ACS College of Engineering

Aerospace Engineering

Part A : Institutional Information

1 Name and Address of the Institution

ACS College of Engineering,
ACS College of Engineering, No. 207, Kambi Pura, Mysore Road, Bangalore -560074.

2 Name and Address of Affiliating University

Visvesvaraya Technological University Belgaum Karn

3 Year of establishment of the Institution:

2009

4 Type of the Institution:

☐ University	☐ Autonomous
☐ Deemed University	☑ Affiliated
☐ Government Aided	

5 Ownership Status:

☐ Central Government	☑ Trust
☐ State Government	☐ Society
☐ Government Aided	☐ Section 25 Company
☐ Self financing	☐ Any Other(Please Specify)

6 Other Academic Institutions of the Trust/Society/Company etc., if any:

Name of Institutions	Year of Establishment	Programs of Study	Location
Rajarajeswari Medical College & Hospital	2005	UG/PG	Bengaluru
Rajarajeswari Dental College & Hospital	1992	UG/PG	Bengaluru
Rajarajeswari College of Engineering	2006	UG/PG	Bengaluru
Rajarajeswari College of School of Nursing	2004	UG/PG	Bengaluru
Rajarajeswari College of Physiotheraphy	2006	UG/PG	Bengaluru

7 Details of all the programs being offered by the institution under consideration:

Name of Program	Program Applied level	Start of year	Year of AICTE approval	Initial Intake	Intake Increase	Current Intake	Accreditation status	From	To	Program for consideration	Program for Duration
B.E	UG	2017	2017	60	No	60	Applying first time	--	--	Yes	4

8 Programs to be considered for Accreditation vide this application:

S No	Level	Discipline	Program
1	Under Graduate	Engineering & Technology	Electronics & Communication Engg.
2	Under Graduate	Engineering & Technology	Aerospace Engineering

9 Total number of employees in the institution:

A. Regular* Employees (Faculty and Staff):

Items	2022-23		2021-22		2020-21	
	MIN	MAX	MIN	MAX	MIN	MAX
Faculty in Engineering (Male)	72	72	79	79	68	68
Faculty in Engineering (Female)	33	33	54	54	48	48
Faculty in Maths, Science & Humanities (Male)	14	14	16	16	16	16
Faculty in Maths, Science & Humanities (FeMale)	8	8	10	10	11	11
Non-teaching staff (Male)	58	58	58	58	48	48
Non-teaching staff (FeMale)	67	67	67	67	65	65

B. Contractual* Employees (Faculty and Staff):

Items	2022-23		2021-22		2020-21	
	MIN	MAX	MIN	MAX	MIN	MAX
Faculty in Engineering (Male)	0	0	0	0	0	0
Faculty in Engineering (Female)	0	0	0	0	0	0
Faculty in Maths, Science & Humanities (Male)	0	0	0	0	0	0
Faculty in Maths, Science & Humanities (FeMale)	0	0	0	0	0	0
Non-teaching staff (Male)	0	0	0	0	0	0
Non-teaching staff (FeMale)	0	0	0	0	0	0

10 Total number of Engineering Students:

Engineering and Technology- UG	☑ Shift1	☐ Shift2
Engineering and Technology- PG	☑ Shift1	☐ Shift2
Engineering and Technology- Polytechnic	☐ Shift1	☐ Shift2
MBA	☐ Shift1	☐ Shift2
MCA	☐ Shift1	☐ Shift2

Engineering and Technology- UG Shift-1

Items	2022-23	2021-22	2020-21
Total no. of Boys	658	799	600
Total no. of Girls	782	476	674
Total	**1440**	**1275**	**1274**

Engineering and Technology- PG Shift-1

Items	2022-23	2021-22	2020-21
Total no. of Boys	3	15	11
Total no. of Girls	1	4	15
Total	**4**	**19**	**26**

11 Vision of the Institution:

Engineering the future of the nation by transforming the students to be technically skilled managers, innovative leaders and environmentally receptive citizens.

12 Mission of the Institution:

- To implement holistic approach in curriculum and pedagogy through Industry Integrated Interactions to meet the needs of Global Engineering Environment.
- To develop students with knowledge, attitude and skill of employability, entrepreneurship (Be Job creators than job seekers), research potential and professionally ethical citizens.

13 Contact Information of the Head of the Institution and NBA coordinator, if designated:

Head of the Institution	
Name	DR M.S MURALI
Designation	PRINCIPAL
Mobile No.	9900028024
Email ID	principal@acsce.edu.in

NBA Coordinator, If Designated

Name	DR T SENTHILKUMARAN
Designation	PROF AND DEAN
Mobile No.	8884000900
Email ID	senthilkumaran@acsce.edu.in

PART B: Criteria Summary

Critera No.	Criteria	Total Marks	Institute Marks
1	VISION, MISSION AND PROGRAM EDUCATIONAL OBJECTIVES	60	60.00
2	PROGRAM CURRICULUM AND TEACHING - LEARNING PROCESSES	120	120.00
3	COURSE OUTCOMES AND PROGRAM OUTCOMES	120	120.00
4	STUDENTS' PERFORMANCE	150	107.90
5	FACULTY INFORMATION AND CONTRIBUTIONS	200	171.52
6	FACILITIES AND TECHNICAL SUPPORT	80	80.00
7	CONTINUOUS IMPROVEMENT	50	50.00
8	FIRST YEAR ACADEMICS	50	45.85
9	STUDENT SUPPORT SYSTEMS	50	50.00
10	GOVERNANCE, INSTITUTIONAL SUPPORT AND FINANCIAL RESOURCES	120	120.00
	Total	**1000**	**926**

Part B

1 VISION, MISSION AND PROGRAM EDUCATIONAL OBJECTIVES (60)

Total Marks 60.00

1.1 State the Vision and Mission of the Department and Institute (5)

Total Marks 5.00

Institute Marks : 5.00

Vision of the institute	Engineering the future of the nation by transforming the students to be technically skilled managers, innovative leaders and environmentally receptive citizens.
Mission of the institute	• To implement holistic approach in curriculum and pedagogy through Industry Integrated Interactions to meet the needs of Global Engineering Environment. • To develop students with knowledge, attitude and skill of employability, entrepreneurship (Be Job creators than job seekers), research potential and professionally ethical citizens.
Vision of the Department	The Aerospace Department seeks to nurture creativity among the students for shaping the next generation of aerospace systems.
Mission of the Department	

Mission No.	Mission Statements
M1	To provide capable, motivated, and high-quality aerospace engineering students, that will enable them to reach their maximum potential in the technological world.
M2	To significantly advance the knowledge of the students and integrate them in aerospace related disciplines.
M3	To perform research that is timely and of importance to society, which coincide with relevant interests in the engineering community and the community at large.

1.2 State the Program Educational Objectives (PEOs) (5)

Total Marks 5.00

Institute Marks : 5.00

PEO No.	Program Educational Objectives Statements
PEO1	PROFESSIONAL KNOWLEDGE - Aerospace Graduates will have the ability to apply knowledge across the disciplines and in emerging areas of Aerospace Engineering for higher studies, research, employability and product development
PEO2	LEADERSHIP SKILLS - Graduates possess academic excellence, managerial skills, leadership qualities and understand the need for lifelong learning for a successful professional career.
PEO3	ATTITUDE DEVELOPMENT - Graduates will have the communication skills, sense of responsibility to protect the environment and ethical conduct towards their profession and commitment to serve the society

1.3 Indicate where the Vision, Mission and PEOs are published and disseminated among stakeholders (10) Total Marks 10.00

Institute Marks : 10.00

The Vision, Mission and PEOs are published at:

1. Institute website https://www.acsce.edu.in/department/aerospace-engineering/ (https://www.acsce.edu.in/department/aerospace-engineering/)
2. Course file
3. Alumni Meeting
4. Displayed in HOD's room, Faculty Room and Seminar Hall
5. Displayed on notice boards of laboratories, classrooms and corridors.
6. Departmental Newsletter

Process of dissemination among stakeholders

The institution and departments Vision, Mission, and Program Educational Objectives (PEOs) are communicated to new faculty and students during the introductory meeting and Faculty were informed about these matters through regular meetings and discussions in the Departmental Advisory Board (DAB)/ Program Assessment Committee (PAC) meetings. The faculty incorporates the Vision, Mission, and PEOs into their course files and shares them with their students. Information brochures, departmental Newsletter, and parent-teacher meetings are utilized to inform employers, parents, and alumni about these essential elements. Additionally, Faculty Development Programs (FDP) is organized to focus on Outcome-Based Education (OBE) as needed.

1.4 State the process for defining the Vision and Mission of the Department, and PEOs of the program (25) Total Marks 25.00

Description of process involved in defining Vision and Mission of the Department:

The vision and mission statements of the department are established through a thorough consultation process by involving the stakeholders (internal and external) of the department. The inputs from Alumni Interaction, Exit Interview, Departmental Advisory Board (DAB) / Program Assessment Committee (PAC) and department Strengths & Statistics are used in framing the **Vision & Mission Statements** of the dept. aligned with the institutional **Vision & Mission Statements.**

Step 1: During the first stage, gather input from stakeholders and confer with the department head, as well as the Departmental Advisory Board (DAB) / Program Assessment Committee (PAC) meeting, to establish the vision and mission statements that are consistent with those of the institute.

Step 2: The vision and mission statements, defined as stated in step-1 are shared with faculty, students, alumni, management and IQAC for the feedback.

Step 3: The feedback obtained from stakeholders in step 2 is discussed among DAB / PAC members before being finalized.

Step 4: The new vision and mission statements (outcome of the DAB / PAC meeting) are placed before IQAC for recommendation.

Step 5: Once the vision and mission statements are recommended by the IQAC they are published in the web site and other places stated in 1.3. Any comments by the Internal / External stakeholders are noted and considered for next cycle of revising the vision and mission statements.

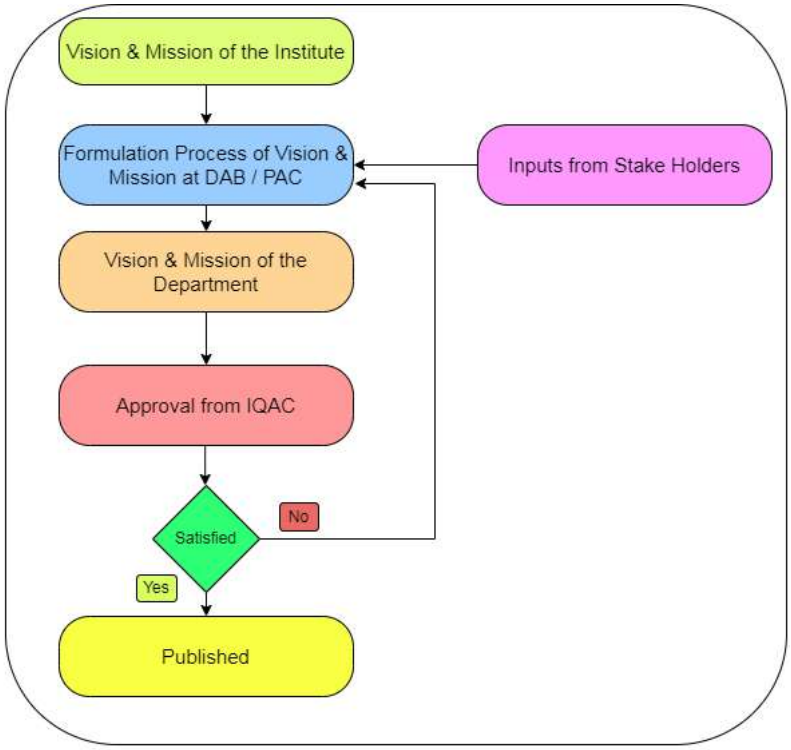


Fig.1.4.A Process to establish department vision & mission.

Description of process involved in defining PEOs of the Department:

The Program Educational Objectives are established through a consultation process involving the core constituents such as students, alumni, industries, and faculty members.

The PEOs are established through the following steps:

Step1: The PEOs are initially defined considering the following:

- Vision, mission statements of the institute/department program outcomes
- Feedback from alumni and industry requirement
- Expectations of parents/aspirants of the program.
- The placement record of the graduates from the Training and Placement cell and higher education records
- Curriculum analysis

Step 2: The defined PEOs are discussed among faculty, current students, alumni, parents, and DAB / PAC members. The feedback received from all stakeholders is carefully considered to refine the PEOs.

Step 3: The PEOs from step 2 are put before IQAC for discussion and feedback. Once the IQAC approve the PEOs they will be published.

Step 4: Attainment of the stated PEOs is checked through surveying views of employers of Our students and alumni. Their views are considered while modifying PEOs in next cycle.

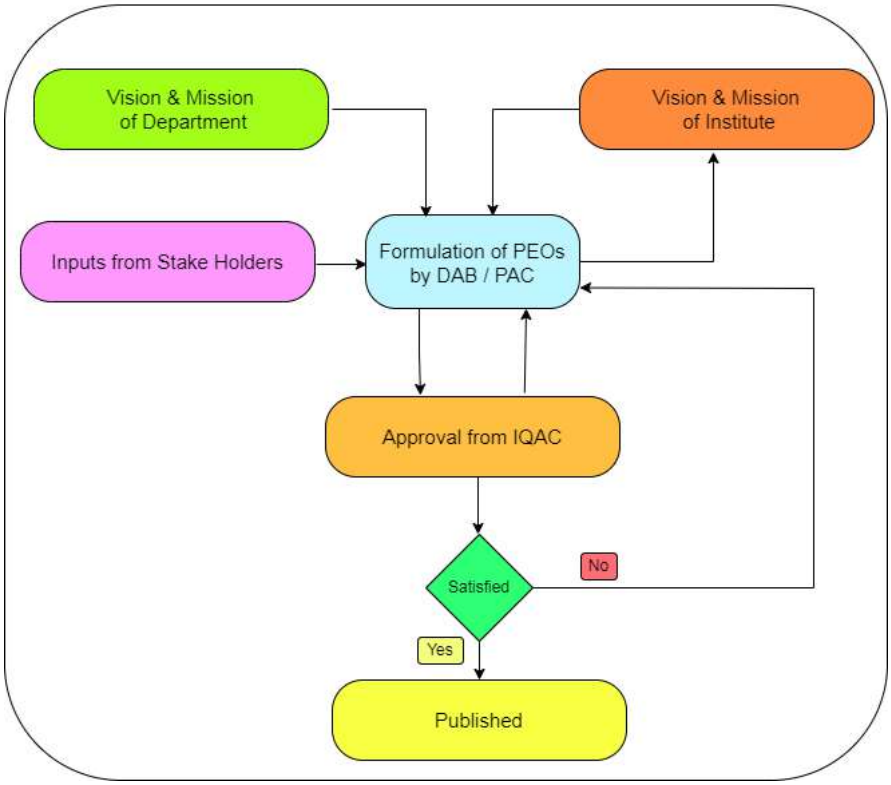


Fig.1.4.B Process to establish Department PEOs

1.5 Establish consistency of PEOs with Mission of the Department (15) Total Marks 15.00

Table B.1.5 Justification and of PEOs with Mission of the Department

PEOs	Mission	Levels	Justification
PEO1	M1	3	Understanding Aerospace Engineering concepts is vital for graduate success. There is a high correlation between concept comprehension and achievement. Innovative teaching methods and advanced labs improve graduates skills, sought after by academia and industry, increasing the correlation with success.
	M2	3	Availability of research facilities and labs encourages lifelong learning in graduates, aligning with Mission-2 and PEO1. Graduates remain updated with latest developments and are well-prepared to adapt to industry changes, contributing to their profession throughout their career.
	M3	2	Ethical and value-based education moderately correlates with success, augmenting graduates ability to address industry and societal needs. Technical and communication skills also contribute, but ethics education nurtures graduates social responsibility and moral compass, alongside technical proficiency.
PEO2	M1	2	Modern tools and training programs for skill enhancement moderately correlate with graduate success. Access to cutting-edge technologies prepares students for real-world challenges, essential for meaningful contributions to their field. Technical skills and modern tool proficiency are indispensable for graduates to excel in their careers and stay competitive in an ever-changing industry
	M2	2	Training programs and access to state-of-the-art facilities aim to improve graduates ability to address societal needs, moderately correlating with their impact. While other factors also affect success in this area, involvement in training programs and use of modern tools are crucial for graduates to tackle real-world challenges and make a positive societal impact.
	M3	2	Developing problem-solving skills through a strong foundation in design thinking enhances students ability to tackle current industrial challenges, resulting in a moderate correlation between these factors.
PEO3	M1	3	Practical knowledge and experience over time help graduates comprehend ethical, environmental, and societal needs, allowing them to develop the necessary skills to solve complex problems effectively. Hence, the correlation between understanding these needs and the ability to address related issues is high.
	M2	3	The initiative focuses on innovative instructional methods and necessary laboratory facilities to equip graduates with skills required for higher studies in academia, resulting in a high correlation.
	M3	2	Involving students in training programs, modern tool usage, and state-of-the-art facilities moderately enhances their ability to address societal needs, resulting in a moderate correlation. However, experience, teamwork, and communication skills also play a vital role in graduates ability to address societal needs.

PEO Statements	M1	M2	M3
PROFESSIONAL KNOWLEDGE - Aerospace Graduates will have the ability to apply knowledge across the disciplines and in emerging areas of Aerospace Engineering for higher studies, research, employability and product development	3	3	2
LEADERSHIP SKILLS - Graduates possess academic excellence, managerial skills, leadership qualities and understand the need for lifelong learning for a successful professional career.	2	2	2
ATTITUDE DEVELOPMENT - Graduates will have the communication skills, sense of responsibility to protect the environment and ethical conduct towards their profession and commitment to serve the society	3	3	2

2 PROGRAM CURRICULUM AND TEACHING - LEARNING PROCESSES (120)

Total Marks 120.00

2.1 Program Curriculum (20)

Total Marks 20.00

2.1.1 State the process used to identify extent of compliance of the University curriculum for attaining the Program Outcomes and Program Specific Outcomes as mentioned in Annexurel. Also mention the identified curricular gaps, if any (10)

Institute Marks : 10.00

The Department of Aerospace Engineering is affiliated to Visvesvaraya Technological University, Belagavi, Karnataka. The complete curriculum/syllabi are designed and provided by the university. The curriculum is developed and assessed by the Board of Studies (BOS), which includes the chairman, senior professors of aerospace engineering, and representatives from the industry. In addition to the university syllabus, the department and institute organize a range of curricular and extracurricular activities to bridge any gaps in the curriculum and enhance student learning.

The Undergraduate Program, which follows a revised scheme of the choice-based credit system (CBCS) from the academic years 2018-22, is affiliated with Visvesvaraya Technological University in Belagavi, and its curriculum is prescribed by the university. The university defines course outcomes for every subject, which are mapped to program outcomes prescribed by the NBA. Additionally, the department defines program-specific outcomes. The curriculum is designed to maintain a balance in the composition of Basic Science, Humanities, and Professional Courses, as well as their distribution in Core and Electives courses. If any component required to attain CO/PO is not included in the university-provided curriculum, the department takes additional steps to impart such knowledge through "Contents beyond Syllabus" by conducting proper Gap analysis Process.

Subject Allotment: The department follows a standard plan to successfully implement the provided curriculum. Firstly, at the end of each semester, the HOD conducts a department meeting to take stock of the academic requirements for the next semester. After a complete discussion, the subjects and labs are allotted to the faculty members based on their priority, previous experience, specialization, individual interest, and the HODs mapping of subjects to faculties.

Class Conduction and Course Material: The faculty prepares the Course File, which includes a lesson plan, question bank, assignment questions, presentation materials/handouts, etc. of the allotted subjects for the entire syllabus before the commencement of each semester. The course file prepared by the staff is reviewed by the HOD, and suggestions are provided. After corrective measures, the prepared academic material is made available to the students.

Lab Conduction: The concerned faculty and lab instructor go through the syllabus, take stock of new requirements, replacements needed, servicing issues, etc. and submit to HOD for the concerned action plan. The labs are allotted to a faculty member along with one lab instructor, and batches are created for each lab. The respective lab faculty prepares and updates the Lab Manuals and shares them among the student batches. According to the syllabus, the respective lab faculty conducts the experiments or programs.

PROGRAM OUTCOME (POs)

PO1 – Engineering Knowledge: Apply knowledge of mathematics and science, with fundamentals of Aerospace Engineering to be able to solve complex engineering problems related to Aerospace Engineering

PO2 – Problem Analysis: Identify, Formulate, review research literature and analyse complex engineering problems related to Aerospace Engineering and reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences.

PO3 – Design/Development of solutions: Design solutions for complex aircraft problems related to Aerospace Engineering 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 Aircraft and Aerospace structure 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 Aerospace Engineering related 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 Aerospace professional engineering practice.

PO7 – Environment and Sustainability: Understand the impact of the Aerospace 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 High society and with write effective reports and design documentation, make effective presentations and give and receive clear instructions.

PO11 – Project Management and Finance: Demonstrate knowledge and understanding of the engineering management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multi-disciplinary environments.

PO12 – Life-Long Learning: Recognize the need for and have the preparation and ability to engage in independent and life-long learning the broadest content of technological change.

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

PEO-1 PROFESSIONAL KNOWLEDGE: Aerospace Graduates will have the ability to apply knowledge across the disciplines and in emerging areas of Aerospace Engineering for higher studies, research, employability and product development.

PEO-2 LEADERSHIP SKILLS: Graduates possess academic excellence, managerial skills, leadership qualities and understand the need for lifelong learning for a successful professional career.

PEO-3 ATTITUDE DEVELOPMENT: Graduates will have the communication skills, sense of responsibility to protect the environment and ethical conduct towards their profession and commitment to serve the society.

PROGRAM SPECIFIC OUTCOMES (PSOs)

PSO 1. Professional Skills Apply the knowledge of aerospace engineering in innovative, dynamic and challenging environment for design and development of flight/space vehicles through simulation, Programming skills and general-purpose CAE packages.

PSO 2. Practical implementation and Testing Skills Providing different types of in-house training and industry practice to fabricate, test and develop the products with more innovative technologies.

PSO 3. Successful Career and Entrepreneurship To prepare the students to become technocrats with broad aerospace knowledge for design and development of systems and subsystems for aerospace and associated fields.

Table 2.1. Extend of compliance of the University curriculum in Attaining PO

S.No	COURSE NAME	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO8	PO 9	PO 10	PO 11	PO 12
1.	Calculus And Linear Algebra	✓	✓	✓	✓								
2.	Engineering Physics	✓	✓	✓	✓	✓		✓					
3.	Basic Electrical Engineering	✓	✓	✓	✓	✓		✓					✓

S.No	COURSE NAME	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO8	PO 9	PO 10	PO 11	PO 12
4.	Engineering Graphics	✓	✓	✓	✓	✓		✓		✓	✓	✓	
5.	Engineering Physics Laboratory	✓	✓	✓	✓	✓		✓					
6.	Basic Electcial Engineering Laboratory	✓		✓				✓					✓
7.	Technical English I						✓				✓		✓
8.	Advanced Calculus And Numerical Methods	✓	✓	✓	✓								
9.	Engineering Chemistry	✓	✓	✓	✓	✓		✓					
10.	C Programming For Problem Solving	✓	✓	✓	✓	✓		✓					
11.	Basic Electronics	✓	✓	✓	✓			✓					✓
12.	Elements Of Mechanical Engineering	✓	✓	✓	✓	✓		✓					✓
13.	C Programming Laboratory	✓	✓	✓	✓	✓		✓					✓
14.	Technical English II	✓				✓		✓					
15.	Transform Calculus Fourier Series And Numerical Technique	✓	✓	✓	✓	✓							
16.	Aero-Thermodynamics	✓	✓	✓	✓	✓						✓	
17.	Mechanics Of Materials	✓	✓	✓	✓						✓		
18.	Introduction To Aerospace Engineering	✓	✓	✓	✓						✓		✓
19.	Mechanics Of Fluids	✓	✓	✓	✓								✓
20.	Aerospace Materials	✓	✓	✓	✓	✓		✓					✓
21.	Measurements And Metrology Lab	✓	✓	✓	✓	✓						✓	
22.	Material Testing Lab	✓	✓	✓	✓	✓						✓	
23.	Vyavaharika Kannada Aadalitha Kannada	✓				✓		✓					
24.	Complex Analysis, Probability And Statistical Method	✓	✓	✓	✓	✓							
25.	Aerodynamics - I	✓	✓	✓	✓	✓	✓						✓
26.	Aerospace Structures-I	✓	✓		✓								
27.	Mechanisms And Machine Theory	✓	✓	✓	✓								✓
28.	Composite Materials	✓	✓	✓	✓						✓	✓	✓
29.	Energy Conversion & Fluid Mechanics Lab	✓	✓	✓	✓	✓						✓	

S.No	COURSE NAME	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO8	PO 9	PO 10	PO 11	PO 12
30.	Computer Aided Aircraft Drawing Lab				✓			✓				✓	
31.	Constitution Of India, Professional Ethics And Cyber Law						✓		✓				
32.	Management And Entrepreneurship	✓	✓	✓	✓						✓		✓
33.	Aerodynamics - II	✓	✓	✓	✓	✓							✓
34.	Aerospace Propulsion	✓	✓	✓	✓								✓
35.	Aerospace Structures –II	✓	✓	✓	✓								✓
36.	Aircraft Systems & Instrumentation	✓	✓	✓	✓								✓
37.	Flight Mechanics	✓	✓	✓	✓	✓							✓
38.	Aerodynamics Lab	✓	✓	✓	✓	✓						✓	
39.	Propulsion Lab	✓	✓	✓	✓	✓						✓	
40.	Environmental Studies			✓			✓						
41.	Missiles And Launch Vehicles	✓	✓	✓	✓	✓	✓						✓
42.	Computational Fluid Dynamics	✓	✓	✓	✓	✓		✓		✓	✓	✓	✓
43.	Finite Element Method	✓	✓	✓	✓								✓
		✓	✓	✓	✓								✓
44.	Introduction To Astrophysics And Space Environment	✓	✓	✓	✓	✓		✓					
45.	Non-Conventional Energy Sources	✓	✓	✓	✓			✓		✓	✓		✓
46.	Design, Modelling & Analysis Lab			✓			✓				✓		
47.	Aerospace Structures Lab	✓	✓	✓	✓	✓						✓	
48.	Mini-Project	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
49.	Space Mechanics	✓	✓	✓	✓						✓		✓
50.	Control Engineering	✓	✓	✓	✓							✓	
51.	Space Vehicle Design	✓	✓	✓	✓						✓		✓
52.	Global Navigation Satellite Systems	✓	✓	✓	✓						✓		✓
53.	Energy And Environment	✓	✓	✓	✓						✓		✓
54.	Space Simulation Lab	✓	✓	✓	✓	✓						✓	
55.	Avionics And Instrumentation Lab	✓	✓	✓	✓	✓						✓	
56.	Project Work Phase - I	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
57.	Spacecraft Systems	✓	✓	✓	✓	✓					✓		✓
58.	Cryogenics	✓	✓	✓	✓				✓				
59.	Project Work Phase - II	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
60.	Technical Seminar		✓		✓	✓	✓	✓	✓	✓	✓		✓

S.No	COURSE NAME	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO8	PO 9	PO 10	PO 11	PO 12
61.	Internship	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

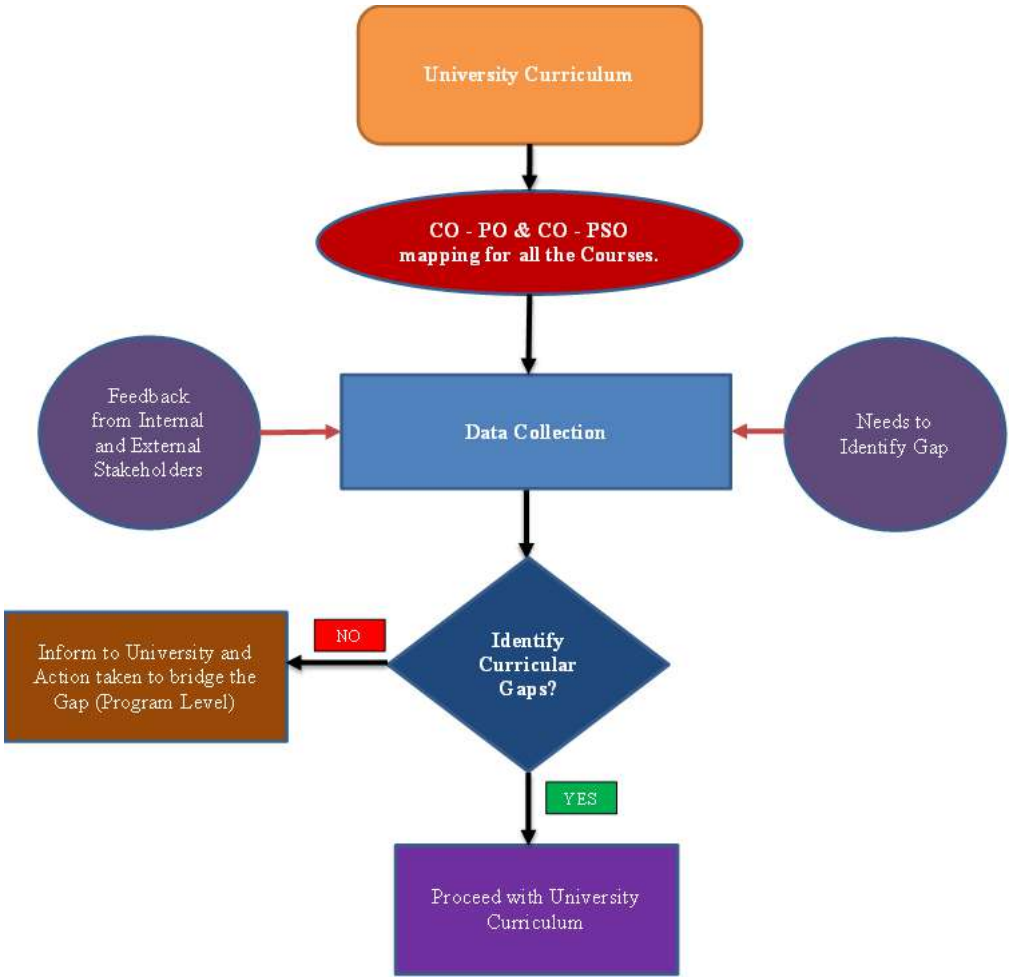


Fig. 2.1. Process for Identifying Curricular Gap

Process to identify the extend of compliance of university curriculum

The process used to identify the extend of compliances of University curriculum is through getting

the feedback on Gaps from different Stakeholders. It includes

1. Seeking the Input from the Faculties who is handling the course.

2. Seeking the input from internal stake holder.

3. Seeking the Input from external Stakeholders.

Step1: As per the VTU curriculum respective subject (course) faculties map the CO, PO and PSO for the subjects.

Step2: to identify the GAP, the Department Advisory Committee collects the data from the internal and external stake holders.

Step3: if Gap is identified, inform the gap to the university and at institute level from respective

department conduct the seminars and webinars to fulfill the gap.

Step4: if Gap is not identified proceed with the existing curriculum

Implementation: The lesson plan incorporates any additional material beyond the prescribed syllabus, whether it is related to theory or practical work, and is taught in class by the faculty. In case any new topic or subject arises, professionals from the industry are invited to provide a lecture.

2.1.2 State the delivery details of the content beyond the syllabus for the attainment of POs and PSOs (10)

Institute Marks : 10.00

1. Pre-placement Training
2. Training on Soft skills
3. Industry support certification
4. Premier institution training program · NPTEL certification · IIT Bombay-Spoken tutorial certification
5. Guest lectures
6. Workshops/conference
7. Industrial Visits
8. Internships
9. Inplant Training

2021-22

S.No	Gap	Action Taken	Date-Month-Year	Resource Person with Designation	% of students	Relevance to POs, PSOs
1	Airplane Avionics Integration	Guest Lecture on Integrated Avionic System	16/12/2021	Mr. R. Ramesh Babu, RayDynamics Ltd.	90	PO1,PO3,PO5, PO6,PO10,PO11,PO12
2	AI application in UAVs	Technical Seminar on Applications of Drones and HAPS and Possible role of AI / Robotics	17/12/2021	Dr K Ramachandra	94	PO1,PO3,PO4, PO5,PO6,PO10,PO11,PO12
3	Pilot Skill Development	Hands on Training in Flight Simulator	17/12/2021	Mr. R. Ramesh Babu	94	PO1,PO3,PO4, PO5,PO6,PO10,PO11,PO12
4	Role of Aviation in Defence	Industrial Visit to Exhibition of Defence Products for General Public & Students to Commemorate AZADI KA AMRIT MAHOTSAV,Bengaluru	18/12/2021	DRDO	92	PO1,PO2,PO3, PO5,PO6,PO10,PO11,PO12
5	Manufacturing of Gas Turbine Components	Technical Seminar on Practical aspects of Gas Turbine Design Process	23/12/2021	Mr. Vinod S Choudhari	59	PO5,PO6,PO7, PO8,PO10,PO11,PO12
6	Industrial Software Packages	Webinar on Awareness on Designing Software in Aerospace Engineering	19/01/2022	Mr. T. Vijay	66	PO1,PO2,PO3, PO4,PO5,PO6, PO10,PO11,PO12
7	Sustainable Development in Airport	Inaugural ceremony of Flight Simulator and Technical talk on Infrastructure and Sustainability focus areas at Airport	16/02/2022	Mr. S. Lakshmi narayanan	92	PO1,PO2,PO3, PO5,PO6,PO7, PO8,PO9,PO10,PO11,PO12
8	Life Skill	Motivational Speech	26/02/2022	Mr. O.R. Ashwin Chandar	67	PO6,PO7,PO8, PO9,PO10,PO11,PO12
9	Problem Solving and Intellectual Skill Enhancement	Innovative Projects Contest – National Science Day Celebration	08/03/2022	Dr.P.Theerthamalai, Dean,CoE	65	PO1,PO2,PO3, PO4,PO5,PO6, PO10,PO11, PO12
10	Life Skill	Awareness session on Healthy Youth – Healthy Planet –World Health Day Celebration	07/04/2022	Dr.R. Prema	86	PO5,PO6,PO10,PO11,PO12
11	Employability Enhancement in Design	Career Guidance Program on Aerospace Design	12/04/2022	Mr.Shashank Ravat	86	PO5,PO6,PO10,PO11,PO12
12	ISRO accomplishments and Futuristic challenges	Seminar on Accomplishments in Space research and Applications – Global and Indian Scenario	19/04/2022	Dr.G.Raju	76	PO5,PO6,PO10,PO11,PO12
13	Knowledge on Commercial Pilot License	Webinar on Career Prospects and Challenges in Airlines –International Pilot Day Celebration	26/04/2022	Captain Vasundara Rajanna	75	PO1,PO2,PO3, PO6,PO10,PO11,PO12
14	UAV Design	Technical talk on Career Prospects and Hands on training in UAV Design	13/05/2022	Mr. Pritam Ashutosh Sahu	67	PO1,PO2,PO3, PO4,PO5,PO6, PO10,PO11, PO12
15	Hyopermesh and ANSYS	Technical training on Aerospace Vehicle Design Tools	27/05/2022	Mr. M. Sivaramraj	66	PO1,PO2,PO3, PO4,PO5,PO6, PO10,PO11,PO12
16	Propeller theory	Engine cut sections inauguration & Technical talk on Jet Engines	01/06/2022	Dr.K.Ramachandra & Dr. S V Ramanamurty	92	PO1,PO2,PO3, PO4,PO5,PO6,PO10,PO11,PO12
17	Satellite Radio Station Working	Technical seminar on Space Communication- A practical Perspective	10/06/2022	Mr. B. A. Subramani	64	PO1,PO2,PO3, PO4,PO5,PO6,PO10,PO11,PO12
18	Employability Enhancement in Aerospace Sectors	Webinar on Internship. Project and Job Opportunities for Aerospace Students	12/01/2022	Mrs. R. Srinithya	70	PO5,PO6,PO7, PO8,PO10,PO11,PO12

2020-21

S.No	Gap	Action Taken	Date-Month-Year	Resource Person with Designation	% of students	Relevance to POs, PSOs
1	Advanced Flight Management System	Webinar on “ARINC 702A Advanced Flight Management Computer System	8/8/2020	Mr S Ramesh Raju	58	PO1,PO2,PO3, PO4,PO5,PO6, PO11,PO12
2	Cubesat	Webinar on “State of the Art of Small Satellites & A Student-run Cubesat Program at Nanyang Technological University	22/8/2020	Mr. S. Shanmugasundaram	65	PO1,PO2,PO3, PO5,PO6,PO10, PO11,PO12
3	SeaPlane and Hovercraft	Seaplane and Hovercraft - Indian Seacoast & lakes	15/10/2020	Dr. K. Ramachandra	65	PO1,PO2,PO3, PO4,PO5,PO6, PO10,PO11,PO12
4	STK Software	Systems Tool Kit - Software	27/11/2020	Mr. Dhanis Abdul Khader	83	PO1,PO2,PO3, PO10,PO11,PO12
5	Guidance and sensors in Army	Evolution of FLV, Guidance and Sensors since II World War	12/12/2020	Dr. Achintya Krishna Sarkar	67	PO7,PO8,PO9, PO10,PO12
6	Futuristic Electronics in Aviation	Introduction to Advanced Electronics in Aviation	29/12/2020	Mr. R. Ramesh Babu	70	PO8,PO9, PO10,PO11, PO12
7	Nanocomposites	Damage Prediction on Nanocomposites after high velocity impact	22/05/2021	Dr. P S. Venkatanarayanan	70	PO1,PO2,PO3, PO4,PO5 ,PO9, PO10,PO11, PO12
8	HAM radio station	Aviation/Aerospace - BE Different /Hobby Corner / HAM Radio	29/05/2021	Mr. Kalayana Raman N	75	PO5,PO6,PO7, PO8,PO9, PO10,PO11,PO12
9	Morphing wing aerodynamics	Design Perspectives in Morphing Wings	04/06/2021	Gautham Vigneswar P N	70	PO1,PO2,PO3, PO4, PO10,PO11, PO12
10	NavIC& GNSS performance analysis	Indian NavIC and Other GNSS - Research Analysis and Challenges	05/06/2021	Dr. Naveenkumar Perumalla	90	PO1,PO2,PO3, PO4,PO10,PO11, PO12
11	Nanomaterial storage	Nanomaterials for Energy and Storage Applications	12/06/2021	Dr. S. Kalpana	80	PO1,PO2,PO3, PO4,PO5, PO9, PO10,PO11, PO12
12	Shock reflections	Flow Through variable area ducts and influence of shockwaves	16/06/2021	Mr. Ramakrishna Madhira	90	PO1,PO2,PO3, PO4,PO5,PO6, PO7,PO8,PO9
13	Awareness on space collaboration	The view from Space: Competitive Collaboration for Space Development	24/06/2021	Mr. Luwanga Christopher	90	PO6,PO7,PO8, PO9,PO10,PO11,PO12
14	Airworthiness	Safety and Airworthiness in Aviation	17/06/2021	Shri. P. Jayapal	80	PO5,PO6,PO7, PO8,PO9, PO10,PO11, PO12

2019-20

S.No	Gap	Action Taken	Date-Month-Year	Resource Person with Designation	% of students	Relevance to POs, PSOs
1	UAV in Future	Seminar on “Small UAV’s – Growing Opportunities in Universities	17/10/2019	Dr. G. Ramesh Former Scientist, NAL	97	PO7,PO8,PO9, PO10,PO12
2	Educadd	Educadd Seminar	12/11/2019	Mr.Sunil Educadd Representative	97	PO8,PO9, PO10,PO11,PO12
3	UAV design	Seminar on Design and Development of UAV’s	22/11/2019	Mr.N.Balachandran Rtd. Scientist G, ADE	97	PO1,PO2,PO3,PO10,PO11,PO12
4	Porpellant preparation	Workshop on Rocket Propellant Preparation	23/11/2019	Mr.M.Ravi Shankar Expleo Technologies India Pvt. Ltd.	99	PO1,PO2,PO3,PO4,PO5 ,PO9, PO10,PO11,PO12
5	Aircraft Icing and Deicing	Aircraft Icing and its Effects	02/03/2020	Dr.L.Prince Raj (IIEST, Shibpur)	95	PO1,PO2,PO3,PO10,PO11,PO12
6	Nano composites	Webinar on “Composite materials and their applications”	18/5/2020	Mr.Charles G Martin, Aerospace Structures - Domain Expert BridgeNow Academy	95	PO1,PO2,PO3,PO10,PO11,PO12
7	Skill Enhancement	Webinar on “Career Opportunities for Aeronautical Engineering Graduates”	19/5/2020	Dr.Kishore kumar Bramah	95	PO5,PO6,PO7, PO8,PO9, PO10,PO11,PO12
8	Missile Aerodynamics	Missile Aerodynamics - Webinar	20/05/2020	Dr.P.Theerthamalai	95	PO1,PO2,PO3, PO4, PO10,PO11, PO12
9	Advanced CFE	CFD and its Applications - Webinar	22/05/2020	Dr.S.K.Maharana	95	PO1,PO2,PO3, PO4, PO10,PO11, PO12
10	Life Skill	Webinar on “POST COVID-19 Challenges & Opportunities for Aerospace Engineering”	29/5/2020	Padma Shri Dr. Mylswamy Annadurai Vice President – Tamilnadu State Council for science & Technology Former Director-ISRO Satellite Centre (URSC)	95	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO12
11	Futuristic space systems	Webinar on “Emerging Global Trends In Space Systems”	1/6/2020	Padma Shri R.M.Vasagam Former Director, ISRO, Bangalore Former Vice-Chancellor, Anna University, Chennai	95	PO5,PO6,PO7,PO8,PO9, PO10,PO11,PO12
12	Satellite navigation in future	Webinar on “Satellite Navigation-Past, Present and Future”	08/06/2020	Prof.P.Soma Former Deputy Director – Navigation systems Area, ISTRA	95	PO1,PO2,PO3,PO4, PO8,PO9, PO10,PO11,PO12
13	AI&ML	Webinar on “AI & ML for Aerospace Engineering	14/06/2020	Dr.U. Selvakumar N-Side, Senior Data Science Consultant, Noesis Solutions, ML Development Engineer, Belgium	95	PO6,PO7,PO8,PO9, PO10,PO11,PO12
14	Ionospheric weather prediction	Webinar on “Ionospheric Forecasting models for Global Navigation Satellite System Users	15/06/2020	Dr.D.Venkata Ratnam Professor KLEF Deemed to be University, Guntur, Andhra Pradesh	95	PO5,PO6,PO7,PO8,PO9, PO10,PO11,PO12
15	Industrial Structural engineering	Structural Design & Analysis with application in offshore and marine industry	27/06/2020	Mr.P.Bernard Adaikalaraj Senior Engineer Keppel Marine and Deep Water Technology	95	PO1,PO2,PO3,PO10,PO11,PO12
16	Biology in Engineering	Webinar on “Challenges on Healthcare Field – Research Perspective”	18/07/2020	Dr S Mythili	95	PO8,PO9,PO10,PO11,PO12

2.2 Teaching - Learning Processes (100) Total Marks 100.00

2.2.1 Describe processes followed to improve quality of Teaching & Learning (25)

Institute Marks : 25.00

The department prepares the academic calendar in accordance with the Visvesvaraya Technological University calendar of events and Institutional calendar which include the working days, holidays, internal assessments dates, practical exam dates, schedule of workshops, seminars, industrial visit, sports day, cultural day and the last working days of the semester and submitted to the principal for the approval of the Management.

The academic calendar is well planned and the same is displayed in the notice boards for the benefits of the students. The department conducts internal assessments as per the institutional calendar as centralized internal test based on the procedure and regulations of VTU and as per the schedule of the academic calendar.

The following deliberate the compliance of Continuous Internal Evaluation with Academic Calendar:

Academic Calendar: HODs and Faculty is conducted at the beginning of each semester. Regular meetings of HOD with members of the faculty are conducted to develop academic plans based on the number of available days.

Class and Lab Time Table: Time Table Coordinator of each department prepares the time table as per the guidelines of VTU for the number of credit hours for each subject and the academic calendar prior to the beginning of the semester. Time Table is displayed on notice boards of every department. As far as laboratory classes as concerned, lab manuals are prepared for each laboratory and distributed to the students.

Course Files and Lecture Plan: Each member of the faculty maintains the lesson plan and course file which are reviewed by the respective HOD and the Principal. Mentors ensure good attendance and class performance. Specific teaching strategies aids such as assignment, class test, quiz, group discussions etc are conducted which supports for the effective delivery and the betterment performance of the students throughout the semester. Industrial visits/Educational tours are conducted every year according to the syllabus of the course.

Internal Examination: The internal tests are conducted generally after every 30 working days to monitor the progress of the students. Three internal assessments are conducted for each semester. The QP of Internal exam is prepared by faculties and is approved by the HoDs. The internal examination is evaluated with unbiased and transparent. In addition to the regular subject classes, the institution also organizes special lectures, workshops and seminars by inviting experts from various fields to share their knowledge and experiences with the students.

Academic Monitoring: The HoD of the each department monitors on course coverage, student attendance and assignment for every subject. After each internal examination, results and the performance are discussed in class committees and department meetings to evaluate and remedial measures are then initiated to raise their academic performance. Parents are informed about the performance of students by phone, email etc., and parent- teacher meetings are convened during each semester.

Students Feedback and Corrective Action: The feedback on Teaching-Learning process will be collected three times in a semester from the students and corrective actions if any will be taken and documented.

Slow Learners and Advanced Learners: The institution has a well-structured counseling / mentoring system to assess the learning levels of the student through the Induction / Orientation program organized by the institution for the fresher students. The institution analysis the student's learning ability in the initial stage based on class XII scores and the entrance test. Subsequent year, academic performance, level of attention, involvement in debates, and mid semester evaluations are adopted to make further judgments in later years of their studies. The students are considered as Slow learners if they score marks below 50% of the total CIE marks, Assignment marks, and Semester End Examinations. The students who have obtained marks more than 75% are considered as Advanced Learners. Mentors observations play a vital role which supplements the individual observations of the student's.

Bridge Courses: For the students joining under the lateral entry system (diploma holders joining the second-year engineering course), the institution offers special coaching, bridge programs and peer guidance, especially for Mathematics.

Remedial Classes: are conducted with an aim to improve the academic performance of the slow learners.

Classes for Arrear Students: The faculty identifies the Arrear students after the results obtained from University on the basis of performance. The mentors motivate the students to perform better. Extra coaching classes are provided by the concerned faculty members to enhance their academic performance.

Advanced Learners: are encouraged to participate and present papers in various Seminars/ Conferences/ Workshops/ Inter Collegiate Competitions. They are encouraged to participate in various inter collegiate cocurricular activities such as debates, Problem Solving, design competitions etc. Meritorious students from every semester in the respective departments are provided along with a certificate of merit. They are also encouraged to participate in a wide range of activities through student clubs/forums. Also, those students got CGPA of 8.5 and more were encouraged to apply for B.E Honors Degree.

Teaching Learning Methods:

1. Experiential Learning

1.1 Students are encouraged to take up project work involving latest technologies and use of latest software. Different problems are investigated to a reasonable level by the final year students under the guidance of project guides, within the time frame of the University.

1.2 For Real time exposure students are encouraged to participate in inter-collegiate and state level paper presentation and other competitions.

1.3 Field visits and Surveys are arranged in academically significant areas.

1.4 Industrial visits are organized to academically significant industries to provide exposure to industrial work culture.

1.5 Guest lecture by eminent experts from industry and academics are organized to supplement the teaching process and provide experiential learning.

2. Participative Learning

2.1 Students are encouraged to participate in professional societal activities like IEI, ISTE, IETE, etc.,

2.2 The college organizes activities to promote(i) the spirit of Team work through NSS camps, (ii) social responsibility through Red Cross, village Adoption, Tree plantation, Swachh Bharat and Health awareness camp, to help the students learn to lead life as a team for Social and community welfare.

2.3 Students are encouraged to take MOOCs (Massive Open Online Courses) offered by premier institutions of the country. They include online lectures, demonstration and interaction through web sessions.

2.4 Lab work and workshops are conducted as individual and group work under the supervision of the faculty members.

3. Problem solving Methodology

3.1 To develop logical thinking and practical knowledge among the students, case study method is adopted in teaching learning process. This will enhance problem solving ability.

3.2. All questions in the internal tests are based on analysis and reasoning. Free internet access in the library and WI-FI facilities in campus promotes the habit of self-learning and discussion.

3.3 Assignments and Quizzes are given at the end of each unit.

3.4 Students are involved in the Research activities, product design and development conducted in each Department under the guidance of research scholars, to get knowledge about emerging area and help them to develop research orientation.

3. ICT Tools

The faculty members use various ICT enabled tools to enhance the quality of teaching learning like,

1.Google classroom is used to manage and post course related information- learning material, quizzes, lab submissions and evaluations, assignments, etc.

2.Virtual labs are used to conduct labs through simulations.

3.Online drawing tools like concept maps, mind maps, are used to perform student centric activities.

4.The PPTs are enabled with animations and simulations to improve the effectiveness of the teaching learning process.

5.The online learning environments are designed to train students in open problem-solving activity.

6. Interactive Digital Board for better understanding of problems and problem solving skills.

7.Lab manuals are mailed to students well in advance the experiment is performed.

8.Online quizzes and polls are regularly conducted to record the feedback of the students.

9.To teach mathematical subjects in online mode, teachers have used various online tools like- whiteboard in Microsoft teams, Jamboard in Google meet, etc ICT tools complete the traditional teaching – learning methods, and institution encourages innovative methods for enriching the learning experience.

ICT enables teaching-learning process is supported with regular practical sessions, access digital library, online courses (MOOC, NPTEL, etc.,), online journals, online test, use of LCD projectors for seminars and workshops, productive use of educational videos.

ICT has helped to improve the communication skills of the students and thereby acquire proficiency in listening, speaking, reading and writing skills.

ICT Tools and Resources available: Microsoft Teams, Google Sites - Google Docs, Google Sheets, Google Slides, Google Drawings, Google Forms, and Google Keep, Google Classroom, Plickers, Screencast-o-matic, think link, E-Resources and Techniques Used: NPTEL, Library e-book / Journal, Springer online e-Journal, ASME online e-Journals, ProQuest, Edx.org., Turnitin Plagiarism checker software.

