Year: 1st
Semester: 1st

6. **Name of the Faculty: Mr. Arijit Mukherjee, Ms. Sanchita Mallick, Mr. Titas Kumar Nag, Ms. Tanaya Das. Mr. Sayanta Sikdar**
7. **Course Code : SET41401**
8. **Course : CE, CSE, ECE, EE, ME** **L: 0**
9. **Program : B.Tech** **T: 0**
10. **Target : 60 %** **P: 2**
C: 1

LABORATORY COURSE FILE CONTENTS

Check list Course Outcomes Attainment

S. No.	Contents	Available (Y/N/NA)	Date of Submission	Signature of HOD
1.	Authenticated Syllabus Copy	Y		
2.	Individual Time Table	Y		
3.	Students' Name List (Approved Copy)	Y		
4.	Course Plan, PO, PSO, COs, CO-PO Mapping, COA Plan, Session Plan and Periodic Monitoring	Y		
5.	Rubrics for Assessment of Laboratory Experiments	Y		
6.	**Lab Manual / Lab Learning Materials** a) List of Experiments (Cycle I & CycleII) b) Detailed Procedure for Experiments & Field Applications c) Viva-Voce Questions d) Smart Lab Experiments if any	NA		
7.	Dissemination of Syllabus and Course Plan to the Students	Y	01.09.2020	
8.	**Continuous Assessment** A. Laboratory Observation B. Laboratory Records C. Evaluation Sheet with Rubrics D. Slow Learners List and RemedialMeasures	 NA NA		
9.	Course End Survey (Indirect Assessment)& Consolidation	Y	25.01.2021	
10.	**End Term Examination** A. Question Paper B. Sample Answer Scripts (Best, Average,Poor) if available C. Evaluation Sheet with Rubrics D. Slow Learners List and RemedialMeasures.	Y		
11.	Content Beyond the Syllabus (Proof)			
12.	Innovative Teaching Tools Used			

Year: 1st
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13.	Consolidated Mark Statement		26.03.2021	
14.	CO Attainment (Continuous Assessment + End Term)			
15.	Gap Analysis & Remedial Measures			
16.	CO - PO Attainment			
17.	Class Record (Faculty Logbook)		09.04.2021	

Signature of HOD/ Dean **Signature of Faculty**

Date: **Date:**

Year: 1st
Semester: 1st

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SET41401	**Capstone Project I**	L	T	P	C
Version 1.0		0	0	2	1
Pre-requisites/Exposure	Basic Computer Skills				
Co-requisites					

Syllabus Copy

Course Objectives

1. To provide design experience to the students through team work.
2. To develop an understanding of various areas involved in any project.
3. To train students with various project dealing areas like feasibility, communications, planning, design, deployment and testing.

Course Content

Unit I: **10 Lecture Hours**

Introduction to Aerial Robotics: Unmanned Aerial Vehicles, Quadrotors, Key Components of Autonomous Flight, State Estimation, Applications, Basic Mechanics, Dynamics and 1-D Linear Control, Design Considerations, Agility and Maneuverability, Component Selection, Effects of Size, Supplementary Material: Introduction, Dynamical Systems, Rates of Convergence, Matlab Tutorials - Introduction to the Matlab Environment, Programming Basics, Advanced Tools.

Unit II: **10 Lecture Hours**

Introduction to EV &&INDIAN and GLOBAL Scenario: Past, Present & Feature of EV, Current Major Issues, Recent Development Trends, EV Concept, Key EV Technology, State-of-the Art EVs & HEVs, Comparison of EV Vs IC Engine, Technology Scenario, Market Scenario, Policies and Regulations, Payback and commercial model, Payback and commercial model, Polices in India.

Unit III: **10 Lecture Hours**

Introduction to Smart Cities: Definition, Dimensions of smart city, socio-economic aspect for smart city planning, framework for smart city- Technology framework, Institutional framework, Human framework, Energy framework, Data management framework, transformation of urban digital and physical fabric of cities, Performance, Initiatives.

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C: 1

Faculty Individual Time Table

ADAMAS UNIVERSITY, KOLKATA								
SCHOOL OF ENGINEERING AND TECHNOLOGY								
Programme: B. Tech (1st Semester)								
Course Code & Course: SET41401 & Capstone Project I Faculty Coordinator:								
Day & Time	**9:30-10:25**	**10:30-11:25**	**11:30-12:25**	**12:25-13:30**	**13:30-14:25**	**14:30-15:25**	**15:30-16:25**	**16:30-17:25**
Monday				LUNCH				
Tuesday								
Wednesday					Capstone Project I			
Thursday								
Friday								

Signature of HOD Coordinator

Date:

Signature of Class

Date:

Year: 1st
Semester: 1st

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9. **Program : B.Tech** **T: 0**
10. **Target : 60 %** **P: 2**
C: 1

