



**योजना तथा वास्तुकला विद्यालय, विजयवाड़ा**  
**School of Planning and Architecture, Vijayawada**  
An Institute of National Importance, Ministry of Education Gov. of India

**Department of Architecture**

Course: **MBEM211 - Project Procurement Management Studio** Class: 2<sup>nd</sup> Yr MBEM - III Sem. AY 2023-24  
Internal Assessment: 50 %  
External Assessment: 50 %  
Instructor: Dr. Uma Sankar Basina  
Total Marks: 100 %  
Contact Periods/Wk: 15 periods  
Credits: 15  
Timetable: Monday, Thursday, Friday (4, 5-9 periods)  
Attendance: Min 75% Min. Passing Marks: 50% each in Internal & External Assessment, 50% in Aggregate

**Objectives:** The intent of the course is to augment the knowledge imparted through lectures by discussion of practical cases to determine practice, critically analyze application of knowledge in professional context, experience simulated application procedure in a limited context. Live case studies are undertaken and various aspects of the course are taken up in the Studios. Emphasis is given to interaction with project technical staff and other stakeholders.

**LECTURE PLAN**

Sl. No.	Week	Topic of Class Lecture & Discussion	Class activities & Assignments
01	Week 1	Contract Management; Familiarisation with National & International Contract Forms	Studio
02	Week 2	Study and documentation contract forms in International bidding;	Studio
03	Week 3	Identifying key differences between various contract forms;	Studio
04	Week 4	Risks in Contract Management for Project Manager;	Studio
05	Week 5	Bidding Documents/ NIT; Developing notice inviting tender; Selecting bidding methodology;	Studio
06	Week 6	<b>Internal Assessment - 1</b>	<b>Int. Assessment-1</b>
07	Week 7	Developing bidding documents for projects;	Studio
08	Week 8	RFP/RFQ for Professional Services; Conceptualization and deciding requirements of Services desired for a project; Developing Quotation for Professional Consulting Services;	Studio
09	Week 9	Preparing request for proposal/request for quote for professional consulting services	Studio
10	Week 10	Preparation of equipment, plant and machinery plan; Develop detailed specifications based of project needs;	Studio
11	Week 11	<b>Internal Assessment - 2</b>	<b>Int. Assessment-2</b>
12	Week 12	Developing procurement documents for equipment, plant and machinery; RFP/RFQ and selection of suppliers;	Studio
13	Week 13	Construction Logic for pre-construction phase of projects; identifying detailed activities, milestones based on Work Breakdown Structure;	Studio
14	Week 14	Code of Professional Practice and Ethics in Project Management; Models for procurement of Project Management service	Studio
15	Week 15	Quality Assurance Plans and Quality Control; Understanding evolution and significance of quality assurance plans and quality control mechanisms; Developing on the importance of Cost of Quality and Risks of Rework;	Studio
16	Week 16	Preparation of quality assurance plans for organizations and quality control checklists for various items of works; Developing control mechanisms for ensuring quality management within organizations and project sites	Studio
17	Week 17	<b>Internal Assessment - 3</b>	<b>Int. Assessment-3</b>

**Tentative break-up of internal assessment marks.**

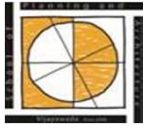
S. No.	Category of Evaluation	Marks
01	Internal Assessment 1	10 %
02	Internal Assessment 2	15 %
03	Internal Assessment 3	25 %
	EXTERNAL JURY	50 %

-Sd-

**Dr. Uma Sankar Basina**  
Course Coordinator

-Sd-

**Dr. Uma Sankar Basina**  
Head, Dept. of Arch.



**School of Planning and Architecture: Vijayawada**  
(An institution of National Importance under the Ministry of Human Resource  
Survey No.4/4, ITI Road, Vijayawada-520008, Andhra Pradesh, India)

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**Department of Architecture**

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**Course: MBEM212 - BIM Based Construction Management**

**Class:** 2nd Yr MBEM & MSA III Sem A.Y. 2023-24

**Instructors:** Asst.Prof. Vijesh Kumar V

**Internal Assessment:** 50

**External Theory Exam:** 50

**Contact Periods/ week:** 03 periods.(50 min each)

**Total Marks:** 100

**Time Table:** Tuesday (Period 1 - 3)

**Credits:** 3

**Attendance:** Min 75%

**Min. Passing Marks:** 40% each in Internal & External Assessment, 40% in Aggregate

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**Objective:** To equip students with BIM based construction management background.