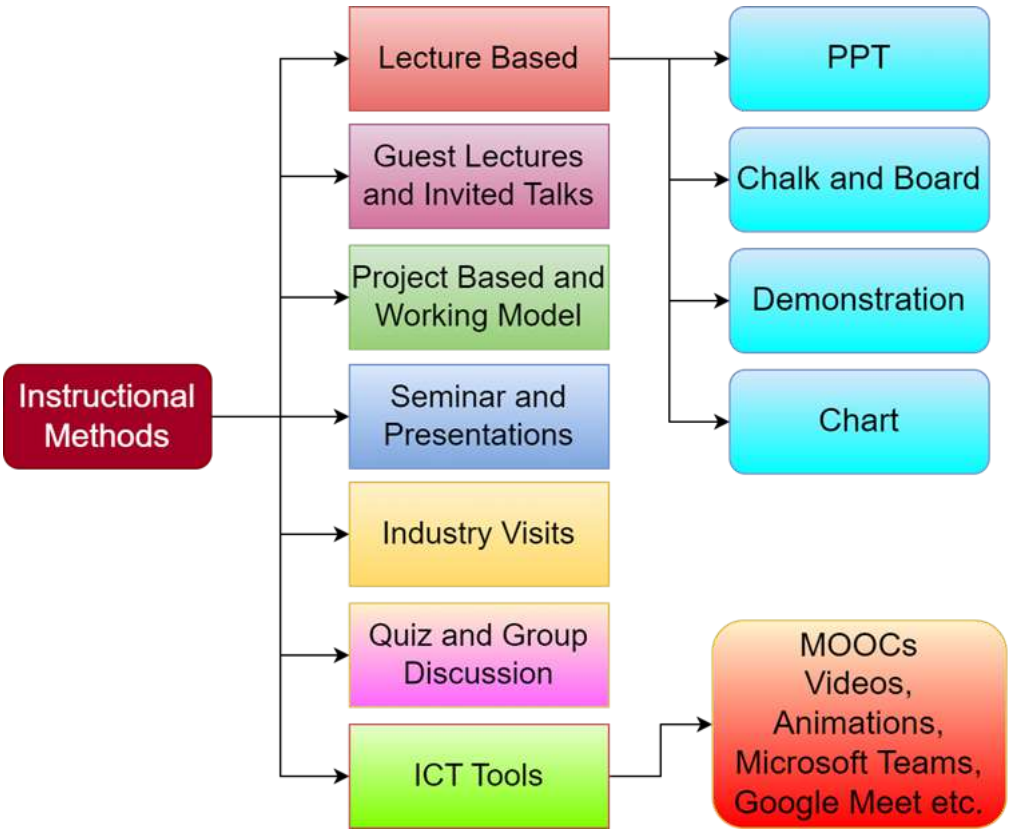


Fig 2.2 Teaching Learning Process (Methods)

CLASS CONDUCTED PROOF

Name of the Faculty: Mrs Roohi

Subject Name: 18AS43 AEROSPACE STRUCTURES – I

Academic year: 2020-2021 (EVEN SEMESTER)

Semester/Year: 4th semester /2nd year

Platform Used: Microsoft Teams

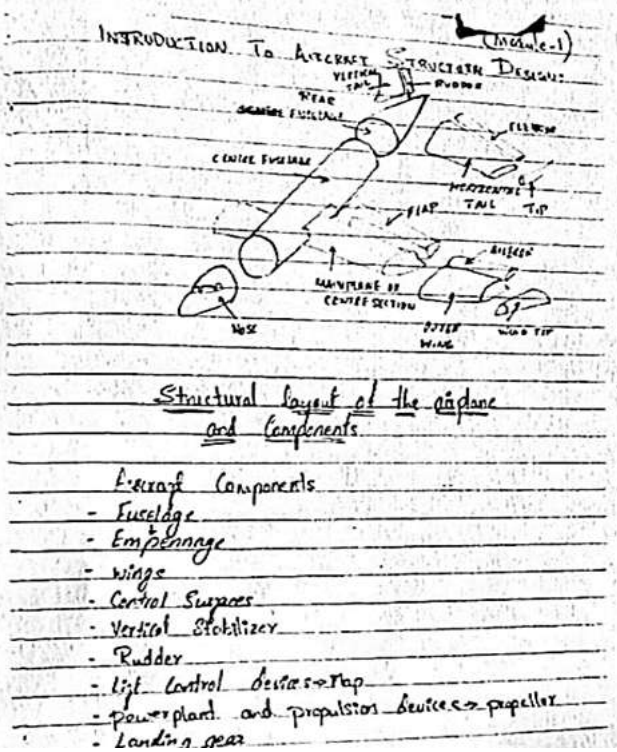


Fig. 2.3 Online Class (ICT Usage)

ACS COLLEGE OF ENGINEERING

DEPARTMENT OF AEROSPACE ENGINEERING

CALENDER OF EVENTS EVEN SEMESTER APRIL – AUGUST 2021

Week No	Month	MON	TUE	WED	THU	FRI	SAT	No of Working Days	Activities
1	APRIL	19	20	21	22	23	24	06	
2	APRIL/MAY	26	27	28	29	30	1	05	MAY 1st – May day
3	MAY	3	4	5	6	7	8	06	
4	MAY	10	11	12	13	14	15	04	MAY 13th – Ramzan MAY 14th – Basava Jayanthi
5	MAY	17	18	19	20	21	22	06	*MAY 19th - Webinar on Applications of AI in Aerospace Engineering* *MAY 22nd - Webinar on Damage Prediction on Nanocomposites after high velocity impact*
6	MAY	24	25	26	27	28	29	06	MAY 24th ,25th & 26th – First IA *MAY 28th - Webinar on 3D High Flow Computations* *MAY 29th - Webinar on Aviation/Aerospace - BE Different /Hobby Corner / HAM Radio*
7	MAY/JUNE	31	1	2	3	4	5	06	*JUN 4th - Webinar on Design Perspectives in Morphing Wings* *JUN 5th - Webinar on Indian NavIC and Other GNSS - Research Analysis and Challenges*
8	JUNE	7	8	9	10	11	12	06	*JUN 12th - Webinar on Nanomaterials for Energy and Storage Applications*
9	JUNE	14	15	16	17	18	19	06	*JUN 16th - Webinar on Flow Through variable area ducts and influence of shockwaves* *JUN 17th - Webinar on Safety and Airworthiness in Aviation* *JUN 19th - Webinar on Non Planar Wing concept of commercial Aircraft*
10	JUNE	21	22	23	24	25	26	06	*JUN 24th - Webinar on the view from Space: Competitive Collaboration for Space Development*
11	JUNE/JULY	28	29	30	1	2	3	06	JUN 28th, 29th & 30th – Second IA *JUL 2nd – Webinar on Role of Engineers in Indian Armed Forces*
12	JULY	5	6	7	8	9	10	06	
13	JULY	12	13	14	15	16	17	06	JUL 15th, 16th & 17th – Third IA
14	JULY	19	20	21	22	23	24	06	JUL 20th - Bakrid
15	JULY	26	27	28	29	30	31	06	
16	AUG	2	3	4	5	6	7		

Commencement of ODD Semester 13.09.2021
I Internal Test –24th, 25th & 26th of May 2021
II Internal Test – 28th, 29th & 30th of June 2021
III Internal Test – 15th, 16th & 17th of July 2021
Last working day for 4th , 6th & 8th Semester: 07.08.2021

Event Coordinator

HOD

Department of Aerospace Engineering
ACS College of Engineering
207, Kambipura, Mysore Road

Fig.2.4. Department Academic Calendar

ACS COLLEGE OF ENGINEERING

Kambipura, Bangalore - 74

DEPARTMENT OF AEROSPACE ENGINEERING

Lesson Plan

Course Title: Avionics
Course Faculty: Dr. R. Mukesh
Academic year: 2020-2021

Course Code: 17AS71
Semester: VII
No of Credits: 04

Course Outcomes:

CO-1	Select the suitable data bus based on the application.
CO-2	Identify the suitable navigation systems.
CO-3	Distinguish the avionics system architecture

Module – 1

S. No	Date	No of Hours	Topics to be Covered	CO	PO	Mode of Delivery
1.	1.9.20	1	Introduction to Dept. Vision, Mission Statements	CO1	PO1, PO2, PO3 & PO4	BB
			Discussion on CO-PO attainments			
			Introduction about the Subject			
			Discussion about the Internal question paper Pattern			
			Introduction, Need for Avionics			
2.	3,4.9.20	1+2	Bus Bar, Split Bar, Special purpose cables	CO2		BB
3.	7.9.20	1	Electrical diagram & identification scheme	CO2		BB
4.	8,10.9.20	1+2	Circuit Controlling devices, power utilization	CO2		BB
5.	11.9.20	1	Application to avionics	CO1		PPT
6.	14.9.20	1	Need for Avionics in civil and military aircraft	CO1		BB
Total No of Hours		10				

Module – 2

S. No	Date	No of Hours	Topics to be Covered		PO	Mode of Delivery
1.	15.9.20	1	Gyroscope Vs Inertial platform	CO2	PO1, PO2, PO3 & PO4	PPT
2.	18.9.20	1	Structure of stable platform, INS	CO2		BB
3.	21.9.20	1	Inertial alignment	CO2		BB
4.	22.9.20	2	Inertial Interface system, Compass swing	CO2		PPT
5.	24.9.20	1	Fly by wire system concept and features	CO2		BB
6.	25,28.9.20	1+1	Pitch and roll rate command and response	CO2		BB
7.	29.9.20	1	Control laws	CO2		BB
8.	1.10.20	1	Frequency response of BW actuator, cooper Harper scale, redundancy & failure survival.	CO2		BB
9.	5.10.20	1	Common mode of failure & effect analysis	CO2		PPT
Total No of Hours		11				

Fig.2.5.A Lesson Plan

Module – 3

No	Date	No of Hours	Topics to be Covered	CO	PO
	6.10.20	1+1	Display units	CO2	PO1, PO2, PO3 & PO4
	8.10.20	1+1	Presentation, failure & annunciation	CO2	
	9.10.20	1	Display of air data	CO2	
	12.10.20	1	Typical avionics subsystems	CO2	
	13.10.20	1	Amplifier, oscillator	CO3	
	22.10.20	1	Aircraft communication system	CO3	
	23.10.20	1	Transmitter, receiver, antenna	CO3	
tal No of Hours		09			

Module – 4

	Date	No of Hours	Topics to be Covered	CO	PO
	27.10.20	1	Digital computers	CO2	PO1, PO2, PO3 & PO4
	29.10.20	1	Microprocessors	CO2	
	2.11.20	1+1	Memories	CO2	
	3.11.20	1	Control and display technologies	CO2	
	5,6.11.20	1+1	CRT,LED,LCD,EL	CO2	
	9.11.20	1	Plasma panel, Touch screen, DVI	CO2	
	10.11.20	1	MFDS, HUD, MFK	CO2	
	12.11.20	1	HOTAS	CO2	
tal No of Hours		10			

Module – 5

No	Date	No of Hours	Topics to be Covered	CO	PO
	13.11.20	1+1	Avionics equipment fit	CO2	PO1, PO2, PO3 & PO4
	17.11.20	1	Electrical data bus system	CO2	
	19.11.20	1	Communication systems	CO3	
	20.11.20	1+1	Navigation systems, flight control systems	CO3	
	30.11.20	1	Radar, electronic warfare & fire control,	CO3	
	1,3.12.20	1+1	Avionics system architecture, Data Bus	CO2	
	4.12.20	1	MIL-STD 1553 B	CO2	
tal No of Hours		10			

Faculty

HOD

Fig.2.5.B Lesson Plan

Fig 2.6. NPTEL Certification

2.2.2 Quality of internal semester Question papers, Assignments and Evaluation (20)

Institute Marks : 20.00

- The subject handling faculty prepares the Question paper and Evaluation Schemes in align with Cos and Blooms Taxonomy.
- The Head of the Department will verify and approve the Question Paper and Evaluation schemes. If it is Unsatisfactory, it will be modified.
- Subsequently, they create an evaluation plan and solution to the paper. The Head of Department then reviews and approves the question paper and evaluation plan.
- Throughout the semester, there will be three Internal Assessments. Based on the approved evaluation plan, the students will be given marks after their Bluebooks have been evaluated.
- After the completion of all three Internal Assessments, the faculty members will calculate the average of the scores and assess the CO attainment.

USN | | | | | | | | | | |

ACS

ACS College of Engineering, Bangalore
Affiliated to VTU, Accredited by NAAC with 'A' Grade, Accredited by NBA
ODD Semester BE Aerospace Engineering Department
INTERNAL ASSESSMENT - I

Max. Marks : 50 **SEM: V**
Duration : 1.5 Hours **Sub. Code : 18AS56**
Date : 26.11.2021 **Subject : Flight Mechanics**

Note: 1) Answer all Full Questions, selecting at least one questions from each MODULE/PART

Q.NO	QUESTION	MARKS	CO'S	RBTL
	Module 1			
1.	a) What is the need of ISA? b) Obtain the relationship between atmospheric properties and altitude in ISA.	10	CO1	L2
	(OR)			
2.	a) What are the forces and moments acting on aircraft? b) Define Degrees of Freedom. Explain the degrees of freedom of an airplane in space.	10	CO1	L1
	Module 1			
3.	Derive the conditions for minimum drag and minimum Power required in steady level flight.	20	CO1	L2
	(OR)			
4.	A steady level flight is flying at the speed of 'm' times the minimum drag speed, then prove that $D / D_{min} = ½ (m^2 + m^{-2})$.	20	CO1	L3
	Module 2			
5.	a) Define Neutral point of an airplane? b) Calculate the induced drag of an aircraft having the weight 2270 kg, wing span 15.25 m and velocity 145 kmph. Assume Span efficiency as 1.	20	CO2	L3
	(OR)			
6.	Explain the wing and tail contribution towards pitching moment of an aircraft about Centre of gravity.	20	CO2	L2

2.8. Sample Internal Assessment Question Paper

2.2.3 Quality of student projects (25)

Institute Marks : 25.00

1. For Mini Project work, the marks assigned by the CIE are determined by evaluating the Mini Project work Report, the quality of Project Presentation, and the Question and Answer session in the ratio of 50:25:25. The marks allotted for the Mini Project report will be the same for all the Batch mates according to VTU Regulations.

2. Project work is preferably organized Batch-wise, and each Batchs size must not exceed four students as per VTU Regulations. Project Work Phase-1s CIE Marks will be determined by evaluating the Project Work Phase-1 Report, the Project skill, and the Question and Answer session in the ratio of 50:25:25. The marks given for the Project report will be the same for all Batch mates according to VTU Regulations.
3. Similarly, the CIE Marks assigned for Project Work Phase-2 will be determined by evaluating the Project Work Phase-2 Report, the Project skill, and the Question and Answer session in the ratio of 50:25:25. The marks given for the Project report will be the same for all Batch mates according to VTU Regulations.

Students are encouraged to come up with novel ideas to execute in project work. Students are motivated to apply research fundings in various funding agencies such as KSCST, DRDO, DST, VTU etc. and Faculty guides the students to publish journals

2.2.4 Initiative related to industry interaction (15)

Institute Marks : 15.00

The department aims to motivate and enhance industry-academia collaboration by signing Mou's with reputed industries and organizations, providing in plant and implant training, value added courses by industry people, workshops, industrial visits, industry assisted Laboratories, project works and internships etc.

Table 2.2 List of Functional MoU's

S.No	Name of the Organization	Signed On	Validity/Duration
1	Memorandum of Understanding with "SS Technologies, Bangalore"	12th July 2019	3 Years
2	Memorandum of understanding with "Accord Software and Systems, Bangalore"	17th October 2019	5 Years
3	Memorandum of understanding with "SANDI, Bangalore"	24th January 2020.	5 Years
4	Memorandum of understanding with "EdgeOpt, Thanjavur"	4th February 2020.	5 Years
5	Memorandum of Understanding with "BridgeNow Academy, Bangalore"	08th June 2020	5 Years
6	Memorandum of Understanding with "Ray Dynamics, Coimbatore"	29th December 2020	5 Years
7	Memorandum of understanding with "Shanlax Journals, Madurai"	5th February 2021	5 Years
8	Memorandum of understanding with "Aerolance, Bangalore"	22nd June 2021	5 Years
9	Memorandum of understanding with "Barathi Enterprises, Chennai"	12th October 2021	5 Years
10	Memorandum of understanding with "Unique Lab Equipments, Chennai"	22nd September 2021	5 Years
11	Memorandum of understanding with "Cadmaxx Edtech Pvt Ltd, Bangalore"	25th November 2022	1 Year
12	Memorandum of understanding National Programme on Technology Enhanced Learning	2020	-
13	Memorandum of understanding with "Universiti Teknologi PETRONAS, Malaysia"	2021	-
14	Memorandum of understanding with "Space Applications Centre (SAC), ISRO"	19th January 2016	-

2.2.5 Initiative related to industry internship/summer training (15)

Institute Marks : 15.00

The completion of the Internship must be within the period specified in the Scheme of Teaching and Examination. The Internship should ideally take place at a reputable Industry/R&D organization/IT company/Government organization for a specific period, as mentioned in the Scheme of Teaching and Examination. The Department/college will select staff members to assist, guide, and supervise students during their internships.

Students must report their internship progress to their Guides regularly and seek their guidance. The Guide must keep a record of the candidates progress during their internships. Upon finishing their internships, students must submit a report with a completion certificate and attendance certificate to the Head of the Department, with the approval of both the Internal and External Guides.

There will be 40 marks for CIE and 60 marks for SEE. The minimum requirement for CIE Marks is 50% of the maximum marks. The internal guide will be the internal examiner for the SEE. The external Guide for the Internship will be the external examiner for the SSE. The internship examination will take place at the college, and the date will be set in consultation with the external Guide. The examiner will jointly award the SEE marks.

If the external Guide is unable to conduct the examination, the Principal/Chief Superintendent of the Institute will appoint a senior Faculty member from the Department to conduct the examination along with the Internal Guide. If the Internal Guide is not available due to unavoidable circumstances for the SSE examination, the Principal/Chief Superintendent of the respective institute will appoint a senior faculty member from the Department to conduct the examination.

Students are allowed to complete their internships anywhere in India or abroad. The University will not provide any financial assistance to any student for their Internship. The CIE Marks assigned for the Internship will be based on the evaluation of the Internship Report, Project Presentation skills, and Question and Answer session, with a ratio of 50:25:25, as per VTU Regulations.

3 COURSE OUTCOMES AND PROGRAM OUTCOMES (120)

Total Marks 120.00

Define the Program specific outcomes

3.1 Establish the correlation between the courses and the Program Outcomes (POs) and Program Specific Outcomes (PSOs) (20)

Total Marks 20.00

:

PSO1	Professional Skills Apply the knowledge of aerospace engineering in innovative, dynamic and challenging environment for design and development of flight/space vehicles through simulation, Programming skills and general-purpose CAE packages
PSO2	Practical implementation and Testing Skills Providing different types of in-house training and industry practice to fabricate, test and develop the products with more innovative technologies
PSO3	Successful Career and Entrepreneurship To prepare the students to become technocrats with broad aerospace knowledge for design and development of systems and subsystems for aerospace and associated fields

3.1.1 Course Outcomes(COs)(SAR should include course outcomes of one course from each semester of study, however, should be prepared for all courses and made available as evidence, if asked) (5)

Institute Marks : 5.00

Note : Number of Outcomes for a Course is expected to be around 6.

Course Name :	C2 34	Course Year :	2019-2020

Course Name	Statements
C2 34.1	Apply the basic knowledge & principles of aviation & spaceflight.
C2 34.2	Apply the concepts of fundaments of flight, basics of aircraft structures, aircraft & rocket propulsion and aircraft materials during the development of an aircraft
C2 34.3	Appreciate the complexities involved during development of flight vehicles.

Course Name :	C2 44	Course Year :	2019-2020

Course Name	Statements
C2 44.1	Apply the theory of velocity, acceleration and static force analysis to design of mechanisms.
C2 44.2	Design spur gears, gear train, balancing of rotating and reciprocating masses
C2 44.3	Apply governors and gyroscope

Course Name :	C3 55	Course Year :	2020-2021

Course Name	Statements
C3 55.1	Distinguish the conventional and modern control systems.
C3 55.2	Classify the aircraft systems.
C3 55.3	Categorize different types of aircraft instruments.

Course Name :	C3 62	Course Year :	2020-2021

Course Name	Statements
C3 62.1	Differentiate the FDM, FVM and FEM
C3 62.2	Perform the flow, structural and thermal analysis.
C3 62.3	Utilize the discretization methods according to the application.

Course Name :	C4 73	Course Year :	2021-2022

Course Name	Statements
C4 73.1	Carry out space mission analysis and design process
C4 73.2	Explain a spacecraft configuration.
C4 73.3	Apply the concepts of space craft attitude control and instrumentation

Course Name :	C4 82	Course Year :	2021-2022

Course Name	Statements
C4 82.1	Recognize the basic of cryogenic engineering.
C4 82.2	Identify the storage and instrumentation required for cryogenic liquids.
C4 82.3	Classify the types of cryogenic equipments.

3.1.2 CO-POmatrices of courses selected in 3.1.1(Six matrices to be mentioned; one per semester from 3rd to 8th semester) (5) Institute Marks : 5.00

1 . course name : C234

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C234.1	3	3	3	2	-	-	-	-	-	2	-	2
C234.2	3	3	3	2	-	-	-	-	-	2	-	1
C234.3	3	3	3	3	-	-	-	-	-	2	-	1
Average	**3.00**	**3.00**	**3.00**	**2.30**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.00**	**0.00**	**1.30**

2 . course name : C244

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C244.1	3	3	3	3	-	-	-	-	-	-	-	3
C244.2	3	3	3	3	-	-	-	-	-	-	-	3
C244.3	3	3	3	3	-	-	-	-	-	-	-	2
Average	**3.00**	**3.00**	**3.00**	**3.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.70**

3 . course name : C355

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C355.1	3	3	3	3	-	-	-	-	-	-	-	2
C355.2	3	3	3	3	-	-	-	-	-	-	-	1
C355.3	3	3	3	3	-	-	-	-	-	-	-	1
Average	**3.00**	**3.00**	**3.00**	**3.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.30**

4 . course name : C362

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C362.1	3	3	3	2	2	-	1	-	1	1	2	2
C362.2	3	3	3	2	2	-	1	-	1	1	2	1
C362.3	3	3	3	3	2	-	1	-	1	1	2	1
Average	**3.00**	**3.00**	**3.00**	**2.30**	**2.00**	**0.00**	**1.00**	**0.00**	**1.00**	**1.00**	**2.00**	**1.30**

5 . course name : C473

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C473.1	3	3	3	3	-	-	-	-	-	2	-	2
C473.2	3	2	2	2	-	-	-	-	-	2	-	1
C473.3	3	3	3	3	-	-	-	-	-	2	-	1
Average	**3.00**	**2.70**	**2.70**	**2.70**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.00**	**0.00**	**1.30**

6 . course name : C482

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C482.1	3	2	2	3	-	-	-	3	-	-	-	-
C482.2	3	2	3	2	-	-	-	2	-	-	-	-
C482.3	3	3	3	2	-	-	-	2	-	-	-	-
Average	**3.00**	**2.30**	**2.70**	**2.30**	**0.00**	**0.00**	**0.00**	**2.30**	**0.00**	**0.00**	**0.00**	**0.00**

1 . Course Name : C234

Course	PSO1	PSO2	PSO3
C234.1	2	2	2
C234.2	3	2	2
C234.3	3	2	2
Average	**2.70**	**2.00**	**2.00**

2 . Course Name : C244

Course	PSO1	PSO2	PSO3
C244.1	2	-	-
C244.2	3	-	-
C244.3	3	-	-
Average	**2.70**	**0.00**	**0.00**

3 . Course Name : C355

Course	PSO1	PSO2	PSO3
C355.1	2	2	2
C355.2	3	2	2
C355.3	3	2	2
Average	**2.70**	**2.00**	**2.00**

4 . Course Name : C362

Course	PSO1	PSO2	PSO3
C362.1	2	2	2
C362.2	3	2	2
C362.3	3	2	2
Average	**2.70**	**2.00**	**2.00**

5 . Course Name : C473

Course	PSO1	PSO2	PSO3
C473.1	3	2	2
C473.2	3	2	2
C473.3	3	2	2
Average	**3.00**	**2.00**	**2.00**

6 . Course Name : C482

Course	PSO1	PSO2	PSO3
C482.1	3	1	1
C482.2	3	1	1
C482.3	3	1	1
Average	**3.00**	**1.00**	**1.00**

3.1.3 - A Program level Course-PO matrix of all courses INCLUDING first year courses (10)

Institute Marks : 10.00

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C111	2.4	2.4	2	2.6	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C112	2.4	2	1.3	1.8	2	PO6	1.5	PO8	PO9	PO10	PO11	PO12
C113	2.8	PO2	2.4	PO4	PO5	PO6	2	PO8	PO9	PO10	PO11	PO12

C114	3	3	2.8	3	2.3	PO6	1.5	PO8	PO9	PO10	PO11	PO12
C115	1.4	3	3	2.4	2.8	PO6	2.6	PO8	2.2	3	2.4	PO12
C116	3	3	1	2	2	PO6	1.6	PO8	PO9	PO10	PO11	PO12
C117	3	PO2	1.5	PO4	PO5	PO6	2	PO8	PO9	PO10	PO11	2.5
C118	PO1	PO2	PO3	PO4	PO5	2.2	PO7	PO8	PO9	2.8	PO11	2.4
C121	2.8	2.8	2.4	3	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C122	3	2.6	2.2	2.6	3	PO6	3	PO8	PO9	PO10	PO11	PO12
C123	1.8	2.3	1.5	2	3	PO6	2	PO8	PO9	PO10	PO11	PO12
C124	2.8	PO2	2.4	PO4	PO5	PO6	2	PO8	PO9	PO10	PO11	1.4
C125	2.8	3	2.7	2.8	2.8	PO6	2	PO8	PO9	PO10	PO11	2.5
C126	1.8	2.3	1.5	2	3	PO6	2	PO8	PO9	PO10	PO11	1.8
C127	2.2	PO2	PO3	PO4	2.8	PO6	2.4	PO8	PO9	PO10	PO11	PO12
C231	2.4	2.4	2	2.6	1.8	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C232	3	2.7	2.3	2.7	3	PO6	PO7	PO8	PO9	PO10	1	PO12
C233	2.3	2.7	2.7	3	PO5	PO6	PO7	PO8	PO9	3	PO11	PO12
C234	3	3	3	2.3	PO5	PO6	PO7	PO8	PO9	2	PO11	1.3
C235	3	3	3	3	PO5	PO6	PO7	PO8	PO9	PO10	PO11	1.3
C236	2.3	2.3	3	3	1.7	PO6	1.3	PO8	PO9	PO10	PO11	2.7
C237	3	3	2.3	3	3	PO6	PO7	PO8	PO9	PO10	3	PO12
C238	3	3	3	3	2.3	PO6	PO7	PO8	PO9	PO10	3	PO12
C239	2.2	PO2	PO3	PO4	2.8	PO6	2.4	PO8	PO9	PO10	PO11	PO12
C241	2.4	2.4	2	2.6	2.6	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C242	2	2.3	2.3	2.3	2	1	PO7	PO8	PO9	PO10	PO11	3
C243	2.7	2.7	2	1	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C244	3	3	3	3	PO5	PO6	PO7	PO8	PO9	PO10	PO11	2.7
C245	3	3	3	3	PO5	PO6	PO7	PO8	PO9	PO10	PO11	2.3
C246	3	3	3	3	PO5	PO6	PO7	PO8	PO9	1.3	1.3	2
C247	3	3	2.3	2	3	PO6	PO7	PO8	PO9	PO10	2.3	PO12
C248	PO1	PO2	PO3	3	PO5	PO6	2.7	PO8	PO9	PO10	2.7	PO12
C249	1	PO2	PO3	PO4	PO5	2.3	PO7	2.7	PO9	PO10	PO11	PO12
C351	3	3	3	3	PO5	PO6	PO7	PO8	PO9	1.3	PO11	3
C352	2.3	3	2.7	1.7	1.7	PO6	PO7	PO8	PO9	PO10	PO11	3
C353	3	3	3	3	PO5	PO6	PO7	PO8	PO9	PO10	PO11	3
C354	2.7	2.3	3	1	PO5	PO6	PO7	PO8	PO9	PO10	PO11	1
C355	3	3	3	3	PO5	PO6	PO7	PO8	PO9	PO10	PO11	1.3
C356	2.3	2	2.3	2	1.7	PO6	PO7	PO8	PO9	PO10	PO11	2.3
C357	1.3	3	3	3	2.7	PO6	PO7	PO8	PO9	PO10	3	PO12
C358	1	3	1.3	2.7	2.3	PO6	PO7	PO8	PO9	PO10	2.3	PO12
C359	PO1	PO2	2	PO4	PO5	2.8	PO7	PO8	PO9	PO10	PO11	PO12
C361	1.7	2.3	2.3	2.7	2.7	1	PO7	PO8	PO9	PO10	PO11	3
C362	3	3	3	2.3	2	PO6	1	PO8	1	1	2	1.3
C363	2	2.7	2.7	3	PO5	PO6	PO7	PO8	PO9	PO10	PO11	3
C364	3	1.7	2.3	2.3	2	PO6	2	PO8	PO9	PO10	PO11	PO12
C365	3	3	3	2	PO5	PO6	2	PO8	2	2	PO11	2
C366	PO1	PO2	3	PO4	PO5	2.7	PO7	PO8	PO9	2.7	PO11	PO12
C367	1.3	3	3	3	2.7	PO6	PO7	PO8	PO9	PO10	3	PO12
C368	3	3	3	3	1.7	1.7	1	1	2	1.7	2.7	2.7
C471	3	3	3	2.3	PO5	PO6	PO7	PO8	PO9	2	PO11	1.3
C472	2	3	3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	2	PO12

C473	3	2.7	2.7	2.7	PO5	PO6	PO7	PO8	PO9	2	PO11	1.3
C474	3	3	3	2.3	PO5	PO6	PO7	PO8	PO9	2	PO11	1.7
C475	3	3	3	2.5	PO5	PO6	PO7	PO8	PO9	2	PO11	1.3
C476	1.3	3	3	3	3	PO6	PO7	PO8	PO9	PO10	3	PO12
C477	2	2.7	2.7	2.7	2.7	PO6	PO7	PO8	PO9	PO10	3	PO12
C478	3	3	3	3	1.7	1.7	1	1	2	1.7	2.7	2.7
C481	2	2.3	3	3	2.5	PO6	PO7	PO8	PO9	2	PO11	2.3
C482	3	2.3	2.7	2.3	PO5	PO6	PO7	2.3	PO9	PO10	PO11	PO12
C483	3	3	3	3	1.7	1.7	1	1	2	1.7	2.7	2.7
C484	PO1	3	PO3	3	1.7	1.7	1	1	PO9	1.7	PO11	2.7
C485	3	3	3	3	1.7	1.7	1	1	2	1.7	2.7	2.7

3.1.3 - B Program level Course-PSO matrix of all courses INCLUDING first year courses :

Course	PSO1	PSO2	PSO3
C232	3	1	1
C233	2	2	1
C234	2.7	2	2
C235	2.7	2	2
C236	1.3	2.7	2.7
C237	2	2	1
C238	2	2	1
C242	2.3	1.7	2.3
C243	1	1	PSO3
C244	2.7	PSO2	PSO3
C245	3	1.7	PSO3
C246	1.7	PSO2	PSO3
C247	2	2	1
C248	3	2	1
C351	1.3	2	1.7
C352	2.3	2.3	1.7
C353	3	PSO2	PSO3
C354	1	1	PSO3
C355	2.7	2	2
C356	1.7	1.5	1.7
C357	2	2	1
C358	2.7	1	2
C358	2.7	1	2
C361	2	PSO2	2
C362	2.7	2	2
C363	2	1.3	1.7
C364	2	PSO2	2
C366	3	PSO2	2
C367	2	PSO2	2
C368	3	2	3
C471	2.7	2	2
C472	2.7	PSO2	PSO3
C473	3	2	2
C474	2.7	2	2
C475	2.8	2	2

C476	3	1	2
C477	3	1	2
C478	3	2	3
C481	2	PSO2	2
C482	3	1	1
C483	3	2	3
C484	3	2	3
C485	3	2	3

3.2 Attainment of Course Outcomes (50) Total Marks 50.00

3.2.1 Describe the assessment processes used to gather the data upon which the evaluation of Course Outcome is based (10)

Institute Marks : 10.00

In Outcome-Based Education (OBE), the assessment of course outcomes is a critical component that involves direct and indirect assessment methods to measure student performance. The three levels of outcomes in OBE are Course Outcomes (CO), Program Outcomes (PO), and Program Specific Outcomes (PSO). These outcomes pertain to the cognitive (knowledge), psychomotor (skills), and affective (behavior) domains of the students learning experience throughout the program.

During the initial stage of OBE implementation, Course Outcomes (CO) for each course are established, considering the Program Outcome (PO) and other relevant criteria. At the conclusion of each course, the attainment of CO is evaluated through assessment to ensure successful completion. Assessment refers to one or more procedures implemented by the department to identify, gather, and analyze data for evaluating the attainment of Program Educational Objectives and Program Outcomes.

Attainment refers to the act or fact of achieving a desired standard or outcome in the pursuit of ones goals. It is commonly associated with academic achievement, as measured by internal evaluations or examination results.

Attainment of the COs can be measured directly and indirectly.

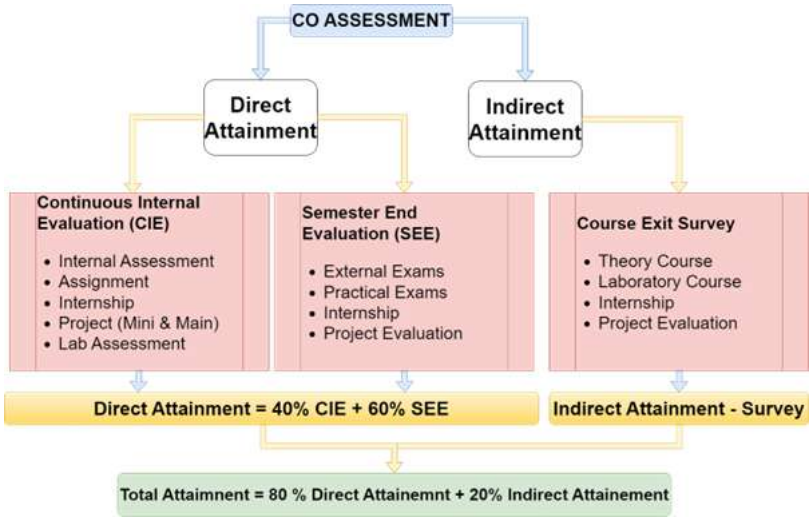


Figure 3.2.1.1 Course Outcome Attainment

Direct Attainment

Direct attainment is based on CIE and SEE is a measure of a students knowledge and skills as demonstrated through their performance. It can be determined by assessing the students performance in various evaluation instruments such as Continuous Internal Evaluation (CIE), assignments, quizzes, seminars, laboratory assessments, and Semester End Exams (SEE).

Assessment methods such as Continuous Internal Evaluation (CIE), assignments, quizzes, seminars, laboratory assessments, and Semester End Exams (SEE) provide a representative sampling of a students knowledge and skills and offer strong evidence of their learning.

To begin with, course outcomes are defined for each course, and the attainment target is set at the start of the semester. Three Internal assessments (IA) are conducted, which cover all Course Outcomes (CO). Each question in the IA test is mapped to the respective CO, and all IAs are assessed using rubrics to determine CO attainment. The average attainment for SEE is also calculated. Additionally, Technical Seminars, Projects, and Internships are mapped to Program Outcomes (PO) and Program Specific Outcomes (PSO), and rubrics are developed to assess the level of attainment.

The various tools which are used in CO attainment are listed below.

Table.3.2.1.1: Tools for Direct Assessment of CO

Sl. NO	Direct Assessment for CO	Description
1	Continuous Internal Evaluation (CIE)	Under VTU regulations, the Continuous Internal Evaluation (CIE) marks for each theory course are a combination of the marks assigned for tests and assignments. Marks prescribed for the tests are 30, while that for assignments is 10. The test marks are based on three tests typically conducted at the end of the fifth, tenth, and fourteenth week of each semester. Each test is worth a maximum of 30 marks, and the final test marks are the average of the three tests. The remaining 10 marks are awarded based on the evaluation of assignments, unit tests, and written quizzes that contribute to covering some of the course or program outcomes. The final CIE marks awarded are the sum of these two components, with a maximum total of 40 marks.
2	Lab Assessment	As per the VTU regulations, for practical courses, the Continuous Internal Evaluation (CIE) marks are based on laboratory journals/records (30 marks for continuous evaluation based on the conduct of experiment, viva, and report writing) and one practical test (10 marks) to be conducted at the end of the semester.
3	Seminars	As per the VTU regulations, for Technical Seminars, the CIE marks shall be 100. In the case of seminars in the final year, the CIE marks shall be based on the evaluation at the end of the VIII semester by a committee consisting of the Head of the concerned Department and two senior faculty members of the Department, one of whom shall be the seminar guide. The seminar topic shall be selected from the emerging technical areas only.

Sl. NO	Direct Assessment for CO	Description
4	Project	According to VTU regulations, the CIE marks in the case of final year projects are based on evaluations by a committee consisting of the Head of the concerned Department and two senior faculty members, one of whom is the project guide. The project work is preferably done in batches of no less than four students and consists of two phases, Phase-1 and Phase-II. The CIE marks awarded for project work in both phases are based on evaluations of the project work, report, project presentation skills, and question and answer sessions. Viva-voce examinations for project work are conducted batch-wise.
5	Semester End Examination (SEE)	According to VTU regulations, the SEE (University examination) covers the entire course syllabus and questions are set from each module, with a choice confined to the concerned module only. A minimum of 35% of the maximum marks prescribed in the University examination and a total of 40% of the maximum marks (i.e., prescribed for SEE and CIE) including the CIE marks secured by the student are required to pass a theory course.
6	Practical examination	According to VTU regulations, the total marks for a course are divided into 40 marks for CIE (Continuous Internal Evaluation) and 60 marks for SEE (Semester End Exam). The minimum requirement for CIE marks is 50% of the maximum marks, which means a student must score at least 20 out of 40 marks in CIE to be eligible to write SEE. The minimum passing marks for a course are 35% of the maximum marks in SEE and a total of 40% of the maximum marks (i.e., prescribed for SEE and CIE) including the CIE marks secured by the student.
7	Internship	According to VTU regulations the Internship shall be completed during the period specified in the Scheme of Teaching and Examinations. 1) The internship shall preferably be at an industry and R and D organization/company/ Government organization of significant repute for a specified period as mentioned in Scheme of Teaching and Examinations. 2) The Department/college shall nominate staff member/s to facilitate, Guide and supervise students under internship. 3) The students shall report progress of the internship to the Guide in regular intervals and seek his/her advice. The Guide shall maintain the progress record of the candidates undergoing internship. 4) After the completion of Internship, students shall submit a report with completion certificate and attendance certificate to the Head of the Department with the approval of both internal and external Guides. 5) There shall be 40 marks for CIE and 60 marks for SEE. The minimum requirement of CIE marks shall be 50% of the maximum marks.

Indirect Attainment

Indirect attainment methods such as course exit surveys are conducted which reflect on the students learning. They assess their own opinions or thoughts about the student's knowledge or skills.

Table.3.2.1.2: Tools for Indirect Assessment of CO

S.NO	Indirect Assessment Method	Description
1	Course Exit Survey	A course exit survey is a survey that is conducted at the end of a course to evaluate the effectiveness of the course and the efficiency of student services offered by the institutions. It is a tool to obtain feedback from students and to measure their satisfaction with various aspects related to the Course. The survey usually covers the teaching methods, the course content, and the overall experience of the student.

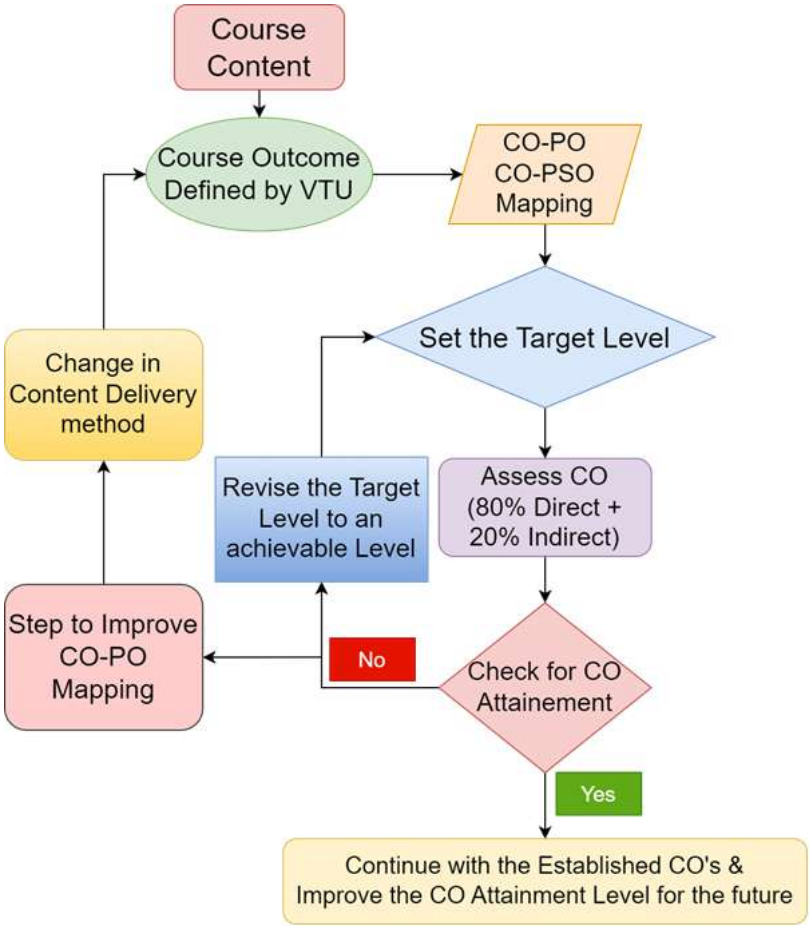


Figure 3.2.1.2 Course Outcome Attainment and Improvement Process

Table.3.2.1.3: Course Outcome Assessment methodology, tools and frequency

Sl. No.	Assessment Method	Assessment frequency	Assessment Tool	In charge
1	Internal Assessment Test	Three per semester	Student's performance in internal assessment booklets.	Faculty Incharge
2	Assignment	Three per semester	Student's performance in Assignment	Faculty Incharge
3	Lab Assessment	Periodically after completion of each experiment	Student's performance in conducting experiments.	Faculty Incharge
4	Semester End Examination	At the end of the semester	Student's performance in university exams.	University Evaluators
5	Practical Examination	At the end of the semester	Student's performance in conducting experiments during university exams.	University Evaluators
6	Internship	At the end of the semester	Student's during university exams.	University Evaluators
7	Project	During the 8^{th} semester	Student's Title, Involvement, Execution, and Reviews	Project Guide/ Project Coordinator
8	Project Work Viva- voce	At the end of the 8^{th} semester	Student's performance in university exams	University Evaluators

Course Outcome Attainment: Continuous Internal Assessment/ Semester End Exam/ Assignment/Quiz

Following procedure is followed for calculation of course outcomes attainment using MS Excel

Tool:-

- **Setting of Target Level-Semester End Examination.**

The target levels for measuring course outcomes attained through university examinations may be stated in terms of the percentage of students who score more than the university average marks or more, as selected by the program in the final examination.

Attainment Level 1(Slight): 60% students scoring more than University average percentage marks or set attainment level in the final examination.

Attainment Level 2(Moderate): 70% students scoring more than University average percentage marks or set attainment level in the final examination.

Attainment Level 3(Substantial): 80% students scoring more than University average percentage marks or set attainment level in the final examination.

To more accurately reflect the expected levels of proficiency for a particular Course Outcome (CO), the Course may include an additional intermediate level between target levels 1 and 2, as well as between target levels 2 and 3, in the Attainment Level. This approach can provide more granularity and specificity in defining the levels of proficiency expected of students.

Attainment is measured in terms of actual percentage of students getting set percentage of marks.

If targets are achieved then all the course outcomes are attained for that course. Program is expected to set higher possible targets for the upcoming years as a part of continuous improvement.

If targets are not achieved the program should put in place an action plan to attain the target in subsequent years.

- **Setting of Target Level- Continuous Internal Assessment.**

Target may be stated in terms of percentage of students getting more than class average marks or set by the program in each of the associated COs in the assessment instruments (tests, assignments, etc. as mapped with the COs)

Attainment Level 1(Slight): 60% students scoring more than 60% marks out of the relevant maximum marks.

Attainment Level 2(Moderate): 70% students scoring more than 60% marks out of the relevant maximum marks.

Attainment Level 3(Substantial): 80% students scoring more than 60% marks out of the relevant maximum marks.

To more accurately reflect the expected levels of proficiency for a particular Course Outcome (CO), the Course may include an additional intermediate level between target levels 1 and 2, as well as between target levels 2 and 3, in the Attainment Level. This approach can provide more granularity and specificity in defining the levels of proficiency expected of students.

Attainment is measured in terms of actual percentage of students getting set percentage of marks.

If targets are achieved, then the CO's are attained for that year. Program is expected to set higher targets for the following years as a part of continuous improvement.

If targets are not achieved the program should put in place an action plan to attain the target in subsequent years.

Course Outcome Attainment:

- **Direct Attainment of Course Outcomes:**
  - Weightage given to SEE: 60% Weightage given to CIE: 40%
- **CO Attainment for Continuous Internal Evaluation (CIE):**
  - CIE Attainment = 75% IA (30 marks)

    + 25% Assignments/Quiz/Other Activities (10 marks)
- **Indirect Attainment of Course Outcomes**
  - Course Exit Survey- for individual Courses
- **CO Attainment Evaluation:**
  - CO Attainment = 80% Direct Attainment + 20% Indirect Attainment

3.2.2 Record the attainment of Course Outcome of all courses with respect to set attainment levels (40) Institute Marks : 40.00

Table 3.2.2.1 Attainment of Course Outcome

COURSE CODE	COURSE NAME	Course Attainment in Scale of 3	Percentage of Attainment
C111	Calculus and Linear Algebra	2.03	68%
C112	Engineering Physics	2.27	76%
C113	Basic Electrical Engineering	2.34	78%
C114	Elements of Civil Engineering and Mechanics	2.26	75%
C115	Engineering Graphics	1.82	61%
C116	Engineering Physics Laboratory	2.67	89%
C117	Basic Electcial Engineering Laboratory	2.68	89%
C118	Technical English I	2.65	88%
C121	Advanced Calculus and Numerical Methods	1.84	61%
C122	Engineering Chemistry	2.10	70%
C123	C Programming for Problem Solving	2.48	83%
C124	Basic Electronics	2.35	78%
C125	Elements of Mechanical Engineering	2.16	72%
C126	C Programming Laboratory	2.69	90%
C127	Technical English II	2.69	90%
C231	Transform calculus Fourier series and numerical technique	1.71	57%
C232	Aero-Thermodynamics	2.04	68%
C233	Mechanics of Materials	1.74	58%
C234	Introduction To Aerospace Engineering	2.36	79%
C235	Mechanics of Fluids	1.51	50%
C236	Aerospace Materials	1.58	53%
C237	Measurements and Metrology Lab	3.00	100%
C238	Material Testing Lab	3.00	100%
C239	Vyavaharika Kannada (Kannada for communication)/ Aadalitha Kannada (Kannada for Administration)	2.77	92%
C241	Complex Analysis, Probability and statistical method	1.69	56%
C242	Aerodynamics - I	1.85	62%
C243	Aerospace Structures-I	1.68	56%
C244	Mechanisms And Machine Theory	1.82	61%
C245	Introduction To Space Technology	2.44	81%
C246	Composite Materials	1.73	58%
C247	Energy Conversion & Fluid Mechanics lab	3.00	100%
C248	Computer Aided Aircraft Drawing Lab	2.67	89%
C249	Constitution of India, Professional Ethics and Cyber Law	3.00	100%
C351	Management and Entrepreneurship	1.58	53%
C352	Aerodynamics - II	2.28	76%
C353	Aerospace Propulsion	2.01	67%
C354	Aerospace Structures –II	1.77	59%
C355	Aircraft Systems & Instrumentation	1.79	60%
C356	Flight Mechanics	2.35	78%
C357	Aerodynamics Lab	3.00	100%
C358	Propulsion Lab	3.00	100%
C359	Environmental Studies	2.67	89%

COURSE CODE	COURSE NAME	Course Attainment in Scale of 3	Percentage of Attainment
C361	Missiles And Launch Vehicles	1.83	61%
C362	Computational Fluid Dynamics	1.87	62%
C363	Finite Element Method	2.68	89%
C364	Introduction To Astrophysics And Space Environment	2.77	92%
C365	Non-Conventional Energy Sources	1.31	44%
C366	Design, Modelling & Analysis Lab	3.00	100%
C367	Aerospace Structures Lab	2.70	90%
C368	Mini-project	2.64	88%
C471	Space Mechanics	2.24	75%
C472	Control Engineering	2.24	75%
C473	Space Vehicle Design	1.86	62%
C474	Global Navigation Satellite Systems	2.41	80%
C475	Energy And Environment	2.95	98%
C476	Space Simulation Lab	3.00	100%
C477	Avionics and Instrumentation Lab	3.00	100%
C478	Project Work Phase - I	2.34	78%
C481	Spacecraft Systems	2.09	70%
C482	Cryogenics	1.88	63%
C483	Project Work Phase - II	2.35	78%
C484	Technical Seminar	2.50	83%
C485	Internship	2.62	87%

3.3 Attainment of Program Outcomes and Program Specific Outcomes (50) Total Marks 50.00

3.3.1 Describe the assessment tools and processes used for measuring the attainment of each of the Program Outcomes and Program Specific Outcomes (10)

Institute Marks : 10.00

The Program Outcomes (POs) outline the knowledge and skills that students are expected to possess upon completion of their academic program. These POs must be achieved through both Direct and Indirect assessment methods. The successful attainment of these POs is indicative of a students performance.

There are two factors that contribute towards attainment of Program Outcomes; they are,

- **Direct method and**
- **Indirect method.**

The Process used for measuring the Attainment of each of the POs and PSOs and the tools used were shown in Figure B.3.4

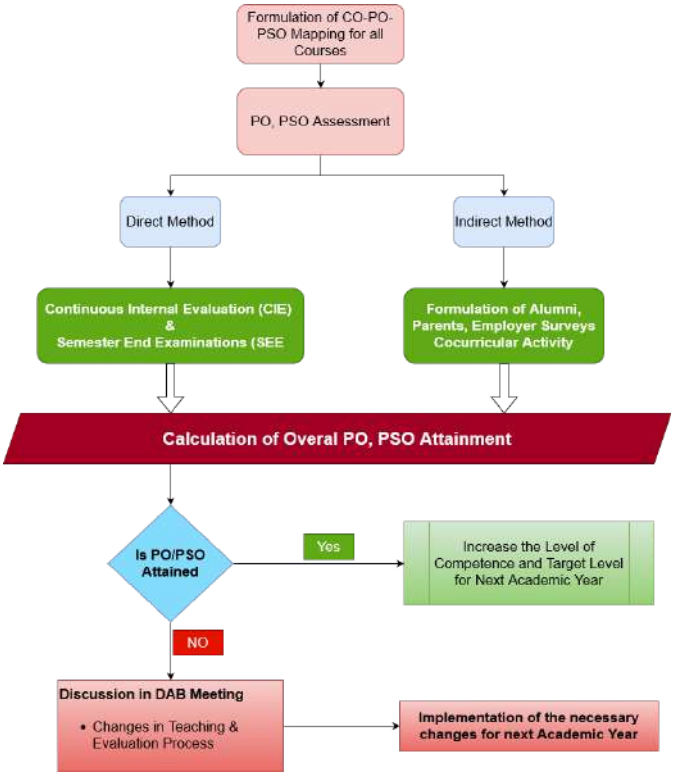


Figure3.3.1.1: The Process of PO/PSO Attainment

Continuous Internal Evaluation (CIE) is regularly conducted to assess the effectiveness of course delivery for both theory and laboratory subjects. Additionally, the University administers semester examinations (SEE) for theory and laboratory subjects. The 2018-2019 scheme of evaluation for VTU allocates 60 marks for SEE and 40 marks for CIE.

Indirect assessment methods such as surveys by the stakeholders to reflect on the students learning. They assess opinions or thoughts about the graduate's knowledge or skills and they are valued by different stakeholders.

Indirect assessment tools are listed below.

● Student Exit Survey

● Alumni Feedback Survey

● Parents Feedback Survey

● Employers Feedback Survey

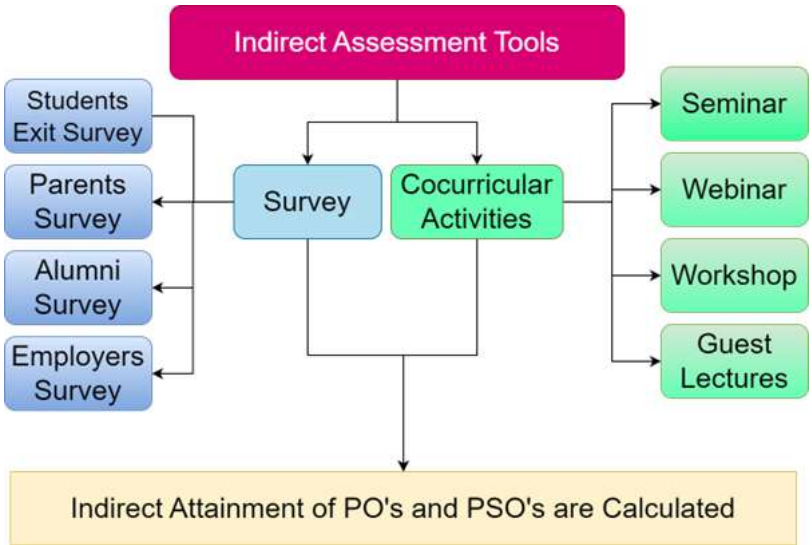


Figure 3.3.1.2: Indirect Assessment Tools used for measuring the attainment of PO PSO

The Indirect Assessment Tools, their description and the frequency of conduction is listed as below:

Table 3.3.1 Tools for Indirect Assessment of PO

S.NO	Indirect Assessment Method	Description	Frequency
1	Student Exit Survey	An Exit survey is conducted to gather feedback from students who are in their final semester of graduation. The survey includes questionnaires that are mapped to Program Outcomes (POs) to evaluate how well the students have achieved the POs. The survey can also highlight areas where the institution should focus more or fewer resources to improve the learning and development experience of the students.	End of VIII semester
2	Alumni Survey	The purpose of the Alumni Survey is to gather information that can be used to enhance the college experience for future students. The survey aims to identify strengths in existing programs and areas that require further development. It includes questions related to the satisfaction of the alumni with regards to academic programs, personal and intellectual growth, student services, and career preparation.	Once in Year
3	Parents survey	Collecting feedback from parents is a useful way to gain insights into their perceptions of an educational institutions infrastructure facilities, quality of education, and placement activities. These suggestions can help the institution identify areas for improvement and make changes that benefit students and the institution.	Once in Semester
4	Employers Survey	Employer feedback is a method of indirect assessment that involves collecting information about graduates skills, capabilities, and performance in comparison to other employees of the organization they are working in. This feedback is obtained from the employers or corporate partners who have hired the graduates and can be used to assess the effectiveness of the program in preparing students for the workforce and to identify areas for improvement.	Once in Year
5	Co-curricular	Co-curricular activities such as seminars, webinars, workshops, guest lectures, and other such events can help in attaining Program Outcomes (POs) by providing students with opportunities to enhance their knowledge, skills, and attitudes. Here are some ways in which co-curricular activities can help in attaining POs: 1. **Knowledge Enhancement:** Co-curricular activities can help in attaining POs related to knowledge by providing students with the opportunity to learn about current trends, issues, and developments in their field of study. Seminars, webinars, and guest lectures by experts can provide valuable insights and knowledge. 2. **Skill Development:** Workshops and hands-on training sessions can help in attaining POs related to skills by providing students with practical training in areas such as communication, teamwork, problem-solving, and technical skills. 3. **Attitude Development:** Co-curricular activities can also help in attaining POs related to attitude development by providing opportunities for students to develop positive attitudes such as curiosity, open-mindedness, adaptability, and a willingness to learn. Overall, co-curricular activities can play a significant role in enhancing the learning experience and helping students attain POs by providing them with diverse opportunities to learn and grow.	Minimum 5 per semester

Sample Collection of Continous Internal Evaluation Sheet.