Students Name List

Section A

Roll Number	Registration Number	Name of the Student
UG/02/BTBIOME/2020/006	AU/2020/0005268	RIYA PAUL
UG/02/BTBIOME/2020/007	AU/2020/0005270	HRITIKA ADHIKARY
UG/02/BTBIOME/2020/001	AU/2020/0004488	SOUMYADIP SANTRA
UG/02/BTBIOME/2020/005	AU/2020/0005262	MOYURI SEN
UG/02/BTBIOME/2020/009	AU/2020/0005518	ANWESA SARKAR
UG/02/BTCSE/2020/014	AU/2020/0004474	ABHISHEK THAKUR
UG/02/BTCSE/2020/015	AU/2020/0004475	SUBHENDU ROY
UG/02/BTCSE/2020/016	AU/2020/0004476	RHYTHM SEN
UG/02/BTCSE/2020/017	AU/2020/0004477	ASHISH KUMAR SINGH
UG/02/BTCSE/2020/019	AU/2020/0004480	SAGAR GHOSH
UG/02/BTCSE/2020/021	AU/2020/0004491	SWAPNODIP DAS
UG/02/BTCSE/2020/023	AU/2020/0004506	SUBRATA HAZRA
UG/02/BTCSE/2020/043	AU/2020/0004584	ATANU CHOWDHURY
UG/02/BTCSE/2020/044	AU/2020/0004586	SUBHADEEP KAR
UG/02/BTCSE/2020/045	AU/2020/0004591	PRIYESH CHANDA
UG/02/BTCSE/2020/013	AU/2020/0004473	VISHESH MOHANTY
UG/02/BTCSE/2020/024	AU/2020/0004512	ADITYA KUMAR

Year: 1st
Semester: 1st

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9. **Program : B.Tech** **T: 0**
10. **Target : 60 %** **P: 2**
C: 1

UG/02/BTCSE/2020/050	AU/2020/0005525	JIT CHATTERJEE
UG/02/BTCSE/2020/030	AU/2020/0004532	PRATHAMA SARKAR
UG/02/BTCSE/2020/031	AU/2020/0004537	BRINTA DEB
UG/02/BTCSE/2020/025	AU/2020/0004516	ANUSHKA KHATUA
UG/02/BTCSE/2020/020	AU/2020/0004490	DEEPTANU SAHA
UG/02/BTCSE/2020/040	AU/2020/0004579	SOUMIK DAS
UG/02/BTCSE/2020/037	AU/2020/0004571	ARPAN MAITY
UG/02/BTCSE/2020/038	AU/2020/0004576	ANIMESH DUTTA
UG/02/BTCSE/2020/039	AU/2020/0004577	ARITRA BISWAS
UG/02/BTCSE/2020/029	AU/2020/0004531	ROHAN SUTRADHAR
UG/02/BTCSE/2020/048	AU/2020/0005466	PRAGATI KEDIA
UG/02/BTCSEAIML/2020/005	AU/2020/0004544	DRON GUIN
UG/02/BTCSEAIML/2020/007	AU/2020/0004559	DEBRUP DEY
UG/02/BTCSEAIML/2020/014	AU/2020/0004581	SAYANIK SUTRADHAR
UG/02/BTCSEAIML/2020/001	AU/2020/0004518	SURYA CHAKRABORTY
UG/02/BTCSEAIML/2020/002	AU/2020/0004519	RISHAV GHOSH
UG/02/BTCSEAIML/2020/010	AU/2020/0004567	SRIJITA SAHA
UG/02/BTCSEAIML/2020/004	AU/2020/0004538	PRITOM SAHA

Year: 1st
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9. **Program : B.Tech** **T: 0**
10. **Target : 60 %** **P: 2**
C: 1

UG/02/BTCSEAIML/2020/012	AU/2020/0004574	MD SAHID ALAM

Section A

Roll Number	Registration Number	Name of the Student
UG/02/BTCSEAIML/2020/003	AU/2020/0004528	BISWAJIT CHAKRABORTY
UG/02/BTCSECSF/2020/007	AU/2020/0005551	MD DAWOOD KHAN
UG/02/BTCSECSF/2020/005	AU/2020/0004558	NILANJANA ROY
UG/02/BTCSECSF/2020/004	AU/2020/0004554	AYUSH KUMAR SINGH
UG/02/BTCSECSF/2020/002	AU/2020/0004527	MAYANK PAREEK
UG/02/BTCSECSF/2020/001	AU/2020/0004508	SHIBSANKAR SAW
UG/02/BTECE/2020/003	AU/2020/0004487	RISHAV BARDHAN
UG/02/BTME/2020/003	AU/2020/0004489	SOUHARDYA SAHA

Signature of HOD/Dean Coordinator

Date:

Signature of Class

Date:

Year: 1st
Semester: 1st

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7. **Course Code : SET41401**
8. **Course : CE, CSE, ECE, EE, ME** **L: 0**
9. **Program : B.Tech** **T: 0**
10. **Target : 60 %** **P: 2**
C: 1

