Visvesvaraya Technological University

"Jnana Sangama" Belagavi-590018, Karnataka State, India

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Ref: VTU/BGM/Academic/A12/2020-21/ 3533

Dated: -6 NOV 2020

CIRCULAR

Subject: Revised titles of subjects of M.Arch., Construction Project Management regarding...

Reference: Resolution no. 2.2.1 of 153th Meeting of EC dated 20.10.2020

Concerning the subject cited above, titles of the elective subjects of 4th-semester M.Arch in Construction Project Management programme, which are having more than 40+ characters in its titles are revised and same are mentioned in the below table-

Sl. No.	Course Code	Existing Title	Revised Title Suggested
01	18CPM421	Facility Management-Management of Large office complexes, Large Campuses	**Facility Management for Large campuses**
02	18CPM425	Management of Infrastructure Management - Airports, Tunnelling, Marine/ Offshore Construction	**Large Infrastructure Management**
03	18CPM431	Special Construction Methods & Techniques - Modular Housing, Prefab Units, High Rise	**Special Construction Methods & Techniques**

The Principals of all the School of Architectures under the ambit of VTU Belagavi are hereby informed to bring the same to the notice of concern.

Thanking you,

Yours faithfully

06.11.2020

REGISTRAR

To,
The Principals of all the School of Architecture under the ambit of VTU, Belagavi.

CC to

1. The Registrar(Evaluation) for information and needful
2. The Chairperson BOS in Architecture for information.
3. The Special Officer CNC section for uploading on VTU webportal.

05.11.2020

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

SYLLABUS

FOR

Two years (four semesters) degree course

of

MASTERS OF ARCHITECTURE

(CONSTRUCTION & PROJECT MANAGEMENT)

(To be implemented from 2018-19)

FACULTY OF ENGINEERING

BOARD OF STUDIES IN ARCHITECTURE

Submitted By SJB School of Architecture and Planning, Kengeri, Bengaluru

SCHEME DETAILS

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI

SCHEME OF TEACHING AND EXAMINATION OF I SEM M.ARCHITECTURE (Construction & Project Management- 2018)

Sl. No.	Subject Code	Title of the Subject	Periods per week (1 Period = 60 Mins.)			Scheme of Examination				
			Lecture	Studio	Total	Theory	Progressive Marks	Viva-Voce	Total	Credits
1	18CPM11	Advanced Construction Technology - 1	3	2	5	100	50	-	150	6
2	18CPM12	Project Management - 1	3	2	5	100	50	-	150	6
3	18CPM13	Procurement of Equipment & Materials	2	2	4	100	50	-	150	6
4	18CPM14	Human Resource Management	2	-	2	-	50	50	100	4
5	18CPM15	Research Methodology	2	-	2	-	50	-	50	2
6	18CPM16	Advanced Estimating & Quantity Surveying	3	-	3	-	50	-	50	2
Total			15	6	21	300	300	50	650	26

Course:

CPM- Construction & Project Management

Minimum Marks for Pass:

Theory - 40%
Progressive Marks - 50%
Viva-Voce- 50%

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI

SCHEME OF TEACHING AND EXAMINATION OF II SEM M.ARCHITECTURE (Construction & Project Management- 2018)

Sl. No.	Subject Code	Title of the Subject	Periods per week (1 Period = 60 Mins.)			Scheme of Examination				
			Lecture	Studio	Total	Theory	Progressive Marks	Viva-Voce	Total	Credits
1	18CPM21	Advanced Construction Technology - 2	3	2	5	100	50	-	150	6
2	18CPM22	Project Management- 2	3	2	5	100	50	-	150	6
3	18CPM23	Construction & Environment Management	2	2	4	100	50	-	150	6
4	18CPM24	Project Finance Management	2	2	4	-	50	50	100	4
5	18CPM25	Site Organisation Management	2	-	2	-	50	-	50	2
6	18CPM26	Management Information Systems	2	-	2	-	50	-	50	2
Total			14	8	22	300	300	50	650	26

Course:

CPM- Construction & Project Management

Minimum Marks for Pass:

Theory - 40%
Progressive Marks - 50%
Viva-Voce- 50%

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI

SCHEME OF TEACHING AND EXAMINATION OF III SEM M.ARCHITECTURE (Construction & Project Management- 2018)

Sl. No.	Subject Code	Title of the Subject	Periods per week (1 Period = 60 Mins.)			Scheme of Examination				
			Lecture	Studio	Total	Theory	Progressive Marks	Viva-Voce	Total	Credits
1	18CPM31	Real Estate & Facility Management	3	2	5	100	50	-	150	6
2	18CPM32	Contract & Conflict Management	3	2	5	100	50	-	150	6
3	18CPM33	Construction Quality & Safety Management	3	2	5	100	50	-	150	6
4	18CPM34	Legal Framework of Construction	2	-	2	-	50	-	50	2
5	18CPM35	Project Formulation & Appraisal	2	-	2	-	50	-	50	2
6	18CPM36	Dissertation Stage – I	-	3	3	-	50	-	50	2
7	18CPM37	Practical Training (6 Weeks)	-	-	-	-	-	100	100	4
Total			13	9	22	300	300	100	700	28

Course:

CPM- Construction & Project Management

Minimum Marks for Pass:

Theory - 40%
Progressive Marks - 50%
Viva-Voce- 50%

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI

SCHEME OF TEACHING AND EXAMINATION OF IV SEM M.ARCHITECTURE (Construction & Project Management- 2018)

Sl. No.	Subject Code	Title of the Subject	Periods per week (1 Period = 60 Mins.)			Scheme of Examination				
			Lecture	Studio	Total	Theory	Progressive Marks	Viva-Voce	Total	Credits
1	18CPM41	Dissertation Stage -II	4	12	16	-	150	150	300	12
2	18CPM42	Elective 1	-	2	2	-	50	50	100	4
3	18CPM43	Elective 2	-	2	2	-	50	50	100	4
Total			4	16	20	-	250	250	500	20

Course:

CPM- Construction & Project Management

Minimum Marks for Pass:

Theory - 40%
Progressive Marks - 50%
Viva-Voce- 50%

Elective 1:	Elective 2:
1. Facility Management for Large campuses **2.** Planning of large residential complexes **3.** Advanced Software's in Construction Management. **4.** International projects management. 1. **Large Infrastructure Management**	1. **Special Construction Methods & Techniques** 2. Restoration Projects 3. Green Buildings 4. Post Disaster construction management 5. Entrepreneurship

05.11.2020

DETAILED SYLLABUS

Name of the Course: **M.Arch Construction & Project Management**		
Name of the Subject: **Advanced Construction Technology – 1**		
Subject Code: **18CPM11**	Semester: **First**	
Duration: **5 Hours**	Maximum Marks: **150**	Credits: **6**
Teaching Scheme	**Examination Scheme**	
Lecture: **3 hrs/week**	End Semester Exam: **100 Marks**	
Studio: **2 hrs/week**	Internal Assessment: **50 Marks**	

Aim:

To give a coverage on aspects of construction technologies related to building projects, the understanding of which are essential for the construction manager.

