



Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore
Shri Vaishnav Institute of Technology and Science
Choice Based Credit System (CBCS) in Light of NEP-2020
Civil Engineering Department
Generic Elective (Undergraduate Courses)
EVEN Sem

| COURSE CODE | CAT-EGO- RY | 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* | | | | |
| BTCE408 | GE | Green Buildings | 60 | 20 | 20 | 0 | 0 | 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):

1. Learn the principles of planning and orientation of buildings.
2. Acquire knowledge on various aspects of green buildings

Course Outcomes (COs):

The student will be able to

1. Understand the concepts of green buildings.
2. Explain the principles of building planning, its bylaws.
3. Understand the aspects related to design of green buildings.

Syllabus:

UNIT I

08 Hrs.

Introduction: What is Green Building, why to go for Green Building, Benefits of Green Buildings, Green Building Materials and Equipment in India, what are key Requisites for Constructing a Green Building, Important Sustainable features for Green Building.

UNIT II

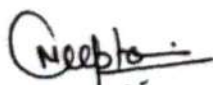
09 Hrs.

Green Building Technologies: Introduction- Necessity - Concept of Green building. Principles of green building – Selection of site and Orientation of the building – usage of low energy materials – effective cooling and heating systems – effective electrical systems – effective water conservation systems - Certification systems- Green Rating for Integrated Habitat Assessment (GRIHA) and Leadership in Energy and Environmental Design (LEED), case studies.

UNIT III

08 Hrs.

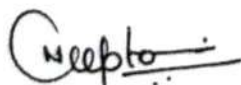
Green Building Design: Introduction, Reduction in Energy Demand, Onsite Sources and Sinks, Maximize System Efficiency, Steps to Reduce Energy Demand and Use Onsite Sources and Sinks, Use of Renewable Energy Sources. Ecofriendly captive power generation for factory, Building requirement.



Chairperson

Board of Studies

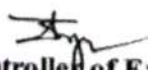
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore



Chairperson

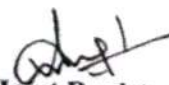
Faculty of Studies

Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore



Controller of Examination

Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore



Joint Registrar

Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore



Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore
Shri Vaishnav Institute of Technology and Science
Choice Based Credit System (CBCS) in Light of NEP-2020
Civil Engineering Department
Generic Elective (Undergraduate Courses)
EVEN Sem

| COURSE CODE | CAT-EGO-RY | 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* | | | | |
| BTCE408 | GE | Green Buildings | 60 | 20 | 20 | 0 | 0 | 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.

UNIT IV

08 Hrs.

Principles of planning, Relevant building bylaws, site selection for buildings, orientation of buildings, common errors in planning, Provision of rainwater harvesting.

UNIT V

08 Hrs.

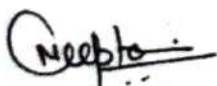
Material Conservation Handling of non-process waste, waste reduction during construction, materials with recycled content, local materials, material reuse, certified wood, rapidly renewable building materials and furniture.

Textbooks:

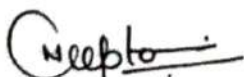
1. Shahane, V. S, "Planning and Designing Building", Poona, Allies Book Stall, 2004.
2. Michael Bauer, Peter Möslle and Michael Schwarz "Green Building – Guidebook for Sustainable Architecture" Springer, 2010.
3. Tom Woolley, Sam Kimmins, Paul Harrison and Rob Harrison "Green Building Handbook" Volume I, Spon Press, 2001.