Faculty: Dr. R. Mukesh
Subject: Introduciton to Aerospace Engineering
Subject Code: 18AS34 Year/ Sem: 02/03

Academic Year:2019-20

Internal Assessment Details — **CO Attainment Through Internal Assessment (Applicable Document Blue Books & Question Paper)**

Student Name	USN	Test	TEST 1						ASS 1	TEST 2						ASS 2	TEST 3						ASS 3
		Q. No.	1	2	3	4	5	6		1	2	3	4	5	6		1	2	3	4	5	6	
		CO's	CO1	CO1	CO1	CO1	CO2	CO2	CO3	CO2	CO2	CO2	CO2	CO2	CO2	CO2	CO2	CO3	CO2	CO2	CO2	CO3	CO3
Abhishek B J	1AH18AS001			9		8	8		10		8		10	12		10				16			10
Achuth reddy H M	1AH18AS002		4		8		8		10		7	14			14	10	9			16		14	10
Ananth padmanabha K	1AH18AS003			7	15		12		10		9	17			17	10	9			16		16	10
Aniket ostwal	1AH18AS004		5			11	12		10		7		17		17	10	8		18			16	10
Anil kumar	1AH18AS005			9	16			19	10		7		18		18	10	9			17		15	10
Anurag A salunkhe	1AH18AS006			9	20		20		10	10		20			18	10		10		18		16	10
Anusha R	1AH18AS007			10		20	20		10		9		16		16	10		9	19			18	10
Apoorva R	1AH18AS008			6	15		15		10		9		15	18		10		10	6			17	10
Bhuvan Akash S	1AH18AS009			9		15	15		10		9		16		15	10		9	18			18	10
Chandan K M	1AH18AS011		5		16			19	10		8		16		16	10	9		18			17	10
Chandru B M	1AH18AS012			8	12		20		10		9		19	18		10	9		19		20		10
Gangotri J V	1AH18AS013			9	15		18		10		9		16		16	10	9		18			17	10

Direct Method of SEE- CO Attainment Calculation

CO- EXTERNAL ATTAINMENT

Faculty: Dr. R. Mukesh Subject: IAE

Subject Code: 18AS34 AY = 2019-20

External Marks (VTU)

Sl. No	USN NO	NAME	Int.	Ext.	Total
1	Abhishek B J	1AH18AS001	25	9	34
2	Achuth reddy H M	1AH18AS002	25	24	49
3	Ananth padmanabha K	1AH18AS003	34	37	71
4	Aniket ostwal	1AH18AS004	33	38	71
5	Anil kumar	1AH18AS005	36	34	70
6	Anurag A salunkhe	1AH18AS006	38	42	80
7	Anusha R	1AH18AS007	35	36	71
8	Apoorva R	1AH18AS008	33	29	62
9	Bhuvan Akash S	1AH18AS009	31	33	64

Indirect Method - Course Exit Survey - CO Attainemnt

CO- INDIRECT METHOD

Faculty: Dr. R. Mukesh Subject: IAE

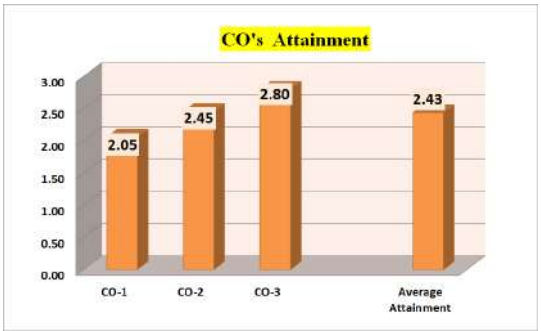
Subject Code: 18AS34 AY = 2019-20

Course Exit Survey

Sl. No	USN NO	NAME	CO1	CO2	CO3
1	Abhishek B J	1AH18AS001	2	3	1
2	Achuth reddy H M	1AH18AS002	3	3	1
3	Ananth padmanabha K	1AH18AS003	1	2	3
4	Aniket ostwal	1AH18AS004	2	3	1
5	Anil kumar	1AH18AS005	3	2	3
6	Anurag A salunkhe	1AH18AS006	3	1	1
7	Anusha R	1AH18AS007	2	2	2
8	Apoorva R	1AH18AS008	1	1	3
9	Bhuvan Akash S	1AH18AS009	3	3	1
10	Chandan K M	1AH18AS011	3	3	2
11	Chandru B M	1AH18AS012	1	2	3
12	Gangotri J V	1AH18AS013	1	3	3

Direct Method of CIE - CO Attainment Calculation

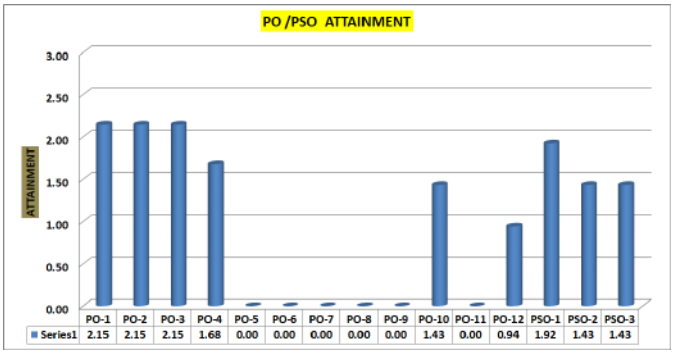
Attainment	IA	Ass	SCALE OF 3
CO-1	0.58	1.00	2.05
CO-2	0.76	1.00	2.45
CO-3	0.91	1.00	2.80
Average Attainment	0.75	1.00	2.43



Direct Method - PO Attainement

CO - PO/PSO Mapping																Table 3.3.1
CO attainment			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	2.03	CO-1	3	3	3	2						2		2	2	2	2
CO2	2.16	CO-2	3	3	3	2						2		1	3	2	2
CO3	2.25	CO-3	3	3	3	3						2		1	3	2	2

PO Attainment (Direct Process)															
	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
CO-1	6.09	6.09	6.09	4.06	0.00	0.00	0.00	0.00	0.00	4.06	0.00	4.06	4.06	4.06	4.06
CO-2	6.49	6.49	6.49	4.32	0.00	0.00	0.00	0.00	0.00	4.32	0.00	2.16	6.49	4.32	4.32
CO-3	6.76	6.76	6.76	6.76	0.00	0.00	0.00	0.00	0.00	4.51	0.00	2.25	6.76	4.51	4.51
Average	6.45	6.45	6.45	5.05	0.00	0.00	0.00	0.00	0.00	4.30	0.00	2.83	5.77	4.30	4.30
Scale of 3	2.15	2.15	2.15	1.68	0.00	0.00	0.00	0.00	0.00	1.43	0.00	0.94	1.92	1.43	1.43



3.3.2 Provide results of evaluation of PO&PSO (40)

Institute Marks : 40.00

PO Attainment

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C111	1.65	1.54	1.29	1.67	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C112	1.81	1.48	0.94	1.29	1.54	PO6	1.16	PO8	PO9	PO10	PO11	PO12
C113	2.18	PO2	1.86	PO4	PO5	PO6	1.53	PO8	PO9	PO10	PO11	1.11
C114	2.33	2.33	2.12	2.33	1.73	PO6	1.15	PO8	PO9	PO10	PO11	PO12
C115	0.88	1.82	1.82	1.38	1.69	PO6	1.52	PO8	1.23	1.82	1.37	PO12
C116	2.31	2.67	2.14	2.14	2.14	PO6	1.42	PO8	PO9	PO10	PO11	PO12
C117	2.68	PO2	1.34	PO4	PO5	PO6	1.79	PO8	PO9	PO10	PO11	2.23
C118	PO1	PO2	PO3	PO4	PO5	1.95	PO7	PO8	PO9	2.46	PO11	2.11
C121	1.71	1.7	1.48	1.84	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C122	2.1	1.82	1.53	1.83	2.1	PO6	2.1	PO8	PO9	PO10	PO11	PO12
C123	1.41	1.84	1.23	1.62	2.48	PO6	1.65	PO8	PO9	PO10	PO11	PO12
C124	2.19	PO2	1.87	PO4	PO5	PO6	1.54	PO8	PO9	PO10	PO11	1.1
C125	2.03	2.16	1.91	2.03	2.05	PO6	1.69	PO8	PO9	PO10	PO11	1.70
C126	1.57	2.01	1.34	1.79	2.69	PO6	1.79	PO8	PO9	PO10	PO11	1.57
C127	1.43	PO2	PO3	PO4	2.15	PO6	2.33	PO8	PO9	PO10	PO11	PO12
C231	1.39	1.35	1.14	1.47	1.02	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C232	2.04	1.78	1.58	1.81	2.04	PO6	PO7	PO8	PO9	PO10	0.68	PO12
C233	1.32	1.53	1.53	1.74	PO5	PO6	PO7	PO8	PO9	1.74	PO11	PO12
C234	2.36	2.36	2.36	1.85	PO5	PO6	PO7	PO8	PO9	1.58	PO11	1.03
C235	1.51	1.51	1.51	1.51	PO5	PO6	PO7	PO8	PO9	PO10	PO11	0.68
C236	1.23	1.28	1.58	1.58	0.86	PO6	0.71	PO8	PO9	PO10	PO11	1.4
C237	3	3	2.33	3	3	PO6	PO7	PO8	PO9	PO10	3	PO12
C238	3	3	3	3	2.33	PO6	PO7	PO8	PO9	PO10	3	PO12
C239	1.48	PO2	PO3	PO4	2.24	PO6	2.41	PO8	PO9	PO10	PO11	PO12

C241	1.36	1.34	1.12	1.45	1.48	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C242	1.22	1.45	1.45	1.46	1.24	0.66	PO7	PO8	PO9	PO10	PO11	1.85
C243	1.48	1.54	1.00	0.63	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C244	1.82	1.82	1.82	1.82	PO5	PO6	PO7	PO8	PO9	PO10	PO11	1.60
C245	2.44	2.44	2.44	2.44	PO5	PO6	PO7	PO8	PO9	PO10	PO11	1.90
C246	1.73	1.73	1.73	1.73	PO5	PO6	PO7	PO8	PO9	0.78	0.78	1.16
C247	3	3	2.33	2.00	3	PO6	PO7	PO8	PO9	PO10	2.33	PO12
C248	PO1	PO2	PO3	2.67	PO5	PO6	2.37	PO8	PO9	PO10	2.38	PO12
C249	1	PO2	PO3	PO4	PO5	2.33	PO7	2.67	PO9	PO10	PO11	PO12
C351	1.58	1.58	1.58	1.58	PO5	PO6	PO7	PO8	PO9	0.67	PO11	1.58
C352	1.80	2.28	2.01	1.31	1.25	PO6	PO7	PO8	PO9	PO10	PO11	2.46
C353	2.01	2.01	2.01	2.01	PO5	PO6	PO7	PO8	PO9	PO10	PO11	2.01
C354	1.58	1.37	1.77	0.59	PO5	PO6	PO7	PO8	PO9	PO10	PO11	0.65
C355	1.79	1.79	1.79	1.79	PO5	PO6	PO7	PO8	PO9	PO10	PO11	0.80
C356	1.83	1.57	1.83	1.57	1.31	PO6	PO7	PO8	PO9	PO10	PO11	1.83
C357	1.33	3.0	3	3	2.67	PO6	PO7	PO8	PO9	PO10	3	PO12
C358	1	3	1.33	2.67	2.33	PO6	PO7	PO8	PO9	PO10	2.33	PO12
C359	PO1	PO2	1.78	PO4	PO5	2.38	PO7	PO8	PO9	PO10	PO11	PO12
C361	1.01	1.43	1.43	1.62	1.62	0.60	PO7	PO8	PO9	PO10	PO11	1.83
C362	1.87	1.87	1.87	1.46	1.25	PO6	0.62	PO8	0.62	0.62	1.25	0.82
C363	1.71	2.35	2.35	2.68	PO5	PO6	PO7	PO8	PO9	PO10	PO11	2.68
C364	2.77	1.49	2.12	2.14	1.84	PO6	1.79	PO8	PO9	PO10	PO11	PO12
C365	1.31	1.31	1.31	0.87	PO5	PO6	0.87	PO8	0.87	0.87	PO11	0.87
C366	PO1	PO2	3	2.67	PO5	PO6	PO7	PO8	PO9	2.67	PO11	PO12
C367	1.20	2.70	2.70	2.7	2.4	PO6	PO7	PO8	PO9	PO10	2.7	PO12
C368	2.64	2.64	2.64	2.64	1.46	1.46	0.88	0.88	1.76	1.46	2.34	2.34
C471	2.24	2.24	2.24	1.72	PO5	PO6	PO7	PO8	PO9	1.49	PO11	1.01
C472	1.50	2.24	2.24	PO4	PO5	PO6	PO7	PO8	PO9	PO10	1.50	PO12
C473	1.86	1.66	1.66	1.66	PO5	PO6	PO7	PO8	PO9	1.24	PO11	0.83
C474	2.41	2.41	2.41	1.87	PO5	PO6	PO7	PO8	PO9	1.60	PO11	1.34
C475	2.95	2.95	2.95	2.46	PO5	PO6	PO7	PO8	PO9	1.97	PO11	1.23
C476	1.33	3.00	3	3	3	PO6	PO7	PO8	PO9	PO10	3	PO12
C477	2	2.67	2.67	2.67	2.67	PO6	PO7	PO8	PO9	PO10	3.0	PO12
C478	2.34	2.34	2.34	2.34	1.32	1.3	0.78	0.78	1.56	1.3	2.1	2.08
C481	1.40	1.64	2.09	2.09	1.70	PO6	PO7	PO8	PO9	1.40	PO11	1.63
C482	1.88	1.47	1.68	1.46	PO5	PO6	PO7	1.46	PO9	PO10	PO11	PO12
C483	2.35	2.35	2.35	2.35	1.32	1.29	0.78	0.78	1.57	1.29	2.11	2.07
C484	PO1	2.5	PO3	2.5	1.39	1.38	0.83	0.83	PO9	1.38	PO11	2.21
C485	2.62	2.62	2.62	2.62	1.45	1.46	0.87	0.87	1.75	1.46	2.32	2.33

PO Attainment Level

Course	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**	**PO11**	**PO12**
CO Attainment	1.90	2.04	1.94	1.97	1.94	1.61	1.53	1.36	1.48	1.56	2.12	1.67
Direct Attainment	1.86	2.06	1.94	1.97	1.90	1.48	1.42	1.18	1.34	1.46	2.18	1.58
InDirect Attainment	2.06	1.94	1.94	1.95	2.09	2.11	1.99	2.08	2.05	1.95	1.89	2.01

PSO Attainment

Course	**PSO1**	**PSO2**	**PSO3**
C232	2.04	0.68	0.63
C233	1.16	1.16	0.56
C234	2.12	1.58	1.58
C235	1.34	1.01	1.01

C236	0.70	1.39	1.41
C237	2	2	1.0
C238	2	2	1
C242	1.43	1.04	1.45
C243	0.56	0.56	PSO3
C244	1.66	PSO2	PSO3
C245	2.44	1.32	PSO3
C246	0.98	PSO2	PSO3
C247	2	2	1
C248	2.67	1.78	0.89
C351	0.67	1.06	0.88
C352	1.74	1.8	1.25
C353	2.01	PSO2	PSO3
C354	0.59	0.60	PSO3
C355	1.59	1.2	1.2
C356	1.31	1.18	1.31
C357	2.00	2	1
C358	2.67	1.00	2.00
C361	1.22	PSO2	1.22
C362	1.67	1.25	1.25
C363	1.78	1.22	1.46
C364	1.84	PSO2	1.84
C366	3	PSO2	2
C367	1.8	PSO2	1.8
C368	2.64	1.76	2.64
C471	1.97	1.49	1.49
C472	2.02	PSO2	PSO3
C473	1.86	1.24	1.24
C474	2.14	1.60	1.60
C475	2.7	1.97	1.97
C476	3	1	2
C477	3	1	2
C478	2.34	1.56	2.34
C481	1.40	PSO2	1.4
C482	1.88	0.63	0.63
C483	2.35	1.57	2.35
C484	2.50	1.66	2.50
C485	2.62	1.75	2.62

PSO Attainment Level

Course	**PSO1**	**PSO2**	**PSO3**
CO Attainment	1.92	1.52	1.60
Direct Attainment	1.89	1.37	1.50
InDirect Attainment	2.06	2.12	2.02

4 STUDENTS' PERFORMANCE (150) Total Marks 107.90

:

Table 4.1

Item (Information to be provided cumulatively for all the shifts with explicit headings, wherever applicable)	2022-23 (CAY)	2021-22 (CAYm1)	2020-21(CAYm2)	2019-20(CAYm3)	2018-19(CAYm4)	2017-18 (CAYm5)	2016-17 (CAYm6)
Sanctioned intake of the program(N)	60	60	60	60	60	60	0
Total number of students admitted in first year minus number of students migrated to other programs/ institutions plus No. of students migrated to this program (N1)	28	45	37	47	32	33	0
Number of students admitted in 2nd year in the same batch via lateral entry (N2)	0	1	1	0	3	0	0
Separate division students, If applicable (N3)	0	0	0	2	3	0	0
Total number of students admitted in the programme(N1 + N2 + N3)	28	46	38	49	38	33	0

Table 4.2

Year of entry	Total No of students admitted in the program (N1 + N2 + N3)	Number of students who have successfully graduated without backlogs in any semester/ year of study (Without Backlog means no compartment or failures in any semester/ year of study)			
		I year	II year	III year	IV year
2022-23 (CAY)	28	0	0	0	0
2021-22 (CAYm1)	46	22	0	0	0
2020-21 (CAYm2)	38	25	20	0	0
2019-20 (CAYm3)	49	30	25	22	0
2018-19 (LYG)	38	22	21	16	15
2017-18 (LYGm1)	33	24	22	22	22
2016-17 (LYGm2)	0	0	0	0	0

Table 4.3

Year of entry	Total No of students admitted in the program (N1 + N2 + N3)	Number of students who have successfully graduated in stipulated period of study) [Total of with Backlog + without Backlog]			
		I year	II year	III year	IV year
2022-23 (CAY)	28	0	0	0	0
2021-22 (CAYm1)	46	45	0	0	0
2020-21 (CAYm2)	38	37	37	0	0
2019-20 (CAYm3)	49	43	45	45	0
2018-19 (LYG)	38	32	38	38	31
2017-18 (LYGm1)	33	30	30	30	30
2016-17 (LYGm2)	0	0	0	0	0

4.1 Enrolment Ratio (20)

Total Marks 14.00

Institute Marks : 14.00

	N (From Table 4.1)	N1 (From Table 4.1)	Enrollment Ratio [(N1/N)*100]
2022-23 (CAY)	60	28	46.67
2021-22 (CAYm1)	60	45	75.00
2020-21 (CAYm2)	60	37	61.67

Average [(ER1 + ER2 + ER3) / 3] : 61.11

Assessment : 14.00

4.2 Success Rate in the stipulated period of the program (40)

Total Marks 26.23

4.2.1 Success rate without backlogs in any semester / year of study (25)

Institute Marks : 13.25

Item	Latest Year of Graduation, LYG (2018-19)	Latest Year of Graduation minus 1, LYGm1 (2017-18)	Latest Year of Graduation minus 2 LYGm2 (2016-17)
X Number of students admitted in the corresponding First year + admitted in 2nd year via lateral entry and seperated division, if applicable	38.00	33.00	0.00
Y Number of students who have graduated without backlogs in the stipulated period	15.00	22.00	0.00
Success Index [SI = Y / X]	0.39	0.67	0.00

Average SI [(SI1 + SI2 + SI3) / 3] : 0.53

Assessment [25 * Average SI] : 13.25

4.2.2 Sucess rate in stipulated period (15)

Institute Marks : 12.98

Item	Latest Year of Graduation, LYG (2018-19)	Latest Year of Graduation minus 1, LYGm1 (2017-18)	Latest Year of Graduation minus 2 LYGm2 (2016-17)
X Number of students admitted in the corresponding First year + admitted in 2nd year via lateral entry and seperated division, if applicable	38.00	33.00	0.00
Y Number of students who have graduated in the stipulated period	31.00	30.00	0.00
Success Index [SI = Y / X]	0.82	0.91	0.00

Average SI[(SI1 + SI2 + SI3) / 3]: 0.86

Assessment [15 * Average SI] : 12.98

Note : If 100% students clear without any backlog then also total marks scored will be 40 as both 4.2.1 & 4.2.2 will be applicable simultaneously.

4.3 Academic Performance in Third Year (15)

Total Marks 11.75

Institute Marks : 11.75

Academic Performance	CAYm3 (2019-20)	LYG (2018-19)	LYGm1 (2017-18)
Mean of CGPA or mean percentage of all successful students(X)	7.96	7.49	8.05
Total number of successful students(Y)	45.00	38.00	30.00
Totalnumber of students appeared in the examination(Z)	45.00	38.00	30.00
API [X*(Y/Z)]:	7.96	7.49	8.05

Average API [(AP1 + AP2 + AP3)/3] : 7.83

Assessment [1.5 * AverageAPI] : 11.75

4.4 Academic Performance in Second Year (15)

Total Marks 11.32

Institute Marks : 11.32

Academic Performance	CAYm2 (2020-21)	CAYm3 (2019-20)	LYG (2018-19)
Mean of CGPA or mean percentage of all successful students(X)	7.68	7.61	7.55
Total number of successful students (Y)	37.00	45.00	38.00
Total number of students appeared in the examination (Z)	38.00	45.00	38.00
API [X * (Y/Z)]	7.48	7.61	7.55

Average API [(AP1 + AP2 + AP3)/3] : 7.55

Assessment [1.5 * AverageAPI] : 11.32

4.5 Placement, Higher Studies and Entrepreneurship (40)

Total Marks 24.60

Institute Marks : 24.60

Item	LYG (2018-19)	LYGm1 (2017-18)	LYGm2 (2016-17)
Total No of Final Year Students(N)	38.00	30.00	0.00
No of students placed in the companies or government sector(X)	16.00	18.00	0.00
No of students admitted to higher studies with valid qualifying scores(GATE or equivalent State or National Level tests, GRE, GMAT etc.) (Y)	4.00	3.00	0.00
No of students turned entrepreneur in engineering/technology (Z)	0.00	0.00	0.00
x + y + z =	20.00	21.00	0.00
Placement Index [(X+Y+Z)/N] :	0.53	0.70	0.00

Average Placement [(P1 + P2 + P3)/3] : 0.62

Assessment [40 * Average Placement] : 24.60

Program Name :

Assessment Year Name : CAYm1

S.No	Student Name	Enrollment No	Employee Name	Appointment No
1	ANURAG A SALUNKHE	1AH18AS006	Focus Academy For Career Enhancement (FACE)	CN20220469/17-02-2022
2	ANUSHA R	1AH18AS007	Focus Academy For Career Enhancement (FACE)	CN20220480/17-02-2022
3	CHANDRU B M	1AH18AS012	Focus Academy For Career Enhancement (FACE)	CN20220434/17-02/2022
4	NAGARAJA M V	1AH18AS020	PreFlight Aviation Service	17-08-2023
5	PAREEKSHITH TG	1AH18AS023	Focus Academy For Career Enhancement (FACE)	CN20220470/17-02-2022
6	PRIYANKA L P	1AH18AS024	CAPEGEMINI	12-01-2022
7	RAKSHITH KUMAR G R	1AH18AS026	Focus Academy For Career Enhancement (FACE)	CN20220449/17-02-2022
8	SHREEKRISHNA P GANESHGUDI	1AH18AS028	BYJU'S	10-02-2022
9	SNEHA SINGH	1AH18AS029	INFOSYS	28-03-2022
10	SWETHA SHREE S	1AH18AS032	CSIR-NAL	3(27)1/2023-AI/16-02-2023
11	PRAJWAL P N	1AH19AS400	BYJU'S	10-02-2022
12	ABHILASH ANCHAN	1AH19AS402	BANGALORE AIRCRAFT INDUSTRIES PVT.LTD	27-09-2022
13	GANGOTRI J V	1AH18AS013	ETOE INTERCONNECTION PVT LTD.	23-01-2023
14	APOORVA R	1AH18AS008	GENMAX TECHNOLOGY LLP	12-12-2022
15	SUSHMITHA B	1AH18AS031	ANKIT AEROSPACE	18-01-2022
16	VIDYAKUMARI M N	1AH18AS037	UMLAUT	C2274819/27-02-2023

Assessment Year Name : CAYm2

S.No	Student Name	Enrollment No	Employee Name	Appointment No
1	ABHIRAMI.K	1AH17AS002	SONOVISION AETOS TECHNICAL SERVICES PVT.LTD	07-12-2021
2	AJAY YALEMELI	1AH17AS003	KUN SOLUTIONS	17-02-2021
3	ARPITHA.M B	1AH17AS007	IDC ENGINEERING INDA PVT LTD.	2021/2011494/16-12-2021
4	CHANDU.C P	1AH17AS010	HECTRONICS	26-06-2021
5	DHANSINGH BHANDARI.J	1AH17AS011	RAY DYNAMICS	04-10-2021
6	JAGADISH.J	1AH17AS013	PINAKA AEROSPACE SOLUTION PVT.LTD	03-12-2021
7	JIJI C JOY	1AH17AS015	TECH MAHENDRA	862644/2010224/ELTP/Rev I/10-01-2022
8	JIJIN P SAVYAR	1AH17AS016	RAY DYNAMICS	04-10-2021
9	M.ASHOK KUMAR	1AH17AS017	PINAKA AEROSPACE SOLUTION PVT.LTD	11-01-2022
10	MAHENDAR B S	1AH17AS018	Skiploop Labs Pvt Ltd	HRD/3T/20-21/10017404/12-07-2021
11	NITIN B L	1AH17AS021	Skiploop Labs Pvt Ltd	HRD/3T/20-21/10017401/12-07-2021
12	PRAJNA. H N	1AH17AS023	RAY DYNAMICS	04-10-2021
13	R.SAI BHUVAN	1AH17AS024	CAPGEMINI TECHNOLOGY SERVICES INDIA LIMITED	1435347
14	SANKEERTHANA.M	1AH17AS027	KUN SOLUTIONS	17-02-2021
15	SARVESH.J	1AH17AS029	KUN SOLUTIONS	17-02-2021
16	SIDHAPARA MITUL MUKESH BHAI	1AH17AS032	THERMAX BABCOCK & WILCOX ENERGY SOLUTIONS PRIVATE LIMITED	15-06-2021
17	TARUN K	1AH17AS037	Skiploop Labs Pvt Ltd	HRD/3T/20-21/10017402/12-07-2021
18	YUKTHASHREE.H M	1AH17AS040	TECH MAHENDRA	872867/2015701/ELTP/Rev I/21-01-2022

Assessment Year Name : CAYm3

No record exist(s)

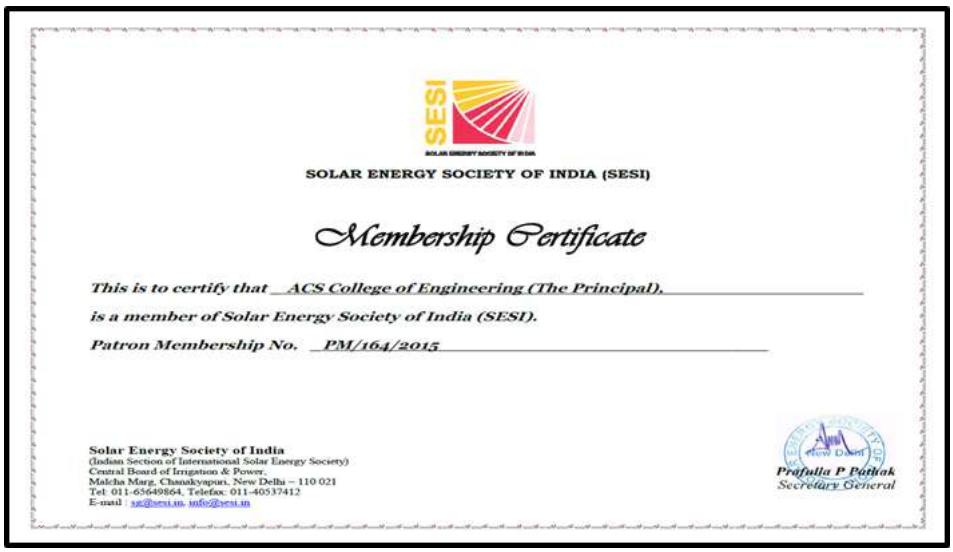
4.6 Professional Activities (20) Total Marks 20.00

4.6.1 Professional socities/ chapters and organizing engineering events (5)

Institute Marks : 5.00

Table B.4.6 PROFESSIONAL SOCIETIES

S.NO	Name of Professional Societies/Chapters	YEAR OF INSTITUTIONAL MEMBERSHIP ESTABLISHMENT
1	THE INDIAN SOCIETY FOR TECHNICAL EDUCATION (ISTE)	2010
2	THE INSTITUTION OF ENGINEERS (INDIA)	2015
3	SOLAR ENERGY SOCIETY OF INDIA (SESI)	2015
4	THE INDIAN SCIENCE CONGRESS ASSOCIATION	2015
5	COMPUTER SOCIETY OF INDIA	2015
6	THE INSTITUTION OF ELECTRONICS AND COMMUNICATION ENGINEERS	2015



Org. Mem. No. (G00503)

THE INSTITUTION OF
ELECTRONICS AND TELECOMMUNICATION ENGINEERS

This Certificate is granted to

ACS College of Engineering, Bangalore

on election as

Life Organisational Member

of the Institution on the 5th day of Dec, 2015

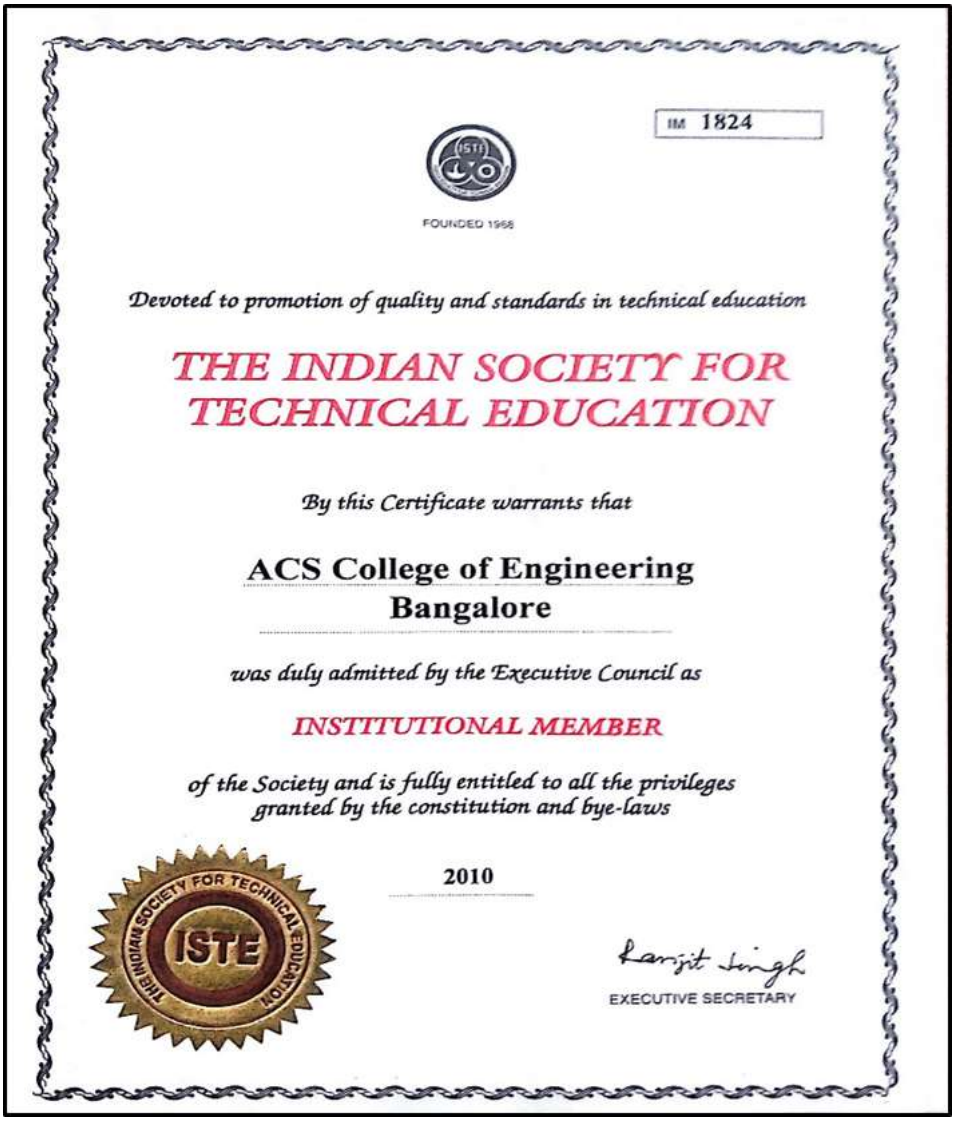
Witness our hand and seal at New Delhi

this 11th day of Dec, 2015

IETE

Maj Gen P K Jaggia, VSM (Retd)
Secretary General

Smriti Dagur
President



IM 1824

FOUNDED 1968

Devoted to promotion of quality and standards in technical education

THE INDIAN SOCIETY FOR TECHNICAL EDUCATION

By this Certificate warrants that

ACS College of Engineering
Bangalore

was duly admitted by the Executive Council as

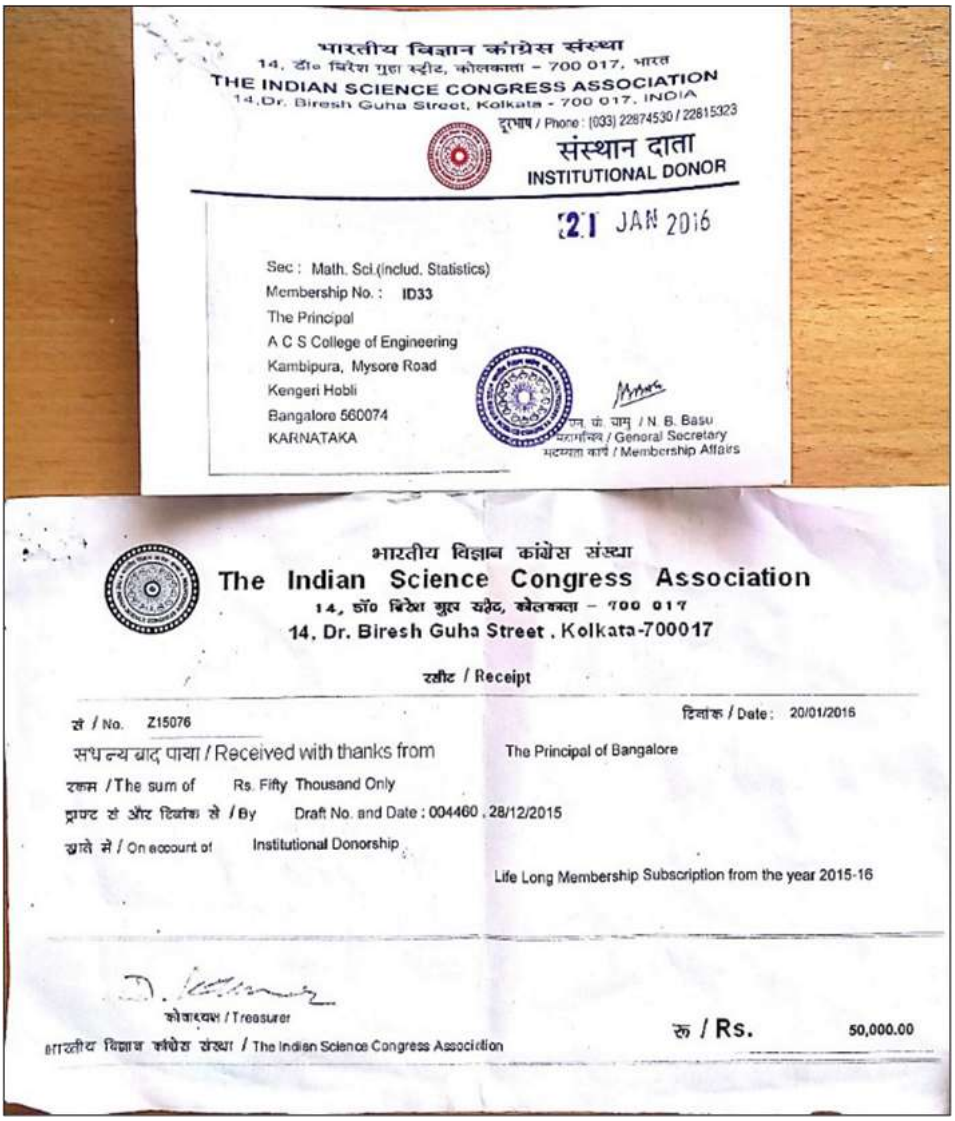
INSTITUTIONAL MEMBER

of the Society and is fully entitled to all the privileges granted by the constitution and bye-laws

2010

ISTE

Ranjit Singh
EXECUTIVE SECRETARY



भारतीय विज्ञान कांग्रेस संस्था
14, डॉ० बिरेश गुहा स्ट्रीट, कोलकाता – 700 017, भारत
THE INDIAN SCIENCE CONGRESS ASSOCIATION
14,Dr. Biresh Guha Street, Kolkata - 700 017, INDIA
दूरभाष / Phone : (033) 22874530 / 22815323

संस्थान दाता
INSTITUTIONAL DONOR

21 JAN 2016

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KARNATAKA

एन. के. बासु / N. B. Basu
महासचिव / General Secretary
सदस्यता कार्य / Membership Affairs

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The Indian Science Congress Association
14, डॉ० बिरेश गुहा स्ट्रीट, कोलकता – 700 017
14, Dr. Biresh Guha Street, Kolkata-700017

रसीद / Receipt

सं / No. Z15076 दिनांक / Date : 20/01/2016

सधन्यवाद पाया / Received with thanks from The Principal of Bangalore

रकम / The sum of Rs. Fifty Thousand Only

ड्राफ्ट सं और दिनांक से / By Draft No. and Date : 004460 , 28/12/2015

खाते में / On account of Institutional Donorship

Life Long Membership Subscription from the year 2015-16

कोषाध्यक्ष / Treasurer

भारतीय विज्ञान कांग्रेस संस्था / The Indian Science Congress Association

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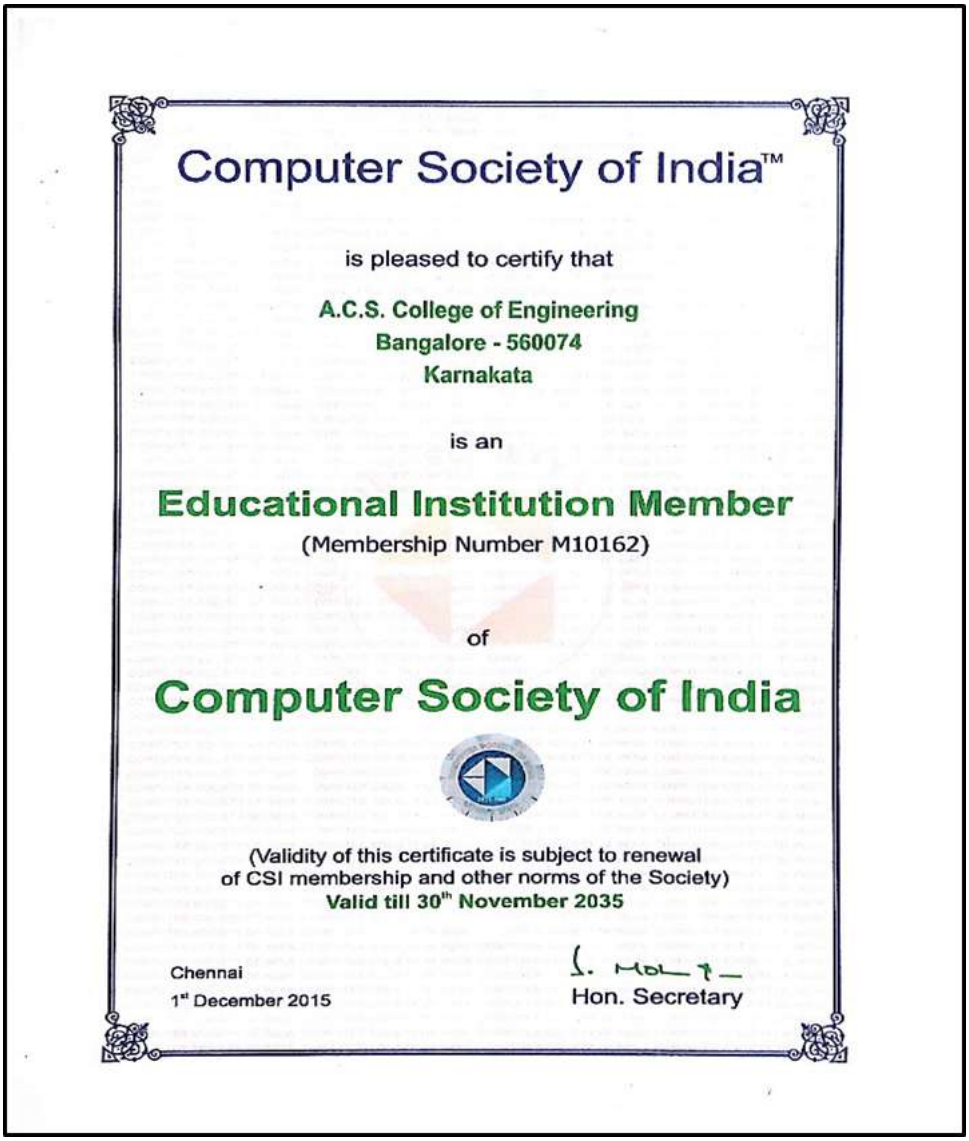

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is pleased to certify that

A.C.S. College of Engineering
Bangalore - 560074
Karnakata

is an

Educational Institution Member

(Membership Number M10162)

of

Computer Society of India

(Validity of this certificate is subject to renewal
of CSI membership and other norms of the Society)
Valid till 30th November 2035

Chennai
1st December 2015

Hon. Secretary

List of Events organized in 2021-22

S.No.	Event Name	Resource Person	Date of Event	No.of Participants
1	Quiz competition on “Basic Engineering and its Sciences” in association with COSMOS Explorer for First year Students	Conducted through THE INDIAN SCIENCE CONGRESS ASSOCIATION	16.11.2021	97
2	Guest Lecture on Integrated Avionic System	Mr. R. Ramesh Babu	16.12.2021	107
3	Technical Seminar on Applications of Drones and HAPS and Possible role of AI / Robotics	Dr K Ramachandra	17.12.2021	112
4	Hands on Training in Flight Simulator	Mr. R. Ramesh Babu	17.12.2021	112
5	Industrial Visit to Exhibition of Defence Products for General Public & Students to Commemorate AZADI KA AMRIT MAHOTSAV,Bengaluru	-	18.12.2021	110
6	Math Quiz event on National Mathematics Day	Conducted through THE INDIAN SCIENCE CONGRESS ASSOCIATION	22.12.2021	72
7	Technical Seminar on Practical aspects of Gas Turbine Design Process	Mr. Vinod S Choudhari	23.12.2021	109
8	Webinar on Internship. Project and Job Opportunities for Aerospace and Aeronautical Students	Mrs. R. Srinithya	12.01.2022	70
9	Webinar on Awareness on Designing Software in Aerospace Engineering	Mr. T. Vijay	19.01.2022	78

S.No.	Event Name	Resource Person	Date of Event	No.of Participants
10	Inaugural ceremony of Flight Simulator and Technical talk on Infrastructure and Sustainability focus areas at Airport	Mr. S. Lakshminarayanan	16.02.2022	310
11	Motivational Speech	Mr. O.R. Ashwin Chandar	26.02.2022	20
12	Innovative Projects Contest – National Science Day Celebration	Conducted through THE INDIAN SOCIETY FOR TECHNICAL EDUCATION (ISTE)	08.03.2022	30
13	Awareness session on Healthy Youth – Healthy Planet –World Health Day Celebration	Dr.R. Prema	07.04.2022	102
14	Career Guidance Program on Aerospace Design	Mr.Shashank Ravat	12.04.2022	102
15	Seminar on Accomplishments in Space research and Applications – Global and Indian Scenario	Dr.G.Raju	19.04.2022	94
16	Webinar on Career Prospects and Challenges in Airlines –International Pilot Day Celebration	Captain Vasundara Rajanna	26.04.2022	42
17	Technical talk on Career Prospects and Hands on training in UAV Design	Mr. Pritam Ashutosh Sahu	13.05.2022	32
18	Technical training on Aerospace Vehicle Design Tools	Mr. M. Sivaramraj	27.05.2022	67
19	Engine cut sections inauguration & Technical talk on Jet Engines	Dr.K.Ramachandra & Dr. S V Ramanamurty	1.06.2022	150
20	Technical seminar on Space Communication- A practical Perspective	Mr. B. A. Subramani	10.6.2022	76

List of Events organized in 2020-21

S.No.	Event Name	Resource Person	Date of Event	No. of Participants
1	Webinar on “ARINC 702A Advanced Flight Management Computer System	MR.S. Ramesh Raju	8.8.20	68
2	Webinar on “State of the Art of Small Satellites & A Student-run Cubesat Program at Nanyang Technological University	Mr. S. Shanmuga Sundaram	22.8.20	75
3	Seaplane and Hovercraft - Indian Seacoast & lakes	Dr. K. Ramachandra	15.10.20	73
4	Systems Tool Kit - Software	Mr. Dhanish from SS Technologies	27.11.20	97
5	Evolution of FLV, Guidance and Sensors since II World War	Dr. Achintya Krishna Sarkar	12.12.20	75
6	Introduction to Advanced Electronics in Aviation	Mr. R. Ramesh Babu	29.12.20	68
7	Applications of AI in Aerospace Engineering	Dr. PVN Ramakumar - Conducted through COMPUTER SOCIETY OF INDIA	19.5.21	65
8	Damage Prediction on Nanocomposites after high velocity impact	Dr. P. S. Venkata Narayanan	22.5.21	73
9	3D High Flow Computations	Dr. N. Gopala Krishna	28.5.21	72
10	Aviation/Aerospace - BE Different /Hobby Corner / HAM Radio	Mr. Kalayana Raman N	29.5.21	75
11	Design Perspectives in Morphing Wings	Dr. Gautham Vigneswar P N	4.6.21	70
12	Indian NavIC and Other GNSS - Research Analysis and Challenges	Dr. Naveen Kumar Perumalla	5.6.21	102
13	Nanomaterials for Energy and Storage Applications	Dr. S. Kalpana	12.6.21	17
14	Flow Through variable area ducts and influence of shockwaves	Mr. Ramakrishna Madhira	16.6.21	55
15	Safety and Airworthiness in Aviation	Sri. P. Jayabal	17.6.21	69

16	Non Planar Wing concept of commercial Aircraft	Dr. C. Suresh	19.6.21	69
17	The view from Space: Competitive Collaboration for Space Development	Mr. Luwanga Christopher	24.6.21	69
18	Role of Engineers in Indian Armed Forces - Conducted through THE INSTITUTION OF ENGINEERS (INDIA)	WG CDR Abhishek Dixit	2.7.21	69

List of Events organized in 2019-20

S.No.	Title of Workshop/Seminar	Resource Person	Date(s)	No. of participants
1	Seminar on “Basic Aerodynamics”	Dr.P.Theerthamalai	26.8.2019	33
2	Seminar on “Mechanics of Fluids”	Mr.R.Srinath	26.9.2019	32
3	Introduction to GNSS Conducted through THE INSTITUTION OF ELECTRONICS AND COMMUNICATION ENGINEERS	Mr.Bharathidasan and Ms.S.Sangeetha Accord Software and Systems Ltd	03.10.2019	60
4	Aero vision Seminar	Venue:NMIT, Bangalore	14.10.2019	56
5	Seminar on “Small UAV’s – Growing Opportunities in Universities	Dr.G.Ramesh Former Scientist, NAL	17.10.2019	60
6	Educadd Seminar	Mr.Sunil Educadd Representative	12.11.2019	60
7	Seminar on Design and Development of UAV’s	Mr.N.Balachandran Rtd. Scientist G, ADE	22.11.2019	74
8	Workshop on Rocket Propellant Preparation	Mr.M.Ravi Shankar Expleo Technologies India Pvt.Ltd.	23.11.2019	32
9	Guest Lecture on “Fluid Mechanics”	Prof.R.Srinath Dayananda Sagar University	13.12.2019	20
10	Guest lecture on “Mechanics of Materials”	Prof.Albert Allen D Mellow ACSCE	16.12.2019	21
11	Aircraft Icing and its Effects	Dr.L.Prince Raj (IIEST, Shibpur)	02.03.2020	54
12	CFD and its Applications conducted through COMPUTER SOCIETY OF INDIA	Mr.M.Krishna Kumar JIT,Coimbatore	04.03.2020	25
13	Webinar on “Composite materials and their applications”	Mr.Charles G Martin, Aerospace Structures - Domain Expert BridgeNow Academy	18.5.2020	58
14	Webinar on “Finite Element Analysis and limitations”	Mr.Yogesh Joshi	18.5.2020	55
15	Webinar on “Career Opportunities for Aeronautical Engineering Graduates”	Dr.Kishore kumar Bramah	19.5.2020	84
16	Missile Aerodynamics - Webinar	Dr.P.Theerthamalai	20.05.2020	52
17	CFD and its Applications - Webinar	Dr.S.K.Maharana	22.05.2020	55
18	Grid Fin Aerodynamics - Webinar	Dr.P.Theerthamalai	28.05.2020	51

S.No.	Title of Workshop/Seminar	Resource Person	Date(s)	No. of participants
19	Webinar on “POST COVID-19 Challenges & Opportunities for Aerospace Engineering”	Padma Shre Dr.Mylswamy Annadurai Vice President – Tamilnadu State Council for science & Technology Former Director-ISRO Satellite Centre (URSC)	29.5.2020	84
20	Webinar on “Emerging Global Trends in Space Systems”	Padma Shri R.M.Vasagam Former Director, ISRO, Bangalore Former Vice-Chancellor, Anna University, Chennai	1.6.2020	79
21	Webinar on “Satellite Navigation-Past, Present and Future”	Prof.P.Soma Former Deputy Director – Navigation systems Area, ISTRAC	08.06.2020	87
22	Webinar on “AI & ML for Aerospace Engineering	Dr.U. Selvakumar N-Side, Senior Data Science Consultant, Noesis Solutions, ML Development Engineer, Belgium	14.06.2020	83
23	Webinar on “Ionospheric Forecasting models for Global Navigation Satellite System Users	Dr.D.Venkata Ratnam Professor KLEF Deemed to be University, Guntur, Andhra Pradesh	15.06.2020	83
24	Structural Design & Analysis with application in offshore and marine industry	Mr.P.Bernard Adaikalaraj Senior Engineer Keppel Marine and Deep Water Technology	27.06.2020	81
25	Webinar on “Introduction to GNSS Simulator”	Ms Sangeetha S	06.07.2020	83
26	Webinar on “Challenges on Healthcare Field – Research Perspective”	Dr S Mythili	18.07.2020	83

List of Events organized in 2018-19

SL. No	Event Name	Chief Guest/Resource Person	Date	No. of participants
1.	Seminar on “System Tool Kit Software	Mr. Dhanish from SS Technologies	19.3.2019	33
2.	Motivational Speech on ’Career in Indian Air Force’	Wg Cdr Saurabh Bhandari	05.03.2019	32
3.	Guest Lecture on ‘Composite Materials’	Dr. P. Ganeshan	06.03.2019	31
4.	Guest Lecture on ‘Aero Thermodynamics’	Dr. R Siva Subramaniyam	03.10.2018	31
5.	Guest Lecture on ‘Mechanics of Materials’	Prof. Dhanya Prakash Babu	04.10.2018	31
6.	Technical Seminar on ‘Development of Gas Turbines and UAV’s’	Dr. K. Ramachandra	09.11.2018	25
7.	Technical Seminar on ‘Basic Awareness Course on Aerospace’	Dr. Badri Narayan	16.11.2018	33