**Out Line of the Course:** BIM fundamentals and concepts; Review of BIM softwares and technology; Studio exercises by using BIM tools.

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**LECTURE PLAN**

WEEK	DATE	TOPIC OF CLASS LECTURE & DISCUSSION	TOPIC OF STUDIO WORK & ASSIGNMENTS / REMARKS
1	18-Jul-22	Fundamentals and practical use of information technologies in the construction industry;	Introduction of Technical paper writing on theme <b>IT in Construction</b>
2	25-Jul-22	basic concepts of building information modelling (BIM);	Review of Paper on Indutry 5.0
3	01-Aug-22	Application of BIM	Installation and Getting along with Revit Interface
4	08-Aug-22	Review of software and technology available for BIM	Introduction to Autodesk Revit followed by execercises in Computer Lab
5	15-Aug-22	<b>Holiday - Independence Day</b>	
6	22-Aug-22	Review of software and technology available for BIM, practical use of BIM including design and clash detection	Autodesk Revit Excercises in Computer Lab
7	29-Aug-22	Impact of BIM on construction management functions;	Autodesk Revit Excercises in Computer Lab
8	05-Sep-22	Construction scheduling and sequencing using BIM;	Introduction to Nawisworks followed by execercises in Computer Lab
9	12-Sep-22	<b>Mid Semester Examination</b>	
10	19-Sep-22	<b>Holiday - Ganesh Chaturthi</b>	

11	26-Sep-22	cost estimating using BIM;	Cost estimation using Revit followed by exercises in Computer Lab
12	03-Oct-22	cost estimating using BIM;	Cost estimation using Navisworks followed by exercises in Computer Lab
13	10-Oct-22	Facility management with BIM;	FM using Revit followed by exercises in Computer Lab
14	17-Oct-22	integrated approach to navigate BIM as a multi-disciplinary design, analysis, construction, and facility management technology;	Assignment on preparation of a BIM working methodology
15	24-Oct-22	<b>Holiday - Dussehra</b>	
16	31-Oct-22	Studio Exercises Discussion	<b>Project:</b> Create a BIM model and to use it in scheduling, sequencing, cost estimating, management, clash detection and simulation of a construction project. (First year studio project can be explored.) using Computer Lab
17	07-Nov-22	Studio Exercises Discussion	
18	14-Nov-22	Studio Exercises Discussion	
19	21-Nov-22	Studio Exercises Discussion	
			Submission and review of Final Project

S. No.	Stages of Evaluation	Weightage
1	First stage: Assessment –1	15
2	Second stage: Mid-semester Examination	20
3	Third stage: Assessment –3	15
	Total	50

**Reference Books:**

1. Eastman, C.; Teicholz, P.; Sacks, R.; Liston, K. (2011) BIM Handbook: A Guide to Building Information Modeling for Owners, Managers, Designers, Engineers and Contractors. New York: Wiley. 626 pp.
2. Hardin, B., & McCool, D. (2015). BIM and construction management: proven tools, methods, and workflows. John Wiley & Sons.
3. Krygiel, E., & Nies, B. (2008). Green BIM: successful sustainable design with building information modeling. John Wiley & Sons.
4. Issa, R. R., & Olbina, S. (Eds.). (2015, May). Building Information Modeling: Applications and Practices. American Society of Civil Engineers.
5. Teicholz, P. (Ed.). (2013). BIM for facility managers. John Wiley & Sons.
6. Kymmell, W. (2007). Building Information Modeling: Planning and Managing Construction Projects with 4D CAD and Simulations (McGraw-Hill Construction Series). McGraw Hill Professional.

**Course Instructors:**

Asst. Prof. Vijesh Kumar V

**Head of Department/Coordinator:**

**SCHOOL OF PLANNING AND ARCHITECTURE, VIJAYAWADA  
(LECTURE PLAN)**

Subject: **Project Finance and Risk Management (MBEM 213)**

Class: MBEM, III Semester

Dr.M Kranti Kumar  
Internal Marks: 50

Dept: Architecture  
External Marks: 50

Number of Hours:03  
Total Marks: 100

**Objective:** The objective of the course is to familiarize the fundamentals of finance and risk management concepts and their applications in the various phases of the project cycle of construction projects. The course aims to provide a basic knowledge to carry out the financial feasibility of projects, evaluation of project investment decisions.