Section B

Roll Number	Registration Number	Name of the Student
UG/02/BTBIOME/2020/002	AU/2020/0004600	RAVI LAL
UG/02/BTBIOME/2020/008	AU/2020/0005281	GAURAV GAIN
UG/02/BTBIOME/2020/003	AU/2020/0005498	SOUMYADEEP SAMADDAR
UG/02/BTBIOME/2020/004	AU/2020/0005499	SPANDAN BHATTACHAARYA
UG/02/BTCE/2020/003	AU/2020/0004536	ARJYA DAS
UG/02/BTCE/2020/002	AU/2020/0004463	ROHIT KUMAR SHIT
UG/02/BTCSE/2020/002	AU/2020/0004275	SUNANDA JANA
UG/02/BTCSE/2020/009	AU/2020/0004466	RITUSHNA ROY
UG/02/BTCSE/2020/032	AU/2020/0004540	MD ALNAS HOSSAIN
UG/02/BTCSE/2020/035	AU/2020/0004565	NIKHIL KUMAR JHA
UG/02/BTCSE/2020/041	AU/2020/0004580	RAJA BANIK
UG/02/BTCSE/2020/042	AU/2020/0004583	ARSHAD RAJA
UG/02/BTCSE/2020/046	AU/2020/0004593	HRITIK KUMAR DUTTA

Year: 1st
Semester: 1st

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7. **Course Code : SET41401**
8. **Course : CE, CSE, ECE, EE, ME** **L: 0**
9. **Program : B.Tech** **T: 0**
10. **Target : 60 %** **P: 2**
C: 1

UG/02/BTCSE/2020/047	AU/2020/0004596	SHIULI MAHATA
UG/02/BTCSE/2020/012	AU/2020/0004472	SOUGATA DUTT
UG/02/BTCSE/2020/018	AU/2020/0004479	PROTYUSH KR CHATTERJEE
UG/02/BTCSE/2020/033	AU/2020/0004549	VIVEK RAJ
UG/02/BTCSE/2020/034	AU/2020/0004562	SOYATA SAHA
UG/02/BTCSE/2020/003	AU/2020/0004276	SUPRATIM TARUN NATH
UG/02/BTCSE/2020/027	AU/2020/0004529	ATANU PRAMANICK
UG/02/BTCSE/2020/028	AU/2020/0004530	AYAN KUMAR DAS
UG/02/BTCSE/2020/007	AU/2020/0004462	SURAJ MAJUMDER
UG/02/BTCSE/2020/011	AU/2020/0004468	PRIMA GIRI
UG/02/BTCSE/2020/004	AU/2020/0004451	ABHIPSIT BHATTACHARJEE
UG/02/BTCSE/2020/008	AU/2020/0004464	ARKADEEP CHATTERJEE
UG/02/BTCSE/2020/022	AU/2020/0004494	INDRANIL DAS
UG/02/BTCSE/2020/052	AU/2020/0005542	ANIRBAN ROY
UG/02/BTCSE/2020/036	AU/2020/0004569	NANDINI ROY
UG/02/BTCSE/2020/001	AU/2020/0004250	ALOK DUTTA
UG/02/BTCSEAIML/2020/006	AU/2020/0004557	SOUMYADWIP MAITY
UG/02/BTCSEAIML/2020/009	AU/2020/0004563	ROHIT KUMAR ROY
UG/02/BTCSEAIML/2020/013	AU/2020/0004578	MD SOHAIL IRFAN
UG/02/BTCSEAIML/2020/011	AU/2020/0004572	SUBARNA BHOWMIK
UG/02/BTCSEAIML/2020/015	AU/2020/0004588	CHANDRACHUR MAJHI
UG/02/BTCSECSF/2020/006	AU/2020/0004587	SABYASACHI PAUL

Year: 1st
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9. **Program : B.Tech** **T: 0**
10. **Target : 60 %** **P: 2**
C: 1

UG/02/BTECE/2020/001	AU/2020/0004465	ARYA PAUL

Section B

Roll Number	Registration Number	Name of the Student
UG/02/BTECE/2020/002	AU/2020/0004486	UTSAB BOSE
UG/02/BTECE/2020/004	AU/2020/0004566	ROHIT RAJ HALDER
UG/02/BTEE/2020/002	AU/2020/0004560	ARKA JYOTI DAS
UG/02/BTEE/2020/001	AU/2020/0004481	SAPTARSHI BHATTACHARJEE
UG/02/BTME/2020/001	AU/2020/0004471	SUMAN HAIT
UG/02/BTME/2020/002	AU/2020/0004484	KOUSHIK GHOSH
UG/02/BTME/2020/005	AU/2020/0004555	REETAM MONDAL
UG/02/BTME/2020/004	AU/2020/0004495	RAKESH KUMAR MOZUMDER

Signature of HOD/Dean Coordinator

Date:

Signature of Class

Date:

Year: 1st
Semester: 1st

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COURSE PLAN

Target	60% (marks)
Level-1	50% (population)
Level-2	60% (population)
Level-3	70% (population)

1. Method of Evaluation

UG	PG
Continuous Assessment (50%)	Continuous Assessment (50%)
End Semester Examination (50%)	End Semester Examination (50%)

*Keep as per Program (UG/PG)