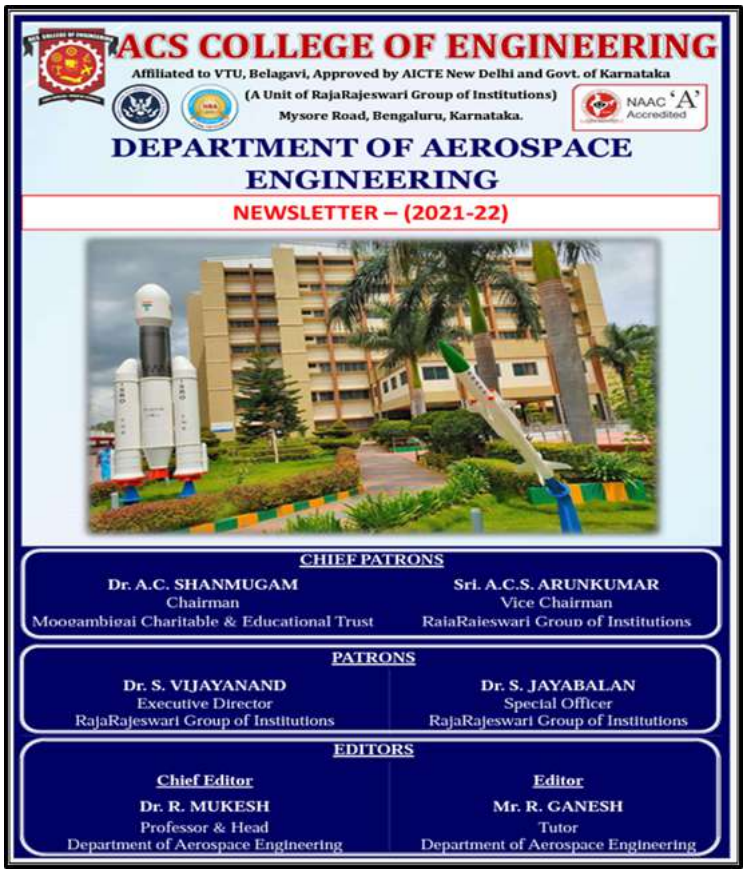
8.	Evolution of Avionics	Dr. B.S. Reddy	28.09.2018	33
9.	Basics of Space Mechanics	Prof. P. Soma	25.09.2018	33

4.6.2 Publication of technical magazines, newsletters, etc. (5)

Institute Marks : 5.00

NEWSLETTER	AY 2021-2022	AY 2020-2021	AY 2019-2020	AY 2018-2019
VOLUME & ISSUE	VOLUME 4 ISSUE 1	VOLUME 3 ISSUE 1	VOLUME 2 ISSUE 1	VOLUME 1 ISSUE 1
CHIEF EDITOR	DR. R. MUKESH	DR. R. MUKESH	DR. R. MUKESH	DR. R. MUKESH

NEWSLETTER FOR ACADEMIC YEAR 2021-2022



NEWSLETTER FOR ACADEMIC YEAR 2020-2021

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NEWSLETTER

2020-2021

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NEWSLETTER

2019-2020

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Moogambigai Charitable & Educational Trust

Sri A.C.S. Arunkumar
Vice Chairman
RajaRajeswari Group of Institutions

Chief Editor

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Professor & Head
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Special Officer
RajaRajeswari Group of Institutions

Editors

Mr. R. Ganesh
Tutor
Department of Aerospace Engineering

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DEPARTMENT OF AEROSPACE ENGINEERING

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2018-2019

Chief Patrons

Sri A.C. Shanmugam
Chairman
Moogambigai Charitable & Educational Trust

Sri A.C.S. Arunkumar
Vice Chairman
Rajarajeswari Group of Institutions

Chief Editor

Dr. R. Mukesh
Professor & Head
Department of Aerospace Engineering

Patrons

Dr. S. Vijayanand
Executive Director
Rajarajeswari Group of Institutions

Dr. S. Jayabalan
Special Officer
Rajarajeswari Group of Institutions

Editors

Ms. C Sushmitha
Assistant Professor
Department of Aerospace Engineering

Mr. R. Ganesh
Tutor
Department of Aerospace Engineering

4.6.3 Participationininter-institute events by students of the program of study (10)

Institute Marks : 10.00

STUDENTS PARTICIPATION IN INTER-INSTITUTE TESTS/EVENTS			
S.NO	**NAME**	**Event Attended**	**DATE**
1	Rakshith Kumar G R	National scholarship test	03-10-2021
2	Sneha Singh	AI for India event	25-05-2021
3		Guinness world record event - participation	01-05-2021
4	Veethasmi A Kumar	Learning sharada script	10-01-2021
5	Shubha K N	Paper Presentation	05-12-2020
6	Veethasmi A Kumar	Astronomy quiz	08-11-2020
7		AICTE Sponsored QIP	02-10-2020
8		Samskrita Sambhashanam	05-09-2020
9	Priyanka L P	Quiz & PPT Presentation	05-03-2020
10	Sneha Singh	ISSC 2020 - national level test	26-02-2020
11		Cultural fest	13-05-2019
12	Priyanka L P	Technical Quiz	30-10-2018
13			05-10-2018

STUDENTS PARTICIPATION IN INDUSTRIAL TRAININGS			
S.NO	**NAME**	**Event Attended**	**DATE**
1	Rakshith Kumar G R	Gas turbine project training	27-09-2021
2	Priyanka L P	HAL In-Plant Training	23-09-2021
3	Varshith R Shetty	AUTOCAD/CATIA Workshop	13-09-2021
4	Chandhan K M	2 month Industrial Program	13-09-2021
5	Varshith R Shetty		
6	Rakshith Kumar G R	5 Day National Workshop	18-07-2021
7	Shubha K N		
8	Veethasmi A Kumar		
9	Priyanka L P		
10	Rakshith Kumar G R	CFD Workshop	18-05-2021
11	Chandhan K M		
12	Sneha Singh	ISRO online distance learning	03-07-2020
13	Priyanka L P	Space systems LECTURE	18-06-2020
14	Veethasmi A Kumar	Arduino training	29-05-2020
15	Veethasmi A Kumar	IIC online sessions	22-05-2020
16	Veethasmi A Kumar	State Level Hackathon	13-11-2019
17	Shubha K N		13-11-2019
18	Priyanka L P	Workshop Aerovision 2019 Quadrotor training	15-10-2019
19	Sneha Singh		15-10-2019 31-03-2019
20	Chandhan K M		
21	Chandru B M		
22	Rakshith Kumar G R		
23	Veethasmi A Kumar	STK software training	2020

STUDENTS PARTICIPATION IN INTER-INSTITUTE SPORTS			
S.NO	**NAME**	**Event Attended**	**DATE**
1	Sneha Singh	Volleyball	2021-2022
2	Sneha Singh	Athletics (4x100m)	2021-2022
3	Hariharan J	Shotput	06-04-2018

STUDENTS PARTICIPATION IN NSS EVENTS			
S.NO	**NAME**	**Event Attended**	**DATE**
1	Nagaraja M V	Environmental Conservation	30-07-2021

2	Hariharan J	Blood donation camp	19-03-2021
3	Sneha Singh	NSS Special Camp	24-03-2019
4	Priyanka L P	Blood donation camp	25-09-2018

STUDENT ACHIEVEMENTS - VTU GOLD MEDALIST				
S.NO	**USN**	**NAME**	**RANK**	**CGPA**
2018-2022 BATCH				
1	1AH18AS032	SWETHASREE S	1	9.37
2	1AH18AS037	VIDYAKUMARI M N	3	8.89
3	1AH18AS021	NITYASRI B S	4	8.83
4	1AH18AS036	VARSHITH R SHETTY	5	8.8
5	1AH18AS030	SRINIDHI N S	6	8.78
6	1AH18AS020	NAGARAJA M V	7	8.76
7	1AH18AS024	PRIYANKA L P	8	8.71
2017-2021 BATCH				
1	1AH17AS010	CHANDU.C P	1	9.50
2	1AH17AS003	AJAY YALAMELI	2	9.05
3	1AH17AS011	DHANSINGH BHANDARI.J	3	8.95

STUDENTS PARTICIPATION IN TECHNICAL WEBINARS

S.NO	**NAME**	**DATE**
1	Shubha K N	02-09-2021
2	Chandhan K M	17-07-2021
3	Chandhan K M	16-07-2021
4	Sneha Singh	12-07-2021
5	Sneha Singh	
6	Sneha Singh	05-07-2021
7	Rakshith Kumar G R	24-06-2021
8	Shubha K N	
9	Priyanka L P	
10	Varshith R Shetty	19-06-2021
11	Priyanka L P	
12	Chandhan K M	
13	Shubha K N	17-06-2021
14	Varshith R Shetty	
15	Rakshith Kumar G R	16-06-2021
16	Shubha K N	
17	Shubha K N	
18	Varshith R Shetty	
19	Gangothri J	12-06-2021
20	Rakshith Kumar G R	
21	Rakshith Kumar G R	
22	Shubha K N	
23	Varshith R Shetty	
24	Priyanka L P	
25	Chandhan K M	
26	Chandhan K M	

27	Shubha K N	05-06-2021
28	Varshith R Shetty	
29	Priyanka L P	
30	Gangothri J	04-06-2021
31	Rakshith Kumar G R	
32	Shubha K N	02-06-2021
33	Shubha K N	29-05-2021
34	Chandhan K M	
35	Varshith R Shetty	28-05-2021
36	Chandhan K M	
37	Shubha K N	22-05-2021
38	Gangothri J	19-05-2021
39	Varshith R Shetty	18-05-2021
40	Nagaraja M V	12-12-2020
41	Sneha Singh	18-11-2020
42	Sneha Singh	17-11-2020
43	Gangothri J	15-10-2020
44	Nagaraja M V	
45	Sneha Singh	
46	Sneha Singh	10-10-2020
47	Sneha Singh	22-08-2020
48	Vandhana H N	08-08-2020
49	Hariharan J	01-08-2020
50	Sneha Singh	29-07-2020
51	Vandhana H N	18-07-2020
52	Sneha Singh	
53	Sneha Singh	08-07-2020
54	Priyanka L P	
55	Sneha Singh	06-07-2020
56	Sneha Singh	03-07-2020
57	Sneha Singh	15-06-2020
58	Sneha Singh	14-06-2020
59	Sneha Singh	13-06-2020
60	Nagaraja M V	08-06-2020
61	Sneha Singh	06-06-2020
62	Priyanka L P	04-06-2020
63	Hariharan J	01-06-2020
64	Priyanka L P	
65	Nagaraja M V	30-05-2020
66	Hariharan J	29-05-2020
67	Priyanka L P	
68	Priyanka L P	21-05-2020
69	Vandhana H N	20-05-2020
70	Sneha Singh	
71	Nagaraja M V	19-05-2020
72	Sneha Singh	
73	Priyanka L P	

STUDENT ACHIEVEMENTS - VTU GOLD MEDALIST

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI.
VTU GOLD MEDALISTS
VTU 22nd ANNUAL CONVOCATION – FEBRUARY 2023

Aerospace Engineering					
1	1AH18AS032	SWETHA SHREE S	ACS COLLEGE OF ENGINEERING, BANGALORE	9.37	1
3	1AH18AS037	VIDYA KUMARI M N	ACS COLLEGE OF ENGINEERING, BANGALORE	8.89	3
4	1AH18AS021	NITHYASRI B S	ACS COLLEGE OF ENGINEERING, BANGALORE	8.83	4
5	1AH18AS036	VARSHITH R SHETTY	ACS COLLEGE OF ENGINEERING, BANGALORE	8.8	5
6	1AH18AS030	SRINIDHI N S	ACS COLLEGE OF ENGINEERING, BANGALORE	8.78	6
7	1AH18AS020	NAGARAJA M V	ACS COLLEGE OF ENGINEERING, BANGALORE	8.76	7
8	1AH18AS024	PRIYANKA L P	ACS COLLEGE OF ENGINEERING, BANGALORE	8.71	8

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI.
VTU GOLD MEDALISTS
VTU 21st ANNUAL CONVOCATION – MARCH 2022

Aerospace Engineering(AS)

1	1AH17AS010	CHANDU C P	ACS.Bengaluru	9.50	1
2	1AH17AS003	AJAY YALAMELI	ACS.Bengaluru	9.05	2
3	1AH17AS011	DHANSINGH BHANDARI J	ACS.Bengaluru	8.95	3

SAMPLE CERTIFICATES OF IN INTER-INSTITUTE EVENTS BY STUDENTS

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To
PAREEKSHITH TG
HOUSE NO19
THALAKANE
CHIKMAGALUR
KARNATAKA - 577126
PH. NO :9535823668

No. of credits recommended by NPTEL:1
An additional 1 credit may be awarded if the University deems it fit, based on the actual student effort involved.

NPTEL Online Certification

(Funded by the Ministry of HRD, Govt. of India)

Covid-19 Impacted January 2020 semester

This certificate is awarded to

PAREEKSHITH TG

for passing the course

Aircraft Maintenance

*with Score** **87** %

Prof. Rajesh M.Hegde
Chairman, Centre for Continuing Education
IIT Kanpur

Jan-Feb 2020
(4 week course)

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur

Indian Institute of Technology Kanpur

*Continuous online assessment score

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To,
ANIL KUMAR
27 G.SRIRAM BUILDING SUDDUGUNTE PALYA
RAJ KUMAR CIRCLE
CV RAMAN NAGAR
BANGALORE
KARNATAKA - 560093
PH. NO :9972016618

Score	Type of Certificate
>=90	Elite+Gold
75-89	Elite+Silver
>=60	Elite
40-59	Successfully Completed
<40	No Certificate

No. of credits recommended by NPTEL:2
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NPTEL Online Certification

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This certificate is awarded to

ANIL KUMAR

for successfully completing the course

Advance Aircraft Maintenance

with a consolidated score of **44** %

Online Assignments	14.17/25	Proctored Exam	30/75

Total number of candidates certified in this course: **110**

Prof. Rajesh M.Hegde
Chairman, Centre for Continuing Education
IIT Kanpur

Sep-Nov 2020
(8 week course)

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur

IEEE XPLORE ISBN: 978-1-7281-7089-3

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CERTIFICATE OF PRESENTATION

This is to certify that

Shubha K N

has successfully presented a paper entitled

De-Authentication attacks on Rogue UAVs

in the

3rd International Conference on Intelligent Sustainable Systems (ICISS 2020)

organized on December 3-5, 2020 by SCAD Institute of Technology at Palladam, India.

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(An Autonomous Institution, Affiliated to Anna University, Chennai)
Rajiv Gandhi Salai (OMR), Kalavakkam - 603 110, Tamil Nadu.

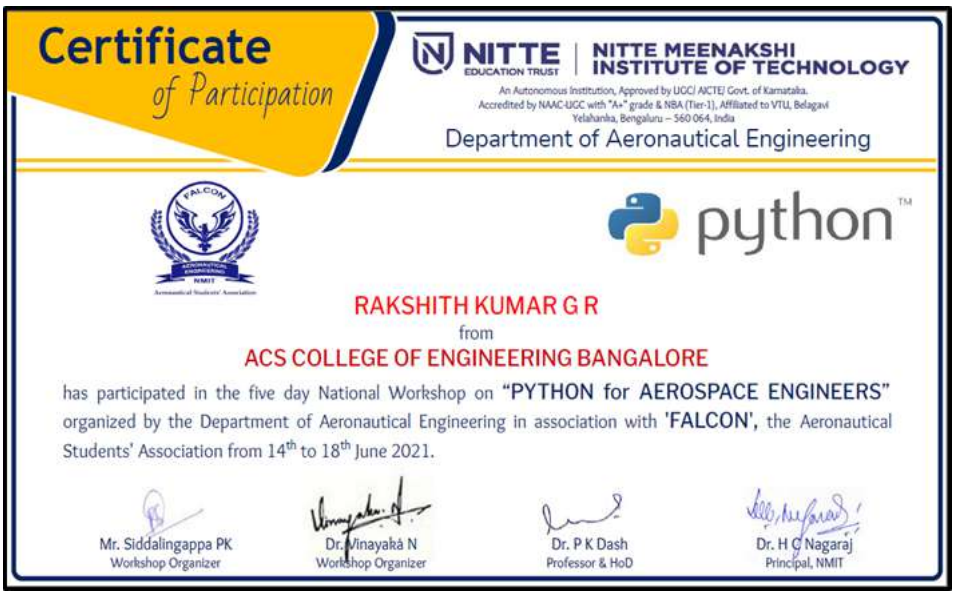
SSN

CERTIFICATE OF PARTICIPATION

This is to certify that Dr./Mr./Ms. VARSHITH R SHETTY has attended the *ONE DAY WORKSHOP ON CFD FUNDAMENTALS – THEORY AND PRACTICE*, organized by the Department of Mechanical Engineering, SSN College of Engineering on 18th MAY, 2021.

Coordinator

Dr. N. LAKSHMI NARASIMHAN
(Associate Prof/Mech, SSNCE)



Certificate of Participation

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Department of Aeronautical Engineering

python™

RAKSHITH KUMAR G R
from
ACS COLLEGE OF ENGINEERING BANGALORE

has participated in the five day National Workshop on "PYTHON for AEROSPACE ENGINEERS" organized by the Department of Aeronautical Engineering in association with 'FALCON', the Aeronautical Students' Association from 14th to 18th June 2021.

Mr. Siddalingappa PK
Workshop Organizer

Dr. Vinayaka N
Workshop Organizer

Dr. P K Dash
Professor & HoD

Dr. H C Nagaraj
Principal, NMIT

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प्रमाणपत्रम्

Participation Certificate

इदं प्रमाणीक्रियते यत् श्रीमान् / श्रीमती/ डॉ. / **कु. वीतस्मी ए कुमार** भारतीयप्रौद्योगिकीसंस्थानम् इन्दौरम् इत्यत्र स्थितेन गुणवत्ताविकास- कार्यक्रमकेन्द्रपक्षेण संस्कृतभारती-मालवाप्रान्तस्य सहयोगेन सितम्बरमासस्य चतुर्विंश दिनाङ्कादारभ्य अक्टूबरमासस्य द्वितीयदिनाङ्कं, २०२० यावत् एआईसीटीई-द्वारा प्रायोजिते गुणवत्ताविकासकार्यक्रमस्य अङ्गभूते उपक्रमे **"संस्कृतमये वातावरणे प्राचीनभारतीय-वैज्ञानिकसाहित्यस्य परिचयः"** इत्यस्मिन् कार्यक्रमे भागम् अवहत् । उपक्रमोत्तरपरीक्षायां समेकितरूपेण विशिष्टता प्राप्तवान् /प्राप्तवती।

This is to certify that Ms/Mr/Mrs/Dr. **Ms. Veethasmi A Kumar** has participated in the AICTE sponsored QIP course on **"Understanding Classical Scientific Texts of India in an Immersive Sanskrit Environment"** with Distinction, conducted as a part of quality improvement program, organized by the QIP Center, IIT Indore in collaboration with Samskrita Bharati Malva Prant from September 14 to October 2, 2020.

Prof. Ganti S. Murthy
Dr. Eswara Prasad Korimilli
Course Coordinator

QIP Coordinator

Name	PAN No.	University Degree	Date of Receiving Degree	Area of Specialization	Research Paper Publications	Ph.D Guidance	Faculty receiving Ph.D during the assessment year	Current Designation	Date (Designated as Prof/Assoc. Prof.).	Initial Date of Joining	Association Type	At present working with Institution(Ye
Dr. R. Mukesh	ATGPR1078L	MS and PhD	05/11/2014	Aerospace	25	7	2	Professor	08/08/2019	27/01/2015	Regular	Yes
Dr. C. Suresh	FBEPS7342F	ME/M. Tech and PhD	10/05/2021	Flight Mechanics	04	0	0	Associate Professor	12/07/2021	12/07/2021	Regular	Yes
Dr. V. Paramaguru	BMTPP2778J	ME/M. Tech and PhD	03/09/2021	Propulsion	03	0	0	Associate Professor	03/09/2021	12/07/2021	Regular	Yes
R Karthi	CEKPK1334M	M.E/M.Tech	28/04/2017	Aerodynamics	0	0	0	Assistant Professor		19/07/2019	Regular	Yes
J. Siva	DFGPS7094L	M.E/M.Tech	30/06/2014	Thermal	1	0	0	Assistant Professor		01/03/2019	Regular	Yes
U. Sivasathya	ENYPS0777M	M.E/M.Tech	30/05/2013	Aerodynamics	0	0	0	Assistant Professor		27/08/2018	Regular	Yes
M. Vijay	ASAPV5056F	M.E/M.Tech	31/05/2019	Structures	06	0	0	Assistant Professor		21/12/2020	Regular	Yes
M. Sivaramraj	GCLPS0238H	M.E/M.Tech	31/05/2021	Materials	0	0	0	Assistant Professor		17/08/2021	Regular	Yes
K. Ganesan	EFDPK7677M	M.E/M.Tech	30/06/2015	Thermal	0	0	0	Assistant Professor		04/01/2023	Regular	Yes
C. Kirubakaran	DMGPK6810M	M.E/M.Tech	30/06/2018	Flight Mechanics	0	0	0	Assistant Professor		29/08/2022	Regular	Yes
S. Chandrasekar	BXPPC1019R	M.E/M.Tech	15/12/2022	Aerodynamics	0	0	0	Assistant Professor		29/08/2022	Regular	Yes
R Vivek	BDCPV1358L	M.E/M.Tech	10/04/2015	Thermal	0	0	0	Assistant Professor		01/06/2022	Regular	Yes
Roohi	BQCPR9581G	M.E/M.Tech	30/06/2014	Aerodynamics	0	0	0	Assistant Professor		29/12/2020	Regular	Yes
Anusha K	AYIPA2364F	M.E/M.Tech	28/04/2017	CFD	0	0	0	Assistant Professor		21/12/2020	Regular	No
Vidyashree K R	APAPV3298N	M.E/M.Tech	30/06/2018	Aerodynamics	0	0	0	Assistant Professor		19/08/2019	Regular	No
Sushmitha C	BERPC6502H	M.E/M.Tech	30/06/2018	CFD	0	0	0	Assistant Professor		19/07/2019	Regular	No
Suresh D	CWYPS3799C	M.E/M.Tech	30/04/2012	Engineering Design	0	0	0	Assistant Professor		01/08/2019	Regular	No
Dr. G. Radhaboy	AQEPR7878R	ME/M. Tech and PhD	02/12/2020	Composite Materials	0	0	0	Associate Professor		04/12/2020	Regular	Yes

5.1 Student-Faculty Ratio (20)

Total Marks 18.00

Institute Marks : 18.00

UG

No. of UG Programs in the Department 1

B.E						
Year of Study	**CAY (2022-23)**		**CAYm1 (2021-22)**		**CAYm2 (2020-21)**	
	Sanction Intake	**Actual admitted through lateral entry students**	**Sanction Intake**	**Actual admitted through lateral entry students**	**Sanction Intake**	**Actual admitted through lateral entry students**
2nd Year	60	0	60	1	60	0
3rd Year	60	0	60	0	60	0
4th Year	60	0	60	0	60	0
Sub-Total	**180**	**0**	**180**	**1**	**180**	**0**
Total	**180**		**181**		**180**	

Grand Total	180	181	180

PG

No. of PG Programs in the Department 0

Grand Total			

SFR

No. of UG Programs in the Department 1

No. of PG Programs in the Department 0

Description	**CAY(2022-23)**	**CAYm1 (2021-22)**	**CAYm2 (2020-21)**
Total No. of Students in the Department(S)	180 **Sum total of all (UG+PG) students**	181 **Sum total of all (UG+PG) students**	180 **Sum total of all (UG+PG) students**
No. of Faculty in the Department(F)	13 **F1**	11 **F2**	11 **F3**
Student Faculty Ratio(SFR)	13.85 **SFR1=S1/F1**	16.45 **SFR2=S2/F2**	16.36 **SFR3=S3/F3**
Average SFR	15.55 **SFR=(SFR1+SFR2+SFR3)/3**		
F=Total Number of Faculty Members in the Department (excluding first year faculty)			

Note: All the faculty whether regular or contractual (except Part-Time), will be considered. The contractual faculty (doing away with the terminology of visiting/adjunct faculty, whatsoever) who have taught for 2 consecutive semesters in the corresponding academic year on full time basis shall be considered for the purpose of calculation in the Faculty Student Ratio. However, following will be ensured in case of contractual faculty:

1. Shall have the AICTE prescribed qualifications and experience.
2. Shall be appointed on full time basis and worked for consecutive two semesters during the particular academic year under consideration.
3. Should have gone through an appropriate process of selection and the records of the same shall be made available to the visiting team during NBA visit

5.1.1. Provide the information about the regular and contractual faculty as per the format mentioned below:

	Total number of regular faculty in the department	**Total number of contractual faculty in the department**
CAY(2022-23)	13	0
CAYm1(2021-22)	11	0
CAYm2(2020-21)	11	0

Average SFR for three assessment years : 15.55

Assessment SFR : 18

5.2 Faculty Cadre Proportion (25) Total Marks 25.00

Institute Marks : 25.00

Year	Professors		Associate Professors		Assistant Professors	
	Required F1	Available	Required F2	Available	Required F3	Available
CAY(2022-23)	1.00	1.00	2.00	3.00	6.00	9.00
CAYm1(2021-22)	1.00	1.00	2.00	3.00	6.00	7.00
CAYm2(2020-21)	1.00	1.00	2.00	1.00	6.00	9.00
Average Numbers	1.00	1.00	2.00	2.33	6.00	8.33

Cadre Ratio Marks [(AF1 / RF1) + [(AF2 / RF2) * 0.6] + [(AF3 / RF3) * 0.4]] * 12.5 : 25.00

5.3 Faculty Qualification (25)

Total Marks 18.52

Institute Marks : 18.52

	X	Y	F	FQ = 2.5 x [(10X + 4Y) / F)]
2022-23(CAY)	4	9	9.00	21.11
2021-22(CAYm1)	4	7	9.00	18.89
2020-21(CAYm2)	2	9	9.00	15.56

Average Assessment : 18.52

5.4 Faculty Retention (25)

Total Marks 15.00

Institute Marks : 15.00

Description	2021-22	2022-23
No of Faculty Retained	8	7
Total No of Faculty	11	11
% of Faculty Retained	73	64

Average : 68.00

Assessment Marks : 15.00

5.5 Innovations by the Faculty in Teaching and Learning (20)

Total Marks 20.00

Clear Objectives and Adequate Preparation: The goals of innovative practices in the teaching-learning process are implemented to make the students get insight knowledge into the subjects, skill sets and also to obtain good grades in the End Semester Examinations.

To achieve this faculty members are consistently taking the following measures:

- Delivering lectures with the help of ICT tools.
- Conduction of Quiz programs, Group Discussions, Seminars, Discussion of recent trends and Cutting-edge technologies.
- Utilization of NPTEL/MOOC courses, You Tube Video lectures.
- Assignments and Case studies examples are given for better understanding of subjects.
- Undergoing Advanced Training Programmes
- Self-improvement through Institute – Industry Interaction
- Pursuing online courses
- Solving problems by mutual discussions
- Classes in the Library
- Teaching beyond class hours
- Real world examples are used for better understanding of the subjects.
- Industry in Class: By this method we brought several industrial and research organization persons from ISRO, DRDO, NAL, HAL, ADA and other leading private industry persons to improve the teaching learning process and to fulfill the curriculum gap between the industry and institute.
- Theory in Lab: By this method we take the students to the laboratories like aerodynamics lab, propulsion lab, structures lab and other related labs with relevant to their subjects for understanding the basic concepts
- Conduction of important events related to aerospace/aeronautical field.
- Real/Prototype aircraft, rockets and missile models are used for taking classes and demonstration purposes.

Aircraft/Drone Models:

Various aircraft and drone models are available in the aerospace department for better understanding of the subjects .

<table>
<tr><td>  </td><td>  </td></tr>
<tr><td>F117 NIGHTHAWK</td><td>JAS 39 GRIPEN</td></tr>
<tr><td>  </td><td>  </td></tr>
<tr><td>MIG 29</td><td>F22 RAPTOR</td></tr>
<tr><td>  </td><td>  </td></tr>
<tr><td>F16 FIGHTING FALCON</td><td>F35 LIGHTNING II</td></tr>
<tr><td>  </td><td>  </td></tr>
</table>

SR-71 BLACK BIRD	DRONES

GSLV MK III and Akash Missile Models

The Department is having GSLV MK III and Akash Missile prototype models for study purposes.

	
GSLV MK III	**Akash Missile**

MIG 27 Aircraft

The Aerospace Engineering department provides hands-on experience with MiG-27 variable sweep ground attack aircraft. The aircraft was built by the Soviet Union and later license produced in India by Hindustan Aeronautics Limited. The students understand the complete airframe structure in the campus and study design requirements, control surfaces, provisions to mount subsystems as well as control systems.

The list of innovative practices followed in teaching-learning processes is listed below

S.No	Innovations by the Faculty in Teaching and Learning
1.	Learning with the new technology
2.	Learning by attending conferences, webinars and seminars.
3.	Learning based on current Research Papers
4.	Learning by Industrial Visit (Class in Industry)
5.	Teaching through Alumni Interaction

6.	Student Seminars and Mini Projects
7.	Virtual Teaching - Learning Management System (LMS) (Google Class Room, Microsoft Teams, Zoom)
8.	Project Based Learning

5.6 Faculty as participants in Faculty development/training activities/STTPs (15) Total Marks 15.00

Institute Marks : 15.00

Name of the faculty	Max 5 Per Faculty		
	2021-22 (CAYm1)	2020-21 (CAYm2)	2019-20 (CAYm3)
Dr. R. Mukesh	5.00	5.00	5.00
Dr. G. Radhaboy	3.00	3.00	5.00
Dr. C. Suresh	5.00	0.00	0.00
Dr. V. Paramaguru	5.00	0.00	0.00
Mr. J. Siva	5.00	5.00	5.00
Mrs. U. Sivasathya	3.00	5.00	5.00
Mr. R. Karthi	3.00	3.00	3.00
Mr. M. Vijay	5.00	5.00	0.00
Mrs. Roohi	5.00	5.00	0.00
Mr. M. Sivaramraj	5.00	0.00	0.00
Mrs. Anusha	5.00	5.00	0.00
Ms. Vidyashree K R	0.00	5.00	5.00
Mrs. Sushmitha C	0.00	5.00	5.00
Mr. Suresh D	0.00	5.00	5.00
Sum	49.00	51.00	38.00
RF = Number of Faculty required to comply with 20:1 Student Faculty Ratioas per 5.1	9.00	9.05	9.00
Assessment [3*(Sum / 0.5RF)]	32.67	33.81	25.33

Average assessment over 3 years: 30.60

5.7 Research and Development (30) Total Marks 25.00

5.7.1 Academic Research (10)

Institute Marks : 10.00

The faculty members of Aerospace Department are actively doing research, in the areas of Navigation, Aerodynamics, Artificial Intelligence, UAV's, Optimization, Modelling, Data Analytics, Propulsion etc,

A total of 42 research papers were published and presented by the faculty members in referred impact factor journals and various International conferences held in India and foreign countries.

Number of quality publications in refereed/SCI Journals, citations, Books/Book Chapters etc.

Table B.5.7.1.1 Publication Details Journals/Conference/Book

Publication Details				
Year	**SCI**	**Journals**	**Conference**	**Book / Book Chapters**
2022-2023	**4**	**3**	**1**	**-**
2021-2022	**5**	**1**	**-**	**5**
2020-2021	**2**	**3**	**2**	**-**
2019-2020	**6**	**2**	**-**	**-**
2018-2019	**2**	**2**	**4**	**-**
Total	**19**	**11**	**7**	**5**

Quality Publications in refereed/SCI Journals

Table B.5.7.1.1 Journals Publication Details /Conference/Book

2022-2023								
Sl. No	**Year**	**Title of Research Paper**	**Journal**	**Authors**	**IJ/NJ**	**ISSN / ISBN**	**Month**	**Impact Factor/ SCOPS index**
1	2022	Analysis of Ionospheric TEC variations due to X, M & C Class Solar Flares during the years 2003 to 2018 and comparison with IRI models	Geomagnetism and Aeronomy	Mr. M. Vijay and Dr. R. Mukesh	IJ	1555-645X.	December	0.844
2	2022	Streamline Effect Improvement of Additive Manufactured Airfoil Utilizing Dynamic Stream Control Procedure	Advances in Materials Science and Engineering	Mr. Srinath and Dr. R. Mukesh	IJ	1687-8434	September	2.098
3	2022	Wind Tunnel Testing and Validation of Helicopter Rotor Blades Using Additive Manufacturing	Advances in Materials Science and Engineering	Dr. Inamul Hasan and Dr. R. Mukesh	IJ	1687-8434	September	2.098
4.	2022	Prediction of Range Error and correction in single frequency navigational receivers based on GPS satellite data during solar flare days	IEEE	Dr. R. Mukesh and Mr. M. Vijay	IJ	1803–7232	December	Scopus
5.	2022	Prediction of QoS data for pressure sensor using Prophet and FFNN AI algorithms	IEEE	A. Krishnakumar and Dr. R. Mukesh	IJ	1803–7232	December	Scopus
6	2022	Prediction of QoS data for various sensors using AI algorithms	IJISAE	A. Krishnakumar and Dr. R. Mukesh	IJ	2147-6799	December	Scopus

2022-2023								
Sl. No	**Year**	**Title of Research Paper**	**Journal**	**Authors**	**IJ/NJ**	**ISSN / ISBN**	**Month**	**Impact Factor/ SCOPS index**
7	2023	Prediction of TEC and range error using low-latitude GPS data during January to April 2022 solar flare events	Geomagnetism and Aeronomy	Mr. M. Vijay and Dr. R. Mukesh	IJ	1555-645X.	April	0.844

2021-2022								
Sl. No	**Year**	**Title of Research Paper**	**Journal**	**Authors**	**IJ/NJ**	**ISSN / ISBN**	**Month**	**Impact Factor/ SCOPS index**
1.	2022	Influence of input parameters for prediction of GPS and IRNSS TEC by using OKRSM at Hyderabad Stations during solar flare event	Acta Geophysica	Dr. R. Mukesh and Mr. M. Vijay	IJ	1895-7455	January	2.293
2.	2022	Aerodynamic performance analysis of supercritical airfoil in Helicopter main rotor	Transactions of the Canadian Society for Mechanical Engineering	Dr. Inamul Hasan and Dr. R. Mukesh	IJ	0315-8977	January	1.324
3.	2021	Forward Flight Performance Analysis of Supercritical Airfoil in Helicopter Main Rotor	Intelligent Automation & Soft computing	Dr. Inamul Hasan and Dr. R. Mukesh	IJ	1079-8587	November	3.401
4.	2021	Computational Study of Aerodynamic Performance of Three and Four-Bladed Helicopter Rotor with Supercritical Airfoil	Journal of Environmental Protection and Ecology	Dr. Inamul Hasan and Dr. R. Mukesh	IJ	1311-5065	December	0.692
5.	2022	Deep learning and optimisation for quality-of-service modelling	Journal of King Saud University - Computer and Information Sciences	Dr. R. Mukesh	IJ	1319-1578	September	8.839
6.	2022	Study on the characteristics of ordinary concrete with the granite dust as a substitute for the fine aggregates	Materials Today	Dr. C. Suresh	IJ	2214-7853.	July	Scopus

2020-2021								
Sl. No	**Year**	**Title of Research Paper**	**Journal**	**Authors**	**IJ/NJ**	**ISSN / ISBN**	**Month**	**Impact Factor/ SCOPS index**
1.	2021	Analysis of TEC values predicted by OKSM amongst low, mid and high latitude GPS stations during X 9.3 solar flare	Astrophysics and Space Science	Dr. R. Mukesh and Mr. M. Vijay	IJ	0004640X	August	1.909

2.	2020	Performance analysis of Navigation with Indian Constellation Satellites	Journal of King Saud University	Dr. R. Mukesh	IJ	1018-3639	December	Scopus
3.	2020	Prediction of TEC using NavIC/GPS data with geostatistical method/forecasting capability comparison with other models	Astrophysics and Space Science	Dr. R. Mukesh	IJ	0004640X	September	1.909
4.	2021	Aerodynamic Investigation of Double Surface Airfoil	ACS Journal for Science and Engineering	J. Siva, Dr. C Suresh, Dr. V. Paramaguru	IJ	2582-9610	September	Google Scholar
5.	2021	Prediction of GPS TEC during the X9.3 Solar Flare for DGAR low latitude station by using OKSM	Journal of Physics	Dr. R. Mukesh and Mr. M. Vijay	IJ	1742 6588	May	Scopus

2019-2020								
Sl. No	**Year**	**Title of Research Paper**	**Journal**	**Authors**	**IJ/NJ**	**ISSN / ISBN**	**Month**	**Impact Factor/ SCOPUS index**
1.	2020	Ordinary kriging - and cokriging - based surrogate model for ionospheric TEC prediction using NavIC/GPS data	Acta Geophysica	Dr. R. Mukesh	IJ	1895-7455	August	2.293
2.	2020	Forecasting of ionospheric TEC for different latitudes, seasons and solar activity conditions based on OKSM	Astrophysics and Space Science	Dr. R. Mukesh	IJ	0004640X	January	1.909
3.	2020	On the use of laser beam welding for Austenitic steel type 316L and stainless-steel type 304 for aerospace applications	International Journal of Innovative Technology and Exploring Engineering	Dr. R. Mukesh	IJ	2278-3075	January	Scopus
4.	2020	Aerodynamic Analysis of Isolated 3 Bladed Helicopter with Supercritical Airfoil	Solid State Technology	Inamul Hasan and Dr. R. Mukesh	IJ	0038-111X	June	Scopus
5.	2019	Analysis of signal strength, satellite visibility, position accuracy and ionospheric TEC estimation of IRNSS	Astrophysics and Space Science	Dr. R. Mukesh	IJ	0004640X	November	1.909
6.	2019	Cokriging based statistical approximation model for forecasting Ionospheric VTEC during high solar activity and storm days	Astrophysics and Space Science	Dr. R. Mukesh	IJ	0004640X	August	1.909
7.	2019	Developing A Smart Fuel Using Artificial Neural Network for Ci Engine Fuelled with Calophyllum Inophyllum Diesel Blend at Various Compression Ratio	Environmental Progress & Sustainable Energy	Dr. V. Paramaguru and Dr. C. Suresh	IJ	1944-7450	October	2.824

2019-2020								
Sl. No	**Year**	**Title of Research Paper**	**Journal**	**Authors**	**IJ/NJ**	**ISSN / ISBN**	**Month**	**Impact Factor/ SCOPUS index**
8.	2019	Increasing Aerodynamic Efficiency of Commercial Aircraft Wing using Computational Fluid Dynamics	Tierärztliche Praxis Journal	Dr. V. Paramaguru and Dr. C. Suresh	IJ	0303-6286	November	0.388

2018-2019								
Sl. No	**Year**	**Title of Research Paper**	**Journal**	**Authors**	**IJ/NJ**	**ISSN / ISBN**	**Month**	**Impact Factor/ SCOPUS index**
1.	2018	Airfoil Shape Optimization based on Surrogate Model	Journal of The Institution of Engineers (India): Series C	Dr. R. Mukesh	IJ	2250-0545	August	**Scopus**
2.	2019	Prediction of Ionospheric Vertical Total Electron Content from GPS data using Ordinary Kriging-based Surrogate Model	Astrophysics and Space Science	Dr. R. Mukesh	IJ	0004640X	January	1.909
3.	2018	Comparison of TEC of IRNSS with IRI and GPS TEC at equatorial latitude Station	AIP	Dr. R. Mukesh	IJ	1551-7616	November	Scopus
4.	2018	Prediction and optimization of CI engine performance fueled with Calophyllum inophyllum diesel blend using response surface methodology (RSM)	Environmental Science and Pollution Research	Dr. V. Paramaguru and Dr. C. Suresh	IJ	1614-7499	June	5.190

Table B.5.7.1.2 Conference Publication Details

2022-2023								
Sl. No	Year	Title of Research Paper	Conference (Name, Volume, Issue & Page Nos)	Authors	IC / NC	ISSN / ISBN & Country	Month	Impact Factor/ SCOPUS index

1	2022	Prediction of Range Error and correction in single frequency navigational receivers based on GPS satellite data during solar flare days	ICDI 2022, UTP, Malaysia.	Dr. R. Mukesh and Mr. M. Vijay	IC	2249-6661	December	Scopus

2020-2021

Sl. No	Year	Title of Research Paper	Conference (Name, Volume, Issue & Page Nos)	Authors	IC / NC	ISSN / ISBN & Country	Month	impact Factor/ SCOPUS index
1.	2021	Prediction of GPS TEC during the X9.3 Solar Flare for DGAR low latitude station by using OKSM	ICAIISEN21, SRM TRP Engineering College, Trichy	Dr. R. Mukesh	IC	India	April	-
2.	2021	Prediction of GPS TEC during the X9.3 Solar Flare by using OKMM	IVCACME21, Kongu Engineering College, Erode, India	Dr. R. Mukesh	IC	India	April	-

2018-2019

Sl. No	Year	Title of Research Paper	Conference (Name, Volume, Issue & Page Nos)	Authors	IC / NC	ISSN / ISBN & Country	Month	Impact Factor/ SCOPUS index
1	2019	Performance Analysis of IRNSS and TEC Prediction using Surrogate Model	ICETMR 2019, National University of Singapore.	Dr. R. Mukesh	IC	Singapore	April	-
2.	2019	Performance Analysis of NACA 2411 Ice accreted original and optimized airfoils	ICMMM 2019, Bannari Amman Institute of Technology, Sathyamangalam, India	Dr. R. Mukesh	IC	India	March	-
3.	2018	Comparison of TEC of IRNSS with IRI and GPS TEC at equatorial latitude Station	IconSET 2018, ACS College of Engineering, Bangalore, India	Dr. R. Mukesh	IC	India	November	-
4.	2018	Calculation of Ionospheric Total Electron Content using IRNSS Satellites	ICSMDA 2018, Kongu Engineering College, Erode, Tamil Nadu, India	Dr. R. Mukesh	IC	India	June	-

Table B.5.7.1.3 Book Publication Details

Year	Title of Research Paper	Title of the book/chapters published	Authors	ISBN & Country	Name of the Publisher
1.	Aerodynamic measurement of non-planar wings using Blower Balance Tunnel	Aspects and Applications of incompressible and compressible aerodynamics	Dr. C. Suresh, Dr. V. Paramaguru	ISBN: 13: 97816 68442302 India.	IGI Global Publishers
2.	Shock Reflections and Intersections	Aspects and Applications of incompressible and compressible aerodynamics	Dr. C. Suresh, Dr. V. Paramaguru	ISBN: 13: 97816 68442302 India.	IGI Global Publishers
3.	Introduction to Avionics	Introduction to Avionics Vol I and Vol 2	Dr. R. Mukesh	ISBN: 978-93-80686-20-2 India	Shanlax Publishers
4.	Aircraft Systems	Aircraft Systems and Instrumentation	Dr. R. Mukesh	-	Shanlax Publishers
5.	Rockets and Missiles	Missiles and Launch Vehicles	Dr. R. Mukesh and Dr. P. Theerthamalai	-	Shanlax Publishers

Table B.5.7.1.4 PhD Guidance- VTU Research Centre- Department of ASE

Sl. No.	Research Guide	Name of Scholar	Topic of Research	University & Year of Registration	Status
1	Dr. R. Mukesh Professor & Head Aerospace	Nishanth. P (1AH15PAJ01)	Aerodynamic Investigation and Shape Optimization Studies on Blended Wing Body Aircraft Configuration	VTU, Belgaum 2015	PhD Awarded on 10.3.2022
		Inamul Hasan (1AH17PMA01)	Flow Characteristics Analysis of Supercritical Airfoil in Helicopter Main Rotor Blades	VTU, Belgaum 2017	PhD Awarded on 06.12.2022
		Radhakrishnan P (1AH19PAE01)	Aerodynamics Performance and crack growth analysis of structural wing with high lift devices incorporated with self-healing concept.	VTU, Belgaum 2019	CV Completed 07.01.2022
		Srinath R (1AH19PAE02)	Aerodynamic Performance enhancement of airfoil using optimization and passive flow control techniques.	VTU, Belgaum 2019	CV Completed 18.02.2022
		Prashant (1AH20PAE01)	Numerical and Experimental analysis of Aerodynamics Characteristics of an unsymmetrical Airfoil	VTU, Belgaum 2020	Pursuing
		Swathi K (1AH20PAE02)	Prediction of Ionospheric TEC and estimation of range error based on NavIC data by using Machine Learning Algorithms	VTU, Belgaum 2020	Pursuing
		Praneeth H R	Design and Optimization of an airfoil for enhancement of aerodynamic efficiency under rainfall conditions	VTU, Belgaum 2023	Registered

Table B.5.7.1.5 - Ph.D. Awarded during the assessment period while working in the Institute

Sl. No.	Name of faculty	Details of Faculty	University	Title of Research	Year of Completion
1	Dr. Inamul Hasan	Associate Professor	VTU, Belgaum.	Flow Characteristics Analysis of Supercritical Airfoil in Helicopter Main Rotor Blades	2022

2.	Dr. V. Paramaguru	Associate Professor	Anna University	Studies on performance and emission characteristics of variable compression ratio diesel engine blended with alternative fuels and soft computing approach using RSM and ANN.	2021

5.7.2 Sponsored Research (5) Institute Marks : 5.00

2021-22 (CAYm1)

Project Title	Duration	Funding Agency	Amount
Design and Optimization of Air Intake for 155mm Ramjet Projectile	1 Year	ARDE, PUNE	963470.00
AI and ML based forecasting model for prediction of Ionospheric TEC and EQ using GNSS Data	2 Years	VTU, TEQIP	725000.00
Estimation of Aerodynamic parameters from Telemeter Flight Data of UAV	1 Year	ADE, DRDO	967493.00
Aerodynamic Prediction code for canard-controlled missile	2 Years	DRDL, Hyderabad	1481726.00
			Total Amount(X): 4137689.00

2020-21 (CAYm2)

Project Title	Duration	Funding Agency	Amount
Conceptual Aerodynamic Design of Expendable Attack UAV	1 Year	ADE, DRDO	958990.00
Estimation of Aerodynamic Parameters from Telemeter Flight Data of Flight Vehicle in Matlab Environment	1.5 Years	ASL, Hyderabad	964390.00
			Total Amount(Y): 1923380.00

2019-20 (CAYm3)

Project Title	Duration	Funding Agency	Amount
Computational Identification, Validation and Prediction of Covid-19 using AI and ML	6 Months	VTU, Belgaum	90000.00
Student Performance Prediction using AI and ML	6 Months	ACSCE	30000.00
			Total Amount(Z): 120000.00

Cumulative Amount(X + Y + Z) = 6181069.00

5.7.3 Development Activities (10) Institute Marks : 10.00

Research laboratories

1. **IRNSS Lab**

Name of the Research Lab	**IRNSS Data Centre / Navigation, Space and Atmospheric Sciences Research Lab**
Internet connectivity speed	1 Gbps
Name of the Expert /Faculty Members	Dr. R. Mukesh and Mr. M. Vijay
Identified Specializations	**TEC and Range Error Measurement for different GNSS Constellations**
Details of the Equipments	1. **Indian Regional Navigation System (IRNSS)/GPS Receiver** 2. **Multi Constellation GNSS Receiver**
Name of the Faculty In charge	Dr. R. Mukesh, Professor, Department of Aerospace Engineering, ACSCE, Bangalore – 74. 9442288700, vsmprm@gmail.com
Contents Beyond the Syllabus	This lab helps the students to understand the basics of GPS, IRNSS and other Navigational satellite systems. Apart from that, it also gives ideas about the · Dual frequency IRNSS (NavIC), GPS, GLONASS, GALILEO, BEIDOU & QZSS Receiver · Anti-Jam & Anti-Spoof capability · Ionospheric corrections and Multipath Mitigation · RINEX Format · Space based Applications for Social and environment protection · Development of algorithms for TEC and Range Error estimation · Development of algorithms for Tropospheric Error Prediction for communication and navigation satellite systems.
Learners	3rd & 4th year students of Aerospace, Aeronautical Engineering and Electronics and Communication Engineering.
Outcomes	This Laboratory mainly focuses on the investigations on Lower atmospheric studies using satellite data and Modelling and Forecasting of the Ionospheric effects on Global Navigation Satellite System (GNSS) and Navigation with Indian Constellation (NavIC) Signals.
Photographs of the facilities	  

s of the equipment:

S. No.	Name of Equipment	No. of units	Model/Make	Cost in Rs.

1	**Indian Regional Navigation System (IRNSS)/GPS Receiver**	**2**	**ACCORD Software and Systems Pvt. Ltd**	34,50,000/-
2	**Multi Constellation GNSS Receiver**	**1**		
3	**No. of PC's Available** **(**Intel(R) Core (TM) i5-8500 CPU @ 3.00GHz 3.00 GHz with 8GB RAM)	**5**	**HP**	2,50,000/-

2. Design and analysis lab

Name of the Research Lab	**Design and Analysis Lab**
Internet connectivity speed	4 Mbps
Name of the Expert /Faculty Members	Dr. P. Theerthamalai and Dr. R. Mukesh
Identified Specializations	**Design, Modelling and Analysis of UAV, Artillery Shells, Canard Control Missiles.**
Details of the Equipments/Software	Ansys, Gambit, Catia, Matlab, Fortran, Datcom.
Name of the Faculty In charge	Dr. R. Mukesh, Professor, Department of Aerospace Engineering, ACSCE, Bangalore – 74. 9442288700, vsmprm@gmail.com
Contents Beyond the Syllabus	This lab helps the students to understand the basics of design, modelling and Analysis of aerospace structures using various softwares. Apart from that, it also gives ideas about the · UAV Design · Artillery Shell design · Various Canard Controlled missile configurations. · Catapult Design · Analysis and Simulation studies. · Ice accretion analysis · Datcom program for aerodynamic performance estimation.
Learners	3rd & 4th year students of Aerospace, Aeronautical Engineering.
Outcomes	This Laboratory mainly focuses on the investigations on Design and analysis of UAV, Missiles and Ramjet powered shells.
Photographs of the facilities	

S. No.	Name of Equipment	No. of units	Model/Make	Cost in Rs.
1.	**No. of PC's Available** **(**Intel(R) Core (TM) i9-10900x CPU @ 3.70GHz 3696 MHz with 32GB RAM)	**2**	HP	6,20,208/-
2.	**No. of PC's Available** **(**Intel(R) Core (TM) i5-8500 CPU @ 3.00GHz 3.00 GHz with 8GB RAM)	**2**	**HP**	2,50,000/-

3. Flight Simulator Lab

Name of the Research Lab	Avionics/Aircraft Systems and Instrumentation Lab

Internet connectivity speed	1 Gbps
Name of the Expert /Faculty Members	Mr. Sivaramraj and Mr. R. Ganesh.
Identified Specializations	**Avionics and Aircraft Systems & Instruments**
Details of the Equipments	SmartFly Advent Flight Simulator
Name of the Faculty In charge	Dr. R. Mukesh, 9442288700, vsmprm@gmail.com
Contents Beyond the Syllabus	· Flight simulator is an advanced training platform focuses on general aviation which forms the basic building block for students/trainees. The Innovative instructor station puts students into various situations including weather, system and instrument failures etc. to master the procedures. · Digital Avionics Radio stack gives the best training environment to practice radio and Flight navigation procedures. · The operational physical controls such as, switch pack, Throttle, Propeller and Mixture unit, Flaps with LED flap position indicator, landing Gear with position indicators, Trim wheel, Gauge control, digital radio avionics stack, GP500 GPS module and external Instructor operating station gives good hands on experience.
Learners	3rd & 4th year students of Aeronautical and Aerospace Engineering,
Outcomes	· The students can learn & practice the concept of manoeuvring, Navigation under visual or instrument flight conditions. · Flight planning can be done with this simulator. · Become proficient and master flying Visual Flight Rules /Instrument Flight Rules under Instrument meteorological **conditions** day or night to almost any airport in the world. · Safety, Training Value, Zero Pollution, Economy, Low operating cost, Learn at ease situation · The avionics and aircraft systems subjects contents like ASI, VSI, AM, MM, AI, GH, moving map with flight review, vertical and horizontal flight path with ILS/VOR can be taught with good demonstration
Cost	· **12,39,000/-**

Photographs of the facilities	  

4. Satellite Tracking Lab

Name of the Research Lab	**Amateur Satellite Ground Station**
Internet connectivity speed	1 Gbps
Name of the Expert /Faculty Members	Dr. R. Mukesh, J. Siva and Mr. M. Sivaramraj
Identified Specializations	1. Real Time Tracking Software 2. Software Defined Radio 3. Telemetry/image/payload decoding Software
Details of the Equipments	3. One vertically polarized antenna operating @ 144 -146 MHz VHF Amateur Band 4. One vertically polarized antenna operating @ 434-438 MHz UHF Amateur Band 5. One vertically polarized antenna operating @ 137 MHz for receiving Automatic Picture Transmission (APT) Earth Imaging signals from American NOAA & Russian METEOR Satellites 6. Software Defined Radio (SDR)
Name of the Faculty In charge	Dr. R. Mukesh, Professor, Department of Aerospace Engineering, ACSCE, Bangalore – 74. 9442288700, vsmprm@gmail.com

Contents Beyond the Syllabus	This lab helps the students to understand the basics of Amateur satellite system and Satellite Operations. Apart from that, it also gives ideas about the • Track and monitor the satellites in real time • Receive health & house-keeping data as telemetry • Receive Payload data & processing/decoding
Learners	2nd, 3rd & 4th year students of Aerospace, Aeronautical Engineering and Electronics and Communication Engineering.
Outcomes	The Ground/control segment plays very important role in each of the developed and launched satellite to confirm/check the status and to plan the satellite's mission. Satellite Ground station in an Engineering college would provide the students with wonderful opportunities to learn about satellite operations with hands-on experience.
Photographs of the facilities	  

s of the equipment:

S. No.	Name of Equipment	No. of units	Model/Make	Cost in Rs.
1	Software Defined Radio receiver	**1**	RTL-SDR	40,000/-
2	One vertically polarized antenna operating @ 144 -146 MHz VHF Amateur Band One vertically polarized antenna operating @ 434-438 MHz UHF Amateur Band One vertically polarized antenna operating @ 137 MHz	**1**	BJTEK Navigation Inc.	
3	**No. of PC's Available** **(**Intel(R) Core (TM) i5-8500 CPU @ 3.00GHz 3.00 GHz with 8GB RAM)	**1**	Lenovo	50,000/-

5. AI and ML Lab

Name of the Research Lab	**AI and ML Lab**
Internet connectivity speed	1 Gbps
Name of the Expert /Faculty Members	Dr. R. Mukesh, Prof. P. Soma and Dr. P. Theerthamalai.
Identified Specializations	**Prediction of TEC, Lower atmospheric variations using AI and ML algorithms.**
Details of the Equipments/Software	Python,
Name of the Faculty In charge	Dr. R. Mukesh, Professor, Department of Aerospace Engineering, ACSCE, Bangalore – 74. 9442288700, vsmprm@gmail.com

Contents Beyond the Syllabus	This lab helps the students to understand the basics of python and various AI and ML algorithms for prediction of TEC for range error estimation and also possible prediction of earthquake using TEC anomalies.
Learners	3rd & 4th year students of Aerospace, Aeronautical Engineering and Electronics and Communication Engineering.
Outcomes	This Laboratory mainly focuses on the implementation of AI and ML algorithms for prediction of various parameters.
Photographs of the facilities	

S. No.	Name of Equipment	No. of units	Model/Make	Cost in Rs.
1.	**No. of PC's Available** **(**Intel(R) Core (TM) i5-8500 CPU @ 3.00GHz 3.00 GHz with 8GB RAM)	**2**	**Lenovo**	1,20,000/-

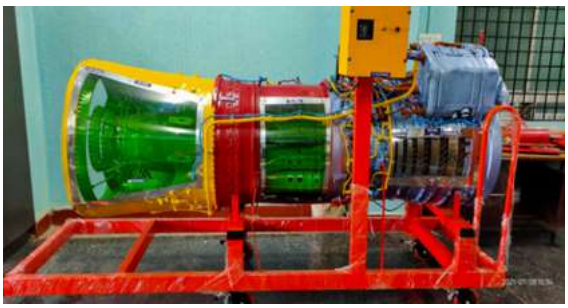
6. Drone and UAV's (Working Models)

Name of the Research Lab	**Drone and UAV lab**
Name of the Expert /Faculty Members	Dr. V. Paramaguru and Mr. M. Sivaramraj.
Identified Specializations	**Using the Drones and UAV's for agricultural, Surveying, Delivering goods and other purposes based on AI algorithms and Navigation aids.**
Details of the Equipments/Software	Drones, UAV's, Tools
Name of the Faculty In charge	Dr. V. Paramaguru, Associate Professor, Department of Aerospace Engineering, ACSCE, Bangalore – 74.
Contents Beyond the Syllabus	This lab helps the students to understand the basics of Drones and UAV's and also useful for real life applications.
Learners	3rd & 4th year students of Aerospace, Aeronautical Engineering and Electronics and Communication Engineering.
Outcomes	This Laboratory mainly focuses on the Design of Drones and UAV's for various applications.
Photographs of the facilities	

7. Propulsion and Engine Lab (Working Models)

Name of the Research Lab	**Propulsion and Engine Lab**
Name of the Expert /Faculty Members	Mr. J. Siva and Dr. C. Suresh
Identified Specializations	**Jet Engine, Radial Piston Engine and Propellant preparation and testing.**

Details of the Equipments/Software	**Universal Testing Machine - Propellant Testing Machine** **Hot Air Oven – Propellant Preparation** **MIG 21 Supersonic Jet Engine (Russian Tumansky R25-300 Series Engine)** **Pratt & Whitney R-1830 Twin Wasp 14 Cylinder Radial Engine**
Name of the Faculty In charge	Mr. J. Siva, Assistant Professor, Department of Aerospace Engineering, ACSCE, Bangalore – 74.
Contents Beyond the Syllabus	This lab helps the students to understand the preparation and testing of propellants, Jet Engine and piston engines.
Learners	3^{rd} & 4^{th} year students of Aerospace, Aeronautical Engineering and Electronics and Communication Engineering.
Outcomes	This Laboratory mainly focuses on the propellant testing, Engine Components and its Design.