Contents

Module-1:

Introduction to construction operations such as RCC-Beams and Columns, Arches, Domes, Trusses, erection work, automation processes and special equipments.

Module-2:

Introduction to Modular Construction, Principles, comparison and advantages of modular construction technology with standard construction techniques, Modular coordination, Modular Standardization, Modular System Building, Limitationsof Modular Construction.

Module-3:

Introduction to Prefabricated structures, Principles, components, joints, storage handling and delivery of components. Planning for pre-casting, Selection of equipment for fabrication, Transport and erection of prefabricated components, Quality measures, Design considerations of precast elements (Theory only), Safety measure during erection.

Module-4:

Industrial Structures, Tall structures, Façade construction techniques, special concrete requirements, Quality control and safety management for special structures.

Module-5:

Requirements of Formwork, Loads carried by Formwork, Types of Formwork: Timber, Steel, Modular shuttering, Slip forms, Scaffolding, Jump forms, Safety in Formworks
Introduction to construction operations, erection work, automation processes and special equipments.

Studio Program:

For each module, a site visit is essential followed by site visit report.

Note: The above topics shall be supplemented with site visits to marquee projects within and outside the country.

References:

- Hutchings, J.F., 1996. *Builder's guide to modular construction*. New York, USA: McGraw Hill.
- El-Reedy, M.A., 2010. *Construction management and design of industrial concrete and steel structures*. CRC Press.
- Jha, J. and Sinha, S.K., 2014. *Modern Practices in Formwork for Civil Engineering Construction Works*. University Science Press.
- Ganesan, R. and Latha., A. *Prefabricated Structures.* Sree Kamalamini Publications.
- S. C. Rangwala, 2009,*Building Construction.*Charotar Publishing House Pvt. Limited.
- Dr. B.C.Punmia, Er. Ashok Kumar Jain and Dr. Arun Kumar Jain, *BUILDING CONSTRUCTION.* Laxmi Publications (P) Ltd.

Name of the Course: **M.Arch Construction & Project Management**		
Name of the Subject: **Project Management - 1**		
Subject Code: **18CPM12**	Semester: **First**	
Duration: 5 **Hours**	Maximum Marks: **150**	Credits: **6**
Teaching Scheme	**Examination Scheme**	
Lecture: **3 hrs/week**	End Semester Exam: **100 Marks**	
Studio: **2 hrs/week**	Internal Assessment: **50 Marks**	Viva-Voce: **0 Marks**

Aim:

To disseminate the application of Project Management in various phases of project embracing various processes.

Contents

Module-1:

INTRODUCTION TO PROJECT MANAGEMENT: Thedifferencebetweena projectmanagerandaprojectengineer/projectleader, Thedutiesofaprojectmanager/projectleader, ProjectLife Cycle, Project Management process

Module-2:

BASICS OF PROJECT MANAGEMENT: Types of project, Phase of project, project management and its relevance, stake holders of a project, structure of project organization, management levels, Failures and success of a project.

Module-3:

CONSTRUCTION PLANNING: Introduction, activities involved types of project plan, work breakdown structure. Planning terminologies, CPM, PERT,

Module-4:PROJECT SCHEDULING AND CONTROLLING: Introduction, Resource allocation and levelling of Major resources, Multi resource allocation, Optimal scheduling. Work Breakdown Structure (W.B.S.), Time scheduling techniques.

Module-5:PROJECT MONITORING AND CONTROL: Feasibility report, Project updating, Cost control, Earned value management, project progress reports, project control techniques, change management, reasons for failure

STUDIO:

Introduction to MS Project

Implementation of Project management skills on a live project ofabout 10,000 sqm.

Note: The above topics shall be supplemented with site visits to marquee projects within and outside the country.

References:

- Association for Project Management, 2012. *APM body of knowledge*. Buckinghamshire: Association for Project Management.
- Guide, A., 2017. *Project Management Body of Knowledge(PMBOK® GUIDE)*. Project Management Institute.
- Dr.K.G. Krishnamurthy and S.V. Ravindra, 2008. *Construction and Project Management*.
- Hendrickson, C., Hendrickson, C.T. and Au, T., 1989. *Project management for construction: Fundamental concepts for owners, engineers, architects, and builders*. Chris Hendrickson.
- Chris, H., 2003. Project Management for Construction: Fundamental Concepts for Owners, Engineers, Architects and Builders. Department of Civil and Environmental Engineering.
- Punmia, B.C. and Khandelwal, K.K., 2002. *Project Planning and Control with PERT & CPM*. Firewall media.
- Jha, K.N., 2015. *Construction Project Management: Theory and Practice*. Pearson Education India.

Name of the Course: **M.Arch Construction & Project Management**		
Name of the Subject: **Procurement of Equipment & Materials**		
Subject Code: **18CPM13**	Semester: **First**	
Duration: **4 Hours**	Maximum Marks: **150**	Credits: **6**
Teaching Scheme	**Examination Scheme**	
Lecture: **2 hrs/week**	End Semester Exam: **100 Marks**	
Studio: **2 hrs/week**	Internal Assessment: **50 Marks**	Viva-Voce: **0 Marks**

Aim:

The objective of the subject is to understand Material and equipment handling in a systematic and scientific method which helps in promoting of project/ process improvement.

Contents

Module-1:

Classification and operational characteristics of equipments for earthmoving, hauling, hoisting, conveying, pneumatic, pumping, aggregate production,concrete production, pile driving, tunneling and road constructionapplications.

Module-2:

Planning and selection of equipment, for earthmoving, hauling,hoisting, conveying, pneumatic, pumping, aggregate production,concrete production, pile driving, tunneling and road constructionapplications.New trends and construction equipment of future.

Module-3:

Equipment procurement, purchase, import of equipment,procedural formalities for importand production rates ofequipment for earthmoving, hauling,hoisting, conveying, pneumatic, pumping, aggregate production,concrete production, pile driving, tunneling and road constructionapplications.

Module-4:

Systems of material classification and types of construction materials. Procurement of Materials, Materials & their peculiarities, material planning, accounting and material reconciliation.