S.NO	DATE	TOPIC OF CLASS LECTURE & DISCUSSION	REMARKS
1	Week 1	Introduction to Project Finance and Risk Management in construction and basic discussion.	Lecture
2	Week 2	Introduction to Risk Management in construction and basic discussion.	Lecture
3	Week 3	<b>Risk Management</b> <ul style="list-style-type: none"> <li>➤ Risk analysis concepts</li> <li>➤ Methodology and application</li> </ul>	Lecture
4	Week 4	<b>Risk Management Plans</b> <ul style="list-style-type: none"> <li>➤ Risk communication</li> <li>➤ Risk registers</li> <li>➤ Risk charters and risk management plans</li> <li>➤ Risk management planning case studies.</li> </ul>	Lecture
5	Week 5	<b>INTERNAL TEST/PRESENTATION</b>	
6	Week 6	<b>Finance Management</b> <ul style="list-style-type: none"> <li>➤ Finance Management</li> <li>➤ Capital budgeting techniques</li> <li>➤ Understanding and analysis of financial ratio</li> <li>➤ Cost-benefit analysis</li> </ul>	Lecture
7	Week 7	<ul style="list-style-type: none"> <li>➤ Replacement analysis</li> <li>➤ Break-even analysis</li> <li>➤ Binancial statement analysis</li> <li>➤ balance sheet</li> <li>➤ Income statement</li> <li>➤ Project-loss statements</li> <li>➤ Profit after taxation</li> </ul>	Lecture
8	Week 8	<b>Financial Models</b> <ul style="list-style-type: none"> <li>➤ Financial investment alternative models</li> <li>➤ Assessing financial health of projects</li> <li>➤ Risks and uncertainties in capital budgeting</li> </ul>	
9	Week 9	<b>MID -TERM EXAMS</b>	
10	Week 10	<ul style="list-style-type: none"> <li>➤ Performance budgeting</li> <li>➤ Financial Planning</li> <li>➤ Preparation of financial feasibility report</li> <li>➤ Project investment decisions</li> <li>➤ Financial risk analysis</li> </ul>	Lecture

11	Week 11	<ul style="list-style-type: none"> <li>➤ Practical problems</li> <li>➤ case studies discussions</li> <li>➤ application to projects</li> </ul>	Lecture
12	Week 12	<p><b>Norms &amp; Procedures for finance</b></p> <ul style="list-style-type: none"> <li>➤ National economic status and impact on construction</li> <li>➤ Financial accounting and budgeting</li> <li>➤ Forms of business organisation (including joint ventures, consortiums) International finance</li> </ul>	Lecture
13	Week 13	<ul style="list-style-type: none"> <li>➤ Role of financial institutions</li> <li>➤ Project financing norms and procedures of International financial institutions</li> <li>➤ Financial management of international projects</li> </ul>	Lecture
14	Week 14	<b>INTERNAL TEST/PRESENTATION</b>	-
15	Week 15	<b>Revision</b>	-

#### **Tentative Break-up of Internal Assessment**

S. No.	Evaluation	Marks	Note
1	Internal test/ Individual Assessment	15	1. Marks allotted at each stage is tentative 2. New stages or categories of evaluation may be included if and when the need arises
2	Mid Term Exam	20	
3	Seminar Presentation	15	

#### **Reference Books**

1. Roy Pilcher (1985) "Project Cost Control in Construction," Collins Professional and technical books, London.
2. Humphreys, K.K., and Wellman, P. (1996) "Basic Cost Engineering," Marcel Dekker, Inc. New York.
3. M Pandey, Financial Management, Vikas Publishing house pvt ltd 9th Edition.
4. Donald Newnan, Engineering Economics analysis, Oxford University Press
5. Roy Pilcher, Principles of Construction Management, Mc Graw Hill London.
6. A.H. Taylor & H Shearing, Financial & Cost Accounting for Management Mac Donald & Evans Ltd, London 8th.

Sd/-  
**Dr. M.Kranti Kumar**



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**Department of Architecture**

Course: MBEM214 - Project Administration and Organizational Behaviour

Instructor: Dr. Uma Sankar Basina

Contact Periods/Wk: 03 periods

Timetable: Friday (1,2,3 periods)

Attendance: Min 75%

Class: 2<sup>nd</sup> Yr MBEM - III Sem. AY 2023-24

**Internal Assessment: 50**

**External Assessment: 50**

**Total Marks: 100**

**Credits: 03**

Min. Passing Marks: 50% each in Internal & External Assessment, 50% in Aggregate

**Objective:**

To familiarize various aspects related to construction administration, control of quality, organizational structure, and roles and responsibilities of various stakeholders associated with a construction project. To make students aware about the role of authority in construction projects, details of construction documentation Responsibilities and limitations of various staff members. To explain about the impact of risks and uncertainties on project performance. To discuss and to bring clarity about various models of organization behaviour. And, to make students understand the power of leadership on construction projects and their success.

**LECTURE PLAN**

Sl. No.	Week	Topic of Class Lecture & Discussion	Class activities & Assignments
01	Week 1	Introduction to Construction Administration, the impact of Control of Quality in Construction	Lecture
02	Week 2	Organizational Structure, Design Build Contracts	Lecture
03	Week 3	Responsibility for Coordination of the trades Role of owner, Contractor, Engineer, and Construction Manager	Lecture
04	Week 4	Introduction to authority, Lines of Authority in Construction administration on Construction Projects	Lecture
05	Week 5	Responsibility, and Familiarization with construction documents, Staffing responsibilities, Limitations of their duties/functions.	Lecture
06	Week 6	<b>Internal Assessment - 1</b>	<b>Internal Assessment-1</b>
07	Week 7	To introduce and discuss about different reasons for the risks, Certainty, Risk, and Uncertainty, Risk Management.	Lecture
08	Week 8	Identification and Nature of Construction Risks, Contractual allocation of Risk	Lecture
09	Week 9	Types of Risks, minimizing risks, mitigating losses, use of expected values, utility in investment decisions, decision trees, sensitivity analysis & their applications.	Lecture
10	Week 10	To discuss about Management and organizational Behaviour. Definition models for organizational Behaviour, Tiers of management, management functions, skills needed by good managers	Lecture
11	Week 11	<b>Internal Assessment - 2</b>	<b>Internal Assessment - 2--</b>
12	Week 12	Definition of personality, motivation, communication, how to use traits to predict behaviour in the work place.	Lecture
13	Week 13	The role of emotion in the workplace, definition of organizational culture. Individual and organizational approaches to coping with stress	Lecture
14	Week 14	Effect of Leadership on Organizational Behaviour. The role of leaders, types of positional and personal power, influence tactics.	Lecture
15	Week 15	Types of leaders, including task-oriented, people-oriented. They also understand the lines of authority in construction projects.	Lecture
16	Week 16	The idea of different risks associated with construction industry and remedial measures. And also to properly understand the IS specifications and drawings in construction projects.	Lecture
17	Week 17	<b>Internal Assessment - 3</b>	<b>Internal Assessment-3</b>

**Tentative break-up of internal assessment marks.**

<b>S. No.</b>	<b>Category of Evaluation</b>	<b>Marks %</b>
01	Internal Assessment 1	15 %
02	Internal Assessment 2	20 %
03	Internal Assessment 3	15 %
04	End Semester Examination	50 %

**Reference Books:**

1. Fisk, E.R. (2000) "Construction Project Administration," Prentice Hall International, London.
2. Kwakye, A.A. (1997), "Construction Project Administration", Adisson Wesley Longman, London.
3. Stephen P. Robbins, Timothy A. Judge (2012), Organizational Behavior, 15<sup>th</sup> Edition, Prentice Hall
4. Schermerhorn, Hunt and Osborn, Organisational Behavior, John Wiley, 9<sup>th</sup> Edition, 2008.
5. Ivancevich, Konopaske & Maheson, Oranisational Behaviour & Management, 7<sup>th</sup> edition, Tata McGraw Hill, 2008.

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**Dr. Uma Sankar Basina**  
Course Coordinator

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**Dr. Uma Sankar Basina**  
Head, Dept. of Arch.

**SCHOOL OF PLANNING AND ARCHITECTURE, VIJAYAWADA  
(LECTURE PLAN)**

Subject: **Construction Procurement and Inventory Management (MBEM 215)**

Class: MBEM, III Semester

Faculty: Dr.M. Kranti Kumar  
Internal Marks: 50

Dept: Architecture  
External Marks: 50

Number of Hours:03  
Total Marks: 100

**Objective:** The intent is to disseminate knowledge about Procurement Management Processes with emphasis on consulting services. The procurement could also include design stage services. During the “Bid and Award Phase” of the project life cycle in different project types in terms of organizational settings, contractual arrangements and building typologies. In addition, the course covers the monitoring and control processes. The course includes procurement of equipment supplies.

S.NO	DATE	TOPIC OF CLASS LECTURE & DISCUSSION	REMARKS
1	Week 1	Introduction to Construction Procurement and Inventory Management and basic discussion.	Lecture
2	Week 2	<b>Project procurement management process</b> <ul style="list-style-type: none"> <li>➤ Study of procurement guidelines of international institutions</li> <li>➤ Preparation of contract documents (RFP, RFQ)</li> <li>➤ Pre-qualification of contractors</li> </ul>	Lecture
3	Week 3	<ul style="list-style-type: none"> <li>➤ Evaluation of technical and financial bid proposals</li> <li>➤ Negotiation and award</li> <li>➤ Overview of dispute resolution mechanisms</li> </ul>	Lecture
4	Week 4	<b>Contracts for procurement of professional services</b> <ul style="list-style-type: none"> <li>➤ Selection of professionals for professional services (Design, Project Management services)</li> <li>➤ Fee structures and contractual conditions</li> <li>➤ Joint ventures of professional teams</li> </ul>	Lecture
5	Week 5	<ul style="list-style-type: none"> <li>➤ Norms for engagements of international Consultants; Performance guarantees</li> <li>➤ Bank guarantees and other fiscal aspects</li> <li>➤ Project delivery systems</li> </ul>	Lecture
6	Week 6	<b>INTERNAL TEST/PRESENTATION</b>	
7	Week 7	<b>Procurement procedures</b> <ul style="list-style-type: none"> <li>➤ Procurement procedures for various supplies, equipment, machineries</li> <li>➤ Warrantees and tax issues</li> <li>➤ Fiscal aspects of supplies</li> <li>➤ Material Management</li> </ul>	Lecture
8	Week 8	<ul style="list-style-type: none"> <li>➤ Supply Chain Management</li> <li>➤ Procurement strategies and purchase procedures</li> <li>➤ Inventory control and management</li> <li>➤ Responsibilities of project management organisation</li> </ul>	Lecture
9	Week 9	<ul style="list-style-type: none"> <li>➤ <b>MID -TERM Assessment</b></li> </ul>	



10	Week 10	<ul style="list-style-type: none"> <li>➤ Procurement of Project Management services</li> <li>➤ Standard PMC consultancy agreement forms</li> <li>➤ Code of professional practice</li> <li>Issues of inter-disciplinary interaction and coordination and professional ethics</li> </ul>	Lecture
11	Week 11	<b>Inventory Management</b> <ul style="list-style-type: none"> <li>➤ Inventory Control techniques</li> <li>➤ EOQ</li> <li>➤ Periodic ordering</li> <li>➤ order point control</li> <li>➤ safety stock, stock outs</li> </ul>	Lecture
12	Week 12	<ul style="list-style-type: none"> <li>➤ Application of AC analysis in inventory control</li> <li>➤ Concept of (JIT)- Just in time management</li> <li>➤ Indices used for assessment of effectiveness of inventory management</li> </ul>	Lecture
13	Week 13	<b>Stores Management</b> <ul style="list-style-type: none"> <li>➤ Receipt and inspection</li> <li>➤ care and safety in handling</li> <li>➤ loss on storage</li> <li>➤ wastage</li> </ul>	Lecture
14	Week 14	<ul style="list-style-type: none"> <li>➤ Bulk purchasing</li> <li>➤ site layout and site organization</li> <li>➤ scheduling of men</li> <li>➤ materials and equipment</li> </ul>	Lecture
15	Week 15	<b>INTERNAL TEST/PRESENTATION</b>	-
16	Week 16	<b>Revision</b>	
17	Week 17	<b>Revision</b>	

#### **Tentative Break-up of Internal Assessment**

S. No.	Evaluation	Marks	Note
1	Internal test/ Presentation	15	1. Marks allotted at each stage is tentative 2. New stages or categories of evaluation may be included if and when the need arises
2	Mid Term Assessment	20	
3	Internal test/ Presentation	15	

#### **Reference Books**

1. Purchasing and Inventory Control- by K. S. Menon, Wheeler Publication.
2. Materials Management, P. Gopalkrishnan, Prentice Hall
3. Handbook of materials management, P. Gopalkrishnan, Sundershan, Prentice Hall.
4. Inventory Management, Lc. Jhamb, Everest Publications

**Sd/-**  
**Dr.M.Kranti Kumar**



# योजना तथा वास्तुकला विद्यालय, विजयवाड़ा

## School of Planning and Architecture, Vijayawada

An Institute of National Importance, Ministry of Education Gov. of India

### Department of Architecture

Course: MBEM216 - Dissertation

Class: 2<sup>nd</sup> Yr MBEM - III Sem. AY 2023-24

Coordinator: Dr. Kranti Kumar M.

**Internal Assessment: 50**

Contact Periods/Wk: 03 periods

**External Assessment: 50**

Timetable: Wednesday

**Total Marks: 100**

Attendance: Min 75%

**Credits: 03**

Min. Passing Marks: 50% each in Internal & External Assessment, 50% in Aggregate

**Objective:** The objective of dissertation is to research on the chosen topics which could be in continuation with the earlier research or different. Students are expected to come out with more specific findings and recommendations and better innovative solutions. This should lead to better performance in the Thesis to be undertaken in the fourth semester.

#### DISSERTATION SCHEDULE

Sl. No.	Week	Topic of Class Lecture & Discussion	Class activities & Assignments
01	Week 1	Introduction on Research, Scope of Research and Dissertation	Lecture
02	Week 2	Discussion on formulation of research problem and topic selection	Lecture
03	Week 3	Discussion on formulation of research problem and topic selection	Lecture
04	Week 4	Discussion and Review of proposed topics, selection of the Dissertation Topic	Lecture
05	Week 5	Discussion and Review of proposed topics, selection of the Dissertation Topic	Lecture
06	Week 6	Finalization of Dissertation Topic and Guide Allocation	---
07	Week 7	<b>Panel Review-1:</b> Background of the selected topic, Aim, Objective, Scope, limitation and proposed Methodology	<b>Internal Assessment-1</b>
08	Week 8	Guide discussion on the Topic Outline and proposed Methodology	---
09	Week 9	Guide discussion on Literature, development of Methodology, data collection, data analysis methods etc.	---
10	Week 10	Guide discussion on finalization of proposed methodology, literature	---
11	Week 11	<b>Panel Review-2:</b> Final Methodology, Detail Literature Study and review of draft report	<b>Int. Assessment-2</b>
12	Week 12	Guide Discussion: Revisions in Final Methodology, Detailed Literature Review and comment of report writing, as required.	---
13	Week 13	Guide Discussion: Review of data collected, Methods of Data Analysis	---
14	Week 14	Guide Discussion: Review of the Analysis and Conclusions, Dissertation Report	---
15	Week 15	<b>Panel Review- 3:</b> Analysis and Conclusion and review of draft report and plagiarism check	<b>Int. Assessment-3</b>
16	Week 16	Discussion and submission of internal marking and attendance with guide, Submission of Final Dissertation Report for External Jury	<b>Int. Assessment-4</b>
		<b>Final Panel Review and Report submission</b>	<b>External Jury</b>

#### Tentative break-up of internal assessment marks.

S. No.	Category of Evaluation	Marks
01	Internal Assessment 1: Panel Review	10
02	Internal Assessment 2: Panel Review	15
03	Internal Assessment 3: Panel Review	20
04	Internal Assessment 4: Final Dissertation Report Submission	05

Sd /-

Dr. Kranti Kumar M.