Photographs of the facilities	 **Universal Testing Machine - Propellant Testing Machine**  **Hot Air Oven – Propellant Preparation**  **MIG 21 Supersonic Jet Engine**  **Pratt & Whitney R-1830 Twin Wasp 14 Cylinder Radial Engine**

Product Development:

S.No	Product Description	Illustration
1.	Multi Rotor VTOL UAV:	

2.	RC Model Aircraft:	
3.	Water Rocketry Models:	

5.7.4 Consultancy(from Industry) (5)

Institute Marks : 0.00

2021-22 (CAYm1)

Project Title	Duration	Funding Agency	Amount
Aircraft Winglets Analysis	6 Months	Raydynamics, Coimbatore	11800.00
			Total Amount(X): 11800.00

2020-21 (CAYm2)

Project Title	Duration	Funding Agency	Amount

2019-20 (CAYm3)

Project Title	Duration	Funding Agency	Amount

Cumulative Amount(X + Y + Z) =

5.8 Faculty Performance Appraisal and Development System (FPADS) (30)

Total Marks 25.00

Institute Marks : 25.00

The faculty performance appraisal system is established to optimize the contribution of faculty in teaching. This system serves as the basis for discussing faculty performance, setting goals and objectives for the next academic year. The performance appraisal system consists of following items to evaluate the performance of the faculty, are as follows,

Processes Followed in the Performance Appraisal System:

- Online Feedback taken from the students through ERP Software.
- Offline Feedback taken from the students through interactive methods and Syllabus Coverage details collection.
- Comments on the Self-appraisal made by the Faculty Member.
- Comments on the Self-appraisal made by the Head of the Department.
- Review by the Dean and Principal.

Teaching, Learning & Evaluation Related Activities:

- Professionalism
- Teaching Skills
- Attitude & Aptitude
- Oral and Written Communication
- Faculty Strength
- Areas in need of improvement
- Semester wise Teaching: Theory and Practical.
- Learning activities like Seminars/Tutorials/Course Project conducted.
- Mentoring
- Preparation of Learning Materials.
- Projects guided in ACSCE.
- Book Publications
- Journals Publications and Conference Presentations
- Patents Filling
- Funded Projects, Awards & Consultancy work
- Workshop, Seminars, FDP and STTP attended.
- University Work (BOS/BOE/QP Setting/External Examiner)
- Administration Work
- Team Work
- Membership of Professional, Academic and other committees.

Implementation and Effectiveness:

- Preparation of Learning Materials on the syllabus and reviewed by HOD or Subject Expert.
- Learn by attending the Expert classes
- Presentation through E-Lecture.
- Preparation of Question Bank and Assignments.
- Conduction of Faculty Deeper Learning Programme for tough subjects.
- Teachers Acclaimed Seminar for Knowledge Sharing Programme are organized to improve the Presentation skills and the Confidence level of the faculty members.
- Faculty Technical Talk Sessions are arranged to share the current cutting-edge technologies used in aviation industries.

Motivation:

The Management of ACSCE appreciates and encourages the faculty for their services and achievements by

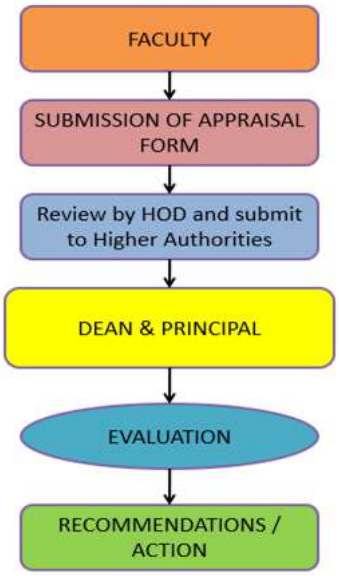
• Reimbursing registration fees for attending conferences for paper presentation.

• Felicitating the faculty members for their exemplary service in the Institution.

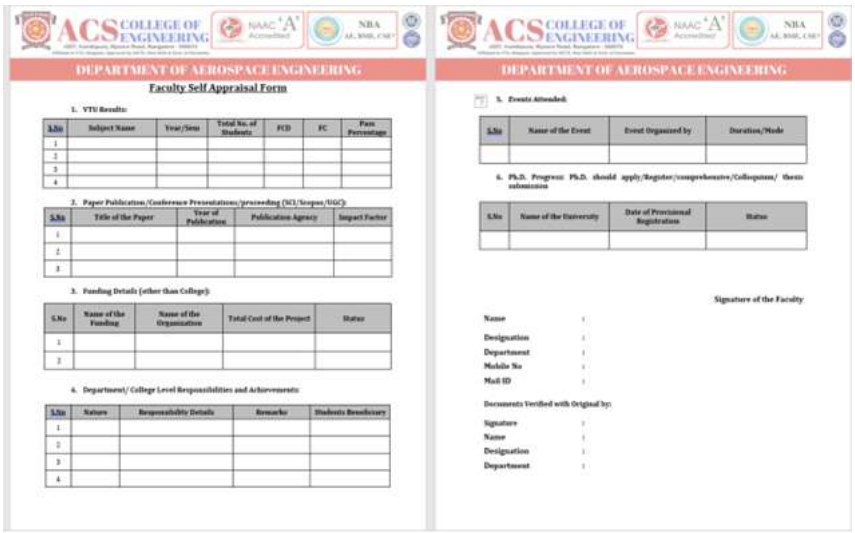
• Reward for the funded and consultancy project.

• Sponsoring the faulty members to visit foreign universities.

• Reimbursing fees for the paper publications in reputed journals (Web of Science/ Scopus, etc)



Flow Chart of Faculty Performance Appraisal and Development System


ACS COLLEGE OF ENGINEERING

DEPARTMENT OF AEROSPACE ENGINEERING

Faculty Self Appraisal Form

1. VTU Results:

S.No	Subject Name	Year/Sem	Total No. of Students	FCD	FC	Pass Percentage
1						
2						
3						
4						

2. Paper Publication/Conference Presentations/proceeding (SCI/Scopus/UGC):

S.No	Title of the Paper	Year of Publication	Publication Agency	Impact Factor
1				
2				
3				

3. Funding Details (other than College):

S.No	Name of the Funding	Name of the Organization	Total Cost of the Project	Status
1				
2				

4. Department/ College Level Responsibilities and Achievements:

S.No	Nature	Responsibility Details	Remarks	Students Beneficiary
1				
2				
3				
4				

ACS COLLEGE OF ENGINEERING

DEPARTMENT OF AEROSPACE ENGINEERING

5. Events Attended:

S.No	Name of the Event	Event Organized by	Duration/Mode

6. Ph.D. Progress: Ph.D. should apply/Register/comprehensive/Colloquium/ thesis submission

S.No	Name of the University	Date of Provisional Registration	Status

Signature of the Faculty

Name :

Designation :

Department :

Mobile No :

Mail ID :

Documents Verified with Original by:

Signature :

Name :

Designation :

Department :

STAFF SELF APPRAISAL FORM 2020-2021.

5.9 Visiting/Adjunct/Emeritus Faculty etc. (10) Total Marks 10.00

Institute Marks : 10.00

Dr. G. Vinoth, B.E, M.S, Ph.D (U.S.A) Innovation Management Services, Pongu Ventures Pvt Ltd

Activities of Pongu Ventures

• To organize periodic workshops/ seminars/ interactions with entrepreneurs, investors, professionals and create a mentor pool for student innovators.

• To conduct various innovation and entrepreneurship-related activities prescribed by Central MIC in time bound fashion.

• Identify and reward innovations and share success stories.

• Network with peers and national entrepreneurship development organizations.

• Create an Institution's Innovation portal to highlight innovative projects carried out by institution's faculty and students.

• Organize Hackathons, idea competition, mini-challenges etc. with the involvement of industries.

• In the academic year 2019-20 18 IIC driven activities, 32 MHRD driven activities and 20 self driven activities were conducted and 485 participants actively participated in these activities

• Students and faculty members were motivated to join the innovative culture and give solutions for innovative projects and make a significant contribution to an existing product, process or service.

Dr Kalyana Kannan Center for Test and Data Sciences

Center for Test an Data Sciences (CTDS) is for real time industry projects, internships, sponsored research from companies and government agencies and technology training.

CTDS is composed of industry professionals playing the role of mentors and serves as a bridge between industry and institutions, The center focuses on building talent and technology solutions for industries through early collaboration and mutual engagements.

Currently the center is working on projects related to Data Analytics, Software Quality Management, Mechanical testing and Characterization.

Areas of Interest

• Agile Technology

• DevOps

• Data Sciences

• Microsoft – ERP

• Materials Testing

• HR Platform – Select Smart

• PLM, Compliance – Pharma – Quality

• AI and Machine Language

• Open Source – Mean Stack

• Design Thinking

6 FACILITIES AND TECHNICAL SUPPORT (80)

Total Marks 80.00

6.1 Adequate and well equipped laboratories, and technical manpower (30)

Total Marks 30.00

Institute Marks : 30.00

Sr. No	Name of the Laboratory	Number of students per set up(Batch Size)	Name of the Important Equipment	Weekly utilization status(all the courses for which the lab is utilized)	Technical Manpower Support		
					Name of the Technical staff	Designation	Qualification
1	Fluid Mechanics Laboratory (4th Semester)	23	Orifice meter Venturimeter Rectangular notch Sudden contraction apparatus for friction factor Pipe friction apparatus for friction factor	2 batches x 3 hours = 6 hours	Mr.Ramakrishna	Instructor	SSLC
2	Computer Aided Aircraft Drawing Laboratory (4th Semester)	23	ACER LCD Monitor 19"inch Intel®Core™2 Duo CPU E7500 @ 2.93GHz,0.99 GB of RAM,320GB HDD ANSYS software tool version 20 ACER keyboard and mouse, and Batteries	2 batches x 3 hours = 6 hours	Mr.Mohana Pratheep	Tutor	B.E
3	Propulsion Laboratory (5th Semester)	23	Universal Testing Machine Apparatus Hot Air Oven Free And Wall Jet Test Setup Forced Convection Apparatus Natural Convection Apparatus Burning Velocity Measurement Low Speed Cascade Test Rig Performance Studies on Jet Engine Equipment	2 batches x 3 hours = 6 hours	Mr. Ravi	Instructor	ITI
4	Aerodynamics Laboratory (5th Semester)	23	Low speed Subsonic Wind Tunnel (Test section 600mm*600mm for air velocity of 0-50 m/sec) Tuft model of aero foil for flow visualization studies along with fixtures. Wake Rake for wake studies across the aero foil along with fixtures. Boundary layer rake for displacement thickness Measurement Inclined tube manometer for velocity measurement fixed on a wooden board. Cylindrical model with Pressure tapings Airfoil model with Pressure tapings Cambered airfoil with Pressure tapings Aircraft Model for 3 Component Balance	2 batches x 3 hours = 6 hours	Mr. Ravi	Instructor	ITI
5	Structures Laboratory (6th Semester)	23	Beam Test Setup Column Test Apparatus Wagner Beam Apparatus Vibration Of Beam Test Setup Shear Centre location Experiment for Open and closed Section, Strain gages	2 batches x 3 hours = 6 hours	Mr.Lingaraju M	Instructor	ITI
6	Avionics & Instrumentation Laboratory (7th Semester)	23	SMARTFLY- Advent Flight Simulator 8085 Microprocessor kit Encoder trainer kit IC 555 application trainer kit Decoder trainer kit Multiplexer trainer kit Half and Full adder and Subtractor kit PAM modulation and demodulation 4 bit shift register using flip flops	2 batches x 3 hours = 6 hours	Mr.Mohana Pratheep	Tutor	B.E
7	Simulation Laboratory (7th Semester)	23	Intel®Core™2 Duo CPU E7500 @ 2.93GHz,0.99 GB of RAM,320GB HDD MAT software tool version 20 DELL keyboard and mouse UPS and Batteries DELL LCD Monitor 19"inch	2 batches x 3 hours = 6 hours	Mr.Mohana Pratheep	Tutor	B.E

6.2 Additional facilities created for improving the quality of learning experience in laboratories (25)

Total Marks 25.00

Institute Marks : 25.00

Sr. No	Facility Name	Details	Reason(s) for creating facility	Utilization	Areas in which students are expected to have enhanced learning	Relevance to POs/PSOs
1	MIG 27 Aircraft	This aircraft was built by the Soviet Union and later license produced in India by Hindustan Aeronautics Limited.	To provide hand-on experience with MIG-27 variable sweep ground attack aircraft. To make the students to understand the complete airframe structure in the campus and study design requirements.	Students and Faculty	Anatomy of an aircraft	PO1, PO2, PO3, PO4, PO5, PO6
2	Tumansky R – 25 – 300 Series Supersonic Jet Engine	The Russian Tumansky R – 25 – 300 Series Engine was built under license by HAL in India for MIG 21 BIS fleet aircraft. It is a supersonic jet engine with straight flow. The length of the engine is 4615 mm which can produce a maximum thrust of 40. 3 kN without afterburner and it can produce a thrust of 69.6 kN with after burner switched on condition. The fuel used in this engine is Kerosene ATF, T1, TC1 and T2.	The Tumansky R – 25 – 300 engine available in ACSCE was partially cutdown and projected in transparent mode for visualizing the inner parts of the engine. The engine compressor is attached with a variable RPM motor for demonstration purposes. It will be helpful for the students to get deep knowledge about the various components and working principle of the Jet engine in detail.	Students	Aerospace Propulsion	PO1, PO2, PO3, PO4, PO5, PO6
3	14 Cylinder radial piston engine of DC 3 Aircraft	14 Cylinder radial piston engine gives the visualization of piston and cylinder in the engine used to propel the aircraft.	To feel the visualization of different parts of the Multi-Cylinder piston engine.	Students	Aerospace Propulsion	PO1, PO2, PO3, PO4, PO5, PO6
4	GSLV MK III Model	GSLV stands for Geosynchronous Satellite Launch Vehicle. GSLV MK III is a three-stage lift launch vehicle developed by ISRO. This launch vehicle is designed for carrying heavier satellites.	The Aerospace department is having GSLV MK III missile prototype for study type.	Students	Satellites and Launch vehicles	PO1, PO2, PO3, PO4, PO5, PO6
5	Akash missile Model	AKASH is a medium range mobile surface to air missile system developed by the DRDO and produced by Bharath Dynamics Limited.	The Aerospace department is having AKASH missile prototype for study type.	Students	Missiles and Launch vehicles	PO1, PO2, PO3, PO4, PO5, PO6
6	Wi-fi	Wi-fi facility available WITH 8192 kbps FOR ALL THE STUDENTS and FACULTY MEMBERS	For accessing Internet	Students and Faculty	Connecting with technical people throughout the world and technical resources available on cloud.	PO5
7	Green Board	All laboratories are equipped	For better explanation	Students	Knowledge Updation	PO10
8	SEMINAR HALL	Fully equipped shared seminar hall with computer, projector, student desk, white board, Air conditioner, fan, cushion chair, mike, speaker, LED light, podium.	For better understanding of computer Aided Aircraft Drawing laboratory and computer Aided analysis and modeling laboratory, computer environment by providing e-learning through online web course and video Guest lectures of advanced topics in Aerospace engineering.	Students and Faculty	Knowledge Updation and sharing	PO1, PO6,PO7, PO10
9	LIBRARY	Apart from the college library department is also having collection of text books, Reference books for staff and students project/ seminar report.	To meet the needs of the students and faculty to provide reference facility	Entire Period of their study in the College	Academic and research. Identification of recent trends and challenges in the industry.	PO1, PO2,PSO1,
10	E JOURNALS, E-BOOKS FACILITY	Provided with sufficient memory power of hard disc for the storage	● Self-learning of advanced and cutting edge research topics. ● Easy access to resources on the internet for better understanding on required topic. ● Bridge gap between Academic and recent research areas.	Entire Period of their study in the College	Academic and research. Identification of recent trends and challenges in the industry.	PO1, PSO1, PSO2
11	LABORATORY INSTRUCTION CLASS	Discussion on theoretical concept of the experiment to be conducted in the upcoming lab Class.	To provide the students with brief idea about the experiment and its applications.	One Lab Instruction Class per Week/ Lab	Problem identification	PO1, PO2, PO3, PO4

6.3 Laboratories: Maintenance and overall ambiance (10) Total Marks 10.00

Institute Marks : 10.00

Maintenance of Laboratory Equipment

• Periodic check-up and calibration of equipment is carried out regularly.

• Separate maintenance register is maintained in the department along with the stock register.

• As per the requirement minor repairs/services are carried out by the laboratory instructors.

• Maintenance of computers is taken care by centralized system maintenance staff.

• Major repairs are outsourced as per institute norms.

• DO's and DON'T's board is fixed in all the laboratories.

Overall Ambience

• All laboratories are having adequate space and well-ventilation with good lighting.

• All the laboratories are equipped with white board and such other amenities.

• All equipment's are in working conditions with instruction manuals.

• All laboratories are well furnished with uninterrupted power supply.

• Exclusively a project laboratory has been provided for the students to carry out their mini and major Project work.

• Fire extinguisher is available in all the laboratories.

• Overall ambience of laboratories is excellent.

Sl No	Curriculum Lab Description	Semester	Exclusive use/ shared	Space/ No.of Students	No. of experiments expt.	Quality of Instruments	Lab Manuals	Equipments	Ambience
1	Machine Shop	III	Shared with MECH	50/22- 23 per batch	14+0	Working	Available	Available	Maintained
2	Material Testing Lab	III	Shared with MECH	50/22- 23 per batch	14+0	Working	Available	Available	Maintained
3	Measurements & Metrology Lab	IV	Shared with MECH	50/22- 23 per batch	13+0	Working	Available	Available	Maintained
4	Computer Aided Aircraft Drawing	IV	Shared with MECH	50/22- 23 per batch	14+0	Working	Available	Available	Maintained
5	Aerodynamics Lab	V	Exclusive use	50/22- 23 per batch	12+0	Working	Available	Available	Maintained
6	Energy Conversion Lab	V	Shared with MECH	50/22- 23 per batch	7+0	Working	Available	Available	Maintained
7	Fluid Mechanics Lab	V	Exclusive use	50/22- 23 per batch	7+0	Working	Available	Available	Maintained
8	Aircraft Propulsion Lab	VI	Exclusive use	50/22- 23 per batch	12+0	Working	Available	Available	Maintained
9	Aircraft Structures Lab	VI	Exclusive use	50/22- 23 per batch	14+0	Working	Available	Available	Maintained
10	Design, Modelling and Analysis Lab	VII	Shared with MECH	50/22- 23 per batch	14+0	Working	Available	Available	Maintained
11	Flight Simulation Lab	VII	Exclusive use	50/22- 23 per batch	14+0	Working	Available	Available	Maintained

6.4 Project laboratories (5) Total Marks 5.00

S. No.	Facility Name	Utilization
1.	IRNSS Laboratory    	• This laboratory helps the students to understand the basics of GPS, IRNSS and other Navigational satellite systems. Apart from that, it also gives ideas about the • Dual frequency IRNSS (NavIC), GPS, GLONASS, GALILEO, BEIDOU & QZSS Receiver • Anti-Jam & Anti-Spoof capability • Ionospheric corrections and Multipath Mitigation • RINEX Format • Space based Applications for Social and environment protection • Development of algorithms for TEC and Range Error estimation • Development of algorithms for Tropospheric Error Prediction for communication and navigation satellite systems. • 3rd & 4th year students of Aerospace, Aeronautical Engineering and Electronics and Communication Engineering. • This Laboratory mainly focuses on the investigations on Lower atmospheric studies using satellite data and Modelling and Forecasting of the Ionospheric effects on Global Navigation Satellite System (GNSS) and Navigation with Indian Constellation (NavIC) Signals.
2.	Design and analysis Laboratory 	• This laboratory helps the students to understand the basics of design, modelling and Analysis of aerospace structures using various softwares. Apart from that, it also gives ideas about the • UAV Design • Artillery Shell design • Various Canard Controlled missile configurations. • Catapult Design • Analysis and Simulation studies. • Ice accretion analysis • Datcom program for aerodynamic performance estimation. • 3rd & 4th year students of Aerospace, Aeronautical Engineering. • This Laboratory mainly focuses on the investigations on Design and analysis of UAV, Missiles and Ramjet powered shells.

S. No.	Facility Name	Utilization
3.	**Flight Simulator Laboratory**  	• Flight simulator is an advanced training platform focuses on general aviation which forms the basic building block for students/trainees. The Innovative instructor station puts students into various situations including weather, system and instrument failures etc. to master the procedures. • Digital Avionics Radio stack gives the best training environment to practice radio and Flight navigation procedures. • The operational physical controls such as, switch pack, Throttle, Propeller and Mixture unit, Flaps with LED flap position indicator, landing Gear with position indicators, Trim wheel, Gauge control, digital radio avionics stack, GP500 GPS module and external Instructor operating station gives good hands-on experience. 3rd & 4th year students of Aeronautical and Aerospace Engineering. • The students can learn & practice the concept of maneuvering, Navigation under visual or instrument flight conditions. • Flight planning can be done with this simulator. • Become proficient and master flying Visual Flight Rules /Instrument Flight Rules under Instrument meteorological conditions day or night to almost any airport in the world. • Safety, Training Value, Zero Pollution, Economy, Low operating cost, Learn at ease situation • The avionics and aircraft systems subject's contents like ASI, VSI, AM, MM, AI, GH, moving map with flight review.
4.	Satellite Tracking Laboratory  	•This laboratory helps the students to understand the basics of Amateur satellite system and Satellite Operations. Apart from that, it also gives ideas about the •Track and monitor the satellites in real time Receive health & house-keeping data as telemetry. • Receive Payload data & processing/decoding 2nd, 3rd & 4th year students of Aerospace, Aeronautical Engineering and Electronics and Communication Engineering. •The Ground/control segment plays very important role in each of the developed and launched satellite to confirm/check the status and to plan the satellite's mission. Satellite Ground station in an Engineering college would provide the students with wonderful opportunities to learn about satellite operations with hands-on experience.
5.	AI and ML Laboratory 	• This laboratory helps the students to understand the basics of python and various AI and ML algorithms for prediction of TEC for range error estimation and possible prediction of earthquake using TEC anomalies. • 3rd & 4th year students of Aerospace, Aeronautical Engineering and Electronics and Communication Engineering. • This Laboratory mainly focuses on the implementation of AI and ML algorithms for prediction of various parameters.

S. No.	Facility Name	Utilization
6.	Drone and UAV's Laboratory 	• Preparations of various UAV's and drones • Practice flying of prepared models practically and by Utilizing simulator software • To create the aircraft models with innovative ideas which will also be helpful in understanding the Real time application of an aircraft • To participate in national level and state level competitions so that the students will be exposed to the outer competitive world. • To build the creative skills in developing and flying of UAV 'S which will Increase the interest of students to study and understand the aeronautical engineering

6.5 Safety measures in laboratories (10)

Total Marks 10.00

Institute Marks : 10.00

Sr. No	Laboratory Name	Safety Measures
1	Fluid Mechanics Laboratory	➢Fire extinguisher (CO2)-for B and C Type (Both fire and electrical fire)-8 litres Capacity. ➢ First Aid Box is fixed in place. ➢ DO's and DON'Ts board is placed. ➢ Instructions are given to students to wear shoes to the laboratory. ➢ Preventive measures taken in case of accident in handling models. ➢ Preliminary Medical facility (clinic) is available inside campus for emergency. ➢ Before running the machine/equipment ensure that there are no loose materials inside it, or anything attached that can be dislodged. ➢ Never leave the machine/equipment running for no reason. If your test is finished, bring the flow to a halt.
2	Computer Aided Aircraft Drawing Laboratory	➢Fire extinguisher (CO2)-for B and C Type (Both fire and electrical fire)-8 litres Capacity. ➢ First Aid Box is fixed in place. ➢ DO's and DON'Ts board is placed. ➢ Instructions are given to students to wear shoes to the laboratory. ➢ Preventive measures taken in case of accident in handling models. ➢ Preliminary Medical facility (clinic) is available inside campus for emergency. ➢ Before running the machine/equipment ensure that there are no loose materials inside it, or anything attached that can be dislodged. ➢ Never leave the machine/equipment running for no reason. If your test is finished, bring the flow to a halt.
3	Propulsion Laboratory	➢Fire extinguisher (CO2)-for B and C Type (Both fire and electrical fire)-8 litres Capacity. ➢ First Aid Box is fixed in place. ➢ DO's and DON'Ts board is placed. ➢ Instructions are given to students to wear shoes to the laboratory. ➢ Preventive measures taken in case of accident in handling models. ➢ Preliminary Medical facility (clinic) is available inside campus for emergency. ➢ Before running the machine/equipment ensure that there are no loose materials inside it, or anything attached that can be dislodged. ➢ Never leave the machine/equipment running for no reason. If your test is finished, bring the flow to a halt.
4	Aerodynamics Laboratory	➢Fire extinguisher (CO2)-for B and C Type (Both fire and electrical fire)-8 litres Capacity. ➢ First Aid Box is fixed in place. ➢ DO's and DON'Ts board is placed. ➢ Instructions are given to students to wear shoes to the laboratory. ➢ Preventive measures taken in case of accident in handling models. ➢ Preliminary Medical facility (clinic) is available inside campus for emergency. ➢ Before running the machine/equipment ensure that there are no loose materials inside it, or anything attached that can be dislodged. ➢ Never leave the machine/equipment running for no reason. If your test is finished, bring the flow to a halt.
5	Structures Laboratory	➢Fire extinguisher (CO2)-for B and C Type (Both fire and electrical fire)-8 litres Capacity. ➢ First Aid Box is fixed in place. ➢ DO's and DON'Ts board is placed. ➢ Instructions are given to students to wear shoes to the laboratory. ➢ Preventive measures taken in case of accident in handling models. ➢ Preliminary Medical facility (clinic) is available inside campus for emergency. ➢ Before running the machine/equipment ensure that there are no loose materials inside it, or anything attached that can be dislodged. ➢ Never leave the machine/equipment running for no reason. If your test is finished, bring the flow to a halt.
6	Avionics & Instrumentation Laboratory	➢Fire extinguisher (CO2)-for B and C Type (Both fire and electrical fire)-8 litres Capacity. ➢ First Aid Box is fixed in place. ➢ DO's and DON'Ts board is placed. ➢ Instructions are given to students to wear shoes to the laboratory. ➢ Preventive measures taken in case of accident in handling models. ➢ Preliminary Medical facility (clinic) is available inside campus for emergency. ➢ Before running the machine/equipment ensure that there are no loose materials inside it, or anything attached that can be dislodged. ➢ Never leave the machine/equipment running for no reason. If your test is finished, bring the flow to a halt.

7	Simulation Laboratory	➢Fire extinguisher (CO2)-for B and C Type (Both fire and electrical fire)-8 litres Capacity. ➢ First Aid Box is fixed in place. ➢ DO's and DON'Ts board is placed. ➢ Instructions are given to students to wear shoes to the laboratory. ➢ Preventive measures taken in case of accident in handling models. ➢ Preliminary Medical facility (clinic) is available inside campus for emergency. ➢ Before running the machine/equipment ensure that there are no loose materials inside it, or anything attached that can be dislodged. ➢ Never leave the machine/equipment running for no reason. If your test is finished, bring the flow to a halt.

7 CONTINUOUS IMPROVEMENT (50)

Total Marks 50.00

7.1 Actions taken based on the results of evaluation of each of the POs & PSOs (20)

Total Marks 20.00

Institute Marks : 20.00

POs Attainment Levels and Actions for Improvement- (2021-22)

POs	Target Level	Attainment Level	Observations
PO 1 : Engineering Knowledge			
PO 1	2.25	1.90	The target has been met by 84%, while a 16% gap remains due to insufficient knowledge in various subjects, such as Aero Engineering Thermodynamics, Mechanics of Materials, and Control Engineering.
Actions: 1. More number of problems will be solved in the class hours and also more problem-oriented assignment questions will be given for the complex aerospace subjects. 2. For slow learners extra classes will be conducted after the regular class hours. 3. Conduction of seminars and guest lectures for better understanding of the basic concepts.			
PO 2 : Problem Analysis			
PO 2	2.1	2.04	97 % of target has been achieved, but a 3% gap remains due to lack of identifying and formulating the complex problems by the students.
1. Problem analysis-oriented assignments will be given to the students to improve their knowledge. 2. Tutorials will be conducted which consist of conceptual numerical problems. 3. Conduction of seminars by Industry experts and arrangement industrial visits to aerospace research organizations. For example, a seminar on the practical aspects of gas turbine design processes was recently organized to improve the problem analysis skills.			
PO 3 : Design/development of Solutions			
PO 3	2.1	1.94	The target has been accomplished by 92%. However, a 8% gap remains because of students unable to understand design problems and development of solutions for complex problems.
1. Tutorials will be conducted related to the design and development of solutions-oriented subjects and lab sessions. 2. Mini projects which deal with design and development of solutions will be given to the students to enhance the knowledge. 3. Additional classes and a practical approach in teaching will be adopted. Advanced CFD seminar and National Science Day events were conducted to improve the students knowledge.			
PO 4 : Conduct Investigations of Complex Problems			
PO 4	2.25	1.97	The target has been reached by 88%, but 12% gap remains due to students not updating their research-based knowledge and lack of interpreting data.
1. Additional classes will be conducted to impart the knowledge about the data collection, data analysis and interpretation of data for research work. 2. Students are motivated to attend national-level workshops and seminars related to research methodology. 3. Industrial Visit to Taneja Aerospace, URSC and IIA were arranged.			
PO 5 : Modern Tool Usage			
PO 5	2.1	1.94	The target has been met by 92%, but still there is 8% gap due to students' lack of knowledge regarding the usage of modern tools.
1. Workshops will be organized to provide hands-on training on modern software/tools such as CATIA, MATLAB, and ANSYS. 2. CATIA software, which is widely used by industries, has been installed in the department. This allows students to undergo level-1 training as per the MOU signed in collaboration with Cadmaxx Edtech. 3. Industrial Visit to Cadmaxx solutions was arranged to learn the usage of modern tools.			
PO 6 : The Engineer and Society			
PO 6	2.1	1.61	The target has been achieved by 77%. However, the remaining 23% gap is due to students not applying their engineering knowledge for the betterment of society.
1. Students were motivated to participate in NSS and environment friendly activities, such as tree plantation, using of drones for agricultural purposes and other related initiatives. 2. More number of AICTE activity related to societal, health and safety-oriented events will be organized. 3. The department organizes an innovative project contest during National Science Day celebrations, which is organized by the students.			
PO 7 : Environment and Sustainability			
PO 7	1.95	1.53	The target has been achieved by 78%. However, there is a remaining gap of 22% exist due to students' lack of awareness regarding the environmental system.
1. Programmes like Plantation, waste management were conducted and more events will be planned. 2. Students are motivated to participate in Swachh Bharat, Blood Donation Camps and creating the awareness about the environment among the public. 3. Blood camp and Yoga Day has been organized in our college and our students had participated			
PO 8 : Ethics			
PO 8	1.7	1.36	The target has been accomplished by 80%, but there is a remaining gap of 20% due to students were not able to the understand and apply the ethical concepts.
1. The department plans to conduct motivational talks and invite guest lecturers to improve students' professional ethics and sense of responsibility. 2. Students are assigned with case studies and mini-projects where they will impart ethical values and a sense of responsibility for the completion of task. 3. Motivational talks were given to the students by our Senior Professors Prof. P. Soma, Former Deputy Director, ISTRAC and Dr. P. Theerthamalai Former Outstanding Scientist, DRDO.			
PO 9 : Individual and Team Work			
PO 9	1.7	1.48	The target has been achieved by 87%, but there is a remaining gap of 13% exists due to students inability to participate in combined multidisciplinary activities.
Action: 1. Group mini projects and project contests are organized to promote multidisciplinary collaboration among students. 2. Students are encouraged to participate in conferences, workshops, seminars, and short-term courses to enhance their exposure to diverse fields and interdisciplinary activities. 3. Motivate the students to participation in extracurricular activities such as NSS/Sports which encourage them to have teamwork and collaboration among students.			
PO 10 : Communication			
PO 10	1.8	1.56	87% of the target has been achieved. The remaining 13% gap is due to some of students were not able to the communicate, present and write the reports properly.
Action: 1. During the placement and training sessions, Communication skill-oriented training will be given to the identified students. 2. Report writing skills will be improved during the mini project and main project review sessions. 3. Seminars and selected course topics will be given to the students to improve their presentation skills.			
PO 11 : Project Management and Finance			

PO 11	2.25	2.12	94% of the target has been achieved. The remaining 6% gap is due to students were not able to manage the projects effectively within the stipulated time and available cost.
Action: 1. Project and finance management awareness sessions will be conducted to enhance the knowledge of the students. 2. Seminars will be conducted towards the project management. 3. Student Project Exhibition was initiated to develop the management and finance skills among students.			
PO 12 : Life-long Learning			
PO 12	1.8	1.67	93% of the target has been achieved, but 7% of the gap is due to the students lack of ability, they could not engage themselves in lifelong learning.
Action: 1. Students are encouraged to register and complete online and offline courses offered by institutes like IITs and other institutions. 2. The department guides the students who are interested in pursuing higher studies in India as well as abroad, which enhances their lifelong learning. 3. The students are motivated to join in the professional societies which will provide the platform to attain lifelong learning. 4. Seminar on Study Overseas was arranged to the students.			

PSOs Attainment Levels and Actions for Improvement- (2021-22)

PSOs	Target Level	Attainment Level	Observations
PSO 1 : Professional Skills Apply the knowledge of aerospace engineering in innovative, dynamic and challenging environment for design and development of flight/space vehicles through simulation, Programming skills and general-purpose CAE packages			
PSO 1	2.25	1.92	85% target has been achieved. 15% gap arises due to various factors such as lack of resources, insufficient training, lack of fundamentals, lack of skill sets and other external factors.
Action: 1. To enhance the Professional skills, students were given more practical knowledge through more lab sessions, workshops and Industrial Visits. 2. Seminars and guest lectures will be organized with academic and industrial experts which will be helpful for them to understand the latest technology used in the field of aerospace engineering. 3. Technical talks were given to the students to inculcate the latest technologies used in the industries by our Senior Professors Prof. P. Soma, Former Deputy Director, ISTRAC and Dr. P. Theerthamalai Former Outstanding Scientist, DRDO and Dr. A.K. Sarkar, Former Scientist, DRDO.			
PSO 2 : Practical implementation and Testing Skills Providing different types of in-house training and industry practice to fabricate, test and develop the products with more innovative technologies			
PSO 2	1.95	1.52	78% target has been achieved. 22% gap arises because of the students are not that much involved in development of products which deals with experimental activities.
Action: 1. Students will be provided with practical training classes to enhance their understanding and practical skills in design and development of aerospace systems related products. 2. Seminars and workshops will be conducted for the students to enhance the testing skills. 3. Hands on training on Flight simulator, Satellite tracking and Lighter than air systems were conducted.			
PSO 3 : Successful Career and Entrepreneurship To prepare the students to become technocrats with broad aerospace knowledge for design and development of systems and subsystems for aerospace and associated fields			
PSO 3	1.95	1.60	82% target was achieved. The remaining 18% gap is due to students are not interested/having fear to become entrepreneurs.
Action: 1. Club activities in diverse domains will be organized to provide opportunities for students to make decisions and gain experience during the execution of the events. 2. Motivate the students to choose multidisciplinary field-oriented projects which will provide good exposure and knowledge in various domains. This will be helpful for them to become entrepreneurs. 3. IIC is constantly motivates our students to become entrepreneurs rather than job seekers.			

7.2 Academic Audit and actions taken thereof during the period of Assessment (10) Total Marks 10.00

Institute Marks : 10.00

Academic Audit Committee (AAC):

a. Internal Committee (IC)

b. External Committee (EC)

Internal Committee (IC)

The Internal Committee (IC) has been formed for monitoring different departmental activities. The Internal Committee consists of Head of the Institution, Member secretary and Key Resource person of the Institution.

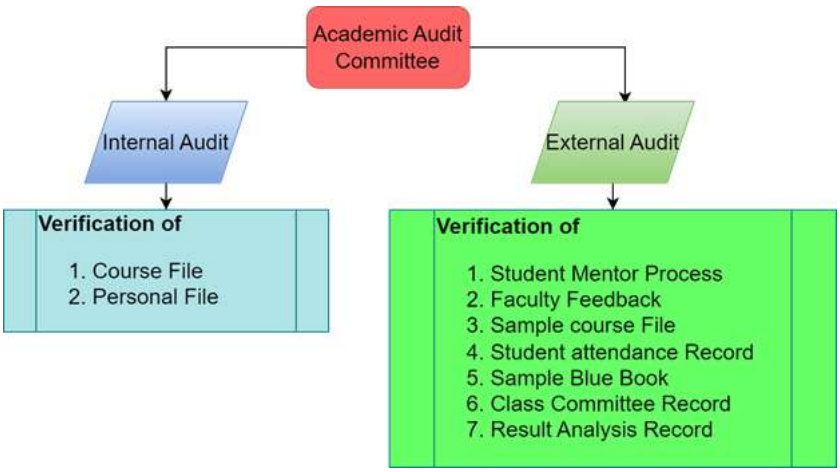


Figure 7.2.1

Table 7.2.1 Internal Academic Audit Committee

S.No	Name	Role in IC	Affiliation
1	Dr. M. S. Murali	Chairman	Principal, ACSCE
2	Dr. S. Selvanandan	Member Secretary	Vice-Principal, ACSCE
3	Dr. Bharathi Gururaj	Key Resource Person	Professor& HoD - ECE, ACSCE
4	Dr. Siddesha. H. S	Member	Associate Professor & HoD – Mechanical Dept., ACSCE

Table 7.2.2 External Academic Audit Committee

S.No	Name	Role in EC	Affiliation
1	Dr. S.K. Maharana	Chairman	Professor and Dean, Acharya Institute of Technology.
2	Dr. L. Rangaiah	Member Secretary	Professor and HOD, RRCE.
3	Dr. M. Balamurugan	Key Resource Person	Professor, Christ University
4	Dr. A. Muruganandham	Member	Professor, RRCE

Roles and Responsibilities of the Internal Committee and External Committee:

1. Suggesting ways and means to reduce the curriculum gaps in achieving PO and PSO.

2. Evaluating program effectiveness and proposing necessary changes.

3. Measuring the extent of adherence to planned activities and calendar of events.

4. Formulate the Program Educational Objectives to describe the career.

Department Advisory Board (DAB):

Department Advisory Board has been formed to monitor and to advise the department to enhance the overall quality of the department. Following are the members of the Department Advisory Board.

Table 7.2.2 Department Advisory Board

Sl.NO	Name	Role in DAC	Affiliation
1	Dr. Theerthamalai P	Chairperson	Professor & Dean, ACSCE
2	Dr. Mukesh R	Co-Chairperson	Professor &HOD-Aerospace, ACSCE
3	Dr. Suresh C	NAAC Coordinator	Associate Professor, ACSCE
4	Dr. Paramaguru V	NBA Coordinator	Associate Professor, ACSCE
5	Mr. Siva J	Member	Assistant Professor, ACSCE
6	Mr. Vijay M	Member	Assistant Professor, ACSCE
7	Dr. Jeyabalan S	Member	Parent
8	Mr. Hema Hariharan J	Member	Student Alumni
9	Mr. Ramesh Babu	Member	Employer, Raydynamics.
10	Ms. Sangeetha	Member	II Year AS student (2021-2025)

Roles and responsibilities of the Departmental Advisory Board (DAB):

1. Study and suggest improvement in all the academic activities in the department including identification of faculty to teach courses, offering elective courses and timetable preparation and soon.
2. Encourage industry-institute interactions to bridge curriculum gaps and suggest initiatives to enhance employability skill sets.
3. Constantly monitor the skill sets among current students and propose necessary action plans for skill development through technical and soft skills training.
4. Encourage ‘Entrepreneurship Development’ through special training.
5. Identify and suggest thrust are as to conduct various activities like final year projects, training courses and additional experiments to meet PEOs.
6. Evaluate proposals/offers for internships and guide students with respect to advanced technologies sought from the industries.
7. Plan Guest Lectures (Minimum Five) and Industrial Visits (Minimum Three) throughout the semester.
8. Motivate students to organize Project Exhibition and participate in various Domain research areas.
9. Plan any academic activity like Workshops and Seminars.
10. Sustaining the activities of Professional Bodies and their Students Chapters to enhance technical knowledge.

Internal Audit:

After completion of the semester, there will be verification of the Course File and Personal Files of all the faculty members. The department invites two senior faculty members along with the Academic committee of the department to get the Internal Audit done.

External Audit:

We encourage the Academic Auditing members to check the academic process which is being carried out in our department. The following particulars will be verified by the expert.

Table 7.2.3 Files verified during the External Audit

S.No.	Particulars to be Verified	Yes/No
1	Sample Course File Verification	YES
2	Maintenance of Attendance Record	YES
3	Sample Blue Book Verification	YES
4	Faculty Feedback File	YES
5	Result Analysis File	YES
6	Mentoring process	YES

Course File:

Every faculty member has to maintain a course file for each subject they teach, Course files hall include all the particulars which are mentioned in the course file content table.

ACS College of Engineering

Department of Aerospace Engineering

Course File Check List

S.No	Contents	Remarks
1	Syllabus Copy	✓
2	Academic Calendar	✓
3	Lesson Plan	✓
4	Attendance Register	✓
5	IA Question Papers with Schemes	✓
6	Assignment Question Papers/Question Bank	✓
7	Study Materials/ Notes	✓
8	Internal Marks Details	✓
9	VTU Previous year Question Papers	✓
10	CO-PO Mapping Chart	✓
11	Teachers Diary	✓

Signature of the Staff

HOD

Figure 7.2.1 Course File Record

Attendance Record:

Attendance register for each subject maintained by the respective subject faculty. All three internal assessment and assignment marks and the final average marks will be entered in the attendance register.

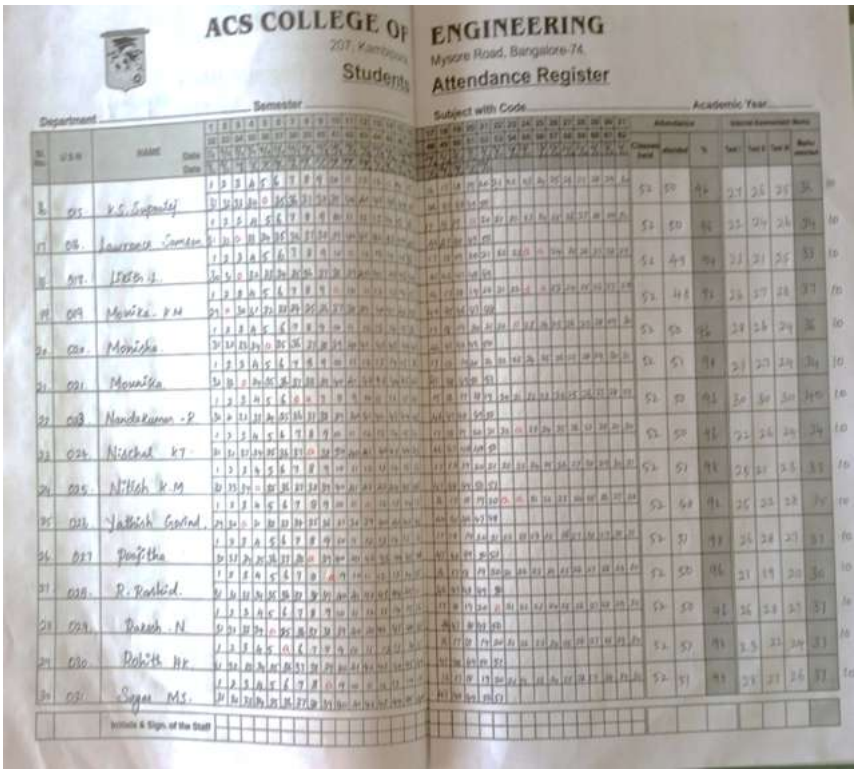
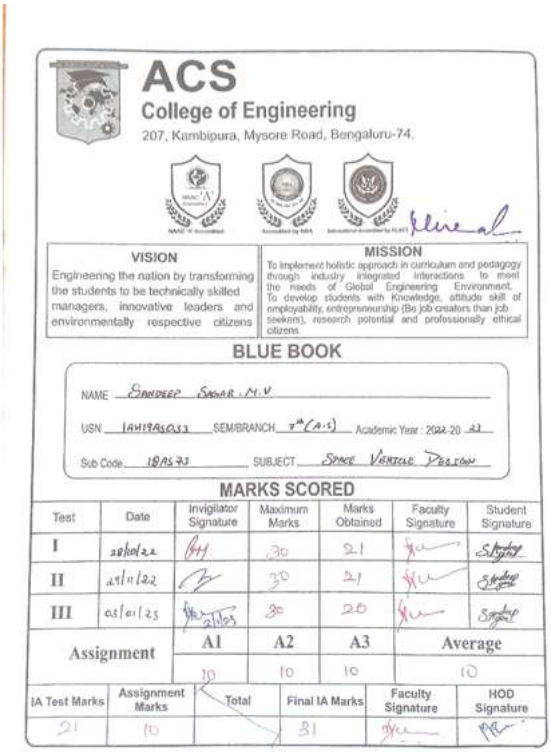


Figure 7.2.2 Students Attendance Record

Sample Blue Books:

The student will write all three internal assessments in a single book. There will be one blue book for each subject.



ACS
College of Engineering
207, Kambipura, Mysore Road, Bengaluru-74.

VISION
Engineering the nation by transforming the students to be technically skilled managers, innovative leaders and environmentally respective citizens

MISSION
To implement holistic approach in curriculum and pedagogy through industry integrated interactions to meet the needs of Global Engineering Environment.
To develop students with Knowledge, attitude skill of employability, entrepreneurship (Be job creators than job seekers), research potential and professionally ethical citizens.

BLUE BOOK

NAME: SANDEEP SAGAR. M.V
USN: 1AH19AS053 SEM/BRANCH: 7th (A-S) Academic Year: 2022-20 23
Sub Code: 18AS73 SUBJECT: SPACE VEHICLE DESIGN

MARKS SCORED

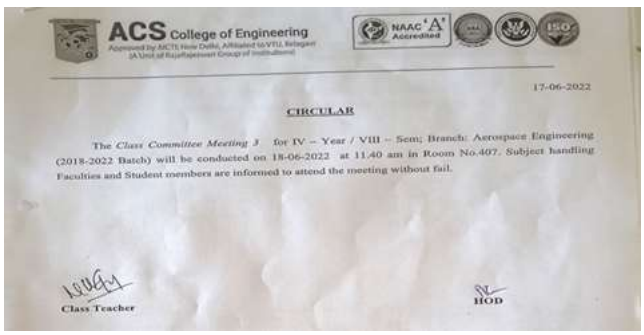
Test	Date	Invigilator Signature	Maximum Marks	Marks Obtained	Faculty Signature	Student Signature
I	28/10/22		30	21		
II	29/11/22		30	21		
III	03/01/23		30	20		
Assignment		A1	A2	A3	Average	
		10	10	10	10	

IA Test Marks	Assignment Marks	Total	Final IA Marks	Faculty Signature	HOD Signature
21	10		31		

Figure 7.2.3 Sample Blue Book

Class Committee Meeting Details:

After the internal assessment, a class committee meeting will be conducted. The meeting will be conducted thrice in a semester. The class committee shall include HOD, the class teacher, subject handling faculty and student representatives. The discussion will happen on syllabus coverage, level of internal question paper and feedback on faculty members. The outcome of the meeting is conveyed to subject teachers.



ACS College of Engineering
NAAC 'A' Accredited

17-06-2022

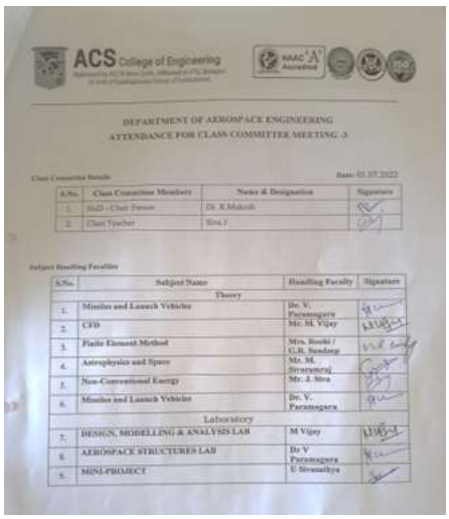
CIRCULAR

The *Class Committee Meeting 3* for IV – Year / VIII – Sem; Branch: Aerospace Engineering (2018-2022 Batch) will be conducted on 18-06-2022 at 11.40 am in Room No.407. Subject handling Faculties and Student members are informed to attend the meeting without fail.