Reference Books:

1. Mili Majumdar, "Energy-efficient buildings in India" Tata Energy Research Institute, 2002.
2. TERI "Sustainable Building Design Manual- Volume I & II" Tata Energy Research Institute, 2009



Chairperson
Board of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore



Chairperson
Faculty of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore



Controlled of Examination
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore



Joint Registrar
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore



Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore
Shri Vaishnav Institute of Technology and Science
Choice Based Credit System (CBCS) in Light of NEP-2020
Civil Engineering Department
Generic Elective (Undergraduate Courses)
EVEN Sem

| EVEN Sem | | | | | | | | | | | |
|-------------|----------------|-------------------------------|-------------------------------|------------------|-------------------------|-------------------------------|-------------------------|---|---|---|---------|
| COURSE CODE | CAT-EGO- RY | 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* | | | | |
| BTCE409 | GE | Road Safety and Management | 60 | 20 | 20 | 0 | 0 | 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):

1. To acquire knowledge and understanding of the road environment.
2. To inculcate decision making and behavioral skills necessary to survive in the road environment.
3. To impart knowledge and understanding of the causes and consequences of accidents.
4. To understand roles and responsibilities in ensuring road safety.

Course Outcomes (COs):

The student will be able to

1. Generate awareness about number of people dying every year in road accidents, traffic rules and characteristics of accident.
2. Gain information and knowledge about people responsible for accidents and their duties
3. Understand the importance of multidisciplinary approach to planning for traffic safety and rehabilitation
4. Acquire a certificate of coordination/ participation in compulsory events based on the topic under study

UNIT I

08 Hrs.

Introduction to Road Safety: Road traffic accidents scenario in India and in world. Road Safety and its importance. Traffic Rules and Driving Behavior. Characteristics of accidents, accidents vs. crash.

UNIT II

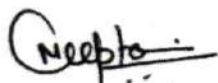
08 Hrs.

Planning for Road safety: Awareness about rules and regulations of traffic. Assisting Traffic control authorities. Multidisciplinary approach to planning for traffic safety and injury control. Vulnerable road users: crashes related to pedestrian and bicyclists, their safety, provision for disabled.

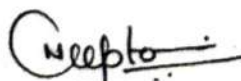
UNIT III

09 Hrs.


Responsibility of Road accidents and Safety measures: People responsible for accident prevention: Police, Politicians, Community members, Policy makers, Teachers, Parents, Infrastructure authorities, Drivers and Official road safety body. Reasons of students/ children




Chairperson
Board of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore



Chairperson
Faculty of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore


Controller of Examination
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore


Joint Registrar
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore



Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore
Shri Vaishnav Institute of Technology and Science
Choice Based Credit System (CBCS) in Light of NEP-2020
Civil Engineering Department
Generic Elective (Undergraduate Courses)
EVEN Sem

| COURSE CODE | CAT-EGO- RY | 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* | | | | |
| BTCE409 | GE | Road Safety and Management | 60 | 20 | 20 | 0 | 0 | 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.

have accidents. 4 E's of Accidents Prevention: 1. Engineering - by altering the environment 2. Enforcement - by imposing laws 3. Encouragement - by the use of publicity campaigns 4. Education - by gaining and using knowledge.

UNIT IV

08 Hrs.

Road Safety Education: Introduction to Road Safety Education. 5 P's of Road safety education: 1. Pre-school road safety education 2. Practical rather than theory education 3. Principles of own development as regards to road safety education 4. Presentations on road safety education 5. Place for road safety education in syllabus

UNIT V

08 Hrs.

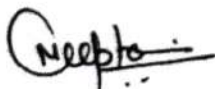
Road Safety Events: Discussions on efforts done by Government on Road Safety. Celebration of Road Safety week or Workshop on Road Safety week/ Organization of seminar on Road Safety. This is to be entirely organized by students under the mentorship of concerned Head of the Department.

Textbooks:

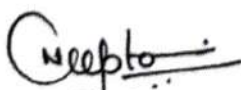
1. Kadiyali L.R., Traffic Engineering & Transport Planning, Khanna Publishers, 2003
2. Crown Agents Ref: TEA/A369, 1995. (Unpublished contractors report for Ministry of Transport and Communications, Ghana). Road safety study and the institutional strengthening of the vehicle examination and licensing division.
3. TRRL OVERSEAS UNIT, 1991. Towards safer roads in developing countries: a guide for planners and engineers. Crow Thorne: Transport and Road Research Laboratory.

