Course Handout for …4th…… Year …BTECH, CSE……. PROGRAM

Course Title	: Project Management and Entrepreneurship
Course Code	: HSMC 701
L-T-P-S Structure	:2-1-0
Credits	: 3
Pre-requisite	:
Course Coordinator	: Sutapa Bhattacharya
Team of Instructors	:
Teaching Associates (For LAB only)	:

Course Objective: Students will be capable to demonstrate the progress of a project in productive manner including cost budgets, financial management, project planning, project scheduling, and project life cycle which are measurable throughout the project.

COURSE OUTCOMES (COs):

CO No	Course Outcome (CO)	Blooms Taxonomy Level (BTL)	Target %
CO1	**Understand** Concept and Characteristics of a project and Project Evaluation, Financial Sources, Feasibility Studies and Entrepreneurship.	**(BT-Level 2)**	60%
CO2	**Explain** the Importance of Project Scheduling, Work Breakdown Structure and Organization Breakdown and Gantt Chart and LOB, Network Analysis – CPM/PERT.	**(BT-Level 4)**	60%
CO3	**Outline** the Time Cost Trade-off Analysis and Resource Allocation and Levelling.	**(BT-Level 4)**	60%
CO4	**Verify** Capital & Operating Costs, Project Life Cycle Costing, Project Cost Reduction Methods.	**(BT-Level 5)**	60%
CO5	**Monitor** the Concept of Project Quality, TQM in Projects, Project Audit and Major Features of Project Management Software like MS Project and role of the Entrepreneurship, Criterion for Software Selection.	**(BT-Level 6)**	60%

PROGRAM OUTCOMES (POs):

PO Number	Description
1. **Engineering Knowledge**	Engineering knowledge: Apply the knowledge of mathematics, science, Electronics & Communication engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO Number	Description
2. **Problem Analysis**	Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and Electronics & Communication engineering sciences.
3. **Design/ development of solutions**	Design/development of solutions: Design solutions for complex Electronics & Communication engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. **Conduct investigations of complex problems**	Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions in the field of Electronics & Communication Engineering.
5. **Modern tool usage**	Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex Electronics & Communication engineering activities with an understanding of the limitations.
6. **The engineer and society**	The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional Electronics & Communication engineering practice.
7. **Environment and sustainability**	Environment and sustainability: Understand the impact of the professional Electronics & Communication engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8. **Ethics**	Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. **Individual and team work**	Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. **Communication**	Communicate effectively on complex Electronics & Communication engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO Number	Description
11. **Project management and finance**	Demonstrate knowledge and understanding of the Electronics & Communication engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12. **Lifelong learning**	Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Mapping of Course Outcomes and Program Outcomes:

1 = courses in which the student will be exposed to a topic

Course Outcomes	Program Outcomes											PSOs	
	PO1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO11	PO1 2	PSO 1	PSO 2
HSMC701.1	2	2	--	--	2	--	--	--	--	--	2	1	1	1
HSMC701.2	2	2	2	--	2	--	--	--	2	--	2	1	1	1
HSMC 701.3	2	2	2	--	2	--	--	--	--	--	2	1	1	---
HSMC701.4	2	2	2	--	2	1	--	--	2	--	2	1	1	1
HSMC 701.5	---	--	2	--	--	1	--	--	--	--	2	1	1	---
HSMC701	**2**	**2**	**2**	--	**2**	1	--	--	**2**	--	**2**	**1**	**1**	**1**

2 = courses in which students will gain competency in that area

3= courses in which students will master that skill

SYLLABUS:

CHAPTER-1

Project Management Concepts: Concept and Characteristics of a Project Importance of Project Management.[1L]

CHAPTER-2

Project Planning: Project Evaluation, Financial Sources, Feasibility Studies.[2L]

CHAPTER-3

Project Scheduling: Importance of Project Scheduling, Work Breakdown Structure and Organization Breakdown Structure, Scheduling Techniques – Gantt Chart and LOB, Network Analysis – CPM/PERT. [4L]

CHAPTER-4
Time Cost Trade-off Analysis – Optimum Project Duration. [2L]

CHAPTER-5
Resource Allocation and Leveling.[2L]