Class Teacher

HOD

Figure 7.2.4 Class Committee Meeting Circular



ACS College of Engineering
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DEPARTMENT OF AEROSPACE ENGINEERING
ATTENDANCE FOR CLASS COMMITTEE MEETING -3

Date: 01.07.2022

S.No.	Class Committee Members	Name & Designation	Signature
1.	HoD - Chair Person	Dr. R.Mahesh	
2.	Class Teacher	Sruthi	

S.No.	Subject Name	Handling Faculty	Signature
	Theory		
1.	Missiles and Launch Vehicles	Dr. V. Paramaguru	
2.	CFD	Mr. M. Vijay	
3.	Finite Element Method	Mrs. Rooki / G.R. Sandeep	
4.	Astrophysics and Space	Mr. M. Sivaramaraj	
5.	Non-Conventional Energy	Mr. J. Siva	
6.	Missiles and Launch Vehicles	Dr. V. Paramaguru	
	Laboratory		
7.	DESIGN, MODELLING & ANALYSIS LAB	M Vijay	
8.	AEROSPACE STRUCTURES LAB	Dr V Paramaguru	
9.	MINI-PROJECT	U Sivanaliya	

Figure 7.2.5 Class Committee Meeting Record

Mentor Process:

Each faculty mentors around 20 students. For each student, a mentor book is maintained where academic details are noted.

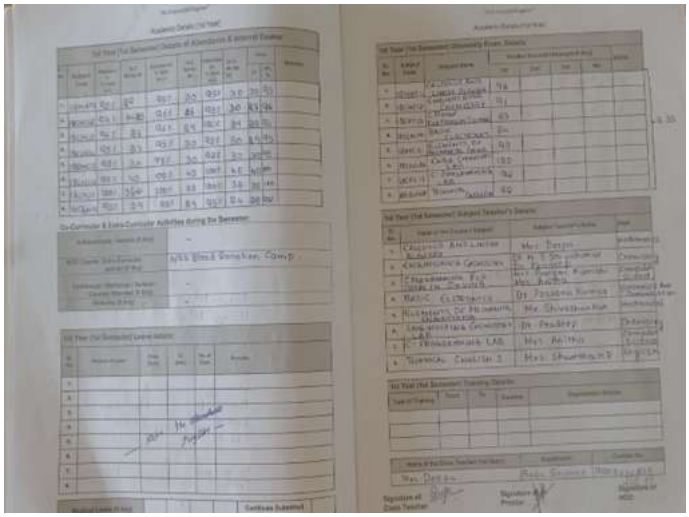


Figure 7.2.6 Student Mentor Process Record

Faculty Feedback:

Feedback is taken on completion of every internal test from the students. The feedback collected from students is analyzed by Department Advisory Board (DAB). The Performance of each individual faculty is assessed and corrective measures are listed (if any). Feedback will be shared to individual faculty with necessary advice on the factors to be improved in the teaching learning process.

ACS College of Engineering

(Approved by AICTE, New Delhi, Govt. of Karnataka & Affiliated toVisvesvaraya Technological University, Belgaum)

Sponsored by : MOOGAMBIGAI CHARITABLE AND EDUCATIONAL TRUST

NAAC 'A' Accredited

STUDENTS FEED BACK & ACTION TAKEN REPORT ODD / EVEN SEMESTER

DEPARTMENT OF AEROSPACE ENGINEERING

ACADEMIC YEAR / SEMESTER / SECTION: 2021-2022/VIII/A. DATE: 03-06-2022

S.No.	Sub. Code	Subject Title	Faculty Name	1 Punctuality / Class Time Utilization	2 Ability to explain	3 Interaction with Students	4 Subject Knowledge	5 Presentation of the subject	6 Motivating the students	Total (Max. 30)	Action Taken
1.	18AS81	Spacecraft Systems	Mr. M. Vijay	5	5	4	5	4	5	28	Advised to improve students interaction
2	18AS822	Cryogenics	Dr. C. Suresh	5	5	5	5	4	5	29	Advised to increase number of presentation

Head of the Department

Principal

Figure 7.2.7 Feedback from students about the faculty

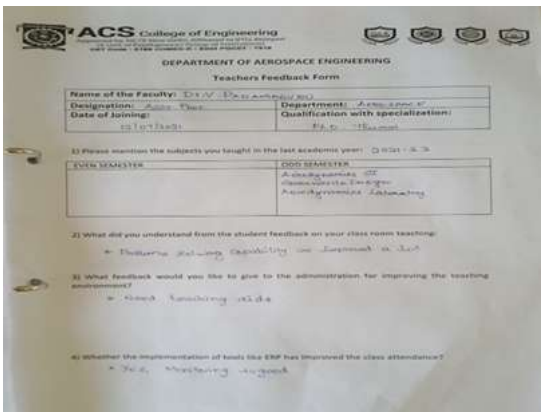
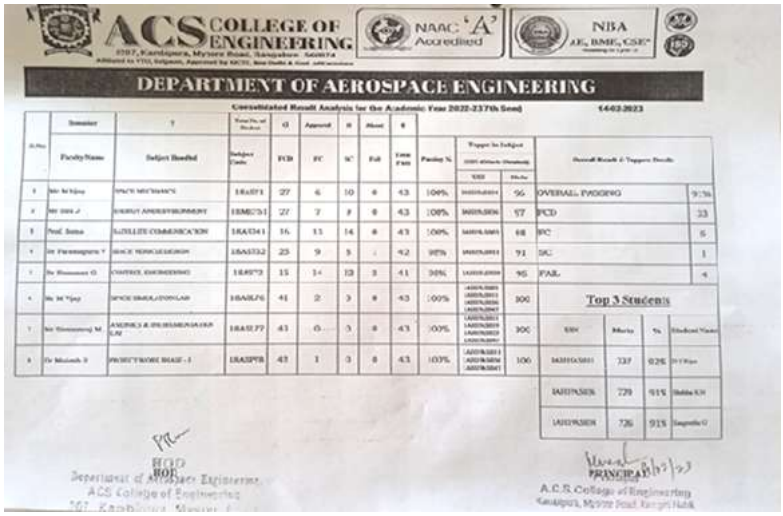


Figure 7.2.8 Faculty feedback for the subject

Result Analysis:

Result analysis is done immediately after the declaration of results by university. A meeting will be conducted by head of the department with all subject handling faculty members to analyze and interact to improve the results. The subject handling faculty who achieved best results are congratulated and motivated.



ACS COLLEGE OF ENGINEERING

NAAC 'A' Accredited

NBA AE, BME, CSE

DEPARTMENT OF AEROSPACE ENGINEERING

Consolidated Result Analysis for the Academic Year 2022-23(7th Sem) 14-03-2023

Sl.No	Semester / Faculty Name	7 / Subject Handled	Total No. of Students / Subject Code	O	Appeared	A	Absent	R	Pass %	Topper in Subject (USN / Marks)		Overall Result & Toppers Details	
1	Mr. M Vijay	SPACE MECHANICS	18AE71	27	6	10	0	43	100%	[illegible]	96	OVERALL PASSING	91.86
2	Mr. Shiv J	SATELLITE ARCHITECTURE	18ME751	27	7	7	0	43	100%	[illegible]	97	FCD	33
3	Prof. Suma	SATELLITE COMMUNICATION	18AE041	35	11	14	0	43	100%	[illegible]	98	FC	6
4	Mr. Parameshwara T	SPACE VEHICLE DESIGN	18AE732	25	9	5	1	42	98%	[illegible]	91	SC	1
5	Dr. Bhaskaran G	CONTROL ENGINEERING	18ME73	35	14	13	1	41	98%	[illegible]	95	FAIL	4
6	Mr. M Vijay	SPACE SIMULATION LAB	18AEL76	41	2	3	0	43	100%	[illegible]	100	Top 3 Students	
7	Mr. Shreenivas M. Lal	ANSYS & SIMULINK LAB	18AEL77	43	0	3	0	43	100%	[illegible]	100	USN	Marks	%	Student Name
8	Dr. Mahesh S	PROJECT WORK PHASE - I	18ASPW	43	1	3	0	43	100%	[illegible]	100	1AE17AS011	737	92%	[illegible]
												1AE17AS026	729	91%	[illegible]
												1AE17AS028	726	91%	[illegible]

HOD
Department of Aerospace Engineering
ACS College of Engineering

PRINCIPAL
A.C.S. College of Engineering

Figure 7.2.8 Sample Result Analysis

7.3 Improvement in Placement, Higher Studies and Entrepreneurship (10) Total Marks 10.00

Institute Marks : 10.00

Table 7.3.1 Student Placements Details for past 3 years are given below:

Years	No. of Students appeared in final year examination (N)	No. of Students Graduated out of students appeared in final year examination (G)	Z = (No of students placed + selected for Higher studies +Opted Entrepreneurship)	Placement Ratio (Z/N)
2021-2022	35	27	20	0.57
2020-2021	30	29	21	0.7
2019-2020	NA	NA	NA	NA

Table 7.3.2 Student Placement Detail in year (2021-22)

S.No	Student USN	Student Name	Company Name	Position	Salary Details
1	1AH18AS006	ANURAG A SALUNKHE	FACE	Placement Mentor	3.06 LPA
2	1AH18AS007	ANUSHA R	FACE	Placement Mentor	3.06 LPA
3	1AH18AS012	CHANDRU B M	FACE	Placement Mentor	3.06 LPA
4	1AH18AS020	NAGARAJA M V	Preflight Aviation Services Pvt Ltd	Trainee	NA
5	1AH18AS023	PAREEKSHITH TG	FACE	Placement Mentor	1. 3.06 LPA
6	1AH18AS024	PRIYANKA L P	1. CAPEGEMINI 2. STRATOGENT 3. VRIZE	1. Analyst 2. Trainee System Engineer 3. Associate Software Engineer	1. 4 LPA 2. 3.2-3.6 LPA 3. 6.5 LPA
7	1AH18AS026	RAKSHITH KUMAR G R	FACE	Placement Mentor	3.06 LPA
8	1AH18AS028	SHREEKRISHNA P GANESHGUDI	BYJU's	Academic Specialist	6 LPA
9	1AH18AS029	Sneha Singh	Infosys	System Engineer Role	3.6 LPA
10	1AH18AS032	SWETHA SHREE S	1. FACE 2. CSIR-NAL	Placement Mentor Project Associate I	3. LPA 3 LPA
11	1AH19AS400	PRAJWAL P N	BYJU's	Academic Specialist	6 LPA
12	1AH19AS402	Abhilash Anchan	BANGALORE AIRCRAFT INDUSTRIES Pvt.LTd	Trainee	3LPA
13	1AH18AS013	Gangotri J V	ETOE Interconnection Pvt Ltd.	Project Associate	3LPA
14	1AH18AS008	Apoorva R	GENMAX Technology LLP	Trainee Engineer	1.8LPA`
15	1AH18AS031	Sushmitha B	ANKIT AEROSPACE Aerospace	Project Associate	3LPA
16	1AH18AS037	Vidyakumari M N	ACCENTURE	Trainee Engineering	4.5 LPA

Table 7.3.3 Student Higher Studies Detail in year (2021-22)

S.No	Student USN	Student Name	University	Course
1	1AH18AS003	Ananth padmanabha K	THE UNIVERSITY OF SHEFFIELD, UK	MSc (Aerospace Engineering)

2	1AH18AS017	Lokesh Kumar K M	THE UNIVERSITY OF SHEFFIELD, UK	MSc (Aerospace Engineering)
3	1AH18AS021	Nityasri B S	COVENTRY UNIVERSITY, UK	MSc (Aerospace Engineering)
4	1AH18AS030	Srinidhi N S	THE UNIVERSITY OF SHEFFIELD, UK	MSc (Aerospace Engineering)

Table 7.3.4 Student Placement Detail in year (2020-21)

S.No	Student USN	Student Name	Company Name	Position	Salary Details
1	1AH17AS002	Abhirami.K	SONOVISION AETOS TECHNICAL SERVICES PVT.LTD	Trainee-CMM	1.6 LPA
2	1AH17AS002	Ajay Yalemeli	KUN Solutions	Graduate Engineer Trainee	1.2 LPA
3	1AH17AS007	Arpitha.M B	IDC Engineering India Private Ltd.	GET	3.2 LPA
4	1AH17AS010	Chandu.C P	HECTRONICS	Design Mechanical Engineer	2.5 LPA
5	1AH17AS011	Dhansingh Bhandari.J	RAY DYNAMICS	Graduate Engineer-Trainee-Manufacturing	1.2 LPA
6	1AH17AS013	Jagadish. J	PINAKA AEROSPACE SOLUTION PVT.LTD	Technical Staff	2.76 LPA
7	1AH17AS015	Jiji C Joy	TECH MAHENDRA	Associate Software Engineer	3.25 LPA
8	1AH17AS016	Jijin P Savyar	RAY DYNAMICS	Graduate Engineer-Trainee-Manufacturing	1.2 LPA
9	1AH17AS017	M.Ashok Kumar	PINAKA AEROSPACE SOLUTION PVT.LTD	Technical Staff	2.76 LPA
10	1AH17AS018	Mahendar B S	SKIPLOOP	Associate Engineer	2.44 LPA
11	1AH17AS021	Nitin B L	SKIPLOOP	Associate Engineer	2.44 LPA
12	1AH17AS023	Prajna. H N	RAY DYNAMICS	Graduate Engineer-Trainee-Manufacturing	1.2 LPA
13	1AH17AS024	R.Sai Bhuvan	CAPGEMINI TECHNOLOGY SERVICES INDIA LIMITED	Analyst	3.8 LPA
14	1AH17AS027	Sankeerthana.M	KUN Solutions	Graduate Engineer Trainee	1.2 LPA
15	1AH17AS029	Sarvesh.J	KUN Solutions	Graduate Engineer Trainee	1.2 LPA
16	1AH17AS032	Sidhapara Mitul Mukesh Bhai	THERMAX BABCOCK & WILCOX ENERGY SOLUTIONS PRIVATE	Thermal Plant Supervisor	3.6 LPA
17	1AH17AS037	Tarun K	SKIPLOOP	Associate Engineer	2.44 LPA
18	1AH17AS040	Yukthashree.H M	TECH MAHENDRA	Associate Software Engineer	3.25 LPA

Table 7.3.4 Student Higher Studies Detail in year (2020-21)

S.No	Student USN	Student Name	University	Course
1	1AH17AS034	Srigowri.A	UNIVERSITY OF GLASGOW	MSc (Astrophysics)
2	1AH17AS014	Jayadarth Sudhakar Poojary	MANIPAL ACADEMY OF HIGHER EDUCATION	M.Tech (Defence Technology)
3	1AH17AS028	Sanketh Shivaji Naharkar	Indian Institute of Technology Kharagpur	M.Tech

Table 7.3.5 Maximum and Average package

Year	Max. Package	Average Package

2021-2022	6.5 lakhs	3.0 lakhs
2020-2021	3.8 lakhs	2.4 lakhs

7.4 Improvement in the quality of students admitted to the program (10)

Total Marks 10.00

Institute Marks : 10.00

Item		2022-23	2021-22	2020-21
National Level Entrance Examination	No of students admitted	0	1	0
JEE	Opening Score/Rank	0	42931	0
	Closing Score/Rank	0	42931	0
State/ University/ Level Entrance Examination/ Others	No of students admitted	28	26	22
CET	Opening Score/Rank	18506	29169	5907
	Closing Score/Rank	162300	192175	153444
Name of the Entrance Examination for Lateral Entry or lateral entry details	No of students admitted	1	1	0
Karnataka Diploma CET	Opening Score/Rank	9954	918	0
	Closing Score/Rank	9954	918	0
Average CBSE/Any other board result of admitted students(Physics, Chemistry&Maths)		73	74	77

8 FIRST YEAR ACADEMICS (50)

Total Marks 45.85

8.1 First Year Student-Faculty Ratio (FYSFR) (5)

Total Marks 5.00

Institute Marks : 5.00

Please provide First year faculty information considering load for the particular program

Name of the faculty member	PAN No.	Qualification	Date of Receiving Highest Degree	Area of Specialization	Designation	Date of joining	Teaching load (%)			Currently Associated (Yes / No)	Nature Of Association (Regular / Contract)	Date Of leaving(In case Currently Associated is 'No')
							CAY	CAYm1	CAYm2			
Dr.B H Veena	ABVPV4837A	M.Sc. and PhD	10/03/1992	Mathematics	Professor	03/08/2015	100	100	100	Yes	Regular	
Dr.Pradeep Ku	BWHPP1151K	M.Sc. and PhD	26/03/2013	Mathematics	Associate Professor	01/08/2013	100	100	100	Yes	Regular	
Dr.Raghavendı	BFZPR7142P	M.Sc. and PhD	08/02/2020	Mathematics	Associate Professor	30/07/2012	100	100	100	Yes	Regular	
Mrs.Deepa	BGHPD4862K	M.Sc	06/02/2005	Mathematics	Assistant Professor	27/08/2019	100	100	100	Yes	Regular	
Mr.Abhishek P	BOAPA5762E	M.Sc	28/02/2019	Mathematics	Assistant Professor	04/06/2022	100	0	0	Yes	Regular	
Mrs.Bhargavi K	EJEPB2992F	M.Sc	30/01/2021	Mathematics	Assistant Professor	11/07/2022	100	0	0	Yes	Regular	
Mrs.Kavya C H	EHUPK8680K	M.Sc	13/06/2016	Mathematics	Assistant Professor	18/03/2019	100	100	100	Yes	Regular	
Mr.Guruswamy	AVNPG2757L	M.Sc	05/03/2010	Mathematics	Assistant Professor	21/12/2022	100	0	0	Yes	Regular	
Dr.Selvananda	BEPPS2037R	M.Sc. and PhD	31/01/2009	Physics	Professor	28/07/2014	100	100	100	Yes	Regular	
Mrs.Anandhi D	BQNPA3860N	M.Sc	08/09/2007	Physics	Assistant Professor	05/02/2014	100	100	100	Yes	Regular	
Mr.NagendraBa	CPBPP7881Q	M.Sc	01/12/2022	Physics	Assistant Professor	21/12/2022	0	0	0	Yes	Regular	
Mr.Santhosh K	FUTPS7739J	M.Sc	12/01/2014	Physics	Assistant Professor	08/08/2022	100	0	0	Yes	Regular	
Dr. M S Shiva K	AKCPM6895R	M.Sc. and PhD	17/07/2017	Chemistry	Professor	10/08/2009	100	100	100	Yes	Regular	
Dr.Pradeepa S	BQYPP5794F	M.Sc. and PhD	18/06/2015	Chemistry	Assistant Professor	21/12/2015	100	100	100	Yes	Regular	
Mr.Venkatesh T	AOQPV2695Q	M.Sc	14/03/2010	Biochemistry	Assistant Professor	09/11/2012	100	100	100	Yes	Regular	
Mrs.NishanthA	BFWPA3633P	M.Sc	15/02/2011	Chemistry	Assistant Professor	08/08/2022	100	0	0	Yes	Regular	
Mrs.Iramma V	AOTPH6496L	MA	27/01/2017	English	Assistant Professor	10/08/2022	100	0	0	Yes	Regular	
Mr.Vinay Kuma	BDXPV9221K	MA	19/08/2015	Kannada	Assistant Professor	23/08/2022	100	0	0	Yes	Regular	
Ms.Shruthi G	ENUPS5284R	MA	22/04/2019	Constitutional and Administrative Law	Assistant Professor	10/08/2022	100	0	0	Yes	Regular	
Dr. Siddesha H	ALXPS3767N	ME/M. Tech and PhD	16/03/2017	Composite Materials Process BySevere Plastic Deformation	Associate Professor	01/08/2011	100	100	100	Yes	Regular	
Mr. Kumar B M	BXEPK1086N	M.E/M.Tech	09/12/2008	Thermal Engineering	Assistant Professor	08/08/2011	100	100	100	Yes	Regular	
Dr. Sunil Raj B	BCAPB6294G	ME/M. Tech and PhD	24/02/2023	Solar Thermal Engineering	Assistant Professor	23/07/2012	100	100	100	Yes	Regular	
Dr. Suresh P M	ADBPP0581H	ME/M. Tech and PhD	09/03/2011	Fluid mechanics	Professor	01/07/2016	100	100	100	Yes	Regular	
Mrs. Gayathri C	AXQPG5162N	ME/M. Tech and PhD	30/03/2009	Environmental Engineering	Assistant Professor	23/07/2015	100	100	100	Yes	Regular	
Mrs.Navya	NRBBS8914J	M.E/M.Tech	03/04/2021	Structural Engineering	Assistant Professor	10/08/2022	100	0	0	Yes	Regular	
Ms.Sahana B	CTJPV4025L	ME/M. Tech and PhD	10/03/2022	STRUCTURES	Assistant Professor	04/10/2021	100	100	0	Yes	Regular	
Mr. Praveen A	BZRPP5653B	M.E/M.Tech	08/12/2010	Power Electronics	Assistant Professor	25/07/2019	100	100	100	Yes	Regular	

Mr. Gowtham K	BLYPG3275K	M.E/M.Tech	01/06/2017	Electrical Drives Embedded Control	Assistant Professor	02/11/2017	100	100	100	Yes	Regular	
Mr. Ram Kuma	AKKPK7249K	M.E/M.Tech	15/04/1993	Industrial Electronics	Assistant Professor	03/03/2021	100	100	0	Yes	Regular	
Mr.Gowrishank	AZGPG6914J	M.E/M.Tech	01/11/2013	Communication Systems	Assistant Professor	26/08/2019	100	100	100	Yes	Regular	
Mrs.Ganga	VWBPG3564M	M.E/M.Tech	11/11/2019	Computer Science Engineering	Assistant Professor	24/02/2021	100	100	0	Yes	Regular	
Mrs.Sandhya F	DGAPG8806D	M.E/M.Tech	14/10/2020	Computer Science Engineering	Assistant Professor	29/08/2022	100	0	0	Yes	Regular	
Mrs.Divya P	BRSPD7696F	M.E/M.Tech	01/06/2013	Computer Science Engineering	Assistant Professor	29/08/2022	100	0	0	Yes	Regular	
Mrs.Aswini	EFWPS5240P	M.E/M.Tech	18/03/2019	Computer Science Engineering	Assistant Professor	01/08/2018	100	100	100	Yes	Regular	
Mrs.Shruthi T S	FQWPS0877Q	M.Sc	07/02/2012	Mathematics	Assistant Professor	30/07/2014	0	100	100	No	Regular	30/07/2022
Mrs.Divya S	BCPPD7749P	M.Sc	30/04/2014	Mathematics	Assistant Professor	16/08/2019	0	100	100	No	Regular	09/12/2022
Dr.Gunasekara	AZNPG2274N	M.Sc. and PhD	01/10/2019	Physics	Assistant Professor	25/10/2017	0	100	100	No	Regular	06/08/2022
Ms.Divya V He	AKFPH8961C	M.Sc	01/07/2016	Physics	Assistant Professor	17/08/2017	0	100	100	No	Regular	15/09/2022
Dr.Selvaganap	FEOPS0367R	M.Sc. and PhD	31/08/2015	Chemistry	Associate Professor	02/08/2017	0	100	100	No	Regular	15/10/2022
Ms.Shwetha K	BLSPS3935E	M.Phil	07/07/2010	English	Assistant Professor	17/09/2018	0	100	100	No	Regular	28/11/2022
Dr.Jyothirlingai	AZUPJ2564M	M.A and Ph.D	12/04/2012	Kannada	Assistant Professor	12/10/2018	0	100	100	No	Regular	06/08/2022
Dr. Kavitha S	DQRPK9480E	ME/M. Tech and PhD	01/11/2018	Structures	Associate Professor	01/02/2018	0	0	100	No	Regular	15/07/2021
Ms. Pallavi H J	CSSPP4842D	ME/M. Tech and PhD	09/02/2014	Geotechnical Engineering	Assistant Professor	01/08/2018	0	100	100	No	Regular	07/10/2022
Mrs. Vijaylaxmi	CUECK5370A	M.E/M.Tech	04/05/2013	Computer Science Engineering	Assistant Professor	19/07/2019	0	100	100	No	Regular	09/07/2022
Mrs. Gayathri V	CNNPK2224G	M.E/M.Tech	06/01/2015	Computer Science Engineering	Assistant Professor	26/08/2019	0	100	100	No	Regular	06/08/2022
Mr. Vishwanath	ANRPN0680P	M.E/M.Tech	02/02/2014	Software Engineering	Assistant Professor	30/08/2019	0	100	100	No	Regular	06/08/2022
Mrs.Sumathi	FIIPS0697J	M.E/M.Tech	15/01/2016	COMMUNICATION SYSTEMS	Assistant Professor	04/02/2019	100	100	100	Yes	Regular	
Dr. S. Anitha	ALQPA0498R	ME/M. Tech and PhD	01/08/2013	Signal and Image Processing	Professor	06/02/2017	100	100	100	Yes	Regular	

Year	Number Of Students(approved intake strength) N	Number of Faculty members(considering fractional load) F	FYSFR (N/F)	*Assessment=(5*20)/FYSFR(Limited to Max.5)
2020-21(CAYm2)	540	33	16	5.00
2021-22(CAYm1)	540	35	15	5.00
2022-23(CAY)	630	35	18	5.00
Average	0	0	0	0

8.2 Qualification of Faculty Teaching First Year Common Courses (5)

Total Marks 3.67

Institute Marks : 3.67

Year	x (Number Of Regular Faculty with Ph.D)	y (Number Of Regular Faculty with Post graduate Qualification)	RF (Number Of Faculty Members required as per SFR of 20:1	Assessment Of Faculty Qualification [(5x + 3y) / RF]
2020-21	15	17	27	4.00
2021-22	14	19	27	4.00
2022-23	11	22	31	3.00

Average Assessment: 3.67

8.3 First Year Academic Performance (10) Total Marks 7.18

Institute Marks : 7.18

Academic Performance	2022-23	2021-22	2020-21
Mean of CGPA or mean percentage of all successful students(X)	7.67	7.34	7.15
Total Number of successful students(Y)	45.00	37.00	43.00
Total Number of students appeared in the examination(Z)	45.00	37.00	47.00
API [X*(Y/Z)]	7.67	7.34	6.54

Average API[(AP1+AP2+AP3)/3] : 7.18

Assessment [1.5 * Average API] : 7.18

8.4 Attainment of Course Outcomes of first year courses (10) Total Marks 10.00

8.4.2 Record the attainment of Course Outcomes of all first year courses (5)

Institute Marks : 5.00

CO-Attainment

Course Name	Course Outcomes	CIE	SEE	Direct Assesment	Indirect Assesment	Total attainment	Attained Percentage
				40%CIE + 60%SEE	Course Exit Surve		
C111	CO1	2	2	2	2.43	2.09	70%
	CO2	3	2	2.4	2.44	2.41	80%
	CO3	3	3	3	2.44	2.89	96%
	CO4	3	2	2.4	2.57	2.44	81%
	CO5	3	3	3	2.44	2.89	96%
C112	CO1	3	2	2.4	2.80	2.48	83%
	CO2	3	3	3	2.44	2.89	96%
	CO3	3	2	2.4	2.67	2.46	82%
	CO4	3	3	3	2.57	2.92	97%
	CO5	3	2	2.4	2.50	2.42	81%
C113	CO1	3	2	2.4	2.50	2.42	81%
	CO2	3	3	3	2.57	2.92	97%
	CO3	3	2	2.4	2.80	2.48	83%
	CO4	3	3	3	2.57	2.92	97%
	CO5	3	2	2.4	2.50	2.42	81%
C114	CO1	3	2	2.4	2.57	2.44	81%
	CO2	3	3	3	2.67	2.94	98%
	CO3	3	2	2.4	2.67	2.46	82%
	CO4	3	3	3	2.50	2.9	97%
	CO5	3	2	2.4	2.67	2.46	82%
C115	CO1	2	3	2.6	2.50	2.58	86%
	CO2	3	3	3	2.67	2.94	98%
	CO3	2	2	2	2.57	2.12	71%
	CO4	3	2	2.4	2.44	2.41	80%
C116	CO1	2	3	2.6	2.44	2.57	86%
	CO2	3	2	2.4	2.44	2.41	80%
	CO3	2	2	2	2.67	2.14	71%
	CO4	3	3	3	2.80	2.96	99%
	CO5	2	2	2	2.67	2.14	71%
C117	CO1	3	2	2.4	2.44	2.41	80%
	CO2	3	2	2.4	2.50	2.42	81%
	CO3	3	2	2.4	2.67	2.46	82%
	CO4	3	2	2.4	2.67	2.46	82%
C118	CO1	3	2	2.4	2.67	2.46	82%
	CO2	3	3	3	2.57	2.92	97%
	CO3	3	2	2.4	2.61	2.45	82%
	CO4	3	3	3	2.67	2.94	98%
	CO5	3	2	2.4	2.63	2.45	82%
C121	CO1	3	2	2.4	2.80	2.48	83%
	CO2	3	3	3	2.57	2.92	97%
	CO3	3	2	2.4	2.57	2.44	81%
	CO4	3	3	3	2.57	2.92	97%
	CO5	3	2	2.4	2.67	2.46	82%

C122	CO1	3	2	2.4	2.65	2.45	82%
	CO2	3	3	3	2.80	2.96	99%
	CO3	3	2	2.4	2.44	2.41	80%
	CO4	3	3	3	2.57	2.92	97%
	CO5	3	2	2.4	2.80	2.48	83%
C123	CO1	3	2	2.4	2.63	2.45	82%
	CO2	3	3	3	2.61	2.93	98%
	CO3	3	2	2.4	2.50	2.42	81%
	CO4	3	3	3	2.80	2.96	99%
C124	CO1	3	2	2.4	2.44	2.41	80%
	CO2	3	3	3	2.50	2.9	97%
	CO3	3	2	2.4	2.50	2.42	81%
	CO4	3	3	3	2.44	2.89	96%
	CO5	3	2	2.4	2.44	2.41	80%
C125	CO1	3	2	2.4	2.50	2.42	81%
	CO2	3	3	3	2.57	2.92	97%
	CO3	3	2	2.4	2.80	2.48	83%
	CO4	3	3	3	2.67	2.94	98%
	CO5	3	2	2.4	2.50	2.42	81%
	CO6	3	3	3	2.00	2.8	93%
C126	CO1	2	3	2.6	2.62	2.61	87%
	CO2	3	1	1.8	2.57	1.96	65%
C127	CO1	3	2	2.4	2.44	2.41	80%
	CO2	3	3	3	2.80	2.96	99%
	CO3	2	3	2.6	2.50	2.58	86%
	CO4	3	2	2.4	2.50	2.42	81%
C128	CO1	3	2	2.4	2.61	2.45	82%
	CO2	3	3	3	2.57	2.92	97%
	CO3	3	2	2.4	2.50	2.42	81%
	CO4	3	3	3	2.54	2.91	97%
	CO5	3	2	2.4	2.80	2.48	83%

8.4.1 Describe the assessment processes used to gather the data upon which the evaluation of Course Outcomes of first year is done (5)

Institute Marks : 5.00

1.THEORY COURSES:

(The data for Co attainment is considered from the performance of students in internal tests and final university examinations)

Three internal tests are conducted during 5th, 10th and 15th week of the semester. Common question papers are set for all the courses common to all the programs.

For the 2018 CBCS Scheme from the academic year 2018-19 onwards 40% of weightage is given for the performance in the internal test and 60% of weightage is given for the performance in final VTU examinations. Three internal tests were conducted for 50 marks and average of all the three tests were correspondingly reduce to 30 marks. Remaining 10 marks is towards assignment /unit test/written test/quizzes. A university examination for all courses under Semester End Examination (SEE) is conducted for a maximum of 100 marks and correspondingly is reduced to 60 marks for awarding the results.

For the academic year 2019-2020 and 2020-21 of even semester due to COVID-19 pandemic situation the internal tests were conducted online. The procedure was as follows:

- Google link – MS Team link was provided to the students in the whattsup group for the question paper just before 10 minutes from the commencement of test timing.
- ohe student had to login to the MS team for his attendance and also the test session was monitored by the class teacher in MS team.
- Students have to submit the scanned copy of the internals and upload in the google from link-MS team link within 30 minutes of the closer the test timing.

·For the 2021 CBCS Scheme from the academic year 2020-21 onwards 40% of weightage is given for the performance in the internal test and 60% of weightage is given for the performance in final VTU examinations. Three internal tests were conducted for 50 marks and average of all the three tests were correspondingly reduce to 30 marks. Remaining 10 marks is towards assignment /unit test/written test/quizzes. A university examination for all courses under Semester End Examination (SEE) is conducted for a maximum of 100 marks and correspondingly is reduced to 60 marks for awarding the results.

2.LABORATORY COURSES:

For the academic year 2019-20, 2020-21 batch 40% of weightage is given for the performance in the internal tests called Continuous Internal Evaluation (CIE) and 60% of weightage is given for the performance in University examination/ Semester End Examination (SEE). The CIE marks awarded shall be based on the weekly evaluation of laboratory journals/ reports after the conduction of every experiment evaluated for 30 marks and internal test will be conducted for 10 marks. Total internal marks are awarded for 40 marks and final university were conducted for 100 marks and correspondingly reduced to 60marks for awarding the results.

For the academic year 2019-2020 and 2020-21 of even semester due to COVID-19 pandemic situation lab sessions and lab tests are held online. The lab rubrics will be changed as evaluation for all departments

3.CALUCLATION OF CO ATTAINMENT:

- CO attainment is based on 2 parameters: Internal Assessment (IA) and University End Examination (SEE).
- Internal Assessment (IA) is considered as direct method and University End Examination (SEE) is considered as indirect method for CO attainment.
- The target set for the CO attainment is 60% of Marks scored.

Assessment Processes:	
Direct Assessment Processes:	Indirect Assessment Processes:
Internal test	Exit Survey
Continuous Assessment (Assignments)	

The attainment level Rubrics considered for CO attainment is as follows:

Level 3	60% of the students scored 60% marks
Level 2	50% of the students scored 60% marks
Level 1	40% of the students scored 60% marks

Target and attainment levels /Rubrics are same for the Internal Assessment (IA) and University End Examination.

Following procedure is followed for calculation of course outcomes attainment:

- Internal Assessment questions and assignment questions are mapped to COs.
- All the mapped questions from the Internal Assessment papers and assignment questions are considered for overall course attainment.
- The semester end examinations marks are mapped to all CO's and the same is considered for calculation of CO attainment.
- Percentage of students scoring target marks in the internal assessment tests. Assessment and University semester end examination is calculated.
- All satisfying values obtained are considered for deciding various levels of course outcome attainment.

8.5 Attainment of Program Outcomes from first year courses (20) Total Marks 20.00

8.5.1 Indicate results of evaluation of ezch relevant PO and/ or PSO, if applicable (15) Institute Marks : 15.00

POs Attainment:

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C111	2.05	1.92	1.59	2.08	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C112	2.08	1.73	0.69	1.24	1.79	PO6	1.04	PO8	PO9	PO10	PO11	PO12
C113	2.47	PO2	2.08	PO4	PO5	PO6	1.72	PO8	PO9	PO10	PO11	1.23
C114	2.15	2.15	1.99	2.15	1.63	PO6	1.08	PO8	PO9	PO10	PO11	PO12
C115	1.01	2.01	2.01	1.48	1.84	PO6	1.70	PO8	1.30	2.01	1.5	PO12
C116	2.14	2.44	1.94	1.97	1.97	PO6	1.34	PO8	PO9	PO10	PO11	PO12
C117	1.95	PO2	0.98	PO4	PO5	PO6	1.30	PO8	PO9	PO10	PO11	1.62
C118	PO1	PO2	PO3	PO4	PO5	1.93	PO7	PO8	PO9	2.45	PO11	2.09
C121	2.48	2.48	2.12	2.64	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C122	2.64	2.32	1.96	2.32	2.64	PO6	2.64	PO8	PO9	PO10	PO11	PO12
C123	1.24	1.56	1.04	1.44	2.15	PO6	1.43	PO8	PO9	PO10	PO11	PO12
C124	2.45	PO2	2.06	1.71	PO5	PO6	PO7	PO8	PO9	PO10	PO11	1.22
C125	2.53	2.71	2.32	2.55	2.71	PO6	2.17	PO8	PO9	PO10	PO11	2.16
C126	1.21	1.55	1.02	1.37	2.07	PO6	1.38	PO8	PO9	PO10	PO11	1.21
C127	1.40	PO2	PO3	PO4	2.12	PO6	2.31	PO8	PO9	PO10	PO11	PO12

PO Attainment Level

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
Direct Attainment	1.99	2.09	1.68	1.90	2.10	1.93	1.65	0	1.30	2.23	1.5	1.59
CO Attainment	1.99	2.09	1.68	1.90	2.10	1.93	1.65	0	1.30	2.23	1.5	1.59

PSOs Attainment:

Course	PSO1	PSO2	PSO3
C111	1.43	PSO2	PSO3
C112	1.76	PSO2	0.88
C113	1.95	PSO2	PSO3
C114	1.76	PSO2	0.88
C115	1.50	1.50	PSO3
C116	PSO1	1.63	PSO3
C117	PSO1	1.30	PSO3
C121	2.32	PSO2	PSO3
C122	1.76	PSO2	PSO3
C123	PSO1	1.43	PSO3
C124	1.74	PSO2	PSO3
C125	1.81	PSO2	1.81
C126	PSO1	1.38	PSO3

PSO Attainment Level

Course	PSO1	PSO2	PSO3
Direct Attainment	1.78	1.45	1.19
CO Attainment	1.78	1.45	1.19

8.5.2 Actions taken based on the results of evaluation of relevant POs (5)

Institute Marks : 5.00

POs Attainment Levels and Actions for Improvement- (2021-22)

POs	Target Level	Attainment Level	Observations
PO 1 : Engineering Knowledge			
PO 1	2.1	1.99	Basic Engineering fundamental knowledge of students needs to be improved.
Action 1: Emphasized on Mathematical fundamentals before actually teaching concerned subject topics and made them solve more problems. Action 2: More problems will be given for practice. Action 3: More emphasis is given to teach fundamental concepts.			
PO 2 : Problem Analysis			
PO 2	2.25	2.09	Students analytical skills are to be improved to analyze complex Engineering Problems.
Action 1:Mini projects are done to improve the analytical skills in the higher semesters Action 2: Preference given to hands on sessions during class hours in the coming semesters			
PO 3 : Design/development of Solutions			
PO 3	1.95	1.68	Students ability to design solutions for complex problems needs to be improved
Action 1:Encourage to carry out Projects on societal and environmental concerned issues Action 2:Students were made to design and implement additional programs during lab sessions .			
PO 4 : Conduct Investigations of Complex Problems			
PO 4	2.1	1.9	Students need to be made more research oriented towards analysis and synthesis of results.
Action 1:Students were advised to refer relevant sources during literature survey to gain research-based knowledge. Action 2:Case studies are assigned to Students. Workshops are conducted to conduct investigations on complex problem with exhaustive input sets.			
PO 5 : Modern Tool Usage			
PO 5	2.25	2.1	Usage of modern tool in the program needs to be improvised.
Action 1:Hands-on session is conducted to learn modern tools.			
PO 6 : The Engineer and Society			
PO 6	2.1	1.93	Ability to map technology to give solutions to societal problems, needs to be strengthen
Action 1:Students are encouraged to consider the impact of engineering solutions on Society, Health, safety etc., during induction program Action 2 : Awareness created among students by conducting social economic lectures. development.			
PO 7 : Environment and Sustainability			
PO 7	1.95	1.65	Student need to be motivated to develop real time application by considering the impact on environmental contexts.
Action 1:Students are encouraged to carry out projects related to environment and design sustainable solutions. Action 2 : NSS activities are planned for social economic development.			
PO 8 : Ethics			
PO 8	1.5	0	Student knowledge to be enhanced more on professional ethics and responsibilities.
Action 1:Students were briefed about Ethics in Constitution of India and Professional Ethics. Action 2:Guest Lectures on professional ethics is conducted.			
PO 9 : Individual and Team Work			
PO 9	1.95	1.3	Few Students need to be improved in Functioning effectively as an individual and as a team leader.
Action 1:To work in a team of large size, students form batches during laboratory. Action 2:Students are made to present individually in Technical seminar. Action 3:Group activities are conducted Action 4: Promote students leadership qualities by providing platform for co-curricular and extra-curricular activities.			
PO 10 : Communication			
PO 10	2.25	2.23	The communication and presentation skills are to be further improved among the students.
Action 1:Students were advised to speak in English Action 2:Training and Placement department conducts soft skills training, technical training, Group Discussions and etc., to improve the communication and write-ups. Action 3:Course wise student presentations are conducted			
PO 11 : Project Management and Finance			
PO 11	1.5	1.5	Planed to attain in the next academic year.
Action 1:Guest lecture is conducted to learn cost estimation and cost-effective techniques by taking practical examples.			
PO 12 : Life-long Learning			
PO 12	2.1	1.59	Learning habit among students can be strengthened.
Action 1:Students were instructed to understand and learn the concepts well, because they have to use certain concepts throughout their profession. Action 2:Motivate students for higher studies Action 3:Motivate students for learning new technologies			

PSOs Attainment Levels and Actions for Improvement- (2021-22)

PSOs	Target Level	Attainment Level	Observations
PSO 1 : Professional Skills Apply the knowledge of aerospace engineering in innovative, dynamic and challenging environment for design and development of flight/space vehicles through simulation, Programming skills and general-purpose CAE packages			
PSO 1	1.95	1.78	Gap arises due to various factors such as lack of resources, insufficient training, lack of fundamentals, lack of skill sets and other external factors.
1. To enhance the Professional skills, students were given more practical knowledge through more lab sessions, workshops and Industrial Visits. 2. Seminars and guest lectures will be organized with academic and industrial experts which will be helpful for them to understand the latest technology used in the field of aerospace engineering.			
PSO 2 : Practical implementation and Testing Skills Providing different types of in-house training and industry practice to fabricate, test and develop the products with more innovative technologies			
PSO 2	1.95	1.45	Gap arises because of the students are not that much involved in development of products which deals with experimental activities.
1. Students will be provided with practical training classes to enhance their understanding and practical skills in design and development of aerospace systems related products. 2. Seminars and workshops will be conducted for the students to enhance the testing skills			
PSO 3 : Successful Career and Entrepreneurship To prepare the students to become technocrats with broad aerospace knowledge for design and development of systems and subsystems for aerospace and associated fields			
PSO 3	1.95	1.19	Gap is due to students are not interested/having fear to become entrepreneurs.
1. Club activities in diverse domains will be organized to provide opportunities for students to make decisions and gain experience during the execution of the events. 2. Motivate the students to choose multidisciplinary field-oriented projects which will provide good exposure and knowledge in various domains. This will be helpful for them to become entrepreneurs. 3. IIC is constantly motivate our students to become entrepreneurs rather than job seekers.			

9 STUDENT SUPPORT SYSTEMS (50)

Total Marks 50.00

9.1 Mentoring system to help at individual level (5)

Total Marks 5.00

Institute Marks : 5.00

Definitions, use, and efficacy of the mentoring system

A. Specifics of the mentorship program that has been designed for students for a variety of goals, along with a statement of the program's effectiveness

1. At ACS College of Engineering, the goal of mentoring is to provide students a sense of comfort and self-assurance.

2. Each staff member is given a class of about 20 students.

3. Mentor-mentee meetings are held before and after the internal tests to discuss attendance and preparation levels.

4. The personnel will continue to mentor the students from their first to their last year. Direct touch as well as electronic communication is used in the mentor-mentee relationship.

5. The mentoring relationship between the students and the mentor steadily grows through time and in some situations persist long after they leave the college.

Objectives:

1 To establish a setting that fosters the mentees intellectual and emotional growth.

2 To provide instructions on how to study effectively and prepare for exams.

3 To offer suggestions for elective courses, seminar topics, internships, and projects.

4 To inspire the mentees to feel comfortable talking about some personnel difficulties.

5 To mentor the mentees and assist them in achieving their career goals.

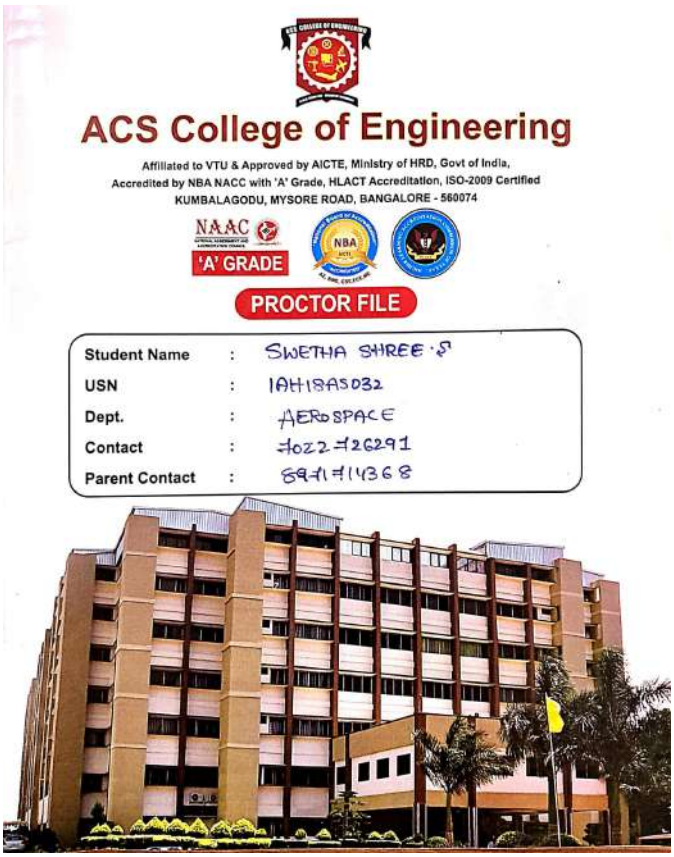
6 To encourage mentees to participate actively in professional groups and organizations.

Process of mentoring:

Each student is assigned a Mentor at the beginning of their first semester. The Mentor maintains a Mentor Book, which contains vital information about the students parents or guardians, such as their name, address, phone number, and academic background. The student is required to fill out their personal information in the Mentor Book. The Mentor Book also includes data on attendance, internal exam performance, counseling following internal tests, and university results, followed by a commitment from the student and their parents. The Mentor keeps track of all interactions with the student throughout the semester and maintains this data for all eight semesters.

Additionally, the Mentor Book provides information on the students academic activities such as projects, internships, conferences, seminars, as well as co-curricular and extracurricular activities. Students who face academic difficulties and/or attendance issues are scheduled for follow-up appointments with both the Mentor and their parents to assist them in improving their academic performance and attendance

Sample Mentor book



"Serving the society is serving god"

ACS COLLEGE OF ENGINEERING

Affiliated to VTU & Approved by AICTE, Ministry of HRD, Govt of India.
Accredited by NBA, NACC with 'A' Grade, HLACT Accreditation
KUMBALAGODU, MYSORE ROAD, BANGALORE - 560074

20_18_ to 20_22_ Batch

Department of AEROSPACE

BLOOD GROUP	AB+

Student's Details:	
Name of the Student :	SWETHA SHREE S
USN :	1AH18AS032
Register Number :	

Student's Contact Details:	
Student's Mobile Number :	7022726291
Father's / Guardian's Mobile Number :	8660960389
Mother's Mobile Number :	7829038802

Proctor's Details:	
Name of the 1st Year Proctor (S&H) :	Ragavendhra .
Contact Number :	9538588410
E-mail ID :	

Name of the Dept. Proctor (2nd / 3rd / 4th Year) :	M.Vijay
Contact Number :	9500661423.
E-mail ID :	

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Student's Information Sheet

Contact Details of the Student:

	Name	Contact No.	E-Mail ID
Student	Swethashree.S	7022726291	Swethashrees22@gmail.com
Father	Sharavana.S	8660960389	
Mother	Vijayalakshmi.S	7829038802	
Guardian			

Academic Details of the Student:

Qualification	Reg No.	Year of Passing	Total Marks	Secured Marks	CGPA / %age	Name of the Exam Board	Name & Place of the Institution
10th	2016083 - 3936	2016	625	579	92.64	Karnataka	D.M.M.H.S Bangalore
12th	8149435	2018	600	570	95	PU-Board	SDMV PU college Ujire
Diploma							
Achievements / Awards (If any)							

Communication Address Details of the Student:

	Permanent Address	Present Address
Street / House No.	#121	#45
Door No.	#121	
Street	Gargamma temple street	18th cross
Land Mark	6th, ward	MTS layout
Nearest Police Station	Sarjapura police station	kenara police station
District	Bangalore	Bangalore
State	karnataka	karnataka
Country	India	India
PIN CODE	562125	560060

Contact Details of the Student:

Date of Birth	11-11-2000	Gender	Female
Nationality	Indian	Religion	Hindu

Category	General	SC	ST	OBC	PH	Sports	NCC	GC
Hobbies	watching TV, drawing cartoons.							

"Be A successful Engineer"

Academic Details (1st Year)

1st Year (1st Semester) Details of Attendance & Internal Exams:

S. No	Subject Code	Attendance % Upto IA-1	IA-1 Marks 30	Attendance % Upto IA-2	IA-2 Marks 30	Attendance % Upto IA-3	IA-3 Marks 30	Final IA	Final Att. %	Remarks
1.	BMAT11	94	50	86	50	90	50	40		
2.	BCHE12	88	49	84	49	88	50	39		
3.	BCPS13	86	48	90	50	94	50	39		
4.	BELN14	96	44	88	49	86	45	37		
5.	BME15	84	49	86	50	89	50	40		
6.	BCHEL16	98	41	84	–	88	–	31		
7.	BCPL17	90	50	90	–	90	–	40		
8.	BEGH18	92	50	88	46	98	44	38		

Co-Curricular & Extra-Curricular Activities during the Semester:

Achievements / Awards (If Any)	
NSS / Sports / Extra-Curricular activity (If Any)	
Conference / Workshop / Seminar / Courses Attended (If Any)	
Remarks (If Any)	

1st Year (1st Semester) Leave details:

Sl. No.	Purpose of Leave	From (Date)	To (Date)	No. of Days	Remarks
1.					
2.		Refer			
3.					
4.		Attendance			
5.					
6.		Register			
7.					
8.					

Medical Leave (If Any)					Certificate Submitted (Y/N)	

"Be A successful Engineer"

Proctor Interaction Details with the Student (1st Semester)

Sl. No.	Date	Time	Duration	Remarks
1.	20/9/18	3:30-4:00pm	30min	About Lab record
2.	14/10/18	3:30-4:00pm	30min	Discussion about 2nd Internals.
3.	5/11/18	3:30-4:00pm	30min	Discussion on IA marks.
4.				

Proctor Interaction Details with the Student (1st Semester)

Suggestions	Sign. of Student	Sign. of Proctor	Sign. of Proctor Supervisor	Sign. of HOD
Soft copy will be given.	Sh	[illegible]		
IA needs improvement	Sh	[illegible]		
IA conducted.	Sh	[illegible]		

Behavioral / Psychological Profile during (1st Semester)

Suggestions	Sign. of Student	Sign. of Proctor	Examined by Counselor	Examined by Psychiatrist

Final Remarks:

Signature

9.2 Feedback analysis and reward /corrective measures taken, if any (10)

Total Marks 10.00

Institute Marks : 10.00

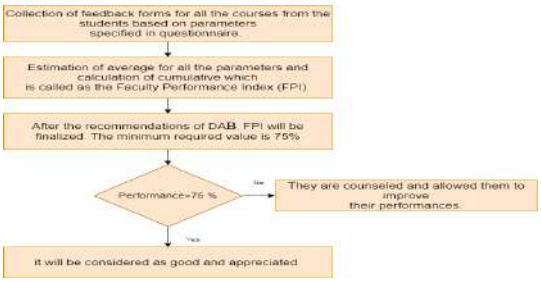
A. The methodology used for evaluating the efficacy of feedback

- A scale from 1 to 5 is used to rate Faculty feedback (5-point scale).
- An Assessment Committee led by the Head of the department analyses the student response after it has been collected.

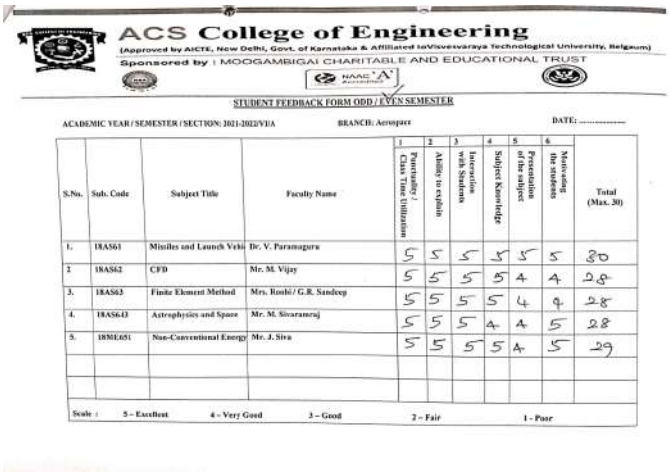
The feedback collected from students is analyzed by Department Advisory Board (DAB). Performance of each individual faculty is assessed and corrective measures are listed (if any). Feedback will be shared to individual faculty with necessary advice on the factors to be improved.

All the courses mentioned in the feedback form are analyzed as follows:

Feedback Flow chart:



Student Feedback Form Sample Report



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NAAC 'A'

STUDENT FEEDBACK FORM ODD / EVEN SEMESTER

ACADEMIC YEAR / SEMESTER / SECTION: 2021-2022/VI/A BRANCH: Aerospace DATE: .....

S.No.	Sub. Code	Subject Title	Faculty Name	1 Punctuality / Class Time Utilization	2 Ability to explain	3 Interaction with Students	4 Subject Knowledge	5 Presentation of the subject	6 Motivating the students	Total (Max. 30)
1.	18AS61	Missiles and Launch Vehi	Dr. V. Paramaguru	5	5	5	5	5	5	30
2	18AS62	CFD	Mr. M. Vijay	5	5	5	5	4	4	28
3.	18AS63	Finite Element Method	Mrs. Roohi / G.R. Sandeep	5	5	5	5	4	4	28
4.	18AS643	Astrophysics and Space	Mr. M. Sivaramraj	5	5	5	4	4	5	28
5.	18ME651	Non-Conventional Energy	Mr. J. Siva	5	5	5	5	4	5	29

Scale : 5 – Excellent 4 – Very Good 3 – Good 2 – Fair 1 – Poor

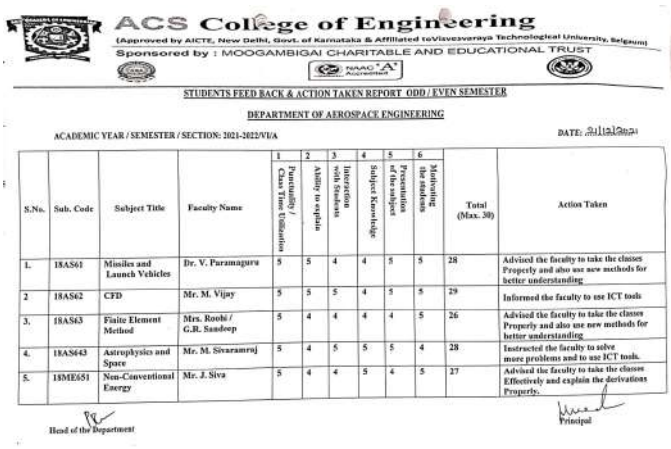
A list of the corrective actions taken by the Head of the department

- Remedial measures are suggested for improvement and are documented if feedback is less than 80%.
- Necessary advice by the Head of the department
- Encouraging faculty to participate in Faculty Development Programs (FDP) that focus on efficient teaching techniques.
- Advise the faculty through counselors / Subject Experts

Effectiveness

- The improvement of the faculty performance with respect to parameters is reflected in the subsequent feedback.
- Certificates are presented to faculties who achieve 100% at the orientation day function as compensation.

ACTION TAKEN SCREENSHOTS



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NAAC 'A'

STUDENTS FEED BACK & ACTION TAKEN REPORT ODD / EVEN SEMESTER

DEPARTMENT OF AEROSPACE ENGINEERING

ACADEMIC YEAR / SEMESTER / SECTION: 2021-2022/VI/A DATE: 31/12/2021

S.No.	Sub. Code	Subject Title	Faculty Name	1 Punctuality / Class Time Utilization	2 Ability to explain	3 Interaction with Students	4 Subject Knowledge	5 Presentation of the subject	6 Motivating the students	Total (Max. 30)	Action Taken
1.	18AS61	Missiles and Launch Vehicles	Dr. V. Paramaguru	5	5	4	4	5	5	28	Advised the faculty to take the classes Properly and also use new methods for better understanding
2	18AS62	CFD	Mr. M. Vijay	5	5	5	4	5	5	29	Informed the faculty to use ICT tools
3.	18AS63	Finite Element Method	Mrs. Roohi / G.R. Sandeep	5	4	4	4	4	5	26	Advised the faculty to take the classes Properly and also use new methods for better understanding
4.	18AS643	Astrophysics and Space	Mr. M. Sivaramraj	5	4	5	5	5	4	28	Instructed the faculty to solve more problems and to use ICT tools.
5.	18ME651	Non-Conventional Energy	Mr. J. Siva	5	4	4	5	4	5	27	Advised the faculty to take the classes Effectively and explain the derivations Properly.

Head of the Department

Principal

9.3 Feedback on facilities (5)

Total Marks 5.00

Institute Marks : 5.00

Student's feedback about college facilities are gathered annually. In accordance with the comments, necessary actions are done. The students are able to offer their opinions and recommendations regarding the amenities. After discussions, the institutions head, in consultation with the management, took corrective action. Student feedback is gathered, analyzed, and corrected actions are used as the basis for assessment.

The following procedures are followed for collecting facility feedback:

1) The procedure of gathering Feedback

2) Feedback evaluation

3) Corrective measures

Feedback gathering procedure:

Objectives	Descriptions
Feedback gathered regarding college facilities.	Yes
Feedback collection process	Feedback forms are given to the students
Feedback cumulative reports are Collected	Head of the Department/Principal
The frequency of feedback gathering	Once in an academic year
Measurements used in calculations	5 point- scale(excellent, very good, good, fair, poor)
Purpose	To improve the quality of teaching

Students Feedback Survey on Facilities

9.4 Self-Learning (5)

Total Marks 5.00

Institute Marks : 5.00

Opportunities for Self-Learning: Course assignments provide students a greater understanding of the subject.

Self–Learning:

Self-Learning is an individualized method of learning, collecting information, processing and retaining it without the need of another individual to teach it.

Scope for Self-Learning:

Course Assignments help students in getting a better exposure to the subject.

Project Work:

The department notice board displays a list of synopses that students use to select their project. Each faculty member submits two or three project titles related to their research or areas of interest. Students must peruse the list, choose a project, and then report to the coordinator with the project title, instructions, and team. Students must form their teams in compliance with university policies, and the topic is frozen on a first-come, first-served basis. Furthermore, students are encouraged to generate original ideas.

During the zero review, the student project team presents their project goals and a completion timeline. The project team for the class outlines the goals and schedule for the assignment. Students are required to meet with their mentor at least once per week to update on their projects status and ask for advice. The department conducts three project reviews to track project progress. The first review evaluates problem formulation and literature review, while the second review assesses the state of the report and experimental observations and theoretical modeling. Finally, the third review assesses the findings, recommendations for future work, and report completion.

Technical seminar: To ensure the latest information is used, students must base their seminar topic on the most recent publications. The subjects must adhere to the latest standards set by organizations like IEEE, IET, Springer, Elsevier Journal, and similar standards. Seminar organizers prevent duplication of topics by freezing topics for students on a first-come, first-served basis. As per university requirements, students must write a seminar report, which includes an introduction, literature review, proposed methodology, a list of required hardware and software, applications, a conclusion, and a discussion of potential future directions. The seminar coordinator creates and posts the presentation schedule on the notice board. Students are given four hours per week to present their technical seminars as per the program.

Internships: The college offers students a list of businesses and industries where they can complete 4-week internships and professional practice. Additionally, the college has taken the initiative to arrange internal internships by contacting industry resource people. Students are required to inform the departments internship coordinator about the business or sector where they will be interning.

The internship organizer provides each student with a guide, and students communicate with their guide to share what they have learned during their internship or professional practice. To synthesize their knowledge, students prepare a report on their internship or professional practice and present it to their guide and the internship coordinator

Mini Projects: In order to prepare students for the challenges they will face in the real world, teachers encourage them to take on small projects that are relevant to their area of expertise. These projects are carried out independently, but with the guidance and advice of the instructor. Once the projects are complete, students are encouraged to present their work to the departmental staff, who offer feedback and suggestions for improvement. This process is designed to help students develop their skills and knowledge in preparation for their senior project work.

A. The Institution needs to specify the facilities, materials for learning beyond syllabus, Webinars, Podcast, MOOCs etc. and demonstrate its effective utilization. Detailed list of resources for self-directed learning:

LIBRARY

The ACSCE Library and Information Centre started in the year 2009 at Kambipura, Bengaluru managed by the Moogambigai Charitable and Educational Trust with an initial collection of 6000 volumes of textbooks, 82 National & International Print Journals and with other necessities. It has housed in the college building Ground Floor with a total area of 360 Sq. Mtrs. with good and well equipped with lightings, furniture's & ventilation.

Presently it is moved to 6th floor of the same building with the 15,488 Sq. Ft. with all the advanced facilities & services (details mentioned in the next slides). To catering to the needs of all specialties of UG & PG, Research & Developmental activities having the collection of around 21460 volumes, 66 National & International Print Journals, Back Volume of Journal, e-Resources and many more with seating capacity of 320 students & faculty well ventilation, lightings & furnitures.

Library NDL Approval


Your Institute ACS COLLEGE OF ENGINEERING is now is now a part of the NDLI Club

Best Regards,
NDLI Club Team,
IIT Kharagpur

LIBRARY FACILITIES

- Automated through RFID circulation counters.
- Reference Section.
- Digital Library service.
- e-Journals facility.
- Print version Journals and Magazines.
- Previous Question papers.
- Internet centre for browsing

LIBRARY VIEW

LIBRARY ADVISORY COMMITTEE

S.No	Name of the Faculty	Designation a	Library Advisory committee (LAC) Designation
1.	Dr. M S Murali	Principal	Chairperson
2.	Dr. Prasanna Kumar	Professor	Member
3.	Prof. Sivasankar	Asst. Professor	Member
4.	Mr. Kiran. R	Chief Librarian, Library	Member
5.	Mr. Ravikumar. N	Librarian, Library	Member

Library Resources

Sl. No	Particulars	Collection
1.	**Collection of titles/Textbooks**	
	Total No. of Books	**21460**
	Total No. of Textbooks	**19756**
	Reference Books	**1704**
	Total No. of title	**3779**
	Rare Book Collection	**32**
2.	**Current Year Periodicals**	
	National Journals	**50**
	International Journals	**16**
	New Papers	**12**

3.	**e-Resources (Online Journals) through VTU Consortium**	
	Elsevier, IEEE, Taylor & Francis, Springer Nature, ProQuest, Mint books, Map Systems (Remote Access Service Map my Access), Net Analytics Technologies, Turnitin (Plagiarism Software Online Tool)	
	https://acsce.mapmyaccess.com/ (https://acsce.mapmyaccess.com/)	
	https://www.turnitin.com/t_home.asp?login=1&svr=22&lang=en_us&r=68.7278218305288 (https://www.turnitin.com/t_home.asp?login=1&svr=22&lang=en_us&r=68.7278218305288)	
4.	**Institutional Membership**	**NDLI Club & DELNET**
5.	**Bound Volume of Print Journals**	**941**
6.	**Non-Book Materials**	
	CD-ROM/DVDs	**657**
	In addition, we have EDUSAT e-Learning Program & NPTEL Lecture notes	https://nptel.ac.in/localchapter/statistics/709
7.	**Computers**	**27**
8.	**Book Bank**	**250**

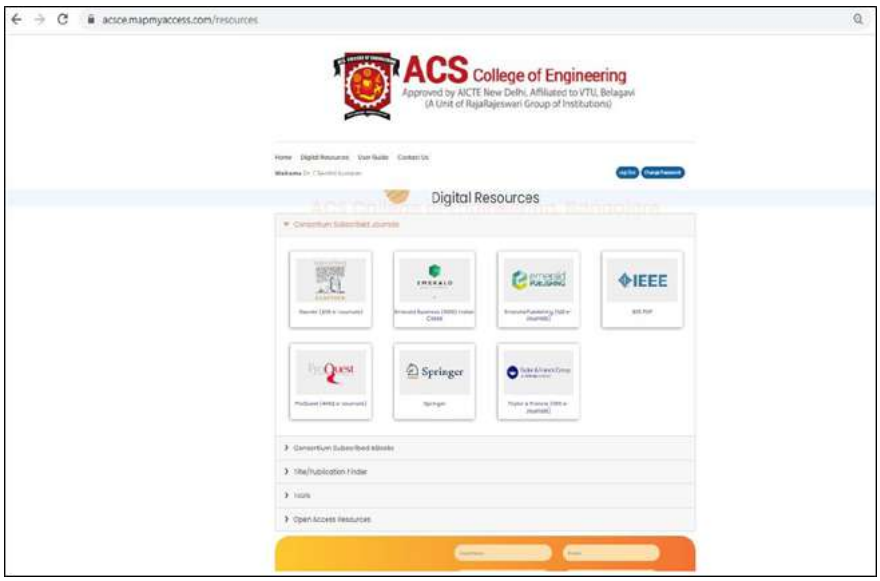
List of News Papers-12

Kannada	English	Hindi	Tamil	Malayalam
Prajavani	Deccan Herald	Rajasthan Patrika	Daily Thanthi	Malayala Manorama
Vijaya Karnataka	The Hindu			
Kannada Prabha	Indian Express			
Udayavani	Times of India			
	Bangalore Mirror			

E- Resources

IEEE – IEL Online	www.ieeexplore.ieee.org (http://www.ieeexplore.ieee.org/)
Elsevier Science (Science Direct)	www.sciencedirect.com (http://www.sciencedirect.com/)
Springer e-Journals	www.link.springer.com (http://www.link.springer.com/)
Taylor & Francis Journals	www.tandfonline .com
ProQuest – Engineering/Management	www.search.proquest.com (http://www.search.proquest.com/)
K-Nimbus: Digital Library Platform	https://www.knimbus.com/user/auth.do
Remote Access Solution	

Link for E-Resources https://acsce.mapmyaccess.com/ (https://acsce.mapmyaccess.com/)



Support to students for self-learning activities:

Accessibility to students Apart from Print Resources the following e-Resources are also available for the benefit of the staff and students. All these resources are very much relevant to the course curriculum.

E- Journals Package:

1. Elsevier Science Direct e-Journals

2. Springer Nature e-Journals

3. Taylor and Francis e-Journals

4. K-nimbus (Digital Library Platform and Remote Access Solution)

5. Turnitin (Similarity check tool)

6. online NPTEL Videos

7. Online IIT Bombay Spoken Tutorial Videos

8. Online Infosys Spring Board Videos

9. Digital Library with a Capacity of 25 Computers linked to E-resources

https://www.acsce.edu.in/e-learning/

https://acsce.mapmyaccess.com/

Name of the Internet provider	Railtel
Available band width	200
Wi-Fi availability	20 access points.
Internet access in labs, classrooms, library and offices of all Departments	LAN Connectivity: LABs, Class Rooms, office of all the departments, Seminar Halls, Conference Hall, Digital Library
Security arrangements	Whole Campus is Enabled with CCTV Surveillance Radius MANAGER

Encouragement for e-shikshana and online courses:

The institute has registered with multiple portals in order to give students and staff access to sign up for various online courses and certifications through the organizations listed below, as well as to stay up to date with cutting-edge technical innovation

Universiti Teknologi PETRONAS

ICT Academy

Value Added Courses

These courses are conducted by professionals and industry experts and help students stand apart from the rest in the job market by adding further value to their resume.

NPTEL Participated Student details

Students taken NPTEL Course and cleared sample certification

Spoken Tutorial -IIT Bombay

Letter of Association

19th August 2021

To,
The Principal,
ACS College of Engineering
Mysore Road, Bengaluru, Karnataka 560074

We are happy to announce the **ASSOCIATION** of Knowledge Partner Spoken Tutorial MOOCs Training Program, IIT Bombay with ACS College of Engineering, **Bengaluru, Karnataka.**

The Program is a part of the National Mission on Education through ICT, MoE, Govt. of India, to spread IT Literacy all over India. We are promoting the learning and usage of Free & Open Source Software (FOSS), through an Audio-Video teaching tool, viz, 'Spoken Tutorial'. We support and motivate colleges to train students on Basic Computer Skills, Software and IT. The course and the training is offered for Rs. 25,000 per year to all the Colleges.

You are making an outstanding contribution by using ICT based teaching and learning methodology for students of your College.

Yours Sincerely,

For and On behalf of
Spoken Tutorials,
Indian Institute of Technology Bombay

Mrs. Shyama Iyer
National Coordinator
Spoken Tutorial Project, IIT Bombay

ACS Journal For Science and Engineering

HACKTHON CONDUCTED BY ACSCE IN 2020

RECOGNIZED AS NODALCENTRE
SMART INDIA HACKATHON FINALE - 2022

List of Events organized in 2022-23

S.No.	Event Name	Resource Person	Date of Event	No. of Participants
1	Seminar on Study Overseas – Options for Aerospace and Aeronautical Engineering	Mr. Rohith Satheesh	08.07.2022	58
2	Students Project Exhibition	Dr. R. Mukesh, Dr. G. Ramanan, Mr. Inamul Hassan, Mr. Satish & AS Dept Faculties	28.07.2022	45
3	Webinar on Space Technology Application – Reach the Unreached	Mr. D. Gokul	29.09.2022	62
4	FDP on Satellite Navigation System For Engineers	Dr. G.Raju,Prof. P.Soma, Dr.R.Mukesh, Dr.A.K. Sarkar, Mr.B.A. Subramani	13 & 14.10.2022	49
5	Hands on Training on Satellite Communication and Tracking	Mr. B.A. Subramani	14.10. 2022	23
6	International Science Day – Quiz Program	AS Dept Faculties	10.11.2022	80
7	Industrial Visit to CADMAXX Solutions	CADMAXX Solutions Faculty	25.11.2022	35
8	Seminar on Unstructured Data Based Finite Volume Computations for Industrial Configurations	Dr.Nikhil Vijay Shende,	09.12.2022	90
9	Industrial Visit – Taneja Aerospace and Aviation Limited	Taneja Aerospace and Aviation Ltd Faculty	24.12.2022	38+2
10	3 Days National Level Workshop on Design and Sizing of Lighter Than Air Systems	Dr. Rajkumar.S. Pant	27,28 &29.12.2022	65 +15
11	SHAR, Sriharikota Visit	SHAR Faculty Members	28-02-2023	80+5
12	UR Rao Satellite Centre (ISRO) Visit	UR Rao Satellite Centre Faculty	08-03-2023	35 +2

List of Events organized in 2021-22

S.No.	Event Name	Resource Person	Date of Event	No.of Participants
1	Quiz competition on “Basic Engineering and its Sciences” in association with COSMOS Explorer for First year Students	Conducted through THE INDIAN SCIENCE CONGRESS ASSOCIATION	16.11.2021	97
2	Guest Lecture on Integrated Avionic System	Mr. R. Ramesh Babu	16.12.2021	107
3	Technical Seminar on Applications of Drones and HAPS and Possible role of AI / Robotics	Dr K Ramachandra	17.12.2021	112
4	Hands on Training in Flight Simulator	Mr. R. Ramesh Babu	17.12.2021	112

S.No.	Event Name	Resource Person	Date of Event	No.of Participants
5	Industrial Visit to Exhibition of Defence Products for General Public & Students to Commemorate AZADI KA AMRIT MAHOTSAV,Bengaluru	-	18.12.2021	110
6	Math Quiz event on National Mathematics Day	Conducted through THE INDIAN SCIENCE CONGRESS ASSOCIATION	22.12.2021	72
7	Technical Seminar on Practical aspects of Gas Turbine Design Process	Mr. Vinod S Choudhari	23.12.2021	109
8	Webinar on Internship. Project and Job Opportunities for Aerospace and Aeronautical Students	Mrs. R. Srinithya	12.01.2022	70
9	Webinar on Awareness on Designing Software in Aerospace Engineering	Mr. T. Vijay	19.01.2022	78
10	Inaugural ceremony of Flight Simulator and Technical talk on Infrastructure and Sustainability focus areas at Airport	Mr. S. Lakshminarayanan	16.02.2022	310
11	Motivational Speech	Mr. O.R. Ashwin Chandar	26.02.2022	20
12	Innovative Projects Contest – National Science Day Celebration	Conducted through THE INDIAN SOCIETY FOR TECHNICAL EDUCATION (ISTE)	08.03.2022	30
13	Awareness session on Healthy Youth – Healthy Planet –World Health Day Celebration	Dr.R. Prema	07.04.2022	102
14	Career Guidance Program on Aerospace Design	Mr.Shashank Ravat	12.04.2022	102
15	Seminar on Accomplishments in Space research and Applications – Global and Indian Scenario	Dr.G.Raju	19.04.2022	94
16	Webinar on Career Prospects and Challenges in Airlines –International Pilot Day Celebration	Captain Vasundara Rajanna	26.04.2022	42
17	Technical talk on Career Prospects and Hands on training in UAV Design	Mr. Pritam Ashutosh Sahu	13.05.2022	32
18	Technical training on Aerospace Vehicle Design Tools	Mr. M. Sivaramraj	27.05.2022	67
19	Engine cut sections inauguration & Technical talk on Jet Engines	Dr.K.Ramachandra & Dr. S V Ramanamurty	1.06.2022	150
20	Technical seminar on Space Communication- A practical Perspective	Mr. B. A. Subramani	10.6.2022	76

List of Events organized in 2020-21

S.No.	Event Name	Resource Person	Date of Event	No. of Participants
1	Webinar on “ARINC 702A Advanced Flight Management Computer System	MR.S. Ramesh Raju	8.8.20	68
2	Webinar on “State of the Art of Small Satellites & A Student-run Cubesat Program at Nanyang Technological University	Mr. S. Shanmuga Sundaram	22.8.20	75
3	Seaplane and Hovercraft - Indian Seacoast & lakes	Dr. K. Ramachandra	15.10.20	73
4	Systems Tool Kit - Software	Mr. Dhanish from SS Technologies	27.11.20	97
5	Evolution of FLV, Guidance and Sensors since II World War	Dr. Achintya Krishna Sarkar	12.12.20	75
6	Introduction to Advanced Electronics in Aviation	Mr. R. Ramesh Babu	29.12.20	68
7	Applications of AI in Aerospace Engineering	Dr. PVN Ramakumar - Conducted through COMPUTER SOCIETY OF INDIA	19.5.21	65
8	Damage Prediction on Nanocomposites after high velocity impact	Dr. P. S. Venkata Narayanan	22.5.21	73

9	3D High Flow Computations	Dr. N. Gopala Krishna	28.5.21	72
10	Aviation/Aerospace - BE Different /Hobby Corner / HAM Radio	Mr. Kalayana Raman N	29.5.21	75
11	Design Perspectives in Morphing Wings	Dr. Gautham Vigneswar P N	4.6.21	70
12	Indian NavIC and Other GNSS - Research Analysis and Challenges	Dr. Naveen Kumar Perumalla	5.6.21	102
13	Nanomaterials for Energy and Storage Applications	Dr. S. Kalpana	12.6.21	17
14	Flow Through variable area ducts and influence of shockwaves	Mr. Ramakrishna Madhira	16.6.21	55
15	Safety and Airworthiness in Aviation	Sri. P. Jayabal	17.6.21	69
16	Non Planar Wing concept of commercial Aircraft	Dr. C. Suresh	19.6.21	69
17	The view from Space: Competitive Collaboration for Space Development	Mr. Luwanga Christopher	24.6.21	69
18	Role of Engineers in Indian Armed Forces - Conducted through THE INSTITUTION OF ENGINEERS (INDIA)	WG CDR Abhishek Dixit	2.7.21	69

List of Events organized in 2019-20

S.No.	Title of Workshop/Seminar	Resource Person	Date(s)	No. of participants
1	Seminar on “Basic Aerodynamics”	Dr.P.Theerthamalai	26.8.2019	33
2	Seminar on “Mechanics of Fluids”	Mr.R.Srinath	26.9.2019	32
3	Introduction to GNSS Conducted through THE INSTITUTION OF ELECTRONICS AND COMMUNICATION ENGINEERS	Mr.Bharathidasan and Ms.S.Sangeetha Accord Software and Systems Ltd	03.10.2019	60
4	Aero vision Seminar	Venue:NMIT, Bangalore	14.10.2019	56
5	Seminar on “Small UAV’s – Growing Opportunities in Universities	Dr.G.Ramesh Former Scientist, NAL	17.10.2019	60
6	Educadd Seminar	Mr.Sunil Educadd Representative	12.11.2019	60
7	Seminar on Design and Development of UAV’s	Mr.N.Balachandran Rtd. Scientist G, ADE	22.11.2019	74
8	Workshop on Rocket Propellant Preparation	Mr.M.Ravi Shankar Expleo Technologies India Pvt.Ltd.	23.11.2019	32
9	Guest Lecture on “Fluid Mechanics”	Prof.R.Srinath Dayananda Sagar University	13.12.2019	20
10	Guest lecture on “Mechanics of Materials”	Prof.Albert Allen D Mellow ACSCE	16.12.2019	21
11	Aircraft Icing and its Effects	Dr.L.Prince Raj (IIEST, Shibpur)	02.03.2020	54
12	CFD and its Applications conducted through COMPUTER SOCIETY OF INDIA	Mr.M.Krishna Kumar JIT,Coimbatore	04.03.2020	25
13	Webinar on “Composite materials and their applications”	Mr.Charles G Martin, Aerospace Structures - Domain Expert BridgeNow Academy	18.5.2020	58
14	Webinar on “Finite Element Analysis and limitations”	Mr.Yogesh Joshi	18.5.2020	55

S.No.	Title of Workshop/Seminar	Resource Person	Date(s)	No. of participants
15	Webinar on “Career Opportunities for Aeronautical Engineering Graduates”	Dr.Kishore kumar Bramah	19.5.2020	84
16	Missile Aerodynamics - Webinar	Dr.P.Theerthamalai	20.05.2020	52
17	CFD and its Applications - Webinar	Dr.S.K.Maharana	22.05.2020	55
18	Grid Fin Aerodynamics - Webinar	Dr.P.Theerthamalai	28.05.2020	51
19	Webinar on “POST COVID-19 Challenges & Opportunities for Aerospace Engineering”	Padma Shre Dr.Mylswamy Annadurai Vice President – Tamilnadu State Council for science & Technology Former Director-ISRO Satellite Centre (URSC)	29.5.2020	84
20	Webinar on “Emerging Global Trends in Space Systems”	Padma Shri R.M.Vasagam Former Director, ISRO, Bangalore Former Vice-Chancellor, Anna University, Chennai	1.6.2020	79
21	Webinar on “Satellite Navigation-Past, Present and Future”	Prof.P.Soma Former Deputy Director – Navigation systems Area, ISTRAC	08.06.2020	87
22	Webinar on “AI & ML for Aerospace Engineering	Dr.U. Selvakumar N-Side, Senior Data Science Consultant, Noesis Solutions, ML Development Engineer, Belgium	14.06.2020	83
23	Webinar on “Ionospheric Forecasting models for Global Navigation Satellite System Users	Dr.D.Venkata Ratnam Professor KLEF Deemed to be University, Guntur, Andhra Pradesh	15.06.2020	83
24	Structural Design & Analysis with application in offshore and marine industry	Mr.P.Bernard Adaikalaraj Senior Engineer Keppel Marine and Deep Water Technology	27.06.2020	81
25	Webinar on “Introduction to GNSS Simulator”	Ms Sangeetha S	06.07.2020	83
26	Webinar on “Challenges on Healthcare Field – Research Perspective”	Dr S Mythili	18.07.2020	83

List of Events organized in 2018-19

SL. No	Event Name	Chief Guest/Resource Person	Date	No. of participants
1.	Seminar on “System Tool Kit Software	Mr. Dhanish from SS Technologies	19.3.2019	33
2.	Motivational Speech on ’Career in Indian Air Force’	Wg Cdr Saurabh Bhandari	05.03.2019	32
3.	Guest Lecture on ‘Composite Materials’	Dr. P. Ganeshan	06.03.2019	31
4.	Guest Lecture on ‘Aero Thermodynamics’	Dr. R Siva Subramaniyam	03.10.2018	31
5.	Guest Lecture on ‘Mechanics of Materials’	Prof. Dhanya Prakash Babu	04.10.2018	31

6.	Technical Seminar on ‘Development of Gas Turbines and UAV’s’	Dr. K. Ramachandra	09.11.2018	25
7.	Technical Seminar on ‘Basic Awareness Course on Aerospace’	Dr. Badri Narayan	16.11.2018	33
8.	Evolution of Avionics	Dr. B.S. Reddy	28.09.2018	33
9.	Basics of Space Mechanics	Prof. P. Soma	25.09.2018	33

9.5 Career Guidance, Training, Placement (10) Total Marks 10.00

About Training & Placement Cell

The Training and Placement Cell at A C S College of Engineering has established itself as a preferred recruitment destination for various National and Multi-National organizations seeking fresh talent from the campus. Along the journey of achieving excellence, the Department has set several milestones in terms of both Quality and Quantity. The infrastructure provided by the college is top-notch and facilitates the smooth functioning of all Training & Placement activities.

To achieve desired results and targets, Training and Development Programs are conducted for both students and faculty in a phased manner. Students facing difficulties in recruitment activities are provided with regular mentoring and one-on-one counseling. The institutions commitment to progress is reflected in its consistent placement record.

Several high-profile companies, including SRIT-Dubai, Capgemini, Tech Mahindra, Mphasis, hp, Siemens, Robert Bosch, L&T Infotech, IBM, Microland, Infosys Technologies, PARK Controls & Communications, SUBEX, Alpha9Marine solutions, regularly visit the campus and conduct Placement activities.

Vision

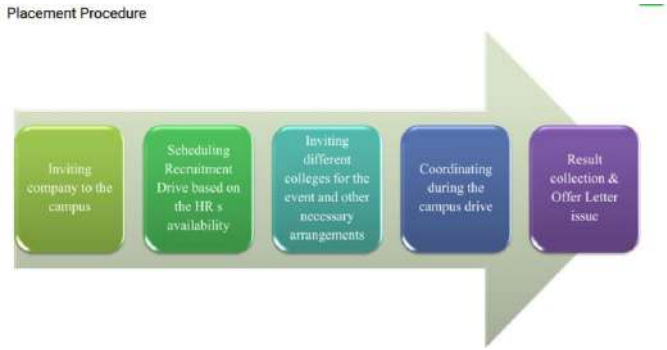
To reduce the gap between candidate skills and industry needs by producing competent resources equipped with personality development and campus recruitment training along with professional etiquette & providing them the best possible opportunities to thrive in their career.

Mission

The training and Placement team of ACS college of Engineering is dedicated towards achieving maximum placements and spares no effort in maintaining sterling rapport with industries. Preparing the recruitment schedule of the year by inviting corporations for association and coordinating with the HR Team to ensure the smooth functioning of the final recruitment process are its major responsibilities. Meanwhile, numerous training programs, workshops, seminars, Industry interactions, and also industry visits are conducted by the team. Regular one-on-one counseling is done for the betterment of the students facing difficulties in different rounds of interviews. Faculty Development Programs are conducted concentrating on 360 degree improvement in student performance along with the skill development of the faculty. The department also holds the responsibility of entrepreneurship development cell that nurtures job givers. The training and placement cell, guided by certain rules and principles, majorly the team strives for the well-organized and successful processing of all the events taken up.

Training Activities

- Induction Program to the students in the 1st year of Engineering
- Personality Development Training
- Career Guidance Seminars by experts
- Personalized counseling to those students who need help in preparing for placements
- Campus Recruitment Training by experienced Industry professionals
- Company Specific Trainings



Facilities Provided to the Recruiters

- Auditorium with seating capacity of 3000 to conduct Pre-placement Talk
- Integrated Labs with around 200 computers having robust Internet connection for online tests
- Vast space for offline tests
- Separate rooms for conduction of Group Discussion and Personal Interview
- Enthusiastic team of volunteers for assistance
- Excellent environment for smooth running of the process

List of Companies visited ACSCE for campus drive

Sl No	Company name	Profile	Eligible Branch	Criteria	Rounds of Interview	S
1	Maventic innovative solutions Pvt Ltd	Software Developer trainee	BE(CSE,ISE & Information Science)	Any without backlogs	Technical Round and Hr round Technical Round+Execution Round at Office+Final Round	2.4
2	Vee Technologies	AR Caller Trainee & Medical coding	BE (All branches)	2018 & 2019 passe	Round 1: Technical Round 2 : HR	1.2
3	Vee Technologies	Architecture Trainee	BE Architecture	60% throughout	Round 1 : Online Test – By **HireMee**	3.3
		Design Engineer Trainee (Mechanical)	BE Mechanical	60% throughout	Round 2 : Video Presentation & PPT	2.1
		Design Engineer Trainee (Electrical)	BE Electrical	60% throughout	Round 3 : Technical Assessment Round 4: Group Discussion Tround 5 : Technical & HR interview	2.1

4	Sasken Technologies Limited	Associate software Engineer	BE/M Tech Electronic & Communication Computer Science Information Science Digital signal processing Wireless communication Automotive Engineering Machine Learning Computer Vision Artificial Intelligence Embedded Systems	2018 & 2019 batch65% throughout with no backlog history	On Line Test, Technical Rounds and HR Round	3
5	Peol Technologies	Developer/Testing	Circuit Branch	No Criteria	online test,technical round,F2F	
6	247ai	Tech Support	All Branch	No Criteria	online test,technical round,F2F	
7	Fidelis	Tech Support	All Branch	No Criteria	Tech,F2F	
8	Luman Data	Tech Support	All Branch	No Criteria	online test,technical round,F2F	
9	Tikona	Network	BE/B.Tech All branches	No Criteria	F2F Interview	
10	UTL Technologies	Support Engineer	All Branch	No Criteria	offline test ,F2F	
11	Cogzy Tech	Developer	Circuit	60 percent thr	Offline Test, Online Test and F2F	
12	PinClick	Property Advisor	All Branch	No Criteria	F2F Interview	
13	Pragati Infotech	Trainee	Circuit Branches	60% througho	Tech,F2F	
14	Codilar Technologies	Developer/Testing	Circuit Branch	No Criteria	online test,technical round,F2F	
15	Akarmaxs Tech Pvt Ltd	Web Design & Development	Circuit Branches	60% throughout	Off line test, Tech round, F2F	
16	Trigent Technologies	ASE, Analyst	BE/ B Tech/MCA/BCA/B Com/ BBM/BA/ M Com/MBA	70% aggregate throughout the academics	Telephonic and F2F	
17	Sodexo Foods Pvt ltd	Multiple Roles	BE/B.Tech All Branch/MBA/Diploma	No Criteria	Telephonic and F2F	Be in
18	Kanrad Technologies				Offline, Tech and HR	
19	Mirafra technologies				Offline, Tech and HR	
20	Kotak Bank					
21	GEPL					
22	Ingram Micro					
23	Adecco India pvt ltd					
24	Cattleya Technosys	IT	Diploma,B.E	No Criteria	Offline, Tech and HR	Be in
25	Frenzoft Technologies	IT	B.E CSE,ECE,IT	No Criteria	Offline, Tech and HR	
26	CAD Macro	IT	B.E CSE,ECE,IT	60% throughout	Offline, Tech and HR	
27	Shrushti Skills	HR	Diploma,B.E,MBA		F2F	Be in
28	Ikya Global	HR	Diploma,B.E,MBA		F2F	
29	Medilight Health Care	IT	B.E CSE,ECE,IT			
30	Sitel Group	IT	B.E CSE,ECE,IT			
31	Qual Ratio Engineering and Automation Pvt Ltd	Mech	BE/B.Tech Mech/Aero/industrial Production/Automobile		Tech Writeen Test, Initial HR	Be in
32	Vcareez	IT	All Branch	60% throughout	Written Test, Tech and HR	
33	Carmatec IT Solutions Pvt Ltd	MBA			Round 1: Written Test Round 2 : Face to face interview	Be in
34	Jobworld India Pvt Ltd	Resource Executive/ IT Recruiter	Diploma,B.E,MBA	No Criteria	Round 1: Written Test Round 2: GD Round 3 : Face to face interview	

35	Nestaway Technologies Pvt. Ltd	Area Property Manager	Diploma,B.E,MBA	No Criteria	Round 1: Written Test Round 2 : Face to face interview	2
36	Sangeetha mobiles Pvt Ltd	Store manager,Sales Executive,cashier,Accounts,Customer Care	BE & MBA	No Criteria	Round 1 : face to face interview	Be in
37	Conferral Preceptor India Group	Executives	MBA	No Criteria	Round 1 : face to face interview	1.5
38	eNoah	Associate	BE & MBA	ithout back log	Round 1 : Group Discussion (Voice Process- Night Shifts) Round 2 : Analytical, Logical & Flexibility Check Round (Face to Face) Round 3 : HR Salary discussion and offer roll out.	2 2
39	Furlenco	Marketing	MBA/BE	No Criteria	Tech Writeen Test, Initial HR	Be in
40	Teleperformance	Marketing	All Branch			
41	HireMee	Marketing	MBA			
42	CalibHR	Marketing	All Branch			
43	Akuva Infotech	Design	Mechnical			
44	Aegis Group	Design	All Branch			
45	Future General	Design	All Branch			

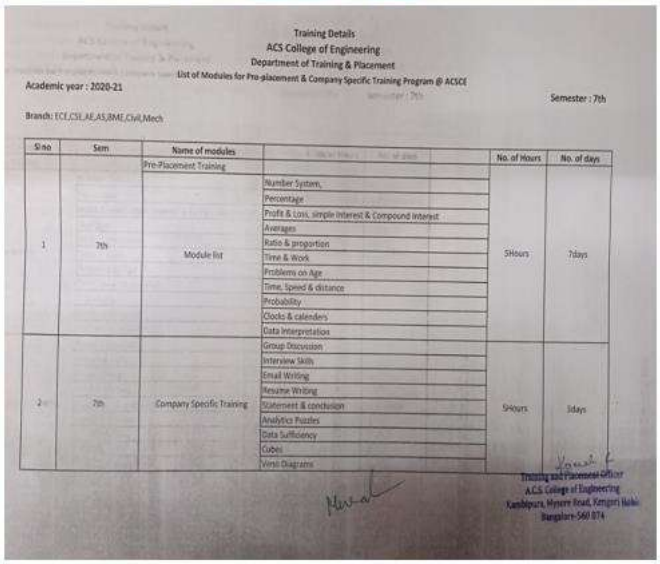
Details of the Job opportunities given to our students

Sl. No.	Name of the Company	Designation
1	Audience Science	Operations Engineer
2	Capgemini	Technical Support Executives
3	Skypro	Network Associate
4	Xithias Technologies	Graduate Engineer
5	Cloud Jini Technologies	Software Trainee
6	Shapia Softwares	Trainee Software Engineer
7	SSS Solutions	Graduate Engineer
8	Theorem	Service Engineer
9	First Data	Service Engineer
10	mphasis	Technical Support Executives
11	Binary Techies Software Ltd.	IT Infrastructure Management
12	Talent Beat	Technical Recuriters
13	Artech	Technical Support Executives
14	Microland	Service Engineer & Service Executives
15	Universal Hunts	Technical Recuriters
16	Global Automation India Pvt. Ltd	Software Engineer
17	Zscaler	Technical Associates
18	3-I Infotech	Infrastructure management
19	Cloudzcampus	IT Positions
20	American Mega Trends India (P) Ltd.	System Software Engineer Trainee
21	Inforay IT solutions India Pvt. Ltd.	Software Engineer
22	Stratageeks	Network Administrator
23	Downtown Technologies	Software Engineer, Network Administrator
24	ADS Softek	DotNet Web developer
25	Icool infotech	Software Trainee
26	Microland	Service Engineer & Service executive
27	IBM – Global Process Services (GPS)	Technical Support Engineer
28	Mercom Capital Group	Research Associate
29	HiveMinds Marketing Solutions	Online Marketing Analyst
30	Absolute Insurance Surveyors & Loss Assessors Pvt Ltd	Trainee Surveyor
31	IBM India	Technical Support Executives

Sl. No.	Name of the Company	Designation
32	IBM India	Technical Support Executives
33	Web Affinity Technologies Pvt. Ltd – Aspiring Minds Assessments Pvt. Ltd	Intern Android Developer
34	Rooman Technologies Pvt. Ltd	System Admin.
35	SPAN Infotech Pvt. Ltd.	Trainee Software Engineer
36	Divum	Trainee Software Engineer
37	Blunkit	Marketing Trainee
38	GrayMatter	Trainee Software Engineer
39	JustEat	Trainee Software Engineer
40	Safran	Technical Associate Engineer
41	Purplista	Trainee Software Engineer
42	Silvan Labs	Software Developer
43	Almamatter	Software Developer
44	Toyota Kirolosakar	Contract Engineer
45	Soham Online	Software Design Engineer
46	Laqsh Job Skills Academy Pvt Ltd – Grasp IT	Software Developer
48	Incept Online Pvt, Ltd – Aspiring Minds Assessments Pvt. Ltd	Technosales Engineer
49	mFinite Marketing Solutions Pvt Ltd	System Administrator cum Support
50	IBM India	Customer Support Engineer
51	CMC Ltd (A TATA Enterprise)	Trainee Software Engineer
52	IBM India	Technical Support
53	JRG Securities – www.inditrade.com	Relationship Manager
54	Goodrich Corporation, Bangalore	Graduate Engineer Trainee – Software V&V
55	Hewlett Packard	Technical Support Engineer
56	Hewlett Packard	Technical Support Engineer
57	Gayethri & Namith Architects.	Associate engineer.
58	Textron India.	Asst Software Engineer and engineering requirement.
59	V Trans India Ltd	Sales Officer
60	Wipro technologies	Test Engineer
61	Josiah Technologies Pvt. Ltd.	Technical Associate.
62	Seajin Technologies	Software engineer.
63	Moog Controls Pvt Ltd.	Asst. Software Engineer
64	Web Hugh Technologies	Software Developer
65	Solutions Infini	Software Engineer
66	KNK India	Civil Engineer
67	Parinama Outsourcing	Asst Software Engineer
68	Micro Academy (I) Pvt Ltd	System Engineer
69	SEED Infotech Ltd	Technical Associate
70	Interface Technologies	Trainee Software Engineer Trainee Software Developer
71	POEL Solutions Pvt. Ltd	Trainee Software Engineer
72	Quinnox Consulting Services	Technical Associate
73	Infrasoft Technologies	Trainee Software Engineer
74	Siemens Industry Software (India) Pvt Ltd	Trainee Engineer
75	Power One Data International	Trainee Engineer
76	Convergys	Desktop Support Engineers
77	AMDOCS	Technical Associate
78	Isometric Technology Services Pvt. Ltd	BDM

Our Recruiting Partners

Pre placement and Company Specific Training Programmes



Training Details
ACS College of Engineering
Department of Training & Placement
List of Modules for Pre-placement & Company Specific Training Program @ ACSCE

Academic year : 2020-21 Semester : 7th

Branch: ECE,CSE,AE,AS,BME,Civil,Mech

Sl no	Sem	Name of modules		No. of Hours	No. of days
		Pre-Placement Training			
1	7th	Module list	Number System, Percentage, Profit & Loss, simple Interest & Compound Interest, Averages, Ratio & proportion, Time & Work, Problems on Age, Time, Speed & distance, Probability, Clocks & calenders, Data Interpretation	5Hours	7days
2	7th	Company Specific Training	Group Discussion, Interview Skills, Email Writing, Resume Writing, Statement & conclusion, Analytics Puzzles, Data Sufficiency, Cubes, Venn Diagrams	5Hours	3days

Training and Placement Officer
A.C.S. College of Engineering
Kambipura, Mysore Road, Kengeri Hobli
Bangalore-560 074

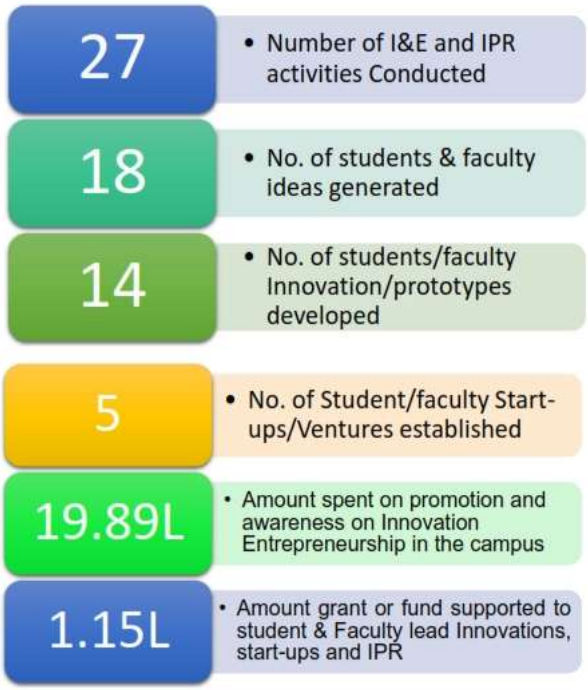
9.6 Entrepreneurship Cell (5) Total Marks 5.00

Institute Marks : 5.00

About IIC Institute Institution's Innovation Council (IIC) at ACS College of Engineering established in the academic year 2019-20 under the guidance of AICTE and Ministry of Education to systematically foster the culture of Innovation. The primary objective of Innovation Council is to encourage, inspire and take care of young students by supporting them to work with new ideas and transform them into prototypes while they are informative years. The motto of ACS IIC is to create a vibrant local innovation ecosystem and prepare institute for Atal Ranking of Institutions on Innovation Achievements Framework. Establish function ecosystem for scouting ideas and pre-incubation of ideas. Develop better cognitive ability for technology students. Vision To provide the needs of students as well as faculty entrepreneurs with innovative ideas of social significance and there by disseminating a culture of entrepreneurship in campus which will boost our education system and there by growing the national economic and social development. Mission To develop a system with required infrastructure that can enable students, faculty to innovate, and prototype their ideas with industrial standards, support from Government, industry and reputed academic institutions around the world, and help them to realize their potentials Objectives of IIC.

- Students/Faculty associated with ICs will have exclusive opportunity to participate in various Innovation related initiatives and competitions organized from institution level to international level.
- Win exciting prizes/Certificates for Innovations.
- Meet/Interact renowned Business Leaders and lead academicians.
- Opportunity to build and prototype new ideas
- Mentoring by industry experts
- Experiment with new technologies
- Visit new places and see new culture

Highlights and Achievements



Facilities, Infrastructure of Pre-Incubation & Incubation

IIC Faculty/Student members and their achievements/ Rewarded for the innovations at different forum

Sl No	Name of the Students	Title of Innovation	Title of Award	Awarded by
1	Syed shabbaz and Amulya gowda	Electro pot device	Won the best Prototype award with cash prize of Rs.40,000/-	NEC business Incubator
2	Sudhanva R Gowda and Harish R Gowda	Eco friendly fiber reinforced geoploymer concrete	won the Best Innovative award with Rs.20000/- case prize	NEC business Incubator
3	Raghavendra L	Crop Analysis Using UAV	Best Innovation award	VTU cell
3	Tejas Chandra Tejaswini B M Narendra N	Solar Integrated Bio Composite Helmet	Co-Incubatee Award & Rs. 1500/ Cash Prize	NEC business Incubator
4	Bharath B Vishnu	Green tech power generator	Co-Incubatee Award & Rs. 1500/ Cash Prize	NEC business Incubator

Highlight selected best Innovations & images with mention of inventor/innovation name

9.7 Co-curricular and Extra-curricular Activities (10) Total Marks 10.00

Accessibility to Sports and Cultural Facilities:

The Physical Education & Sports Department is quite active on campus. The school significantly supports students general growth and supports their participation in sports. For the students physical and mental health and fitness, sports are actually a way of life. The school holds that a well-designed, comprehensive curriculum is crucial for the development of the body and mind

Sports & Recreation

We encourage students to involve in extracurricular activities for their holistic personal developments. ACS has recreational excellent facilities for sports including gymnasium, swimming pool, tennis courts, basketball court, volleyball court, athletics tracks and a spacious ground for sports such as football, cricket and hockey.

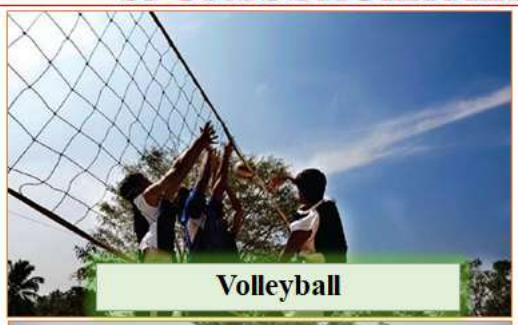
There is an annual state-level swimming gala which is an extremely popular event, organized by the swimming club. Finally, there is Crosse, or the cross-campus race, an integral part of ACSCE athletic tradition. Our Science Club tries to infuse the fun of science into students and encourage them to focus on comprehending science than just learning it for exams.

There is an Aero modeling club, a HAM club, an electronics club and EPIC, HAM radio operators, designers and builders of aero planes, race cars and satellites. Most students are active in the Science Club events and publish an English magazine to keep all the students up to date on campus happenings. ACS also organizes competitions in music, drama, literature, debating, fine arts and Indian folk arts like Rangoli. Performing Arts Festival (PAF), a cultural extravaganza, is one of ACS College of engineering's finest attempts to bring the best of students' talents. From the joining, all students and staff in ACS are entitled to free medical facilities and insurance coverage.

SPORTS :

- The college has a basketball court which conforms to the national standards in the open field.
- The college has volley ball and throw ball courts in the open field.
- Cricket is practiced in the college field every day and more rigorously on holidays and
- Sundays. Cricket batting pitch with net for practice is created in the field.
- Football is also practiced by the students in the evening in the ground

SPORTS FACILITIES – OUTDOOR GAMES



SPORTS FACILITIES - INDOOR GAMES

AAROHANA 2022

Apart from Academic, ACS College of Engineering provides platform for all the students to show their talents as a part of college cultural fest. The College Cultural Fest was called by a name “AAROHANA-2022”. As per the culture of ACS College of Engineering , every academic year the college organises college cultural fest for aspirants assembling from all the departments of ACS College of Engineering with a very high competitive spirit to participant and with the strong determination to include their achievements & accomplishments to their resumes. For the preceding academic Year 2022 ACS College of Engineering have organized college cultural fest “AAROHANA-2022” with the same enthusiasm and strong determination among the new set of students and outgoing students being Coordinators for the fest along with student volunteers under the faculty guidance/coordination during 24/6/2022 These fests are organized every year with the objective to provide platform for the students to showcase their talent with a competitive spirit. The “AAROHANA-2022” was successful enough to attract all the Students for two day fest which includes all the events. The “AAROHANA-2022” fest executed with a total of 15 events planned and organized at its best of quality. Focusing on the types of events to include in the fest was decided by fest coordinators keeping the interest and need of the engineering student into consideration, with little emphasis on the fun full events behind the scene.

The “AAROHANA-2022” included these various events:

1	Rangolii	**8**	Singing
2	Dance solo/group	**9**	Painting
3	Quiz	**10**	Essay writing
4	Painting	**12**	Photography
5	Pencil Sketch	**13**	Cooking Without Fire
6	Pictionary	**14**	Logo design
7	Short Vedios	**15**	Standup Commedy

The “AAROHANA-2022” was conducted on 24/6/2022.

- Day1 (22/06/22) –Indoor events at ACSCE
- Day2 (24/06/22) - Stage events at ACS convention center at RRMCH.
- The “AAROHANA-2022” was organised with a budget of Rs: 200000 /- (Two Lack Rupees only) under the very well coordination of staff coordinators.
- Dr.H.S.Govardhana Swamy, Prof & Head, Civil Engineering
- Mrs.Deepa., Assistant Professor, Department of Mathematics.
- Mr. Sathish Hiremath., Assistant Professor, Department of Aeronatical Engineering.

ANNUAL CULTURAL FEST - AAROHANA

10 GOVERNANCE, INSTITUTIONAL SUPPORT AND FINANCIAL RESOURCES (120) — Total Marks 120.00

10.1 Organization, Governance and Transparency (40) — Total Marks 40.00

10.1.1 State the Vision and Mission of the Institute (5) — Institute Marks : 5.00

Vision :
Engineering the future of the nation by transforming the students to be technically skilled managers, innovative leaders and environmentally receptive citizens.
Mission :
• To implement holistic approach in curriculum and pedagogy through Industry Integrated Interactions to meet the needs of Global Engineering Environment. • To develop students with knowledge, attitude and skill of employability, entrepreneurship (Be Job creators than job seekers), research potential and professionally ethical citizens.

10.1.2 Governing body,administrative setup,functions of various bodies,service rules, procedures, recruitment and promotional policies (10) — Institute Marks : 10.00

The Institute is run by Moogamibigai Charitable and Educational Trust, was founded in 1992 with the main objective of Promoting Higher Education in Karnataka. Various professional institutions like Medical, Dental, Nursing institutions and functioning under the aegis of the Trust generally termed as RajaRajeswari Group of Institutions. RajaRajeswari Group of Institutions was established by our founder Chairman Dr. A.C. Shanmugam, B.A.LLB, FIMSA, FRCPS (Glasgow, UK), his pioneering vision and mission has contributed for the establishment of valued educational institutions. ACS College of Engineering, an institution of academic excellence was established in the year 2009 with a cherished desire to serve the cause of humanity through education. This college is affiliated to Visvesvaraya Technological University, Belagavi and approved by the AICTE and the Govt. of Karnataka. Accredited by NAAC – "A", NBA of the branches of Aeronautical and Bio-Medical Engineering, International Accreditation by HLACT, Texas, USA.

It offers Under Graduate programs in eight engineering disciplines, besides Master's program. Departments such as Aerospace Engineering, Aeronautical Engineering, Bio-Medical Engineering, Computer Science Engineering, Data Sciences Engineering, Cyber Security Engineering, Electronics and Communication Engineering, Mechanical Engineering, Science Humanities, offer research programs leading to Ph.D. program of VTU.

ACSCE equips its students not only with the technical knowledge to enable them to meet the challenges of global standards but also integrates value education, environmental awareness and communication skills into its curriculum to mould the students as responsible citizens. The College is located in a beautiful lush green landscape, free from polluted environment and excellent atmosphere and ambience ideally suited for growth of the soul & mind. It is located behind RRMCH on the Bengaluru-Mysore Highway 15 Km from the Bengaluru City Railway Station and 2 km from Kengeri Railway Station.