Reference Books:


1. Indian Roads Congress, Highway Safety Code, IRC: SP-44:1996 4.
2. Indian Roads Congress, Road Safety Audit Manual, IRC:SP-88-20



Chairperson
Board of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore



Chairperson
Faculty of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore



Controlled of Examination
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore



Joint Registrar
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore



Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore
Shri Vaishnav Institute of Technology and Science
Choice Based Credit System (CBCS) in Light of NEP-2020
Civil Engineering Department
Generic Elective (Undergraduate Courses)
EVEN Sem

| COURSE CODE | CAT-EGO- RY | 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* | | | | |
| BTCE410 | GE | Disaster Resistant Structures and Construction Practices | 60 | 20 | 20 | 0 | 0 | 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):

Impart knowledge of the principle and design of disaster resistant building as per design philosophies and codes.

Course Outcomes (COs):

The student will be able to

1. Understand about different types of disasters.
2. Classify different disaster-prone areas.
3. Understand provisions of disaster resistant structures.

UNIT I

07 Hrs.

Introduction to Disaster and Prone Areas: Basic characteristics of disasters: its behaviour and important parameters: Earthquake Risk; Different seismic zones – Zone II, Zone III, Zone IV, Zone V; Cyclone Risk Areas – Zone I, II, III and IV; Flood Risk; Landslide; Fire; Blasting.

UNIT II

08 Hrs.

Damage Types and Reasons: Damage due to natural hazards; Earthquake Damage – Types and causes; Cyclone Damage – Types and causes; Flood/ Rain – Types and Causes; Vulnerability of Non-Engineered Buildings against Earthquake, Cyclone & Flood Hazards.

UNIT III

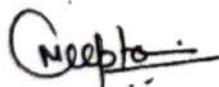
09 Hrs.

Basic Rules of Disaster Resistant Design: Disaster Resistant Construction Principles, Location of the structure, Building plan, Walls - Length, Height, Thickness & Connection; Walls – Openings; General Rules of Masonry - For Brick, Concrete Blocks & Stone.

UNIT IV

08 Hrs.

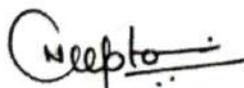
Concrete and Masonry Buildings: Typical damage and failure patterns of brick masonry, causes of damages in brick masonry, Damage to RCC buildings: Sliding of roof support, falling of infill walls, crushing of column ends, diagonal cracking of column beam joints, pulling out of reinforcement bars, foundation sinking and tilting, Typical damage, and failure of stone masonry, causes of damages in stone masonry.



Chairperson

Board of Studies

Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore



Chairperson

Faculty of Studies

Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore



Controller of Examination

Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore



Joint Registrar

Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore



Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore
Shri Vaishnav Institute of Technology and Science
Choice Based Credit System (CBCS) in Light of NEP-2020
Civil Engineering Department
Generic Elective (Undergraduate Courses)
EVEN Sem

| COURSE CODE | CAT-EGO- RY | 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* | | | | |
| BTCE410 | GE | Disaster Resistant Structures and Construction Practices | 60 | 20 | 20 | 0 | 0 | 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.

UNIT V

08 Hrs.

Codal Provisions: Guidelines for improving the cyclonic resistance of low-rise houses and other buildings/structures as per IS 15498:2004

Code of Practice for Earthquake Resistant Design and Construction of Buildings as per IS 4326, 1993.

Textbooks:

1. Manual on Hazard Resistant Construction in India d by Rajendra Desai and Rupal Desai, National Centre For People's - Action In Disaster Preparedness. (NCPDP).
2. Earthquake Disaster Reduction: Masonry Buildings, Design and Construction by Anand S. Arya 2007
3. Earthquake Resistant Design of Structures Duggal, S. K. Oxford University Press, Delhi, 2013

Reference Books:

1. IS 15498:2004, Guidelines for improving the cyclonic resistance of low-rise houses and other buildings/structures
2. IS 4326, 1993, Code of Practice for Earthquake Resistant Design and Construction of Buildings.