2. Passing Criteria

Scale	PG	UG
Out of 10 Point Scale	CGPA – "5.00" Min. Individual Course Grade – "C" Passing Minimum – 40	CGPA – "5.00" Min. Individual Course Grade – "C" Passing Minimum – 35

*Keep as per Program (UG/PG)

3. Pedagogy

Year: 1st
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- Direct Instruction
- Kinesthetic Learning
- Flipped Classroom
- Differentiated Instruction
- Expeditionary Learning
- Inquiry Based Learning
- Game Based Learning
- Personalized Learning

4. **Topics introduced for the first time in the program through this course**
   - (New Experiments Introduced & Content Beyond Syllabus)

5. **References:**

Text Books	Web resources	Journals	Reference books

Signature of HOD/Dean **Signature of Faculty**

Date: **Date:**

Year: 1st
Semester: 1st

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GUIDELINES TO STUDY THE SUBJECT

Instructions to Students:

1. Go through the 'Syllabus' in the LMS in order to find out the Reading List.
2. Get your schedule and try to pace your studies as close to the timeline as possible.
3. Get your on-line SmartLab videos section. Make sure you use them during this course.
4. check your LMS regularly
5. go through study material
6. check mails and announcements on blackboard
7. keep updated with the posts, assignments and examinations which shall be conducted on the blackboard
8. Be regular, so that you do not suffer in any way
9. C**ell Phones and other Electronic Communication Devices:** Cell phones and other electronic communication devices (such as Blackberries/Laptops) are not permitted in classes during Tests or the Mid/Final Examination. Such devices MUST be turned off in the class room.
10. **E-Mail and online learning tool:** Each student in the class should have an e-mail id and a pass word to access the LMS system regularly. Regularly, important information – Date of conducting class tests, guest lectures, via online learning tool. The best way to arrange meetings with us or ask specific questions is by email and prior appointment. All the assignments preferably should be uploaded on online learning tool. Various research papers/reference material will be mailed/uploaded on online learning platform time to time.
11. **Attendance:** Students are required to have minimum attendance of 75% in each subject. Students with less than said percentage shall NOT be allowed to appear in the end semester examination.

This much should be enough to get you organized and on your way to having a great semester! If you need us for anything, send your feedback through e-mail XXX@adamasuniversity.ac.in Please use an appropriate subject line to indicate your message details.

There will no doubt be many more activities in the coming weeks. So, to keep up to date with all the latest developments, please keep visiting this website regularly.

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RELATED OUTCOMES

1. **The expected outcomes of the Program are:**

PO1	**Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
PO2	**Problem analysis:** Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
PO3	**Design/development of solutions:** Design solutions for complex 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.
PO4	**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.
PO5	**Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.
PO6	**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 engineering practice.
PO7	**Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development
PO8	**Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
PO9	**Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
PO10	**Communication:** Communicate effectively on complex 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.

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PO11	**Project management and finance:** Demonstrate knowledge and understanding of the 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.
PO12	**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.

2. The expected outcomes of the Specific Program are: (upto3)

PSO1	Adequate strong skills in learning new programming environments, analyse and design algorithms for efficient computer-based systems of varying complexity.
PSO2	The ability to understand the evolutionary changes in computing, apply standard practices and strategies in software project development using open-ended programming environments to deliver a quality product for business success, real world problems and meet the challenges of the future
PSO3	Ability to analyse the impact of Computer Science and Engineering solutions in the societal and human context, design, model, develop, test and manage complex software and information management systems.
PSO4	The ability to employ modern computer languages, environments, and platforms in creating innovative career paths to be an entrepreneur, lifelong learning and a zest for higher studies and also to act as a good citizen by inculcating in them moral values &ethics.

3. **The expected outcomes of the Course are: (minimum 4 and maximum 6)**

CO1	Explain the mechanics and control strategies of aerial robots and realize how careful component selection and design affect the vehicles' performance.

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CO2	Demonstrate utility of electric vehicle & HEV for various applications.
CO3	Illustrate about the dimensions and performance of smart city.

4. **Co-Relationship Matrix**
Indicate the relationships by1- Slight (Low) 2- Moderate (Medium) 3-Substantial (High)

Program Outcomes / Course Outcomes	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
CO1	3	3	3												
CO2	3	3	3												
CO3	3	3	3												
Average	**3**	**3**	**3**												

5. **Course Outcomes Assessment Plan (COA):**

Course Outcomes	Internal Assessment* (30 Marks)		Mid Term Exam (20 Marks)	End Term Exam (50 Marks)	Total (100 Marks)
	Before Mid Term	After Mid Term			
CO1	5	5	7	16	33
CO2	5	5	7	16	33
CO3	5	5	6	18	34

Year: 1st
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9. **Program : B.Tech** **T: 0**
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Total	15	15	20	50	100

* Internal Assessment –Continuous Assessment

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Semester: 1st

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C: 1

OVERVIEW OF COURSE PLAN OF COURSE COVERAGE

Course Activities:

S. No.	Description	Planned			Actual			Remarks
		From	To	No. of Session	From	TO	No. of Session	
1.	Cycle I Experiments	11.09.2020	02.12.2020	11	11.09.2020	02.12.2020	11	
2.	Cycle II Experiments	09.12.2020	24.02.2021	11	09.12.2020	24.02.2021	11	

Total No. of Instructional periods available for the course: 22 Sessions

Signature of HOD/Dean **Signature of Faculty**

Date: **Date:**

Year: 1st
Semester: 1st

6. **Name of the Faculty: Mr. Arijit Mukherjee, Ms. Sanchita Mallick, Mr. Titas Kumar Nag, Ms. Tanaya Das. Mr. Sayanta Sikdar**
7. **Course Code : SET41401**
8. **Course : CE, CSE, ECE, EE, ME** **L: 0**
9. **Program : B.Tech** **T: 0**
10. **Target : 60 %** **P: 2**
C: 1

SESSION PLAN
Cycle-I

Session Plan				Actual Delivery			
Exp.	Date	Topics to be Covered	CO Mapped	Exp.	Date	Topics Covered	CO Achieved
1	16.09.2020	Introduction to Aerial Robotics: Unmanned Aerial Vehicles	CO1	1	16.09.2020	Introduction to Aerial Robotics: Unmanned Aerial Vehicles	CO1
2	23.09.2020	Key Components of Autonomous Flight, State Estimation	CO1	2	23.09.2020	Key Components of Autonomous Flight, State Estimation	CO1
3	30.09.2020	Applications, Basic Mechanics, Dynamics	CO1	3	30.09.2020	Applications, Basic Mechanics, Dynamics	CO1
4	7.10.20200	1-D Linear Control, Design Considerations,	CO2	4	7.10.20200	1-D Linear Control, Design Considerations,	CO2
5	14.10.2020	Agility and Maneuverability	CO2	5	14.10.2020	Agility and Maneuverability	CO2
6	28.10.2020	Component Selection, Effects of Size	CO2	6	28.10.2020	Component Selection, Effects of Size	CO2
7	4.11.2020	Supplementary Material: Introduction,	CO2	7	4.11.2020	Supplementary Material: Introduction,	CO2
8	11.11.2020	Dynamical Systems, Rates of Convergence	CO2	8	11.11.2020	Dynamical Systems, Rates of Convergence	CO2

Year: 1st
Semester: 1st

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C: 1

9	18.11.2020	Matlab Tutorials - Introduction to the Matlab Evironment	CO3	9	18.11.2020	Matlab Tutorials - Introduction to the Matlab Evironment	CO3
10	25.11.2020	Programming Basics, Advanced Tools	CO3	10	25.11.2020	Programming Basics, Advanced Tools	CO3
11	2.12.2020	Introduction to EV &&INDIAN and GLOBAL Scenario: Past, Present & Feature of EV	CO3	11	2.12.2020	Introduction to EV &&INDIAN and GLOBAL Scenario: Past, Present & Feature of EV	CO3

Remarks:

Signature of Faculty

Date:

Year: 1st
Semester: 1st

6. **Name of the Faculty: Mr. Arijit Mukherjee, Ms. Sanchita Mallick, Mr. Titas Kumar Nag, Ms. Tanaya Das. Mr. Sayanta Sikdar**
7. **Course Code : SET41401**
8. **Course : CE, CSE, ECE, EE, ME** **L: 0**
9. **Program : B.Tech** **T: 0**
10. **Target : 60 %** **P: 2**
C: 1

SESSION PLAN
Cycle-II

Session Plan				Actual Delivery			
Exp.	Date	Topics to be Covered	CO Mapped	Exp.	Date	Topics Covered	CO Achieved
1	9.12.2020	Current Major Issues, Recent Development Trends, EV Concept	CO2	1	9.12.2020	Current Major Issues, Recent Development Trends, EV Concept	CO2
2	16.12.2021	Key EV Technology, State-of-the Art EVs & HEVs	CO2	2	16.12.2021	Key EV Technology, State-of-the Art EVs & HEVs	CO2
3	23.12.2021	Comparison of EV Vs IC Engine, Technology Scenario	CO2	3	23.12.2021	Comparison of EV Vs IC Engine, Technology Scenario	CO2
4	06.01.2021	Market Scenario, Policies and Regulations, Payback and commercial model,	CO2	4	06.01.2021	Market Scenario, Policies and Regulations, Payback and commercial model,	CO2
5	13.01.2021	Payback and commercial model, Polices in India.	CO2	5	13.01.2021	Payback and commercial model, Polices in India.	CO2
6	20.02.2021	Definition, Dimensions of smart city, socio-economic aspect for smart city planning	CO2	6	20.02.2021	Definition, Dimensions of smart city, socio-economic aspect for smart city planning	CO2
7	27.02.2021	framework for smart city- Technology framework, Institutional framework,	CO3	7	27.02.2021	framework for smart city- Technology framework, Institutional framework,	CO3

Year: 1st
Semester: 1st

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7. **Course Code : SET41401**
8. **Course : CE, CSE, ECE, EE, ME** **L: 0**
9. **Program : B.Tech** **T: 0**
10. **Target : 60 %** **P: 2**
C: 1