Module-5:

Role of purchasing function, restraints & factors, purchasing decisions, procedures, forms, records and reports.

Note: The above topics shall be supplemented with site visits to marquee projects within and outside the country.

References:

- Peurifoy, R.L.,C. J. Schexnayder, AShapira ,2010. *Construction planning, equipment, and methods* (No. 4th ed.).
- Raj, P.P., 2017. *Building Construction Materials and Techniques*. Pearson Education India.
- Sharma, S.C., 2016. *CONSTRUCTION EQUIPMENT AND MANAGEMENT*. Khanna publishers.
- Bernold, L.E., 2015. *Construction equipment and methods: Planning, innovation, safety*. Wiley Global Education.
- Gransberg, D.D., Popescu, C.M. and Ryan, R., 2006. *Construction Equipment Management for Engineers, Estimators, and Owners*. CRC Press.
- Day, D.A. and Benjamin, N.B., 1991. *Construction equipment guide* (Vol. 34). John Wiley &

Sons.

Name of the Course: **M.Arch Construction & Project Management**		
Name of the Subject: **Human Resource Management**		
Subject Code: **18CPM14**	Semester: **First**	
Duration: **2 Hours**	Maximum Marks: **100**	Credits: **4**
Teaching Scheme	**Examination Scheme**	
Lecture: **2 hrs/week**	End Semester Exam: **0 Marks**	
Studio: **0 hrs/week**	Internal Assessment: **50 Marks**	Viva-Voce: **50 Marks**

Aim

The main objective of the subject is to impart and train rigorously the students for various HR tools and techniques used in construction industry.

Contents

Module-1:Introduction:

Basic of personnel management, manpower planning, labour laws and industrial relations. The role of personnel management in construction enterprises.

Module-2:Personnel Management:

Concepts, definitions, growth, role and functions, new developments in HRD and HRM, manpower estimation for company and project, methods and procedures of estimation at various stages.

Module-3:Related Aspects:

Methods of recruitment, selection, training, placement, financial compensation, discipline, separation etc. in employing and retaining engineers and managers.

Module-4:Personnel Office at Head Office and Project Site:

Role, functions, status and relationship with other departments, personnel office records and procedures.

Module-5:Legal Aspects:

Labour legislation, related labour acts, grievance handling, enquiry procedure, Labour administration and judiciary in regards to construction industry.

Note: The above topics shall be supplemented with site visits to marquee projects within and outside the country.

References:

- Werner, J.M. and DeSimone, R.L., 2011. *Human resource development*. Cengage Learning.
- McGuire, D., 2014. *Human Resource Development*. SAGE.
- Dr. K.G. Krishnamurthy and S.V. Ravindra, 2008. *Construction and Project Management*.
- Bratton, J. and Gold, J., 2017. *Human resource management: theory and practice*. Palgrave.
- Marchington, M., Wilkinson, A., Donnelly, R. and Kynighou, A., 2016. *Human resource management at work*. Kogan Page Publishers.
- Deb, T., 2006. *Human Resource Development: Theory & Practice*. Ane Books India.

Name of the Course: **M.Arch Construction & Project Management**		
Name of the Subject: **Research Methodology**		
Subject Code: **18CPM15**	Semester: **First**	
Duration: **2 Hours**	Maximum Marks: **50**	Credits: **2**
Teaching Scheme	**Examination Scheme**	
Lecture: **2 hrs/week**	End Semester Exam: **0 Marks**	
Studio: **0 hrs/week**	Internal Assessment: **50 Marks**	Viva-Voce: **0 Marks**

Aim:

The objective of the course is intended to develop the research skills in a systematic manner which will impart the ability to select appropriate research methodology, experimental design, follow professional ethics and academic integrity, and develop oral and written presentation skills.

Contents

Module-1:

Meaning of research problem, Sources of research problem, Criteria Characteristics of a good research problem, Errors in selecting a research problem, Scope and objectives of research problem. Approaches of investigation of solutions for research problem, data collection, analysis, interpretation, Necessary instrumentations

Module-2:

Effective literature study approaches, analysis Plagiarism, Research ethics, Basic NHST with statistical analysis.

Module-3:

Effective technical writing, how to write report, Paper Developing a Research Proposal, Format of research proposal, a presentation and assessment by a review committee.

Module-4:

Nature of Intellectual Property: Patents, Designs, Trademarks and Copyright. Process of Patenting and Development: technological research, innovation, patenting, development. International Scenario: International cooperation on Intellectual Property. Procedure for grants of patents, Patenting under PCT.

Module-5:

Patent Rights: Scope of Patent Rights. Licensing and transfer of technology. Patent information and databases. Geographical Indications.

Note: The above topics shall be supplemented with site visits to marquee projects within and outside the country.

References:

- Kothari, C.R., 2017. Research Methodology Methods and Techniques Second Edition.
- Fellows, R.F. and Liu, A.M., 2015. *Research methods for construction*. John Wiley & Sons.
- Knight, A. and Ruddock, L. eds., 2009. *Advanced research methods in the built environment*. John Wiley & Sons.
- Kumar, R., 2014. *Research Methodology: A Step-by-Step Guide for Beginners*. SAGE.
- Flick, U., 2015. *Introducing Research Methodology: A Beginner's Guide to Doing a Research Project*. SAGE.

Name of the Course: **M. Arch Construction & Project Management**		
Name of the Subject: **Advanced Estimating & Quantity Surveying**		
Subject Code: **18CPM16**	Semester: **First**	
Duration: **3 Hours**	Maximum Marks: **50**	Credits: **2**
Teaching Scheme	**Examination Scheme**	
Lecture: **3 hrs/week**	End Semester Exam: **0 Marks**	
Studio: **0 hrs/week**	Internal Assessment: **50 Marks**	Viva-Voce: **0 Marks**

Aim:

The objective of this subject is to learn the advanced skills of BOQ of specialised projects, materials and machinery and also studying the advanced methods and techniques of Surveying.

Contents

Module-1:

Advanced Estimation Techniques:

Building cost estimation and estimation from 2D AutoCAD drawings.

Creation of extensive project views that are combined with significant information from various software tools.

Module-2:

Manual measuring and automatic measuring of areas, and counting of building materials, and then export the same and publishing.

Creating material quantity departures and performing theoretical evaluations or estimations, from design through pre-reconstruction of the project.

Module-3:

Latest software technologies for drawing, quantification, viewing, and markup accomplishment, uniting design data, other essential information within fluid architecture. This would make sure that everything can be kept on track of changing variables.

Module-4:

Advanced Quantity Surveying Techniques:

Compare procurement and tendering procedures, produce tender documentation and undertake partnering and collaborative systems

Module-5:

Undertake the measurement of building works and tender documentation and evaluation of construction costs

Advanced techniques of surveying - 3D Lasers, Electronic Survey, Aerial, GPS Enabled Surveys

Note: The above topics shall be supplemented with site visits to marquee projects within and outside the country.

References:

- Cartlidge, D., 2017. *Quantity Surveyor's Pocket Book*. Taylor & Francis.
- Brandon, P.S. ed., 1992. *Quantity Surveying Techniques: New Directions*. Blackwell.
- Peurifoy, R.L., 2015. *Estimating construction costs* McGraw Hill Education.
- P.K. Guha.,*QUANTITY SURVEYING - PRINCIPLES AND APPLICATIONS.*
- Towey, D., 2017. *Construction Quantity Surveying: A Practical Guide for the Contractor's QS*. John Wiley & Sons.

Name of the Course: **M.Arch Construction & Project Management**		
Name of the Subject: **Advanced Construction Technology - 2**		
Subject Code: **18CPM21**	Semester: **Second**	
Duration: **5 Hours**	Maximum Marks: **150**	Credits: **6**
Teaching Scheme	**Examination Scheme**	
Lecture: **3 hrs/week**	End Semester Exam: **100 Marks**	
Studio: **2 hrs/week**	Internal Assessment: **50 Marks**	Viva-Voce: **0 Marks**

Aim:

The objective of the subject is to introduce the concepts and Construction methodology in relation to architectural and services system of building. Scope of the subject is limited to conceptual understanding only.

Contents

Module-1:

Structure and structural requirements- overview: General types of structure based on geometry, stiffness, material. Primary structural elements and primary structural units and its aggregation. Types of failure of structure and structural response, structural stability, Dead, live, wind and seismic load calculation based on IS code provision.

Module-2:

Horizontal Systems-Long span roofing system: Interpretation and application of basic principles, behaviour and construction techniques of cables, arches, domes, trusses, pneumatic structures, shells and folded plate structures.

Module-3:

Vertical systems-high rise/ multi-storey structures: Multi-storey construction-factors affecting growth, height and structural form. High rise behaviour, multi-storey frames-rigid frames, braced frames, infilled frames, shear wall. Resistance to lateral loading- deflection and motion control. Construction criteria of earthquake resistance, plan, elevation and mass irregularities, stiffness issues, base isolation and other techniques.

Module-4:

Planning and design considerations of Geotechnical aspects of foundations, Foundation systems, basements including waterproofing systems, Soil / ground improvement techniques, Durability of foundations in aggressive (chemical and physical) soil conditions.

Module-5:

Technology of repairs for concrete, steel, timber, masonry works, stitching, jacketing, Damage assessment methods, Effect of dampness, heat, frost, precipitation, chemical agents, biological agents on building materials in relation of life, serviceability and strength, Machines, tools, instruments for damage assessment investigation, NDT and repairs.

Studio program

Visit to sites known for innovative architectural and structural system in building and making presentation and reports.

Note: The above topics shall be supplemented with site visits to marquee projects within and outside the country.

References:

- Schodek, D. and Bechthold, M., 2013. *Structures*. Pearson Higher Ed.
- Punmia, B.C., kumar Jain, A. and kumar Jain, A., 2001. Soil mechanics and foundation engineering. *Standard Book House, New Delhi*.
- Raj, P.P., 2005. *Ground Improvement Techniques (PB)*. Firewall Media.
- A.M.Neville and M.S.Shetty, 1987. *Concrete Technology*.Pearson Education Ltd.
- Emmitt, S., 2018. *Barry's advanced construction of buildings*. John Wiley & Sons.

Name of the Course: **M.Arch Construction & Project Management**		
Name of the Subject: **Project Management- 2**		
Subject Code: **18CPM22**	Semester: **Second**	
Duration: **5 Hours**	Maximum Marks: **150**	Credits: **6**
Teaching Scheme	**Examination Scheme**	
Lecture: **3 hrs/week**	End Semester Exam: **100 Marks**	
Studio: **2 hrs/week**	Internal Assessment: **50 Marks**	Viva-Voce: **0 Marks**

Aim:

The intent of the course is to disseminate about the application of project management during the entire project life cycle such as initiation, planning, execution and closure with emphasis on Risk Management and Construction Management.

Contents

Module-1:

Introduction to project management topics:Project Charter, Project Management Plan, Project Programme & Portfolio Management, Stakeholder Management, Scope Management, Schedule Management, Strategy Management.

Module-2:

Introduction to project management topics:Communication Management, Procurement Management, Cost Management, Quality Management, Safety Management, Change Management.

Module-3:

Introduction to project management topics:Resource Management, Conflict Management & Dispute resolution, Contract Management, Design Management, Benefits Management, Project Closure.

Module-4:

Risk management: introduction, plan risk management- inputs, tools & techniques, outputs, identify risks- inputs, tools & techniques, outputs.
Perform qualitative risk analysis- inputs, tools & techniques, outputs
Perform quantitative risk analysis- inputs, tools & techniques, outputs
Plan risk responses- inputs, tools & techniques, outputs
Implement risk responses- inputs, tools & techniques, outputs
Monitor risks- inputs, tools & techniques, outputs (as per PMBoK)

Module-5:

Construction Management: Introduction, Understandtheroleof andthe importanceofthe constructionmanagerto theproject, constructionmanagerstasks, dutiesof ageneral or primecontractor asitrelatestositesafety, Defineduediligenceandhowitappliestoconstruction projects, Understandtheconstructionmanagersrolein contractsigning, Carryouttheconstructionmanagersduties.

STUDIO EXERCISES

The application of management processes in construction phase will be disseminated. Choosing acasestudyof aprojectthat haseveryprojectmanagementerroryoucanthink of. Workingin groups,Learners areto answerprojectmanagementquestions relatingto thevarious problems talkedaboutinthecasestudy.Theobjectiveis toanalyseaprojectthathas gone terriblywrongandtolearnfromthemistakesofothers.
Introduction to Primavera, Introduction to BIM

Note: The above topics shall be supplemented with site visits to marquee projects within and outside the country.

References:

- Association for Project Management, 2012. *APM body of knowledge*. Buckinghamshire: Association for Project Management.
- Guide, A., 2017. *Project Management Body of Knowledge(PMBOK® GUIDE)*. Project Management Institute.
- Punmia, B.C. and Khandelwal, K.K., 2002. *Project Planning and Control with PERT & CPM*. Firewall media.
- C. S. Changeriya*., Primavera Project Planner*.
- Hendrickson, C., Hendrickson, C.T. and Au, T., 1989. *Project management for construction: Fundamental concepts for owners, engineers, architects, and builders*. Chris Hendrickson.
- Chris, H., 2003. Project Management for Construction: Fundamental Concepts for Owners, Engineers, Architects and Builders. Department of Civil and Environmental Engineering.
- Dr.K.G. Krishnamurthy and S.V. Ravindra, 2008. *Construction and Project Management*.
- Jha, K.N., 2015. *Construction Project Management: Theory and Practice*. Pearson Education India.
- V. Manisha, K. Modish, 2015.*A Study on Risk Management in Execution of Construction Projects.* LAP Lambert Academic Publishing.

Name of the Course: **M.Arch Construction & Project Management**		
Name of the Subject: **Construction & Environment Management**		
Subject Code: **18CPM23**	Semester: **Second**	
Duration: **4 Hours**	Maximum Marks: **150**	Credits: **6**
Teaching Scheme	**Examination Scheme**	
Lecture: **2 hrs/week**	End Semester Exam: **100 Marks**	
Studio: **2 hrs/week**	Internal Assessment: **50 Marks**	Viva-Voce: **0 Marks**

Aim:

The objective of this subject is to create awareness regarding the environmental impacts of Construction and methods of mitigation.

Contents

Module-1:

Construction environment management plan

- Introduction
- Communication and complaint resolution
- Management of the environmental issues
- Air quality & Addressing air quality in the CEMP
- Noise Addressing noise in the CEMP − standard construction hours construction outside of standard hours (night works)
- Site contamination & Addressing site contamination in the CEMP
- General waste management, Hazardous waste, Use of waste fill & Addressing waste in the CEMP
- Water quality & Addressing water quality in the CEMP
- Monitoring
- Training

Module-2:

- The Environmental Impacts of Construction Projects and the Next Steps Forward for the Industry
- Construction's Impact on the Environment and Climate Change
- Environmental Impacts of Construction Projects
- The Future of Environmentally Conscious Construction

Module-3:

The environmental assessment and review process

Environmental impact assessment and mitigative measures

Module-4:

Rehabilitation and resettlement issues in large dams in India

Environmental impact assessment case study of an expressway

Module-5:

Environmental impact reports form of construction project

Construction and demolition waste management – Salvaging, Recycling, Disposing of non-hazardous demolition and construction waste. Wastage audit at site, Site waste material management plan.

Studio Programme:

Studio problems and exercises are designed to illustrate the practical applications of construction environment management with project case studies.

Note: The above topics shall be supplemented with site visits to marquee projects within

and outside the country.

References:

- Jain, R.K. and Rao, S.S., 2008. *Industrial safety, health and environment management systems*. Romesh Chander Khanna.
- Ferrett, E. and Hughes, P., 2015. *Introduction to health and safety in construction: For the NEBOSH national certificate in construction health and safety*. Routledge.
- Basudev Panda, 2013*Industrial Safety, Health Environment and Security*. Laxmi Publications; First Ed.
- Li, H. and Chen, Z., 2007. Environmental Management in Construction: A Quantitative Approach.
- Griffith, A., 1994. *Environmental management in construction*. Macmillan International Higher Education.
- Uren, S. and Griffiths, E., 2000. *Environmental management in construction*.

Name of the Course: **M.Arch Construction & Project Management**		
Name of the Subject: **Project Finance Management**		
Subject Code: **18CPM24**	Semester: **Second**	
Duration: **4 Hours**	Maximum Marks: **100**	Credits: **4**
Teaching Scheme	**Examination Scheme**	
Lecture: **2 hrs/week**	End Semester Exam: **0 Marks**	
Studio: **2 hrs/week**	Internal Assessment: **50 Marks**	Viva-Voce: **50 Marks**

Aim:

The objective of the subject is to familiarize the fundamentals of financialmanagement concepts and their applications in the various phases of the project cycle of construction projects.

Contents

Module -1

Introduction to financial management, Introduction to construction financial management, Objectives of Finance Management, Responsibilities of a Finance Manager in Construction Industry, Financing Decisions, Types of Business Units- Partnerships, Companies, Co-operatives.

Module -2

Accounting and Financial Resources, long term sources of Finance,
Capital Structure and Cost Capital,
Capital Budgeting,

Module -3

Work Capital Management- Meaning and Concept, Gross work Capital, Net working Capital, Cost Management, Cash Planning, Annual Cash Budget, Methods of Cash Budget, Estimating Cash Payments

Module -4

Analysis of Financial Statements- classification of ratios, Profitability Analysis/ROI, Manging Costs and Profits, Managing Cash Flow and Flow analysis. Time Value of Money – Cost of Capital, steps in preparing cash flow statements, techniques for preparing cash flow statements,

Module -5

Project Accounting,
Budgeting
Financing International Projects
Joint ventures and BOOT projects
Construction claims: common disputes like delayed payment, unworkable rates, risk allocation

Studio Programme:

Studio problems and exercises are designed to illustrate the practical applications of construction financial management with project case studies.

Note: The above topics shall be supplemented with site visits to marquee projects within and outside the country.

References:

- *Project And Infrastructure Finance* Vikas Srivastava(Author), V. Rajaraman(Author)
- Dinku, A., 2003. *Construction Management and Finance*.
- Coombs, W.E., 2019. *Construction Accounting and Financial Management*.
- 2017. *Financial Management Essentials You Always Wanted To Know: (Self-Learning Management Series): 3* Vibrant Publishers, 2nd ed. 2017
- Chandra, P., 2011. *Financial management*. Tata McGraw-Hill Education.
- Gatti, S., 2012. *Project finance in theory and practice: designing, structuring, and financing*

private and public projects. Academic Press.

Name of the Course: **M.Arch Construction & Project Management**		
Name of the Subject: **Site Organisation Management**		
Subject Code: **18CPM25**	Semester: **Second**	
Duration: **2 Hours**	Maximum Marks: **50**	Credits: **2**
Teaching Scheme	**Examination Scheme**	
Lecture: **2 hrs/week**	End Semester Exam: **0 Marks**	
Studio: **0 hrs/week**	Internal Assessment: **50 Marks**	Viva-Voce: **0 Marks**

Aim :

The objective of this subject is to organise and planning of site works in order to ensure maximum safety and efficiency of the construction process.

Contents

Module-1:

The site (Layout and Organisation)

Site inputs planning

Site works planning

Module-2:

Site accounts

Site cost control techniques

Site quality control operations

Module-3:

Quality control in concreting

Improving site productivity

Module-4:

Electricity on building site.

Temporary construction lighting

Winter and Monsoon Construction

Module-5:

Shoring

Demolition

Contaminated land remediation

Note: The above topics shall be supplemented with site visits to marquee projects within and outside the country.

References:

- Rapp, R.R. and Benhart, B.L. eds., 2015. *Construction Site Planning and Logistical Operations: Site-Focused Management for Builders*. Purdue University Press.
- Dr.K.G. Krishnamurthy and S.V. Ravindra, 2008. *Construction and Project Management*.
- Barrie, D.S. and Paulson, B.C., 1984. *Professional construction management*. New York: McGraw-Hill.
- Ritz, G.J., 1994. *Total construction project management*.
- Toole, T.M., 2002. Construction site safety roles. *Journal of Construction Engineering and Management*, *128*(3), pp.203-210.
- Roy Chudley, Roger Greeno, mike Hurst, Simon Topliss, *Advanced construction Technology*.

Name of the Course: **M.Arch Construction & Project Management**		
Name of the Subject: **Management Information Systems**		
Subject Code: **18CPM26**	Semester: **Second**	
Duration: **2 Hours**	Maximum Marks: **50**	Credits: **2**
Teaching Scheme	**Examination Scheme**	
Lecture: **2 hrs/week**	End Semester Exam: **0 Marks**	
Studio: **0 hrs/week**	Internal Assessment: **50 Marks**	Viva-Voce: **0 Marks**

Aim:

The objective of this subject is to gain the necessary skills needed to develop Management Information System for a corporate organisation and for various functions of construction management.

Contents

Module-1:

Evaluation of information system technology.

Cash flow forecasting of projects. Prerequisites for cash flow forecasting, Preparations for cash flow statement, Use of S- curve, Composite cash flow statements (Multiple Projects), Cost of borrowing, Self-financing contracts,

Module-2:

Definition and components of W.C, Cash management, Receivable management, Payable management, Inventory management, Estimating the requirements of W.C, Working capital management of construction companies

Module-3:

Management information System: Definition, Concept, Role an impact. System development, data processing and flow chart.

Module-4:

Computer application, file design, DBM, data communication Documentation, System design specifications, System analysis and design. Information processing technology: Data processing technology, communication technology distributed processing and emerging information technology.

Module-5:

Development and implementation of MIS; Long range plan, Management of quality, MIS factors of success and failure, impact of computer application. Case studies of MIS at corporate and project level.

Note: The above topics shall be supplemented with site visits to marquee projects within and outside the country.

References:

- Hardin, B. and McCool, D., 2015. *BIM and construction management: proven tools, methods, and workflows*. John Wiley & Sons
- Paulson Jr, B.C., 1994. *Computer applications in construction*. McGraw-Hill, Inc..
- Olson, D., 2014. *Information systems project management*. Business Expert Press.
- Schwalbe, K., 2015. *Information technology project management*. Cengage Learning.

Name of the Course: **M.Arch Construction & Project Management**		
Name of the Subject: **Real Estate & Facility Management**		
Subject Code: **18CPM31**	Semester: **Third**	
Duration: **5 Hours**	Maximum Marks: **150**	Credits: **6**
Teaching Scheme	**Examination Scheme**	
Lecture: **3 hrs/week**	End Semester Exam: **100 Marks**	
Studio: **2 hrs/week**	Internal Assessment: **50 Marks**	Viva-Voce: **0 Marks**

Aim:

Intent of the subject is to impart detailed knowledge of all aspects related to management of Real Estate and various building services of a project.

Contents

Module-1:Real Estate Management:

Classification of real estate activities and peculiarities; Factors affecting real estate market; Role of Government in real estate market; Statutory provisions, laws, rules and regulations application, land use controls in property development, registration and licensing requirements;

Module-2:

Functions of Real Estate development like project formulation, feasibility studies, developing, costing and financing, managing including planning, scheduling and monitoring of real estate projects, risk management, facilities management, marketing/advertising, post construction management etc.; Interests in real estate; Documentation in real estate processes; Transfer of titles and title records; Real Estate appraisal and valuation; Role, scope, working characteristics and principal functions of real estate participant and stakeholders;

Module-3:

Real estate consultants and their activities; Types of agreements between the consultants and principal; Knowledge base for assessment and forecasting the Real Estate market; Role and responsibilities of property managers;

Real Estate investment, sources and related issues; Code of ethics for RealEstate participants; Environmental issues related to Real Estate transactions: Closing the Real Estate transactions.

Module-4:Facilities Management:

Role and administrative functions of Supervisors. Firefighting - Basic requirement for the work firefighting system, various components of the firefighting system, maintenance required of the system, fire lighting in high-rise buildings, commercial / industrial complexes, public buildings, checklist for fire safety, firefighting. Lifts / elevators, escalators, permissions & procedures legal formalities for Elevators, various types of lifts, working mechanisms of lift and escalators. Indian standard codes for planning & installations of elevator, inspection & maintenance of lifts.

Module-5: Plumbing Services: Basics of Plumbing systems, Requirement of Plumbing works, Agency, Activity Flow chart for Plumbing work, Quality, checking of materials.

Water Supply distribution system in high-rise buildings & other complexes, pumps and pumping mechanism, operation & maintenance of fittings & fixtures of w/s.

Do's & Don’ts for water pipe networks. Modern Sewage Treatment Plants. Landscaping & Horticulture, Building maintenance management.

Air - conditioning and Heating: Flowcharts of air conditioning & heating. Centralized systems,monitoring working of the equipment, checklist of Inspection, Performance testing. Waterproofing, Damp proofing & Termite proofing. Working Procedure & stages of work of waterproofing for W.C., bathrooms, Terrace, Sloping roof, Basements, tanks.

Note: The above topics shall be supplemented with site visits to marquee projects within and outside the country.

References:

- Mike E Miles & Gayle S Berens, 2015. *Real Estate Development-Principles and Process*.
- Total Facility Management by Adrain Brooks
- David G Cotts, 2009. *The Facility Management Handbook, Chapter 15: The Construction Phase*.

Name of the Course: **M.Arch Construction & Project Management**		
Name of the Subject: **Contract&Conflict Management**		
Subject Code: **18CPM32**	Semester: **Third**	
Duration: **5 Hours**	Maximum Marks: **150**	Credits: **6**
Teaching Scheme	**Examination Scheme**	
Lecture: **3 hrs/week**	End Semester Exam: **100 Marks**	
Studio: **2 hrs/week**	Internal Assessment: **50 Marks**	Viva-Voce: **0 Marks**

Aim:

The objective of this subject is to impart knowledge of principles and overview of contract laws. Conflict management and Dispute resolution skills by a thorough understanding of Legal frameworks and arbitration principles.

Contents

Module-1:

Contract Management:

Procurement and Contracts. Definitions. Why have contracts? Supply and payment chains. Transaction costs. Objectives and processes. Contract documents.
Contracts. Legal principles & overview of contract law. Implied terms. International contracts.Contract Strategy. Number and scope of contracts and subcontracts. Responsibilities and risks.

Module-2:

Terms of Payment. Incentives and damages terms. Traditional remeasured contracts for construction compared with other contracts for engineering work. Standard Methods of Measurement.
Management Contracts & Target Cost Contracts. Objectives and principal features of these contracts. Breach of contract.

Module-3:

Standard/Model Conditions of Contract: FIDIC, ICE, JCT, IChemE, etc.
New Engineering Contract. Objectives and principal features of the NEC family of contracts.
Partnering, Alliances, Joint Ventures and Clustering. Definitions. Objectives and principal features of such arrangements.
Managing variations to scope or programme of contract work
Contracts, Corruption and Bribery for PMs

Module-4:

Conflict Management &Dispute Resolution

Conflict management, conflict theory - Dispute Resolution.
Evaluate the factors that influence Negotiation.
Evaluate the techniques used for Alternative Dispute Resolution.
Discuss and evaluate the concepts and principles of Mediation.

Module-5:

The legal framework for Dispute Resolution; via the law of: Contract and Tort.
The legal framework for Arbitration,Law of Arbitration.
Arbitration Practice and Procedure.
Game theory and application.

Note: The above topics shall be supplemented with site visits to marquee projects within and outside the country.

References:

- Clough, R.H., Sears, G.A., Sears, S.K., Segner, R.O. and Rounds, J.L., 2015. *Construction Contracting: A Practical Guide to Company Management*. John Wiley & Sons.
- Building and Engineering contracts Law and Practice by P.C.Makranda
- Digest of Indian Contract Act 1872 (2011 onwards)
- Dispute Resolution and Conflict Management in Construction: An International Perspective
- by Edward Davies and Peter Fenn

Name of the Course: **M.Arch Construction & Project Management**		
Name of the Subject: **ConstructionQuality & Safety Management**		
Subject Code: **18CPM33**	Semester: **Third**	
Duration: **5 Hours**	Maximum Marks: **150**	Credits: **6**
Teaching Scheme	**Examination Scheme**	
Lecture: **3 hrs/week**	End Semester Exam: **100 Marks**	
Studio: **2 hrs/week**	Internal Assessment: **50 Marks**	Viva-Voce: **0 Marks**

Aim:

The intent of the course is to give an insight into the concepts of Quality and Safety Management System and further develop applications relevant to planning, design & construction of buildings.

Contents

Module-1:

QUALITY MANAGEMENT: Quality policy in construction industry-Consumer satisfaction Ergonomics, Time of Completion-Statistical Tolerance- concept of quality- Contract and construction programming-Inspection procedures, total quality control concept, sustainable construction methods

Module-2:

QUALITY ASSURANCE AND CONTROL: Total Quality Assurance and Quality Control Program and cost implication. Different aspects of quality Appraisals, failure mode analysis, Stability methods and tools, Influence of drawings, detailing, specification,

Module-3:

quality assurance protocols, work procedure preparation, advanced quality programs, Quality audit and monitoring, Quality circles,

Module-4:

STANDARDIZATION AND SAFETY: Standardization-Bid Preparation-Construction activity, the SOP method, Construction Safety - Theory, meaning and scope

Module-5:

SAFETY PROGRAMMES AND ORGANIZATION: Environmental safety, Social and environmental factors, Hazards in construction projects, mitigation and preventive measures, OSHAAS guidelines for construction safety, repercussions of construction accidents, construction accident reporting, Contractual obligations for construction safety, EHS budgeting.

Note: The above topics shall be supplemented with site visits to marquee projects within and outside the country.

References:

- Construction Safety (Safety Management) by D S Ganguly & C S Changeriya
- Quality on Site by Ferguson Ian and Mitcheel Eric
- Quality management-The project Managers perspective. by Patterson John

Name of the Course: **M.Arch Construction & Project Management**		
Name of the Subject: **Legal Framework of Construction**		
Subject Code: **18CPM34**	Semester: **Third**	
Duration: **2 Hours**	Maximum Marks: **50**	Credits: **2**
Teaching Scheme	**Examination Scheme**	
Lecture: **2 hrs/week**	End Semester Exam: **0 Marks**	
Studio: **0 hrs/week**	Internal Assessment: **50 Marks**	Viva-Voce: **0 Marks**

Aim:

The objective of the course is to provide an overview of all laws and regulations related to construction projects in the various stages of the project cycle.

The coverage includes Building regulation and bylaws of local authorities. Laws related to land development.

Contents

Module-1:

Land acquisition, Act (1894, 1984 & 2012/13) lease & easement rights, property acts and Gunthewari acts.

City Master Plans, Zoning regulations and building byelaws.

Module-2:

National Building code

Role of Zilla Parishad & IRDP in rural housing.

Permits and approval for construction activities; statutory requirements and clearance related to environment impact, urban form, fire regulation, completion certificate.

Module-3:

Laws and legislation related to construction Industry labour laws & consumer protection Act, MRTP act.

Interpretation of various revenue documents such as: RTC, Survey Records, Pani, tippani, akarbandh etc.

Consumer Forum

RERA Act and its implications

NGT regulations, Restrictions on Non-Agriculturist purchasing of Land, Land Ceiling act

Module-4:

The building and construction workers (regulation of employment and conditions of service) Act, 1996, workmen's compensation Act. Payment of wages Act, The employee's provident fund and Miscellaneous provisions Act1995 etc. Indemnity & guarantee, Industrial act and Labour laws, Environmental laws.

Types of disputes in construction contracts and methods of dispute resolution processes. Alternative dispute resolution and dispute review mechanisms. Arbitration and conciliation Act1996.

Module-5:

Managerial approach to dispute minimization, Conduct of Arbitration proceedings, Making of Arbitration award and Termination proceedings, powers of arbitrator, case studies of arbitration award, setting aside of awards and enforcement of awards, appeal and revision and court proceedings, introduction to civil & criminal procedure code with special reference to laws & order at project sites, project police relations.

Note: The above topics shall be supplemented with site visits to marquee projects within and outside the country.

References:

- The Arbitration and Conciliation Act 1996

- Building and Engineering contracts Law and Practise by P.C.Makranda

Name of the Course: **M.Arch Construction & Project Management**		
Name of the Subject: **Project Formulation & Appraisal**		
Subject Code: **18CPM35**	Semester: **Third**	
Duration: **2 Hours**	Maximum Marks: **50**	Credits: **2**
Teaching Scheme	**Examination Scheme**	
Lecture: **2 hrs/week**	End Semester Exam: **0 Marks**	
Studio: **0 hrs/week**	Internal Assessment: **50 Marks**	Viva-Voce: **0 Marks**

Aim:

The objective is to study and understand the formulation, costing of construction projects, appraisal, finance and private sector participation.

Contents

Module-1:

PROJECT FORMULATION:Meaning, nature and importance of project. Characteristics of project, project family tree, classification of project, project selection process, project life cycle, project report. Capital investments- Capital budgeting – feasibility study – preliminary analysis –

Module-2:

PROJECT FORMULATION: market, technical, financial, economic and ecological – Market and Demand analysis- Detailed technical analysis. Project manager's roles and responsibilities. Project Cash Flows – Time Value of Money – Cost of Capital.

Urgency - Investment analysis in practice.

Implications of GST on construction, Labour Rates, taxation-project level concession for infrastructure projects.

Module-3:

PROJECT APPRAISAL:Method of Project Appraisal. :Method of Project Appraisal -Economic analysis ,Financial analysis , Market analysis ,Technical analysis , Managerial competence ,Ecological analysis– Indian Practice of Investment Appraisal – International Practice of Appraisal – Analysis of Risk – Different Methods – Selection of a Project and Risk Analysis in Practice.

Module-4:

PREPARATION OF PROJECT AND APPRAISAL:Taking live case studies as examples the students can prepare the appraisal reports and submit it as assignment.

Module-5:

FINANCIAL ASPECTS: Financing of projects – means of finance – Equity and Debt - financial institutions – cost of Capital- Risk Analysis, Sources and Measures of risk-Methods of risk analysis-Analysis of stand-alone risk, Analysis of contextual risk -special schemes.

Note: The above topics shall be supplemented with site visits to marquee projects within and outside the country.

Reference:

- Construction Funding-The process of real estate development by Nathan S Collier
- Project Formulation in developing countries by P.K.Mattoo

Name of the Course: **M.Arch Construction & Project Management**		
Name of the Subject: **Dissertation Stage – I**		
Subject Code: **18CPM36**	Semester: **Third**	
Duration: **3 Hours**	Maximum Marks: **50**	Credits: **2**
Teaching Scheme	**Examination Scheme**	
Lecture: **0 hrs/week**	End Semester Exam: **0 Marks**	
Studio: **3 hrs/week**	Internal Assessment: **50 Marks**	Viva-Voce: **0 Marks**

Aim:

The objective of the course is to undertake an in-depth literature review and research on application of Construction and Project Management topics. (As per Syllabus)

Contents

Dissertation topic Identification
Literature review
Study and Compiling of information
Synopsis of Project to be undertaken during Dissertation-II

Name of the Course: **M.Arch Construction & Project Management**		
Name of the Subject: **Practical Training (Vacation-6 Weeks)**		
Subject Code: **18CPM37**	Semester: **Third**	
Duration: **0 Hours**	Maximum Marks: **100**	Credits: **4**
Teaching Scheme	**Examination Scheme**	
Lecture: **0 hrs/week**	End Semester Exam: **0 Marks**	
Studio: **0 hrs/week**	Internal Assessment: **0 Marks**	Viva-Voce: **100 Marks**

Aim:

To put to practice the learning of Construction and Project Management.

Contents

Compulsory training session at alive project (related construction industry). Simultaneously there should be a compulsory training in a Project (intake can be by Project Management Consultants or by Developers firm having in-house Project Management team). The exposure during this stint should be in the area of interest (Eg: design management team, procurement management or construction management or operation process). End of the training session the student to submit a comprehensive report.

Name of the Course: **M.Arch Construction & Project Management**		
Name of the Subject: **Dissertation Stage -II**		
Subject Code: **18CPM41**	Semester: **Fourth**	
Duration: **16 Hours**	Maximum Marks: **300**	Credits: **12**
Teaching Scheme	**Examination Scheme**	
Lecture: **4 hrs/week**	End Semester Exam: **0 Marks**	
Studio: **12 hrs/week**	Internal Assessment: **150 Marks**	Viva-Voce: **150 Marks**

Aim:

The objective of the course is to undertake an in-depth literature review and research on application of Construction and Project Management topics. (As per Syllabus) and finally to produce a dissertation report.

Contents

Case Study
Primary and Secondary studies and Surveys
Outline proposal
Detailed Recommendation / Proposal
Dissertation Report

Name of the Course: **M.Arch Construction & Project Management**		
Name of the Subject: **Elective 1**		
Subject Code: **18CPM42**	Semester: **Fourth**	
Duration: **2 Hours**	Maximum Marks: **100**	Credits: **4**
Teaching Scheme	**Examination Scheme**	
Lecture: **0 hrs/week**	End Semester Exam: **0 Marks**	
Studio: **2 hrs/week**	Internal Assessment: **50 Marks**	Viva-Voce: **50 Marks**
Aim: To orient the students to latest advancements in the field. (Minimum 1 Topic subject to availability of resource person)		
Suggested Elective Topics:		

1. **Facility Management for Large campuses**
2. Planning of large residential complexes
3. Advanced Software's in Construction Management.
4. International projects management.
5. **Large Infrastructure Management**

Note: The above topics shall be supplemented with site visits to marquee projects within and outside the country.

Name of the Course: **M.Arch Construction & Project Management**		
Name of the Subject: **Elective 2**		
Subject Code: **18CPM43**	Semester: **Fourth**	
Duration: **2 Hours**	Maximum Marks: **100**	Credits: **4**
Teaching Scheme	**Examination Scheme**	
Lecture: **0 hrs/week**	End Semester Exam: **0 Marks**	
Studio: **2 hrs/week**	Internal Assessment: **50 Marks**	Viva-Voce: **50 Marks**
Aim: To orient the students to latest advancements in the field. (Minimum 1 Topic subject to availability of resource person)		
Suggested Elective Topics:		
1. **Special Construction Methods & Techniques** 2. Restoration Projects 3. Green Buildings 4. Post Disaster construction management 5. Entrepreneurship **Note:** The above topics shall be supplemented with site visits to marquee projects within and outside the country.		