Chairperson
Board of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Chairperson
Faculty of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Controller of Examination
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Joint Registrar
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore



Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore
Shri Vaishnav Institute of Technology and Science
Choice Based Credit System (CBCS) in Light of NEP-2020
Civil Engineering Department
Generic Elective (Undergraduate Courses)
EVEN Sem

| COURSE CODE | CAT-EGO- RY | 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* | | | | |
| BTCE411 | GE | Air Pollution and Control Engineering | 60 | 20 | 20 | 0 | 0 | 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):

Impart knowledge on the principle and design of control of Indoor/ particulate/ gaseous air pollutant and its emerging trends.

Course Outcomes (COs):

The students completing the course will have

1. an understanding of the nature and characteristics of air pollutants, noise pollution and basic concepts of air quality management
2. ability to identify, formulate and solve air and noise pollution problems
3. ability to design stacks and particulate air pollution control devices to meet applicable standards.
4. Ability to select control equipment.
5. Ability to ensure quality, control and preventive measures.

UNIT I

Structure and composition of Atmosphere – Definition, Scope and Scales of Air Pollution – Sources and classification of air pollutants and their effect on human health, vegetation, animals, property, aesthetic value and visibility- Ambient Air Quality and Emission standards. **08 Hrs.**

UNIT II

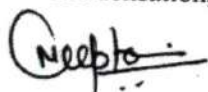
Effects of meteorology on Air Pollution - Fundamentals, Atmospheric stability, Inversion, Wind profiles and stack plume patterns- Atmospheric Diffusion Theories – Dispersion models, Plume rise. **08 Hrs.**

UNIT III

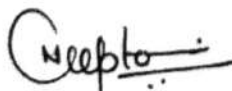
Factors affecting Selection of Control Equipment – Gas Particle Interaction – Working principle - Gravity Separators, Centrifugal separators Fabric filters, Particulate Scrubbers, Electrostatic Precipitators. **08 Hrs.**

UNIT IV

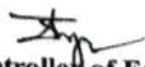
Factors affecting Selection of Control Equipment – Working principle - absorption, Adsorption, condensation, Incineration, Bio filters – Process control and Monitoring. **08 Hrs.**



Chairperson
Board of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore



Chairperson
Faculty of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore



Controller of Examination
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore



Joint Registrar
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore



Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore
Shri Vaishnav Institute of Technology and Science
Choice Based Credit System (CBCS) in Light of NEP-2020
Civil Engineering Department
Generic Elective (Undergraduate Courses)
EVEN Sem

| COURSE CODE | CAT-EGO-RY | 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* | | | | |
| BTCE411 | GE | Air Pollution and Control Engineering | 60 | 20 | 20 | 0 | 0 | 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.

UNIT V

08 Hrs.

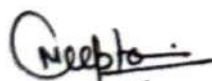
Sources, types and control of indoor air pollutants, sick building syndrome and building related illness- Sources and Effects of Noise Pollution – Measurement – Standards –Control and Preventive measures.

Textbooks:

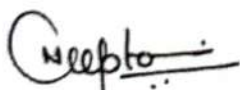
1. Lawrence K. Wang, Norman C. Pareira, Yung Tse Hung, "Air Pollution Control Engineering", Tokyo, springer science + science media LLC,2004.
2. Noel de Nevers, "Air Pollution Control Engineering", Waveland press,Inc 2017.
3. Anjaneyulu. Y, "Air Pollution and Control Technologies", Allied Publishers (P) Ltd., India 2002.

Reference Books:

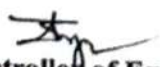
1. David H.F. Liu, Bela G. Liptak, "Air Pollution", Lweis Publishers, 2000.
2. Arthur C. Stern, "Air Pollution (Vol.I – Vol.VIII)", Academic Press, 2006.
3. Wayne T.Davis, "Air Pollution Engineering Manual", John Wiley & Sons, Inc, 2000.
4. M.N Rao and HVN Rao, "Air Pollution",Tata Mcgraw Hill Publishing Company limited,2007.
5. C.S.Rao, "Environmental Pollution Control Engineering", New Age International(P) Limited Publishers,2006.