8	3.02.2021	Human framework, Energy framework,	CO3	8	3.02.2021	Human framework, Energy framework,	CO3
9	10.02.2021	Data management framework	CO3	9	10.02.2021	Data management framework	CO3
10	17.02.2021	transformation of urban digital	CO3	10	17.02.2021	transformation of urban digital	CO3
11	24.02.2021	physical fabric of cities, Performance, Initiatives	CO3	11	24.02.2021	physical fabric of cities, Performance, Initiatives	CO3

Year: 1st
Semester: 1st

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7. Course Code : SET41401
8. Course : CE, CSE, ECE, EE, ME L: 0
9. Program : B.Tech T: 0
10. Target : 60 % P: 2
C: 1

PERIODIC MONITORING

Attainment of the Course (Learning) Outcomes:

Components	Attainment level	Action Plan	Remarks
Cycle I Continuous Assessment	CO1:	Quiz/Test on 15.05.2021	
	CO2:		
	CO3:	NA	
Cycle II Continuous Assessment	CO1:	NA	
	CO2:	Quiz/Test on 17.07.2021	
	CO3:		
End Semester	CO1:	Will held on 28.07.2021	
	CO2:		
	CO3:		
Any Other	CO1:	NA	
	CO2:		
	CO3:		
	CO4:		
	CO5:		

Signature of HOD/ Dean

Date

Signature of Faculty

Date

Year: 1st
Semester: 1st

6. Name of the Faculty: Mr. Arijit Mukherjee, Ms. Sanchita Mallick, Mr. Titas Kumar Nag, Ms. Tanaya Das. Mr. Sayanta Sikdar
7. Course Code : SET41401
8. Course : CE, CSE, ECE, EE, ME L: 0
9. Program : B.Tech T: 0
10. Target : 60 % P: 2
C: 1

Continuous Evaluation Sheet

Roll Number	Registration Number	Name of the Student	Continuous Assessment*								
			Cycle I (25)					Cycle II (25)			
			Ex 1	Ex 2	Ex 3	Ex 4	Ex 5	Ex 6	Ex 7	etc.	Total (50)

*Depends on Number of Experiments Divide the Total Marks and Prepare Rubrics for Evaluating Experiments

Signature of HOD/Dean

Date:

Signature of Faculty

Date:

Year: 1st
Semester: 1st

6. Name of the Faculty: Mr. Arijit Mukherjee, Ms. Sanchita Mallick, Mr. Titas Kumar Nag, Ms. Tanaya Das. Mr. Sayanta Sikdar
7. Course Code : SET41401
8. Course : CE, CSE, ECE, EE, ME L: 0
9. Program : B.Tech T: 0
10. Target : 60 % P: 2
C: 1

Planning for Remedial Classes

Sl. No.	Name of Student	Roll No.	Reg. No.	Mid Sem Marks	Remedial Classes Held							Retest on the basis of Remedial Classes	End Sem Marks	Improvement (Y/N)
					Date									
					Venue									
					Time									
1.														
2.														

Signature of HOD/ Dean
Date:

Signature of Faculty
Date:

Year: 1st
Semester: 1st

6. **Name of the Faculty: Mr. Arijit Mukherjee, Ms. Sanchita Mallick, Mr. Titas Kumar Nag, Ms. Tanaya Das. Mr. Sayanta Sikdar**
7. **Course Code : SET41401**
8. **Course : CE, CSE, ECE, EE, ME** **L: 0**
9. **Program : B.Tech** **T: 0**
10. **Target : 60 %** **P: 2**
C: 1

COURSE END SURVEY

INDIRECT ASSESSMENT

Sample format for Indirect Assessment of Course outcomes:

NAME:
ROLL NO.:
REG. NO..:
COURSE:
PROGRAM:

Please rate the following aspects of course outcomes of

Use the scale 1-5 (Poor – Excellent) *

Course Outcomes	Statement	1	2	3	4	5
CO1	Explain the mechanics and control strategies of aerial robots and realize how careful component selection and design affect the vehicles' performance.					5
CO2	Demonstrate utility of electric vehicle & HEV for various applications					5
CO3	Illustrate the dimensions and performance of smart city					5

INDIRECT ASSESSMENT CONSOLIDATION

ADAMAS UNIVERSITY, KOLKATA **SCHOOL OF** **DEPARTMENT OF** **CO Indirect Assessment**

Year: 1st
Semester: 1st

6. **Name of the Faculty: Mr. Arijit Mukherjee, Ms. Sanchita Mallick, Mr. Titas Kumar Nag, Ms. Tanaya Das. Mr. Sayanta Sikdar**
7. **Course Code : SET41401**
8. **Course : CE, CSE, ECE, EE, ME** **L: 0**
9. **Program : B.Tech** **T: 0**
10. **Target : 60 %** **P: 2**
C: 1

Programme:	**Academic Year:2020-21**	**Batch: 2020-22**
Course Code & Name:		
Course Outcome	**Students Feed Back (5)**	**Attainment (100)**
CO1	5	100
CO2	5	100
CO3	5	100
CO4	5	100
Signature of HOD/Dean Date:		**Signature of Faculty Date:**

Evaluation Sheet (End Semester)

Roll Number	**Registration Number**	**Name of the Student**	**Marks (50)**

Year: 1st
Semester: 1st

6. Name of the Faculty: Mr. Arijit Mukherjee, Ms. Sanchita Mallick, Mr. Titas Kumar Nag, Ms. Tanaya Das. Mr. Sayanta Sikdar
7. Course Code : SET41401
8. Course : CE, CSE, ECE, EE, ME L: 0
9. Program : B.Tech T: 0
10. Target : 60 % P: 2
C: 1

Signature of HOD/Dean

Date:

Signature of Faculty

Date:

Planning for Remedial Classes – End Semester

Year: 1st
Semester: 1st

6. Name of the Faculty: Mr. Arijit Mukherjee, Ms. Sanchita Mallick, Mr. Titas Kumar Nag, Ms. Tanaya Das. Mr. Sayanta Sikdar
7. Course Code : SET41401
8. Course : CE, CSE, ECE, EE, ME L: 0
9. Program : B.Tech T: 0
10. Target : 60 % P: 2
C: 1

Sl. No.	Name of Student	Roll No.	Reg. No.	End Sem Marks	Remedial Classes Held							Retest on the basis of Remedial Classes	Supple Exam Marks	Improvement (Y/N)
					Date									
					Venue									
					Time									
1.														
2.														

Signature of HOD/ Dean

Date

Signature of Faculty

Date

Consolidated Mark Statement

Year: 1st
Semester: 1st

6. **Name of the Faculty: Mr. Arijit Mukherjee, Ms. Sanchita Mallick, Mr. Titas Kumar Nag, Ms. Tanaya Das. Mr. Sayanta Sikdar**
7. **Course Code : SET41401**
8. **Course : CE, CSE, ECE, EE, ME** **L: 0**
9. **Program : B.Tech** **T: 0**
10. **Target : 60 %** **P: 2**
C: 1

Roll Number	Registration Number	Name of the Student	Marks			
			Continuous Assessment (50)		End Semester (50)	Total (100)
			Cycle I (25)	Cycle II (25)		

Signature of Dean/HOD **Signature of Faculty**

Date: **Date:**

Year: 1st
Semester: 1st

6. Name of the Faculty: Mr. Arijit Mukherjee, Ms. Sanchita Mallick, Mr. Titas Kumar Nag, Ms. Tanaya Das. Mr. Sayanta Sikdar
7. Course Code : SET41401
8. Course : CE, CSE, ECE, EE, ME L: 0
9. Program : B.Tech T: 0
10. Target : 60 % P: 2
C: 1

CO ATTAINMENT – GAP ANALYSIS & REMEDIAL MEASURES

ADAMAS UNIVERSITY, KOLKATA
SCHOOL OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF ME; ECE; EE; CSE; CE
CO ATTAINMENT - GAP ANALYSIS & REMEDIAL MEASURES

Batch :	2020-22				Academic Year:	2020-21
Course Code & Name		Name of the Coordinator			Year & Semester	
SET41401 & Capstone Project I		Mr. Arijit Mukherjee, Ms. Sanchita Mallick, Mr. Titas Kumar Nag, Ms. Tanaya Das. Mr. Sayanta Sikdar			I & I	
CO	Direct Assessment	Indirect Assessment	CO Attainment	Target	CO Attainment Gaps	Action for Bridge the Gap	Target Modification
CO1	75	100	80	**70**	-10		75
CO2	75	100	80	**70**	-10		75
CO3	75	100	80	**70**	-10		75

Signature of HOD/Dean **Signature of Faculty**

Date: **Date:**

Year: 1st
Semester: 1st

6. Name of the Faculty: Mr. Arijit Mukherjee, Ms. Sanchita Mallick, Mr. Titas Kumar Nag, Ms. Tanaya Das. Mr. Sayanta Sikdar
7. Course Code : SET41401
8. Course : CE, CSE, ECE, EE, ME
9. Program : B.Tech
10. Target : 60 %

L: 0
T: 0
P: 2
C: 1

CO-PO ATTAINMENT

ADAMAS UNIVERSITY, KOLKATA
SCHOOL OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF ME; ECE; CES; EE; CE
CO-PO ATTAINMENT

Programme: B.Tech	Year & Sem: I & I	Academic Year: 2020-21	Batch:2020-22

Course Code	Course Name	CO-PO	PO 1	PO 2	PO 3	PO4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
DGS11001	DESIGN THINKING	Relationship	CO 1, CO 2, CO 3	CO 2, CO 3	CO 3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		Mapping Value	3	3	3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Year: 1st
Semester: 1st

6. Name of the Faculty: Mr. Arijit Mukherjee, Ms. Sanchita Mallick, Mr. Titas Kumar Nag, Ms. Tanaya Das. Mr. Sayanta Sikdar
7. Course Code : SET41401
8. Course : CE, CSE, ECE, EE, ME L: 0
9. Program : B.Tech T: 0
10. Target : 60 % P: 2
C: 1

		Attainment	2.4	2.4	2.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Signature of HOD/Dean

Date:

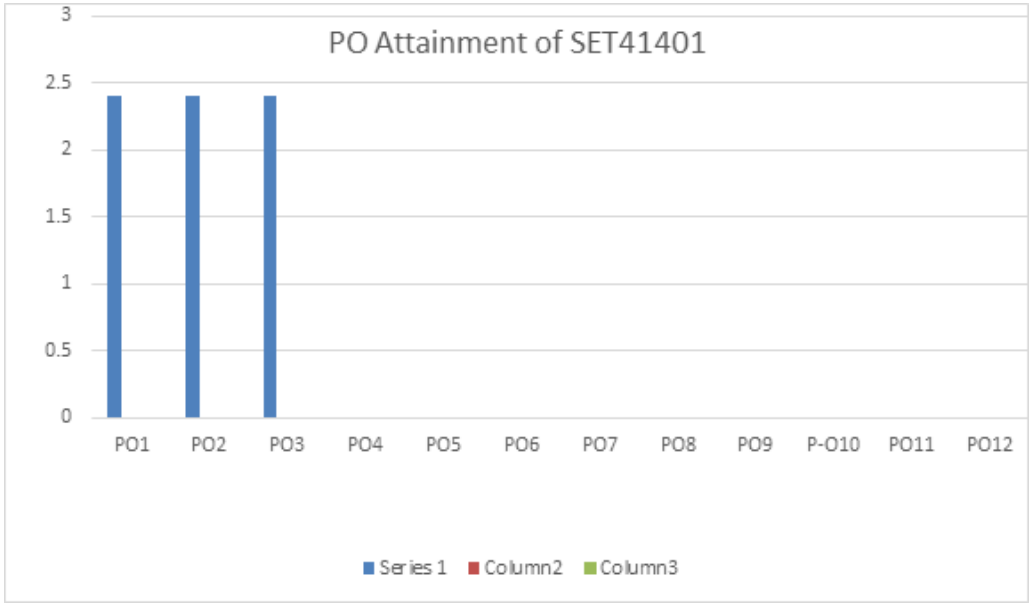
Signature of Faculty

Date:

PO ATTAINMENT OF THE COURSE

Year: 1st
Semester: 1st

6. **Name of the Faculty: Mr. Arijit Mukherjee, Ms. Sanchita Mallick, Mr. Titas Kumar Nag, Ms. Tanaya Das. Mr. Sayanta Sikdar**
7. **Course Code : SET41401**
8. **Course : CE, CSE, ECE, EE, ME** **L: 0**
9. **Program : B.Tech** **T: 0**
10. **Target : 60 %** **P: 2**
C: 1



Year: 1st
Semester: 1st

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9. **Program : B.Tech** **T: 0**
10. **Target : 60 %** **P: 2**
C: 1

INSTRUCTIONS FOR FACULTY

Instructions for Faculty

- Faculty should keep track of the students with low attendance and counsel them regularly.
- Course coordinator will arrange to communicate the short attendance (as per University policy) cases to the students and their parents monthly.
- Experiment covered in each lab should be recorded in the table of RECORD OF CLASS TEACHING (Suggested Format).
- Internal assessment marks should be communicated to the students twice in a semester.
- The file will be audited by respective Academic Monitoring and Review Committee (AMRC) members for theory as well as for lab as per AMRC schedule.
- The faculty is required to maintain these files for a period of at least three years.
- This register should be handed over to the head of department, whenever the faculty member goes on long leave or leaves the Colleges/University.
- For labs, continuous evaluation format (break-up given in the guidelines for result preparation in the same file) should be followed.
- Department should monitor the actual execution of the components of continuous lab evaluation regularly.
- Instructor should maintain record of experiments conducted by the students in the lab weekly.
- Instructor should promote students for self-study and to make concept diary, due weightage in the internal should be given under faculty assessment for the same.
- Course outcome assessment: To assess the fulfilment of course outcomes two different approaches have been decided. Degree of fulfillment of course outcomes will be assessed in different ways through direct assessment and indirect assessment. In Direct Assessment, it is measured through quizzes, tests, assignment, Mid-term and/or End-term examinations. It is suggested that each examination is designed in such a way that it can address one or two outcomes (depending upon the course completion). Indirect assessment is done through the student survey which needs to be designed by the faculty (sample format is given below) and it shall be conducted towards the end of course completion. The evaluation of the achievement of the Course Outcomes shall be done by analyzing the inputs received through Direct and Indirect Assessments and then corrective actions suggested for further improvement.
- **Submission Targets of Course Contents:**
  - **S. No. 1 to 7 : Before Starting the Course**
  - **S. No. 8& 9 : After Mid Semester Examination**
  - **S. No. 10 to 13 : Immediately After End Semester Examination**
  - **S. No. 14 to 17 : After Declaration of Result of the Course**