CHAPTER-6
Project Life Cycle. [2L]

CHAPTER-7
Project Cost – Capital & Operating Costs, Project Life Cycle Costing, ProjectCost Reduction Methods.[2L]

CHAPTER-8
Project Quality Management: Concept of Project Quality, TQM in Projects,
Project Audit.[1L]

CHAPTER-9
Software Project Characteristics and Management [2L]

CHAPTER-10
IT in Projects: Overview of types of Software for Projects, Major Features of
Project Management Software like MS Project, Criterion for Software Selection.[2L]

CHAPTER -11
ENTREPRENEURSHIP

Introduction: Meaning and Concept of Entrepreneurship, Innovation and entrepreneurship, Contributions of entrepreneurs to the society, risk-opportunities perspective and mitigation of risks [2L]

CHAPTER -12

Entrepreneurship – An Innovation: Challenges of Innovation, Steps of Innovation Management, Idea Management System, Divergent v/s Convergent Thinking, Qualities of a prospective Entrepreneur [2L]

CHAPTER -13

Idea Incubation: Factors determining competitive advantage, Market segment, blue ocean strategy, Industry and Competitor Analysis (market structure, market size, growth potential), Demand-supply analysis [4L]

CHAPTER -14

Entrepreneurial Motivation: Design Thinking - Driven Innovation, TRIZ (Theory of Inventive Problem Solving), Achievement motivation theory of entrepreneurship – Theory of McClelland, Harvesting Strategies [2L]

CHAPTER -15

Information: Government incentives for entrepreneurship, Incubation, acceleration. Funding new ventures – bootstrapping, crowd sourcing, angel investors, Government of India's efforts at promoting entrepreneurship and innovation – SISI, KVIC, DGFT, SIDBI, Defense and Railways [4L]

CHAPTER -16

Closing the Window: Sustaining Competitiveness, Maintaining Competitive Advantage, the Changing Role of the Entrepreneur. [2L]

CHAPTER -17

Applications and Project Reports Preparation [4L]

TEXT BOOKS:

1. Gopal Krishnan P. and Rama Mmoorthy: Text Book of Project Management, Macmillan

2. Nicholas John M.: Project Management for Business and Technology – Principles and Practice, Prentice Hall India, 2nd Edition.
3. Innovation and Entrepreneurship by Drucker, P.F.; Harper and Row
4. Business, Entrepreneurship and Management: Rao, V.S.P. ;Vikas

REFERENCE BOOKS:

1. Levy Ferdinand K., Wiest Jerome D.: A Management Guide to PERT/CPM with GERT/PDM/DCPM and other networks, Prentice Hall India, 2nd Edition.

2. Maylor H.: Project Management, Pearson, 3rd Edition.
3. Entrepreneurship: Roy Rajeev; OUP.

COURSE DELIVERY PLAN:

Week	Sess. No.	CO	Topic (s)	**Book No [CH No][Page No]**	Teaching-Learning Methods	Planned Date	Execution Date
1	1	1	Project Management Concepts: Concept and Characteristics of a Project,	Note	T: Chalk & Talk L: Observes understands	23/07/2024	
	2	1	Importance of Project Management, Project Planning	Note	T:Questioning /Discussion L: Answering questions, Participates	26/07/2024	
	3	1	Project Evaluation, Financial Sources, Feasibility Studies	Note	**T:** Chalk & Talk L: Observes understands	26/07/2024	
2	4	2	Project Scheduling: Importance of Project Scheduling,	Note	T: Lecturing L: Observes understands	30/07/2024	
	5	2	Work Breakdown Structure	Note	**T:** Chalk & Talk	02/08/2024	

			and Organization Breakdown		L: Observes understands		
	6	2	Structure,Scheduling Techniques – Gantt Chart and LOB,	Note	T: Lecturing L: Observes understands Video synthesis	02/08/2024	
3	7	2	Network Analysis – CPM/PERT	Note	T: Lecturing L: Observes understands Video synthesis	06/08/2024	
	8	3	Time Cost Trade-off Analysis – Optimum Project Duration	Note	T: Questioning /Discussion, L: PBL	09/08/2024	
	9	3	Resource Allocation and Leveling	Note	T: demonistration, L: Practice by doing	09/08/2024	
4	10	3	Project Life Cycle	Note	T: demonistration, L: Practice by doing	13/08/2024	
	11	3	Project Cost – Capital & Operating Costs,	Note	T: demonistration, L: Practice by doing, Quiz	16/08/2024	
	12	3	Project Life Cycle Costing, Project Cost Reduction Methods	Note	**T:** Chalk & Talk L: Observes understands	16/08/2024	
5	13	5	Project Quality Management: Concept of Project Quality, TQM in Projects, Project Audit	Note	**T:** Chalk & Talk L: Observes understands, Problem solving	20/08/2024	
	14	*5*	Software Project Characteristics and Management	Note	**T:** Chalk & Talk L: Observes understands	23/08/2024	
	15	4	IT in Projects: Overview of types of Software for Projects, Major Features of Project Management Software like MS Project,	Note	**T:** Chalk & Talk L: Observes understands	23/08/2024	

6	*16*	4	Criterion for Software Selection	Note	T: Lecturing L: Observes understands	27/08/2024	
	17	5	Introduction: Meaning and Concept of Entrepreneurship, Innovation and entrepreneurship, Contributions of entrepreneurs to the society	Note	**T:** Chalk & Talk L: Observes understands	30/08/2024	
	18	*5*	risk-opportunities perspective and mitigation of risks	Note	**T:** Chalk & Talk L: Observes understands	30/08/2024	
7	*19*	5	Entrepreneurship – An Innovation: Challenges of Innovation,	Note	T: Lecturing L: Problem based learning	03/09/2024	
	20	5	Steps of Innovation Management, Idea Management System,	Note	T: Lecturing L: Problem based learning	06/09/2024	
	21	*5*	Divergent v/s Convergent Thinking, Qualities of a prospective Entrepreneur	Note	T: Lecturing L: Observes understands	06/09/2024	
8	22	5	Idea Incubation: Factors determining competitive advantage,	Note	T: Chalk & Talk L: Observes understands	10/09/2024	
	23	5	Market segment, blue ocean strategy,	Note	T: Chalk & Talk L: Observes understands	13/09/2024	
	24	5	Industry and Competitor Analysis (market structure, market size, growth potential),	Note	T: Chalk & Talk L: Observes understands	13/09/2024	
9	25	5	Demand-supply analysis	Note	T: Chalk & Talk L: Observes understands	17/09/2024	

	26	5	Entrepreneurial Motivation: Design Thinking - Driven Innovation	Note	T: Chalk & Talk L: Observes understands	20/09/2024	
	27	5	TRIZ (Theory of Inventive Problem Solving),	Note	T: Chalk & Talk L: Observes understands	20/09/2024	
10	28	5	Achievement motivation theory of entrepreneurship – Theory of McClelland,	Note	T: Chalk & Talk L: Observes understands	24/09/2024	
	29	5	Harvesting Strategies	Note	T: Chalk & Talk L: Observes understands, QUIZ	27/09/2024	
	30	5	Information: Government incentives for entrepreneurship,	Note	T: Lecturing L: Observes understands	27/09/2024	
11	31	5	Incubation, acceleration. Funding new ventures – bootstrapping,	Note	T: Lecturing L: Observes understands	01/10/2024	
	32	5	crowd sourcing, angel investors, Government of India's efforts at promoting entrepreneurship and innovation	Note	T: Lecturing L: Observes understands	04/10/2024	
	33	5	innovation -SISI, KVIC, DGFT, SIDBI, Defense and Railways	Note	T: Chalk & Talk L: Observes understands	04/10/2024	
12	*34*	5	Closing the Window: Sustaining Competitiveness,	Note	**T:** Explain Monitoring L: Participates	08/10/2024	
	35	*5*	Maintaining Competitive Advantage, the Changing Role of the Entrepreneur	Note	T: Chalk & Talk L: Observes ,understands	18/10/2024	
	36	5	Applications and Project Reports Preparation		T: Chalk & Talk L: Observes ,understands	18/10/2024	

	37		Revision Lesson		T: Chalk & Talk L: Observes ,understands	22/10/2024	
14	*38*		Previous years questions discussion		T: Chalk & Talk L: Observes ,understands	25/10/2024	

LIST OF TUTORIALS: OPTIONAL

Tutorial session no	**Topics**	**CO-Mapping**
	NA	

WEEKLY HOMEWORK ASSIGNMENTS/ PROBLEM SETS/OPEN ENDEDED PROBLEM-SOLVING EXERCISES etc.

Week	**Assignment/Quiz**	**Topic**	**Details**	**CO**
2	A01			Pre requisite
4	A02	QUIZ 1		CO1,CO2
6	A03			CO3,CO4
9	A04	QUIZ2		CO3,CO4,CO5
12	A05			CO5

COURSE TIME TABLE:

Day	**Monday**	**Tuesday [L]**	**Wednesday**	**Thursday**	**Friday [2L]**
Timing	**-----**	**12.30p.m-01.20p.m**	**-----**	**-------**	**10:00a.m—01.20 pm**

REMEDIAL CLASSES:

Supplement course handout, which may perhaps include special lectures and discussions that would be planned, and schedule notified accordingly.

DELIVERY DETAILS OF CONTENT BEYOND SYLLABUS:

Content beyond syllabus covered (if any) should be delivered to all students that would be planned, and schedule notified accordingly.

S.No	**Advanced Topics, Additional Reading, Research papers and any**	**CO**	**POs & PSOs**	**ALM**	**References/MOOCS**
1		CO1	PO1 & PSO 1	Quiz	
2		CO1	PO1 & PSO1	PPT	
3		CO2	PO2 & PSO2	Videos	

4		CO3	PO1 & PSO1	PPT	

EVALUATION: AS PER MAKAUT GUIDELINES

Schedule for Continuous Assessment (CA):

CA	Assessment By	Schedule
CA-I	Presentation, Quiz, Group Discussion	As per Academic Calendar
CA-II	Report writing	
CA-III	Class test in pen and paper mode to be conducted at the College Level	
CA-IV	Centralized online test to be arranged by theUniversity	
PCA1	Rubrics based Evaluation and Viva -Voce	
PCA2	Rubrics based Evaluation and Viva -Voce	

ATTENDANCE POLICY

Every student is expected to be responsible for regularity of his/her attendance in class rooms and laboratories, to appear in scheduled tests and examinations and fulfil all other tasks assigned to him/her in every course. For Promotion, a Minimum of 50% of internal marks must be obtained. In every course, student has to maintain a minimum of 75% attendance to be eligible for appearing in Semester end examination of the course, for cases of medical issues and other unavoidable circumstances the students will be condoned if their attendance is between 60% to 75% in every course, subjected to submission of medical certificates, medical case file and other needful documental proof to the concerned departments.

DETENTION POLICY

In any course, a student has to maintain a minimum of75% attendance and must secure a minimum of 50% marks in In-Semester Examinations to be eligible for appearing to the Semester End Examination, failing to fulfill these conditions will deem such student to have been detained in that course.

PLAGIARISM POLICY

Use of unfair means in any of the evaluation components will be dealt with strictly, and the case will be reported to the examination committee.

COURSE TEAM MEMBERS, CHAMBER CONSULTATION HOURS AND CHAMBER VENUE DETAILS:

Each instructor will specify his / her chamber consultation hours during which the student can contact him / her in his / her chamber for consultation.

S.No.	Name of Faculty	Chamber Consultation Day (s)	Chamber Consultation	Chamber Consultation Room No:	Signature of Course faculty

			Timings for each day		
1.	SUTAPA BHATTACHARYA	Monday, Wednesday, Thursday, Friday	1.20 pm to 2.10 pm and 4.40 pm to 5.30 pm		

GENERAL INSTRUCTIONS
Students should come prepared for classes and carry the text book(s) or material(s) as prescribed by the Course Faculty to the class.

NOTICES
All notices will be communicated through the institution email.
All notices concerning the course will be displayed on the respective Notice Boards.

Sutapa Bhattacharya
Signature of COURSE COORDINATOR:

HEAD OF DEPARTMENT:

Approval from: Head of the Institutions
(Sign with Office Seal)