Chairperson
Board of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore



Chairperson
Faculty of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore



Controller of Examination
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore



Joint Registrar
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore



Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore
Shri Vaishnav Institute of Technology and Science
Choice Based Credit System (CBCS) in Light of NEP-2020
Civil Engineering Department
Generic Elective (Undergraduate Courses)
EVEN Sem

| COURSE CODE | CAT-EGO-RY | 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* | | | | |
| BTCE412 | GE | Construction Management | 60 | 20 | 20 | 0 | 0 | 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):

1. To train the students with the latest and the best in the rapidly changing fields of Construction Engineering, Technology and Management.
2. To prepare the students to be industry leaders who implement the best engineering and management practices and technologies in the construction industry.
3. To continually work with industry to enhance the program's effectiveness and the opportunities for innovation in the construction industry.

Course Outcomes (COs):

The student will be able to

1. Apply theoretical and practical aspects of project management techniques to achieve project goals.
2. Possess organizational and leadership capabilities for effective management of construction projects.
3. Apply knowledge and skills of modern construction practices and techniques.
4. Capable of using relevant software packages for planning, scheduling, executing, and controlling of construction projects.

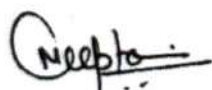
UNIT I

General Management: Introduction and characteristics of management, Principle and function management, Scientific of management. **08 Hrs.**

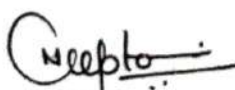
Construction Management: Definition, functions, and scope of construction management; scientific methods of management, construction team.

UNIT II

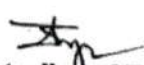
Manpower Planning: Manpower Planning process, Role of HR manager, Personnel Principles, Managerial Staffing, Recruitment Selection strategies. Human relations and Organizational Behaviour: Introduction & Significance, Basic individual psychology, Conflicts in organizations, Engineer as Manager, Communication, and negotiation skills. **08 Hrs.**



Chairperson
Board of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore



Chairperson
Faculty of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore



Controller of Examination
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore



Joint Registrar
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore



Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore
Shri Vaishnav Institute of Technology and Science
Choice Based Credit System (CBCS) in Light of NEP-2020
Civil Engineering Department
Generic Elective (Undergraduate Courses)
EVEN Sem

| COURSE CODE | CAT-EGO-RY | 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* | | | | |
| BTCE412 | GE | Construction Management | 60 | 20 | 20 | 0 | 0 | 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.

UNIT III

08 Hrs.

Materials Management: Scope, Objective and functions of material management, Procurement and store management, Materials handling management, Inventory control and management, Disposal of Surplus Materials.

UNIT IV

08 Hrs.

Construction Planning: Basic Concepts in the Development of Construction Plans, Choice of Technology and Construction Method, Estimating Activity Durations & Resource Requirements for Work Activities.

Site Layout: Principles governing site lay out, factors effecting site lay out, preparation of site lay out, Feasibility study, project reports, progress reports, monitoring and controlling construction activities.

UNIT V

08 Hrs.

Construction Contracts: Indian Contracts Act, Elements of Contracts, Types of Contracts, Features, Suitability, Design of Contract Documents, International Contract Document, Standard Contract Document.

Text Books:

1. Mahesh Verma, 'Construction Equipment and its Planning and Application'.
2. R.L. Peuripo, 'Construction Planning Equipment and Methods', Tata McGraw Hill.
3. Calin M. Popescu, Chotchai Charoenngam, "Project Planning, Scheduling and Control in Construction: An Encyclopedia of terms and Applications", Wiley, New York, 1995.

Reference Books:

1. Chitkara, K.K. "Construction Project Management: Planning, Scheduling and Control", McGraw-Hill Publishing Company, New Delhi, 1998
2. Carleton Counter II and Jill Justice Coutler, "The Complete Standard Handbook of Construction Personnel Management", Prentice-Hall, Inc., 1989.

Chairperson
Board of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Chairperson
Faculty of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Controller of Examination
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Joint Registrar
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore