CEOs):
The students (A) will be able to design the different Diversion Structures (B) according to condition and nature of work (C) efficiently & economically (D)

Course Outcomes (COs):
Upon successful completion of this course, students will be able to:
1. Explain the different Diversion structures and their utilization according to the work.
2. Understand and employ the recommendations made in IS Code.
3. Design different diversion structures like weir, barrage etc.
4. Identify the different theories which are required according to the field conditions.
5. Design the canals, head regulator and cross regulators.

Syllabus

UNIT I **08 Hrs.**

Introduction: Diversion scheme and their components; Water distribution networks, components of network, introduction to various structures provided in a distribution network.

Canals: Design of canals; Kennedy's and Lacey's theory of channel design; Design of stable channels considering concepts of sediment transport; Design of Lined channels.

UNIT II **09 Hrs.**

Structures on Pervious Formations: Introduction; Bligh's Creep theory; Lane's weighted creep theory; Potential flow; Theory and Properties of flow net; Plotting of Flow Net ; Khosla's theory of independent variables; Method of electrical analogy; Seepage force and safety against piping; Inverted Filter; Design considerations, design for surface and sub-surface flow; Scour considerations; Structural designing; Hydraulic jump phenomenon; Critical flow, normal and sequent depths, critical depth, forms of hydraulic jump, plotting of pre jump and post jump profiles, energy dissipation in jump formation.

UNIT III **08 Hrs.**

Canal Head Works: Weirs and Barrages: distinction, type of weirs; Layout of diversion headwork; Design of vertical drop weir; Sloping glacis weir; Design of head regulator as intake at the

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headwork site; Design of wing walls

UNIT IV **08 Hrs.**

Canal Regulation Structures: Necessity of functions and regulation structures like head and cross regulators; Canal Falls; C.D. Works; Outlets etc. Types of falls; C.D. Works and outlets; Design of Head Regulator and Cross Regulator; Design of Sarda Type Fall, Canal Escape

UNIT V **08 Hrs.**

Cross Drainage Works: Introduction to transitions; Contracting transitions, expanding transitions, Mitra's and Chaturvedi's Approach for design of transition, Hind's Transitions; Design of Aqueduct, syphon aqueduct, super passage, canal siphon; Sediment Excluder; Design of Sediment Ejector; Outlet works.

Text Books:

1. Theory & Design of Irrigation Structures Vol. II by R S Varshney; S C Gupta; R L Gupta, Nem Chand & Bros
2. Irrigation & Waterpower Engineering by B. C. Punmia Lal, Pande Brij Basi Lal, Laxmi Publications Pvt.
3. Irrigation & Hydraulic Structure by S.K. Garg, Khanna Publication.

Reference Books:

1. Design of Minor Irrigation & Canal structures by S. Sathyanarayana Murthy, New Age Publications
2. Engineering for Dams (Volumes I, II & III) by Creager, Justin & Hinds

List of Practical:

Detailed Design and drawing of various diversion structures per the syllabus.

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MTCE 3103	DCC	Material Science and Fluid Mechanics	60	20	20	30	20	2	0	2	3

Legends: **L** - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical; C - Credit.
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Course Educational Objectives (CEOs):
To gain the discrete knowledge of concrete and its technology, subject involves theoretical and practical approaches which help in exploring the different kinds of concrete & its properties, so that students can understand the nature and their significance in the field of water resources engineering.

Course Outcomes (COs):

1. To identify the functional role of ingredients of concrete and apply this knowledge to mix design philosophy
2. To acquire and apply fundamental knowledge in the fresh and hardened properties of concrete
3. To evaluate the effect of the environment on service life performance, properties and failure modes of structural concrete and demonstrate techniques of measuring the Non-Destructive Testing of concrete structure
4. To develop an awareness of the utilization of waste materials as novel innovative materials for use in concrete

Syllabus:

UNIT I **06 Hrs.**
Concrete: Cement manufacture, composition, hydrated cement paste, heat of hydration, test for physical properties, different types of cements; Properties of aggregates, workability, factors affecting workability, testing.

UNIT II **06 Hrs.**
Strength of Concrete: Nature of strength, factors affecting; Autogenous heating; Maturity of concrete, fatigue strength, impact strength, elasticity, shrinkage and creep of concrete.

UNIT III **06 Hrs.**
Testing of Hardened Concrete: Destructive and non-destructive testing of concrete; Tests on composition of hardened concrete; Accelerated testing of concrete

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MTCE 3103	DCC	Material Science and Fluid Mechanics	60	20	20	30	20	2	0	2	3

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UNIT IV **05 Hrs.**

Mix Design: Basic consideration, factors in choice of mix proportion; methods of mix design (I.S. Method; A.C.I. Method etc.)

UNIT V **07 Hrs.**

Equations of motion in general orthogonal coordinate system; Dimensional analysis; Laminar flow; Boundary layer theory, laminar boundary layer, turbulent boundary layer; Stability analysis of the boundary layer flow in open channel; Channel geometry and elements of channel section, velocity distribution, energy in open channel flow, specific energy, types of flow, Chezy's and manning's formulae; Economical sections; Hydraulic jump in open channel.

Text Books:

1. Fundamentals of Concrete Technology by Neville, Pearson Education; 1 edition (2002)
2. Concrete Technology Theory and Practice, by M. S. Shetty, S. Chand Publishing
3. Fluid Mechanics by R.K. Bansal, Firewall Media, 2005
4. Hydraulics and Fluid Mechanics by Modi and Seth, Standard Book House Delhi, 2013

Reference Books:

1. Fluid Mechanics by Frank M. White McGraw hills

List of Practicals:

1. To determine fineness of cement by dry sieving
2. To determine the normal consistency of a given sample of cement.
3. To determine the initial and final setting time of a given sample of cement.
4. To determine bulking of aggregate.
5. To determine specific gravity of a given sample of fine aggregate.
6. To determine particle size distribution of coarse aggregates by sieving or screening
7. To determine the impact value coarse aggregates.

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8. To determine the relative consistency of freshly mixed concrete by the use of Slump test.
9. Determination of compressive strength of concrete specimens
10. Determination of flexural strength of moulded concrete specimens.
11. To assess the likely concrete by using rebound hammer
12. To determine Uniform flow conditions in Open Channel.
13. Analysis of specific energy and momentum principle in Hydraulic jump.

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MTCE 3104	DCC	Hydrological Analysis	60	20	20	30	20	2	1	0	3

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P – Practical; C - Credit.
***Teacher Assessment** shall be based following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

Course Educational Objectives (CEOs):
To understand the essential components and function of the hydrologic cycle including precipitation, evaporation/evapotranspiration, overland flow and surface storage, groundwater flow and storage, channel flow, storm water runoff.

Course Outcomes (COs):
At the completion of the course the students will be able to

1. Students will know basic terms used in hydrology and physics of water flow and mass.
2. To develop unit hydrographs based on stream flow data and conduct basic unit hydrograph analysis.
3. Students will understand basic concepts of hydrologic simulation modelling to evaluate potential impacts of management decisions.
4. Students will be able to assess drought situations, flood scenarios and normal flows in streams and catchments using the skills developed by this course.

Syllabus:

UNIT I **08 Hrs.**

Introduction: Description of hydrological cycle; Precipitation, characteristics of precipitation in India, measurement of precipitation; Rain gauge network, collection, and presentation of rainfall data; Test for consistency and continuity of data, analysis of rainfall data; Average precipitation over an area Intensity-duration frequency analysis and depth-area-duration analysis, development of design storms; Probable maximum precipitation

UNIT II **08 Hrs.**

Abstractions from Precipitations: Interception and depression storage initial loss
Evaporation: Evaporation process; Measurement, estimation and control of evaporation, empirical formulae; Water Budget, mass transfer method and energy budget method
Evapo-transpiration: Measurement and estimation of evapotranspiration
Infiltration: Infiltration process, measurement of infiltration, infiltration capacity, infiltration models and infiltration indices

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MTCE 3104	DCC	Hydrological Analysis	60	20	20	30	20	2	1	0	3

Legends: **L** - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical; C - Credit.
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UNIT III **08 Hrs.**

Stream flow and Sediment Measurement: Stream flow measurement, stage-discharge relationship, and rating curve; sediment measurement, sediment –discharge relationship

Runoff: Runoff characteristics, catchment characteristics affecting the runoff, yield from a catchment; Flow duration curve; Rainfall-runoff relation

UNIT IV **08 Hrs.**

Hydrograph Theory: Components of hydrograph, base flow separation, direct runoff hydrograph; Unit hydrograph theory, derivation of unit hydrograph, S-hydrograph and instantaneous unit hydrograph; Derivation of unit hydrograph for un-gauged catchments, synthetic unit hydrograph and its derivation.

UNIT V **09 Hrs.**

Flood Estimation: Peak discharge estimation procedures, enveloping curve, rational method, and unit hydrograph methods; Design flood, return period, flood frequency analysis, probabilistic and statistical concepts; Gumbel's method; Log Pearson Type III method and Log Normal method

Flood Routing: Concepts of flow routing, hydraulic and hydrologic routing, reservoir routing, channel routing; Muskingum method of channel routing and flood forecasting

Text Books:

1. Engineering Hydrology by K. Subramanya, Tata McGraw Hill Publishing Co Ltd,2016
2. Applied Hydrology by K.N. Mutreja, McGraw-Hill Book Comp., 1987
3. A Text Book of Hydrology by P. Jaya Rami Reddy , Firewall Media, 2005

Reference Books:

1. Hydrology: Principles, Analysis, Design, H.M. Raghunath, New Age International Pvt. Ltd; 3rd, 1 January 2015.

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