Governing Council Members:

S. No	*Name*	*Qualification*	*Designation*
1	**Dr. A.C. Shanmugam** Founder Chairman, Managing Trustee RRGI Bangalore.	B.A, L.L.B	Chairman
2	**Sri. A.C.S. Arun Kumar** President, Raja Rajeswari Group of Institutions, Bangalore	B. Tech (Hons), MBA	Member
3	**Prof. R.M. Vasagam** Former Vice-Chancellor, Anna University, Former Scientist ISRO, Bangalore	M.E	Member
4	**Prof. Venkatachalappa. M** Former Prof & Head, Department of Mathematics, Central College, Bangalore	Ph.D.	Member
5	**Prof. Sundara Moorthy T.K** Former Scientist ISRO & Mission Director Indian Communication Satellite System, Bangalore.	ME	Member
6	**Mr. Vijayakumar** Visvesvaraya Technological University, Nominee	ME	Visvesvaraya Technological University Nominee
7	**Director Cum regional officer, AICTE** South Regional office Bangalore	-	AICTE Nominee
8	**Director of Technical Education,** Government of Karnataka, Bangalore	-	Govt. Nominee
9	**Dr. T. Senthil Kumaran** Professor & Head, Department of Computer Science and Engineering	Ph.D.	Member
10	**Dr. M.S. Shivakumar** Professor & Head, Department of Chemistry	Ph.D.	Member
11	**Dr. M.S. Murali** Principal	Ph.D.	Ex-Officio Member Secretary

Governing Council Functions:

- To monitor the academic and other related activities of the College
- To consider and execute the recommendations of the Staff Selection Committee
- To consider the important communications, policy decisions received from the University, Government, AICTE/ PCI, etc. To monitor the students and faculty development programmes
- To implement the recommendations of the Governing council
- To pass the annual budget of the college.
- To approve the income and expenditure of the college annually. General supervision and control of the affairs of the college
- To maintain its own record of its proceedings
- The Governing Council shall hold, control and administer the property and funds of the College as well as other funds placed at the disposal of the College for any specific object.
- The Governing Council can enter into, vary, carry out, confirm and cancel contracts on behalf of the College. To consider the Annual Report, the Annual Accounts and the Financial Estimates.

- To fix admission, tuition and other fees to be charged from students reading and/or residing in the College (subject to any limitations laid down by the University).
- To appoint Principals and other members of teaching and non-teaching staff excluding Class-IV employees of the College in accordance with the procedure laid down. To grant on the recommendation of the Principal, Study Leave and Leave without pay to the teaching staff of the College subject to the Rules and Regulations of the Institution
- To institute, suspend or abolish such teaching and non-teaching posts, as may be considered necessary.
- To open an account or accounts in the name of the College with such scheduled bank or banks as the Governing Body may think fit and to keep the funds of the College deposited with such banks.
- To make rules and to alter, amend or repeal the same, provided, all such alterations and amendments and repeals receive the approval
- To delegate, at its discretion, any of its power as may be necessary from time to time to the Principal.
- To exercise such other powers and to do such other acts or things as may be necessary or expedient for the proper performance of its duties

Governing Council Meeting

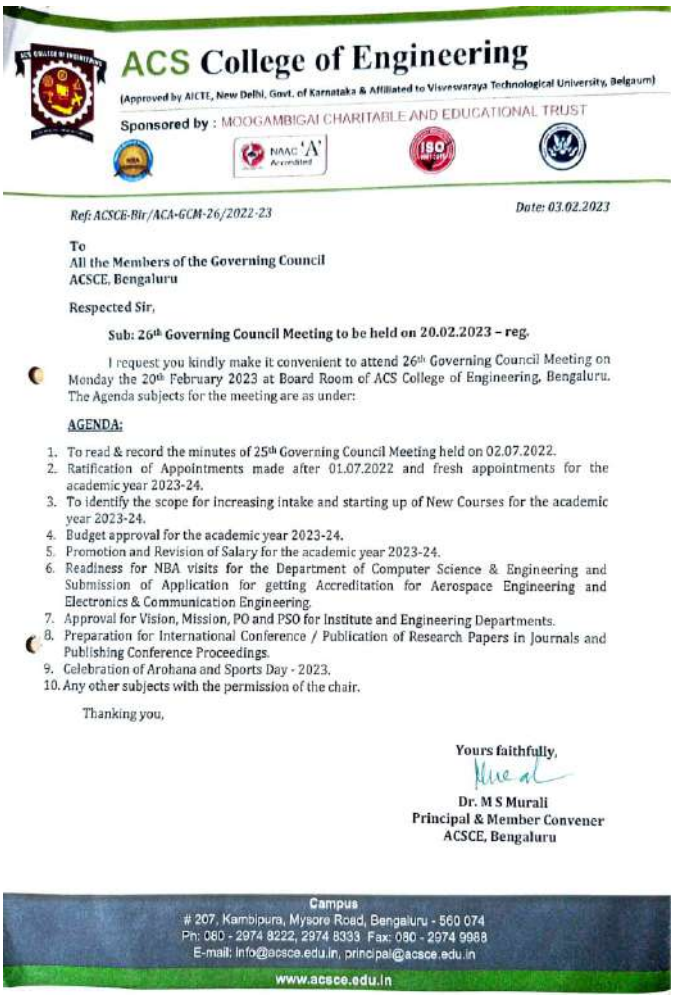
Sl. No	Governing Council Meeting Scheduled	Members Attended
1	07-01-2019	Dr. A.C. Shanmugam
2		Sri. A.C.S. Arun Kumar
3		Prof. R.M. Vasagam
4		Sri. C.N. Seetharam
5		Prof. Venkatachalappa M
6		Mr. Sundramoorthy
7		Dr. Manjunatha B
8		Dr. Ramesh Unni Krishnan
9		Prof. H.U. Talwar
10		Prof. R.R. Elangovan
11		Dr. Punal M Arabi
12		Dr. M.S. Murali

Sl. No	Governing Council Meeting Scheduled	Members Attended
1	22-01-2020	Dr. A.C. Shanmugam
2		Sri. A.C.S. Arun Kumar
3		Prof. R.M. Vasagam
4		Sri. C.N. Seetharam
5		Prof. Venkatachalappa M
6		Mr. Sundramoorthy
7		Dr. Manjunatha B
8		Dr. R. Shaktivel
9		Prof. H.U. Talwar
10		Dr. T. Senthil Kumaran
11		Dr. Punal M Arabi
12		Dr. M.S. Murali

Sl. No	Governing Council Meeting Scheduled	Members Attended
1	13-11-2020 30-01-2021 18-07-2021 19-02-2022	Dr. A.C. Shanmugam
2		Sri. A.C.S. Arun Kumar
3		Prof. R.M. Vasagam
4		Sri. C.N. Seetharam
5		Prof. Venkatachalappa M
6		Mr. Sundramoorthy
7		Shri. Vijaya Kumar K
8		Dr. R. Shaktivel
9		Prof. H.U. Talwar
10		Dr. T. Senthil Kumaran
11		Dr. Punal M Arabi
12		Dr. M.S. Murali

Sl. No	Governing Council Meeting Scheduled	Members Attended
1		Dr. A.C. Shanmugam
2		Sri. A.C.S. Arun Kumar
3		Prof. R.M. Vasagam
4		Sri. C.N. Seetharam
5		Prof. Venkatachalappa M
6	01-07-2022	Mr. Sundramoorthy
7	20-02-2023	Shri. Vijaya Kumar K
8		Dr. R. Shaktivel
9		Prof. H.U. Talwar
10		Dr. T. Senthil Kumaran
11		Dr. M.S. Shivakumar
12		Dr. M.S. Murali

Governing Council Circular



ACS College of Engineering

(Approved by AICTE, New Delhi, Govt. of Karnataka & Affiliated to Visvesvaraya Technological University, Belgaum)

Sponsored by : MOOGAMBIGAI CHARITABLE AND EDUCATIONAL TRUST

NAAC 'A' Accredited

Ref: ACSCE-Blr/ACA-GCM-26/2022-23 Date: 03.02.2023

To
All the Members of the Governing Council
ACSCE, Bengaluru

Respected Sir,

Sub: 26th Governing Council Meeting to be held on 20.02.2023 – reg.

I request you kindly make it convenient to attend 26th Governing Council Meeting on Monday the 20th February 2023 at Board Room of ACS College of Engineering, Bengaluru. The Agenda subjects for the meeting are as under:

AGENDA:

1. To read & record the minutes of 25th Governing Council Meeting held on 02.07.2022.
2. Ratification of Appointments made after 01.07.2022 and fresh appointments for the academic year 2023-24.
3. To identify the scope for increasing intake and starting up of New Courses for the academic year 2023-24.
4. Budget approval for the academic year 2023-24.
5. Promotion and Revision of Salary for the academic year 2023-24.
6. Readiness for NBA visits for the Department of Computer Science & Engineering and Submission of Application for getting Accreditation for Aerospace Engineering and Electronics & Communication Engineering.
7. Approval for Vision, Mission, PO and PSO for Institute and Engineering Departments.
8. Preparation for International Conference / Publication of Research Papers in Journals and Publishing Conference Proceedings.
9. Celebration of Arohana and Sports Day - 2023.
10. Any other subjects with the permission of the chair.

Thanking you,

Yours faithfully,

Dr. M S Murali
Principal & Member Convener
ACSCE, Bengaluru

Campus
207, Kambipura, Mysore Road, Bengaluru - 560 074
Ph: 080 - 2974 8222, 2974 8333 Fax: 080 - 2974 9988
E-mail: info@acsce.edu.in, principal@acsce.edu.in
www.acsce.edu.in

Minutes of Meeting

ACS College of Engineering

(Approved by AICTE, New Delhi, Govt. of Karnataka & Affiliated to Visvesvaraya Technological University, Belgaum)

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Minutes of the 26th Governing Council Meeting held on 20.02.2023 at 10.30AM in the Board Room of ACSCE.

List of members present in the meeting is enclosed.

At the outset, Dr. M S Murali, Principal & Member Convener, Governing Council welcomed all the members and requested them to go through the Agenda items and solicited their valuable suggestions for the overall improvement to the Institution. The following Agenda subjects have come up for discussion and decision there on:

1. **To read and record the minutes of 25th Governing Council Meeting held on 02.07.2022:**
   The minutes of the 25th Governing Council Meeting held on 02.07.2022 was read and recorded.
2. **Ratification of appointments made after 01.07.2022 and fresh appointments for the academic year 2023-24.**
   The Member convener placed before the council the list of appointments made after 01.07.2022. After discussion the appointments made by the Management for the academic year 2022-23 was ratified. And also Member Convener requested to fulfill the vacant position in the Departments for the academic year 2023-24. Further, the convener informed to Identify and appointment of Faculty Members for the New Branches approved by AICTE & VTU.
3. **To identify the scope for increasing intake and starting up of New Courses for the Academic year 2023-24.**
   The Member Convener placed before the council regarding the AICTE approved new UG courses, reduction of intake, increase in intake and closure of UG courses for the academic year 2022-23. The Governing Council Members suggested bringing emerging courses which are useful for the society as well students in future for the upcoming academic year 2023-24.
4. **Budget approval for the academic year 2023-24.**
   The Member Convener placed the Budget Proposal for the Academic Year 2023-24 before the members of the Governing Council. The council after detailed discussion approved the budget for 2023-24. And also Member Convener approached to approve budget for the Labs for Newly approved courses
5. **Promotion and Revision of Salary for the academic year 2023-24.**
   The Member Convener brought before the committee for the appreciation of list of Faculty Members completed their Ph.D in the academic year 2022-23 and also conveyed regarding promoting of Faculty members and the revision of salary made to the staff members for the academic year 2022-23. The Member Convener presented the proposal for the promotion and revision of salary for the academic year 2023-24 and the committee members had approved the same.
6. **Readiness for NBA visits for the Department of Computer Science & Engineering and Submission of Application for getting Accreditation for Aerospace Engineering and Electronics & Communication Engineering.**
   The Member Convener placed before the committee regarding NBA Visit for the Department of Computer Science and Engineering in the month of March 2023. The member Convener was informed to take necessary action on this by considering the importance of Accreditation. The Member Convener approached to approve for the submission of Application for NBA for the Departments of Aerospace Engineering and Electronics & Communication Engineering.

Campus
207, Kambipura, Mysore Road, Bengaluru - 560 074
Ph: 080 - 2974 8222, 2974 8333 Fax: 080 - 2974 9988
E-mail: info@acsce.edu.in, principal@acsce.edu.in
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ACS College of Engineering

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7. **Approval for Vision, Mission, PO, PSO for Engineering Departments.**
   The Member Convener placed before the council members regarding Vision and Mission of the Institute as well the Engineering departments. The discussions held with the departments regarding PO, PSO's and the same was approved by the departments. The details of the same were conveyed to the council and approached the committee members to approve the same.
8. **Preparation for International Conference / Publication of Research Papers in Journals and Publishing Conference Proceedings.**
   As discussed in the previous meeting the member convener informed about the schedule of the International Conference organizing by the Institution on 27th, 28th and 29th April 2023.
9. **Celebration of Arohana and Sports Day for the academic year 2023-24.**
   A detail discussion was held regarding the celebration of Sports Day and Cultural Day at ACSCE College Campus following the SOP norms. The committee unanimously decided to conduct the above said event and decision may be taken time to time in consultation with the Management.
10. **Any other subject with the permission of the chair.**
    The council felt that the faculty members must have the presence of interest to publish Research Article and apply for funding project with various funding agencies.

With this the Governing Council Meeting was concluded with Vote of Thanks to the chair.

Dr. A C SHANMUGAM **CHAIRMAN**	**Sri. A C S ARUN KUMAR** **VICE CHAIRMAN**
Prof. R M VASAGAM **Advisor & Member**	**Sri. C N SEETHARAM** **Advisor & Member**
Prof. VENKATACHALAPPA **Advisor & Member**	**Sri. SUNDARAMOORTHY** **Advisor & Member**
AICTE Nominee	**Dr. VIJAYAKUMAR K** **VTU Nominee**
DTE Nominee	**Dr. M S SHIVAKUMAR** **Member**
Dr. T SENTHILKUMAR **Member**	**Dr. M S MURALI** **Member Secretary & Principal**

Copy to all the Members

Campus
207, Kambipura, Mysore Road, Bengaluru - 560 074
Ph: 080 - 2974 8222, 2974 8333 Fax: 080 - 2974 9988
E-mail: info@acsce.edu.in, principal@acsce.edu.in
www.acsce.edu.in

10.1.3 Decentralization in working and grievanceredressal mechanism (10)

Institute Marks : 10.00

Decentralization:

The institution is governed at different levels. The responsibility of the day to day running of the institution is decentralized into the following levels:

1.Governing Council

2.Management

3.Princial

4.Head of the Department 5.Faculty

6.Students

The Governing Council meets as and when required, but at least once in a year to review the progress made and also give a direction to the Management while approving the programs and proposals received from the stakeholders. The Management after obtaining the approvals for the various programs envisaged, implements the same keeping in view the procedures for such implementation. The Management is vested with the responsibility of taking all the financial decisions and negotiation.

The Principal ensures that the college curriculum is academically viable and consistent with college objectives as well as the affiliating University directives. The Principal conducts regular meetings with all the Heads of the departments regarding academic activities, adherence to the university/institute academic calendar, student's progress, placement and training issues, research and extension activities, industry institution interaction, consultancy assignments, alumni interaction etc. The primary role of the Head of the Department is to provide strong leadership. HOD will be responsible for planning academic strategy for the development of the department in line with the strategic plans of the institution. The HOD drives the department on a day to day basis and is responsible for work allotment, Time Table, complying with the academic calendar, teaching, supervising the other staff and assessment. Faculty are given representation in different committees/cells and required to direct different programs. They are encouraged to develop administration skills by being in control of different scholastic, co-curricular, and extracurricular exercises. They act as a bridge between the administration and students. Students are the main stakeholders who are encouraged to play an active role in the management through representation as class representatives and as members of various committees. Anti-Sexual Harassment Committee, Grievance Redressal Committee, Anti Ragging Committee are some of the committees that exists in the college. The names of committee members with their contact numbers are displayed on notice boards/website for the informat ion of stake holders. If any grievance is reported, it is addressed to the convener of the committee who will take up the matter with the Principal and follow up the matter until proper action is taken. Following are the list of various committees.

Sl. No.	COMMITTEES	HEADS	EMAIL	PHONE No
1	Academic Committee	Dr.H S Siddesha, HOD-ME	siddeshahs@acsce.edu.in (mailto:siddeshahs@acsce.edu.in)	7259125170
2	Disciplinary Committee	Dr. Suresh P.M, Professor-ME	sureshpm@acsce.edu.in (mailto:sureshpm@acsce.edu.in)	9886756991
3	Cultural Committee	Dr.H S Gowardhanaswamy, HoD, Civil	gowardhanaswamy@acsce.edu.in (mailto:gowardhanaswamy@acsce.edu.in)	9663736535
4	Library Committee	Dr.Prasanna Kumar Professor - ECE	amprasannakumar@acsce.edu.in (mailto:amprasannakumar@acsce.edu.in)	8867560052
5	Hostel /Canteen Committee	Dr. R. Mukesh, HOD - AS	vsmprm@gmail.com (mailto:vsmprm@gmail.com)	7760998700
6	Anti-Ragging Committee	Dr. M. S. Murali, Principal	principal.acsce@gmail.com (mailto:principal.acsce@gmail.com),	9880855302
7	Students Welfare Committee	Prof. Danya Prakash R.Babu, Assistant Professor, Aero	danyaprakash@acsce.edu.in (mailto:pillai.cs5@gmail.com)	9886692625
8	Professional /NSS/YRC Committee	Dr. Shiva Kumar .M.S, HOD, Chemistry	msss.res@gmail.com (mailto:msss.res@gmail.com) shivakumarms@acsce.edu.in (mailto:shivakumarms@acsce.edu.in)	9008831720
9	Magazine Committee	Dr.Ramanan, HOD-AE	drramanang@acsce.edu.in (mailto:drramanang@acsce.edu.in) gramanan1987@gmail.com (mailto:gramanan1987@gmail.com)	9965418124
10	Grievance Redressal Committee	Dr. M.S.Murali, Principal Dr. C S Pillai	principal.acsce@gmail.com (mailto:principal.acsce@gmail.com), mamatha.monikaraj@gmail.com (mailto:mamatha.monikaraj@gmail.com)	8073078780
11	Sexual Harassment Elimination Committee	Dr. Bhuvaneshwari, HOD - BME	bhuvaneshwari@acsce.edu.in (mailto:bhuvaneshwari@acsce.edu.in)	9448394177
12	Sports Committee	Dr.C.S.Pillai, Asso. Prof –	pillai.cs5@gmail.com (mailto:pillai.cs5@gmail.com)	9964144757
13	R&D Committee	Dr. T. Senthil Kumaran, Dean	senthilkumaran@acsce.edu.in (mailto:senthilkumaran@acsce.edu.in)	9444192800
14	Placement committee	Mrs. Komala, Training and placement officer	komalathyagaraj234@gmail.com (mailto:komalathyagaraj234@gmail.com)	9342867979
15	Mentoring of student welfare	Dr.Pradeep kumar K.T, Asso Prof.-Maths	ktpradeepkumar@gmail.com (mailto:ktpradeepkumar@gmail.com)	9480648622

16	Women empowerment	Dr. Bhuvaneshwari, HOD - BME	bhuvaneshwari@acsce.edu.in (mailto:bhuvaneshwari@acsce.edu.in)	9448394177
17	SC/ST/BCM Cell	Mr. Kumar B M, Asst Prof. - ME	kumarvanitha80@gmail.com (mailto:kumarvanitha80@gmail.com)	9611243006
18	Alumni Association	Mrs.Kavita patil, Asst Prof. - CSE	kavita.patil@gmail.com (mailto:kavita.patil@gmail.com)	9972948000

IQAC COMMITTEES - 2022-23

Sl. No.	Name of the Committee		
1.	**ACADEMIC COMMITTEE**		
	Head	**Members**	**Activities**
	Dr. H.S Siddesha, HOD – ME	1. Dr. Suresh P M 2. Dr. Bharathi Gururaj 3. Prof. Gayathri	Smooth running of classes, result review, Academic Activity review, etc
2.	**DISCIPLINARY COMMITTEE**		
	Dr.H.S. Gowardhanaswamy, HoD,Civil	1. Dr. Anitha 2. Dr. Subashchandrabose 3. Dr. Pradeep S.M 4. Dr. Ragavendhra 5. Prof. Dhanyaprakash 6. Prof. Nagesh 7. Prof. Sunitha chalageri 8. Prof. Sunilraj 9. Prof. Srinidhi Acharya 10. Prof. Shiva Shankar K M 11. Prof. Gayathri. G 12. Prof. Immanuel hassan	Respond to allegations of misbehaviors or academic misconduct, educate students about impact of their behaviors, Honest conduct & rights of others, investigate and respond to complaints made about ACSCE; investigate allegations and take action.
3.	**CULTURAL COMMITTEE**		
	Dr.H.S. Gowardhanaswamy, HoD,Civil	1. Dr. Suresh P M 2. Dr. Anitha 3. Dr. Raghavendra.K 4. Dr. Bharathi Gururaj 5. Prof. Deepa 6. Prof. Ashwini 7. Prof. Shivashankar P 8. Prof. Kavitha Patil 9. Prof. Ganga 10. Prathiksha (Student Coordinator) 11. Rohith (Student Coordinator)	Conducting cultural events, facilitating student participation in other institutions at State/Inter State/ University Level.
4.	**LIBRARY COMMITTEE**		
	Dr. Prasanna Kumar, Professor ECE	1. Mr. Ravikumar. N 2. Prof. Sivasankar	Library functioning/automation, updating library as per AICTE norms.
5.	**HOSTEL & CANTEEN COMMITTEE**		
	Dr. R. Mukesh, HoD - AS	1. Mr. Paramashivam (Warden) 2. Mr. Prasanth (Instructor) 3. Mr. Hari Krishna (Instructor) 4. Mr. Athipathi Raj (Estate Officer)	Maintenance & attending to grievances if any and Night inspection of hostels, Maintenance.
6.	**ANTI-RAGGING COMMITTEE & SQUAD**		
	Dr. M.S.Murali, Principal	1. Dr. Bhuvaneshwari 2. Dr. C.S.Pillai 3. Dr. Anitha S 4. Mr. Athipathi Raj (Estate officer) 5. Mr. Paramesha R N 6. Mr. Chandan (Student Coordinator) 7. Ms.Geetha (Student Coordinator)	Display boards of anti ragging; observation of anti ragging in the campus including hostel.

	SQUAD		
	Dr. M. S. Murali, Principal	1. Dr. H.S Siddesha 2. Dr. Shiva Kumar 3. Dr. Bharathi Gururaj 4. Mr. Kushal K (Student Coordinator) 5. Mr. C Yuvaraj (Student Coordinator) 6. Ms. Sanjana (Student Coordinator)	
7.	**STUDENTS WELFARE COMMITTEE**		
	Prof. Danya Prakash R.Babu, Assistant Professor, Aero	1. Dr. Selvanandhan S 2. Dr.Bharathi Gururaj 3. Prof. Shivashankar 4. Prof. Srinidhi Acharya 5. Prof. Radhakrishnan 6. Amogh raj (Student Coordinator) 7. Sangeetha (Student Coordinator)	Listening & resolving student grievances, addressing student facilities
8.	**PROFESSIONAL /NSS/YRS COMMITTEE**		
	Dr. Shiva Kumar. M. S, HOD, Chemistry	1. Dr. Pradeepa,S.M 2. Dr. Raghavendra 3. Prof. Satish H 4. Chaithanyashree- Student Coordinator 5. Nitish - Student Coordinator	Conducting ISTE sponsored programs, To give a personality boost with the help of selfless social work with student's personality.
9.	**MAGAZINE COMMITTEE**		
	Dr. Ramanan G, HOD, Dept of AE	1. Dr. Raghavendra.K 2. Dr.Subash Chandra Bose 3. Prof. Sunita Chalegeri 4. Spoorthi - Student Coordinator 5. Sagar -Student Coordinator	To initiate action to publish magazine from ACSCE. To initiate to bring out the News Letter regularly.
10	**GRIEVANCE REDRESSAL COMMITTEE**		
	Dr. M. S. Murali, Principal Dr. C S Pillai, Professor CSE	1. Dr.Subash Chandra Bose 2. Prof. Albert Allen D Mello 3. Prof. Ashwini 4. Prof. Prajith Nair 5. Prof. Surekha 6. Abishek Kumar - Student Coordinator 7. Ashish - Student Coordinator	Listening & resolving student grievances, addressing student facilities
11	**SEXUAL HARASSMENT ELIMINATION COMMITTEE**		
	Dr. Bhuvaneshwari, HOD - BME	1. Dr. Anitha 2. Prof.Vijaya Dalawai 3. Prof. Radha Krishnan.P 4. Syamili - Student Coordinator 5. Poojitha- Student Coordinator	Addressing the issue of Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal)
	SQUAD		
	Dr. M.S.Murali, Principal	1. Dr. B. H Veena 2. Prof. Nanditha Krishna 3. Prof. Siva J	
12	**SPORTS COMMITTEE**		
	Mr. Praveen - PED Dr. C. S. Pillai, Professor – CSE	All HOD's and Dept. Coordinators 1. Abishek Kumar - Student Coordinator 2. Akash - Student Coordinator	Conducting sports events, facilitating student participation in other institutions at State/Inter State Level
13	**R&D COMMITTEE**		
	Dr.T. Senthil Kumaran,- CSE, Dean R&D	Head of R&D Centers	Planning, developing and focuses on overall responsibility of all research and development activities.
14	**PLACEMENT COMMITTEE**		
	Mrs.Komala, Training and placement officer	1. Prof. Kavya 2. Prof. Albert Allen 3. Prof. Sunil Raj B. A 4. Prof. Nagesh. H. B. 5. Dr.Paramaguru V	Establishing the contacts with reputed firms, arranging campus interview, conducting programs e.g. soft skills, encouraging students for group discussions.
15	**MENTORING OF STUDENT WELFARE**		

	Dr. Pradeep kumar K.T, Assoc. Prof.-Maths	1. Prof. Shivashankar K M 2. Prof. Siva J 3. Prof. Deepa	Listening & mentoring the students. Supporting students mentally.
16	**WOMEN EMPOWERMENT**		
	Dr. Bhuvaneshwari, HOD - BME	1. Dr. B.H.Veena 2. Dr. Anitha 3. Prof. Gayathri Joshi 4. Sinchana- Student Coordinator 5. Lakshmi- Student Coordinator	Empowering women to participate fully in economic life across all sectors is essential to build stronger economies, achieve internationally agreed goals for development and sustainability, and improve the quality of life for women.
17	**SC/ST/BCM Cell**		
	Mr.Kumar B M , Asst Prof-ME	1. Dr.Pradeep S.M 2. Prof. Praveen Patil 3. Prof. Deepa	Promotes the special interests of students in the reserved category and provide special inputs in areas where the students experience difficulties.
18	**ALUMNI ASSOCIATION**		
	Mrs. Kavitha Patil, Asst Prof-CSE	1. Dr. M.S.Shiva Kumar 2. Prof. Nagesh H B 3. Prof. Immanuel Hassan 4. HemaHariharan- Student Coordinator 5. Gagana- Student Coordinator	Formulation of Alumni Association

10.1.4 Delegation of financial powers (10)

Institute Marks : 10.00

The institution has a structured procedure for mobilization of funds and its optimal utilization, which ensures effective and optimal utilization of finances for academic, administrative and development purpose. This ultimately helps in realizing the Institute's Vision and Mission.As per the guidelines in the service manual of Chapter 7 whichclearly explain how to utilize the funds and various authorities, variance report of sanctioned budget and actual expenditure are regularly maintainedThe delegation of powers for various functionaries is tabulated in 7.1 sub-heading in the service manual.

The various subcommittees and their financial powers, expenses towards hospitality for meetings and guests for various cadres, expenses towards industrial visits, honorarium towards guests and invitedlecturers are indicated in 7.2 sub-heading in the service manual. under 7.2 the following committees areframed to ensure smooth flow of the process

7.2.1 Department Purchase committee

7.2.2 Institutional Purchase committee from Rs. 10,000 up to Rs. 1.00 Lakh

7.2.3 Institutional Purchase committee more than Rs. 1.00 Lakh

7.2.4 Imprest amount towards hospitality for meetings & guests

7.2.5. Expenses towards industrial visit

7.2.6. Honorarium towards guest & invited lecturers

Every year, the budget is prepared well in advance after taking into consideration the requirement of every Department. Each Department prepares the budget based on the requirement such as equipment, computer and consumables required for next academic session. Principal put up the budget to the management for consideration and approval and Governing Body (GB) meeting and after discussion and necessary corrections/modifications; Governing Body recommends the budget for approval. The budget is reviewed by the management and approved after necessary changes. As and when required, the institution makes a provision for advance additional fund. The Principal and the Head of Departments discuss the requirement and decide the priorities while allotting financial resources for various purposes; and also ensure optimum use of available financial resources. The Governing body studies the annual expenditure, scrutinizes the budget and provides feedback for efficient use of financial resources. The institution has standardized procedure for sanctioning of funds for various activities and also for settlement of advance and passing of bills for payment. The Management has given complete support to Principal for organization of various co-curricular and extra- curricular activities like technical events, sponsoring of faculty and staff for various FDPs, skill development programs, providing financial support for attending conferences, workshops, pursuance of higher education etc. Financial support is also provided for participation of students at various nationallevel events. The management monitors all the major financial transactions. The budget is discussed in the meetings of GB of the institution The resolutions of the GB regarding approval for budget are forwarded to the trust for final approval of the budget. The purchase procedure such as calling quotation, technical bid, preparing comparative statement, negotiation meetings are followed for effective and efficient use of available financial resources. The committee ensures that suitable equipment with right specification is procured at competitive and optimal prices.

Service Rule Link : http://www.acsce.edu.in/acsce/wp-content/uploads/2016/08/Service-Manual.pdf

10.1.5 Transparency and availability of correct/unambiguous information in public domain (5)

Institute Marks : 5.00

The institute is having a website-committee which will be scrutinizing the program/ institute specific information before uploading on to the web. Because of this mechanism, the ambiguity will be avoided. However, if somebody is in need of further clarification, the same will be addressed by the concerned department/ section. However, the documents are also available at the relevant offices for the stake holders.

YES. All the information are available on Institutes website. ACSCE maintains complete transparency in its financial, academic, administrative and auxiliary functions by clearly defining its vision, mission, objectives and procedures and disseminating them at all levels. Proper procedures are strictly followed according to Govt. norms.

Transparency in Academic Functioning

ACSCE strictly adheres to the academic calendar that details the various activities in advance. Admission notifications are made through newspapers and on its website. Admission forms are processed online, with all the relevant details explained in the prospectus and on the website.

The entire academic plan is clearly explained to all students in a compulsory orientation programme on admission. The elaborate system of various committees and bodies coupled with a strong multiple-level feedback mechanism from all stakeholders, also ensures the dynamism required to keep pace with the changing educational environment.

The credits of each programme and outcomes are clearly specified. The internal assessment, comprising various components, ensures that students receive their evaluated answer sheets and monitor their progress, performance and fairness in the evaluation. There is provision for re-evaluation, remedial examinations and grievance redressal system.
The fee is minimal, online and withdrawal and refund as per UGC norms.

Transparency in Administrative Functioning

Recruitments and Staff Promotions are also undertaken with utmost transparency. All posts
are advertised online and the candidates will be screened and called for interview.

Employees can readily discuss and access their records in the various sections of the administrative office. The policies related to HR, Leave, Research and faculty empowerment are available in the service rule which is published in the Institutional website.

https://www.acsce.edu.in/mandatory-disclosure/ (http://www.acsce.edu.in/mandatory-disclosure/)

https://www.acsce.edu.in/iqac-committee-members-minutes-of-meeting/ (http://www.acsce.edu.in/iqac-committee-members-minutes-of-meeting/)

https://www.acsce.edu.in/acsce/wp-content/uploads/2021/10/NAAC/7.1.10.pdf (http://www.acsce.edu.in/acsce/wp-content/uploads/2021/10/NAAC/7.1.10.pdf)

https://www.acsce.edu.in/acsce/wp-content/uploads/2021/10/NAAC/7.1.1a%20Promotion%20of%20gender%20equity.pdf (http://www.acsce.edu.in/acsce/wp-content/uploads/2021/10/NAAC/7.1.1a%20Promotion%20of%20gender%20equity.pdf) (http://www.acsce.edu.in/acsce/wp-content/uploads/2021/10/NAAC/7.1.1b%20Gender%20sensitization%20action%20plan.pdf)

https://www.acsce.edu.in/acsce/wp-content/uploads/2021/10/NAAC/7.1.1b%20Gender%20sensitization%20action%20plan.pdf (http://www.acsce.edu.in/acsce/wp-content/uploads/2021/10/NAAC/7.1.1b%20Gender%20sensitization%20action%20plan.pdf)

10.2 Budget Allocation, Utilization, and Public Accounting at Institute level (30) Total Marks 30.00

10.2.2 Utilization of allocated funds (15) Institute Marks : 15.00

The budget allocated over the years for various programs by the institute are adequate and in case there is any deficiency, it is made from Institutes own resources. Apart from regular Budget, the departments are receiving various project grants to meet their expenditure. The budget allocation and utilisation for the last four years is adequate. Formal budget estimates are prepared by each department and are reviewed in HODs meeting with Principal

Financial year	Requested budget (in Lakhs)	Approved budget (in Lakhs)	Adequate / Not adequate
2022-23	1320.50	1265.25	adequate
2021-22	1296.00	1233.55	adequate
2020-21	1142.68	1082.73	adequate
2019-20	1229.50	1142.99	adequate

10.2.1 Adequacy of budget allocation (10) Institute Marks : 10.00

The allocated funds are utilized properly and are adequate as per the Academic requirements. The budget funds are utilized on priority basis as per the requirements of each department based on availability of funds. However, all recurring and non-recurring expenditure of departments is met in full.

Financial year	Approved budget (in Lakhs)	Actual expenditure (in Lakhs)	Justification
2022-23	1320.50	1265.25	Budget has been utilized within the sanctioned fund meeting the requirement by all the departments and institutional requirement
2021-22	1296.00	1233.55	
2020-21	1142.68	1082.73	
2019-20	1229.50	1142.99	

Summary of currentfinancial year's budget and actual expenditure incurred(for the institution exclusively)in the three previous financial years :

Total Income at Institute level: For CFY,CFYm1,CFYm2 & CFYm3
CFY : (Current Financial Year),
CFYm1 : (Current Financial Year minus 1),
CFYm2 : (Current Financial Year minus 2) and
CFYm3 : (Current Financial Year minus 3)

Table 1 - CFY 2022-23

Total Income 148480434				Actual expenditure(till…): 123578777			Total No. Of Students 1444
Fee	Govt.	Grants	Other sources(specify) -	Recurring including salaries	Non Recurring	Special Projects/Anyother, specify -	Expenditure per student
148480434	0	0	0	91581889	31996888	0	85580.87

Table 2 - CFYm1 2021-22

Total Income 148480434				Actual expenditure(till…): 123355380			Total No. Of Students 1309
Fee	Govt.	Grants	Other sources(specify) -	Recurring including salaries	Non Recurring	Special Projects/Anyother, specify -	Expenditure per student
148480434	0	0	0	90670293	32685087	0	94236.35

Table 3 - CFYm2 2020-21

Total Income 151176802				Actual expenditure(till…): 108273187			Total No. Of Students 1309
Fee	Govt.	Grants	Other sources(specify) -	Recurring including salaries	Non Recurring	Special Projects/Anyother, specify -	Expenditure per student
151176802	0	0	0	74780312	33492875	0	82714.43

Table 4 - CFYm3 2019-20

Total Income 130290618				Actual expenditure(till…): 114299132			Total No. Of Students 1191
Fee	Govt.	Grants	Other sources(specify) -	Recurring including salaries	Non Recurring	Special Projects/Anyother, specify -	Expenditure per student
130290618	0	0	0	84953001	29346131	0	95969.04

Items	**Budgeted in 2022-23**	**Actual Expenses in 2022-23 till**	**Budgeted in 2021-22**	**Actual Expenses in 2021-22 till**	**Budgeted in 2020-21**	**Actual Expenses in 2020-21 till**	**Budgeted in 2019-20**	**Actual Expenses in 2019-20 till**
Infrastructure Built-Up	100000	0	100000	0	100000	0	300000	298611
Library	1515000	1254866	1500000	1242442	1900000	1653339	1800000	1474538
Laboratory equipment	100000	0	100000	0	100000	0	700000	671712

Laboratory consumables	250000	200000	200000	193175	400000	386419	150000	115485
Teaching and non-teaching staff salary	65145000	62720286	64500000	62099293	58000000	55972279	67000000	64869144
Maintenance and spares	29795000	28661603	29500000	28377825	19000000	18421614	22000000	19968372
R&D	4545000	3929544	4500000	3890638	5000000	4211981	1600000	1403009
Training and Travel	808000	694772	800000	687893	2900000	2410695	1600000	1336143
Miscellaneous Expenses	27675000	26117705	28400000	26864114	26868000	25216860	27800000	24162118
Others, specify								
Total	**129933000**	**123578776**	**129600000**	**123355380**	**114268000**	**108273187**	**122950000**	**114299132**

10.2.3 Availability of the audited statements on the institute's website (5)

Institute Marks : 5.00

Institute's audited statements are available at the following link:

https://assessmentonline.naac.gov.in/storage/app/hei/SSR/104253/4.1.4_1637387778_6925.pdf
(https://assessmentonline.naac.gov.in/storage/app/hei/SSR/104253/4.1.4_1637387778_6925.pdf)

10.3 Program Specific Budget Allocation, Utilization (30)

10.3.2 Utilization of allocated funds (20)

Budget Utilized:

Financial year	Approved Budget (in Lakhs)	Actual Expenditure (in Lakhs)	Percentage of Utilization	Justification
2022-23	6.50	3.62442	55.76%	The budget has been utilized within the sanctioned fund meeting the requirement of Aerospace Department. And still, we are in the process o
2021-22	13.50	10.92192	80.90%	The budget has been utilized within the sanctioned fund meeting the requirement of Aerospace Department.
2020-21	15.70	12.91216	82.24%	The budget has been utilized within the sanctioned fund meeting the requirement of Aerospace Department.
2019-20	23.30	21.11816	90.63%	The budget has been utilized within the sanctioned fund meeting the requirement of Aerospace Department.

10.3.1 Adequacy of budget allocation (10)

Institute Marks : 10.00

Adequacy of Budget:

Financial year	Requested Budget (in Lakhs)	Approved Budget (in Lakhs)	Adequate/ Not Adequate
2022-23	8.00	6.50	Adequate
2021-22	15.00	13.50	Adequate
2020-21	17.00	15.70	Adequate
2019-20	25.00	23.30	Adequate

Institute Marks :

Total Income at Institute level: For CFY,CFYm1,CFYm2 & CFYm3
CFY: (Current Financial Year),
CFYm1 : (Current Financial Year minus 1),
CFYm2 : (Current Financial Year minus 2) and
CFYm3 : (Current Financial Year minus 3)

Table 1 :: CFY 2022-23

650000		Actual expenditure (till…): 362442		Total No. Of Students 126
Non Recurring	Recurring	Non Recurring	Recurring	Expenditure per student
400000	250000	140000	222442	2876.52

Table 2 :: CFYm1 2021-22

1350000		Actual expenditure (till…): 1092192		Total No. Of Students 113
Non Recurring	Recurring	Non Recurring	Recurring	Expenditure per student
1225000	125000	1066395	25797	9665.42

Table 3 :: CFYm2 2020-21

1570000		Actual expenditure (till…): 1291216		Total No. Of Students 113
Non Recurring	Recurring	Non Recurring	Recurring	Expenditure per student
1495000	75000	1291216	0	11426.69

Table 4 :: CFYm3 2019-20

2330000		Actual expenditure (till…): 2111816		Total No. Of Students 68
Non Recurring	Recurring	Non Recurring	Recurring	Expenditure per student
2225000	105000	2079540	32276	31056.12

Items	**Budgeted in 2022-23**	**Actual Expenses in 2022-23 till**	**Budgeted in 2021-22**	**Actual Expenses in 2021-22 till**	**Budgeted in 2020-21**	**Actual Expenses in 2020-21 till**	**Budgeted in 2019-20**	**Actual Expenses in 2019-20 till**
Laboratory equipment	100000	0	300000	278585	1300000	1239000	400000	362040
Software	50000	0	800000	787810	70000	52216	700000	667500
Laboratory consumable	100000	100000	50000	25797	20000	0	50000	32276
Maintenance and spares	50000	32442	25000	0	25000	0	25000	0
R & D	100000	0	100000	0	100000	0	1100000	1050000
Training and Travel	150000	140000	25000	0	25000	0	25000	0
Miscellaneous Expenses + Symposium + Others	100000	90000	50000	0	30000	0	30000	0
Total	**650000**	**362442**	**1350000**	**1092192**	**1570000**	**1291216**	**2330000**	**2111816**

10.4 Library and Internet (20) Total Marks 20.00

10.4.1 Quality of learning resources (hard/soft) (10)

Institute Marks : 10.00

Library Detail

	15,488 sq. Ft.
Carpet Area of the library	Spread with various sections like; Textbooks Lending Area, Reference Section, Digital Library, Current Periodicals & Archives Section, Photocopier, Staff Reading Section, Audio Visual Section, Round Table Discussion, Personal Reading Area, Librarian Office
Number of seats in reading space	Seating Capacity of 320 students & Faculty members

Library Photos:

VTU Consortium:

Visvesvaraya Technological University

SRI. S. G. BALEKUNDRI CENTRAL LIBRARY AND INFORMATION CENTER
Jnana Sangama, Belagavi-590018

VTU-CONSORTIUM

Subscription of E-Resources for the year 2022-23

SL NO	PUBLISHERS	SUBJECT CATEGORY	RESOURCE COVERAGE	NO. OF RESOURCES	CONTACT DETAILS	SUBSCRIPTION PERIOD
1.	**Elsevier** www.sciencedirect.com	**E-Journals:** Engineering + CS + EE + ME + EC + CV and allied branches of engineering.	Artificial Intelligence-**22** Computer Graphics and Computer-Aided Design-**19** Computer Networks and Communications-**29** Computer Vision and Pattern Recognition-**10** Hardware and Architecture-**20** Information Systems-**28** Signal Processing-**13** Aerospace Engineering-**5** Biomedical Engineering-**16** Civil and Structural Engineering-**35** Computational Mechanics-**11** Electrical and Electronic Engineering-**33** Mechanical Engineering-**38** Ocean Engineering-**6** Safety, Risk, Reliability and Quality-**13** **(Back Issues from 2010)**	298 Journals	**Mr.Nikhil Bhalerao** 74286 99374 n.bhalerao@elsevier.com	**23-05-2022 to 22-05-2023**
2.	**IEEE Proceedings Order Plan (POP)** https://ieeexplore.ieee.org IEEE Advancing Technology for Humanity	**IEEE Proceedings:** The core collection of IEEE conference proceedings from approximately 100 of IEEE's most important conferences. Full-text access with a backfile to 2010.	• Aerospace and Defense • Biometrics • Computer Hardware and Software • Cyber Security • Electronics • Internet of Things (IoT) • Medical Devices • Nanotechnology • Optics • Power Engineering • Robotics • Semiconductors • Smart Grid • Telecommunications • Wireless Technology **(Back Issues from 2010)**	530,000 papers - from 100 core IEEE conference titles in POP	**Mr. Manjunath SR** 98702 00104 mrudrappa@ebsco.com	**23-09-2022 to 22-09-2023**

3.	**Springer Nature** https://link.springer.com/ SPRINGER NATURE	**E-Journals:** Electrical & Electronics Mechanical Civil Computer Science Engineering (Allied Subject) Chemistry and Material Science Mathematics Physics	Electrical & Electronics - **58** Mechanical - **44** Civil - **13** Computer Science - **93** Engineering (Allied Subject) - **39** Chemistry and Material Science - **162** Mathematics - **167** Physics - **104** **(Back Issues from 1997)**	690 Journals	**Mr. Varghese P. Thomas** 96869 64063 varghese.thomas@springernature.com **Mr. Rajaneesh** 99005 55516 rajaneesh@springer.com	**23-05-2022 to 22-05-2023**
4.	**Taylor & Francis** https://www.tandfonline.com/ Taylor & Francis	**E-Journals:** Engineering + CSE + ME + CV + Architecture and Allied Science	Allied Science-**324** Mechanical-**35** Textile -**8** Engineering & Technology-**76** Electrical-**17** Computer Science-**27** Civil & Structural-**31** BioTechnology-**17** Architecture-**19** **(Back Issues from 2010)**	585 Journals	**Mr. Vinay Srinivas** 98860 44775 Vinay.srinivas@tandfindia.com **Mr. Onkar Verma** onkar.verma@tandfindia.com Tel: +91-11-43155118	**23-05-2022 to 22-05-2023**
5.	**Emerald** https://www.emeraldinsight.com/ emerald PUBLISHING	**E-Journals:** Management	Accounting, Finance & Economics-**9** Business, Management & Strategy-**18** Education-**10** Health & Social Care-**5** HR, Learning & Organization Studies-**17** Information & Knowledge Management-**10** Library Studies-**17** Marketing-**12** Operations, Logistics & Quality-**10** Property Management & Built Environment-**5** Public Policy & Environmental Management-**6** Tourism & Hospitality Management-**1** **(Back Issues from 2010)**	120 Journals	**Mr. S Vinay Kumar** 99162 52539 svkumar@emeraldgroup.com	**01-10-2022 to 30-09-2023**
6.	**ProQuest** https://www.proquest.com/165290 ProQuest	**E-Journals:** Architecture and all Engineering and its allied branches.	Technology Collection includes the Advanced Technology & Aerospace and Materials Science & Engineering Databases **(Back issues from 1962)**	Full text: 4900 Journals Indexed: 7800 Abstract	**Mr. Lakshmikanth A** 98863 39117 Lakshmikanth.Aswathanarayan@proquest.com	**01-08-2022 to 31-07-2023**
7.	**Emerald** https://www.emerald.com/insight/content/case-studies emerald insight	**Emerald Case Studies:** Emerging Markets Case Studies	E-Case Collection (1000 Indian). The CASE Journals (Electronic)	**1000 E-Case**	**Mr. S Vinay Kumar** 99162 52539 svkumar@emeraldgroup.com	**01-06-2022 to 31-05-2023**
8.	**Mint Books** https://mintbook.in mintbook	**E-Books:** Mintbook unified learning platform of e-Books	1. Civil engineering - **150** 2. Mechanical engineering - **249** 3. Electrical engineering - **182** 4. Electronics and communication - **226** 5. Computer science - **650** 6. Information technology -**199** 7. Biotechnology - **150** 8. Management - **1189** 9. Allied branches of engineering – **183** 10. Others (competitive exams) - **81**	**3469 eBooks**	**Mr. Charan B. Naik** **8886247670** charan@mintbook.com	**01-06-2022 to 31-05-2023**
9.	**MAPMy Access** https://vtuconsortium.mapmyaccess.com MAPMyAccess	• Cloud server along with Universal Federation search services • Remote Access Solution	All subjects 12 K + Resources and following features: 1. OA resources. Journals + e-Books + e-Theses + Educational videos. 2. 24 X 7 seamless access. 3. Admin control for librarians. 4. Usage report for individual colleges. 5. Secured remote access full text content. 6. Mobile compatibility.	**OA resources:** 10,000+ eBooks & 5700+ eJournals	**Mr. Satish Pandharpurkar** 8971638 634 support@vtuconsortium.com **Mr. Somshekhar V Thalange** 8600105949 somshekhar@maplibraryservices.com	**23-05-2022 to 22-05-2023**
10.	**Turnitin*** https://www.turnitin.com/ turnitin	Plagiarism Originality Online Check*	End user Licenses: 1. Instructor profile 2. Student's profile	–	**Anub Kumar** 9811464814 akumar@turnitin.com	**03-06-2021 to 02-06-2022**
11.	**NetAnalytiks'** LANQUILL	LANQUILL (Writing Grammar Learning Tool)	1. Admin control for librarians 2. 24 X 7 seamless access 3. Usage report for individual college can take	–	**Mr. Laxminarayana Ullala** 96205 55571 laks@netanalytiks.com **Mr. Sateesh Hegde** 94480 91428 sateeshh@netanalytiks.com	**23-05-2022 to 22-05-2023**

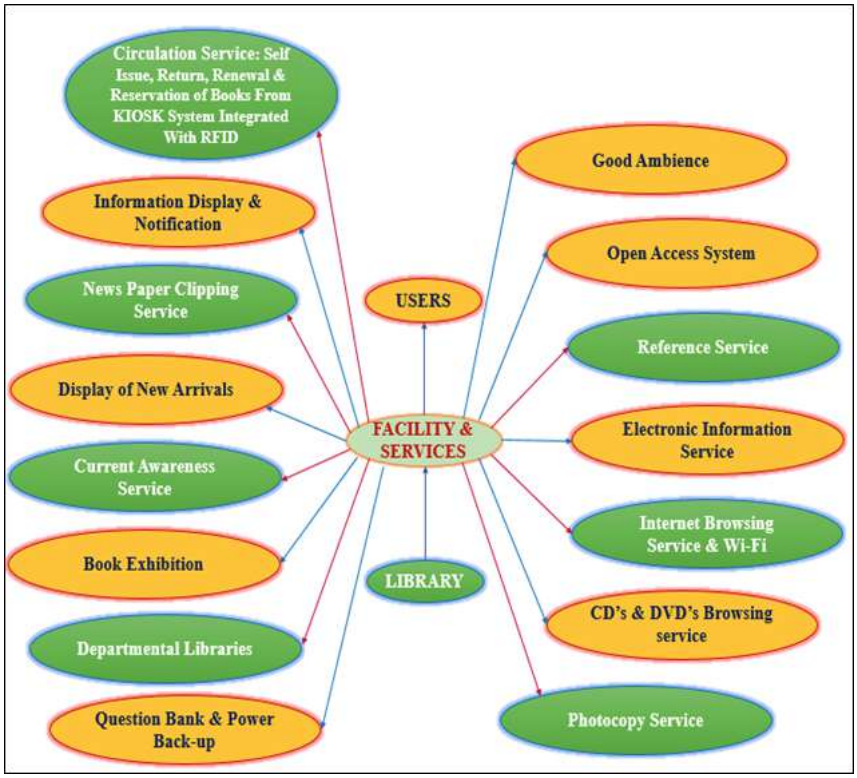
Note: 1. *Above all e-Resources, services extended subject to annual membership payment against license copy of VTU Consortium.*
2. **Access given to only 140 PG program colleges.*
3. *Previous years' purchased e-Books access is continued as perpetual, in the case of* ***McGraw-Hill & Mintbook e-Books*** *subscribed up to 31.05.2023.*

Library Resources:

Sl. No	Particulars	Collection

1.	**Collection of titles/Textbooks**	
	Total No. of Books	**21460**
	Total No. of Textbooks	**19756**
	Reference Books	**1704**
	Total No. of title	**3779**
	Rare Book Collection	**32**
2.	**Current Year Periodicals**	
	National Journals	**50**
	International Journals	**16**
	New Papers	**12**
3.	**e-Resources (Online Journals) through VTU Consortium**	
	Elsevier, IEEE, Taylor & Francis, Springer Nature, ProQuest, Mint books, Map Systems (Remote Access Service Map my Access), Net Analytics Technologies, Turnitin (Plagiarism Software Online Tool)	
	https://acsce.mapmyaccess.com/ (https://acsce.mapmyaccess.com/)	
	https://www.turnitin.com/t_home.asp?login=1&svr=22&lang=en_us&r=68.7278218305288 (https://www.turnitin.com/t_home.asp?login=1&svr=22&lang=en_us&r=68.7278218305288)	
4.	**Institutional Membership**	**NDLI Club & DELNET**
5.	**Bound Volume of Print Journals**	**941**
6.	**Non-Book Materials**	
	CD-ROM/DVDs	**657**
	In addition, we have EDUSAT e-Learning Program & NPTEL Lecture notes	https://nptel.ac.in/localchapter/statistics/709
7.	**Computers**	**27**
8.	**Book Bank**	**250**

Records Maintenance in the Library:



RFID Components for Library Smooth and Proper Function

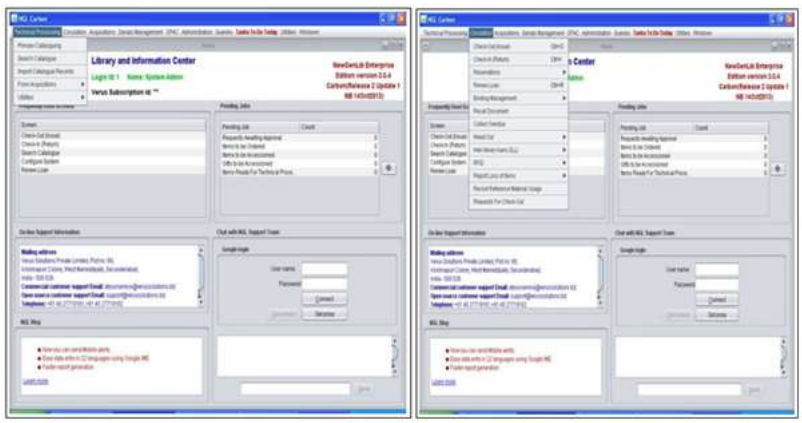

RFID Book Tag

RFID Staff Station


Gate Security System


RFID Self-KIOSK

NGL 3.0.0 Version Software Access Steps:

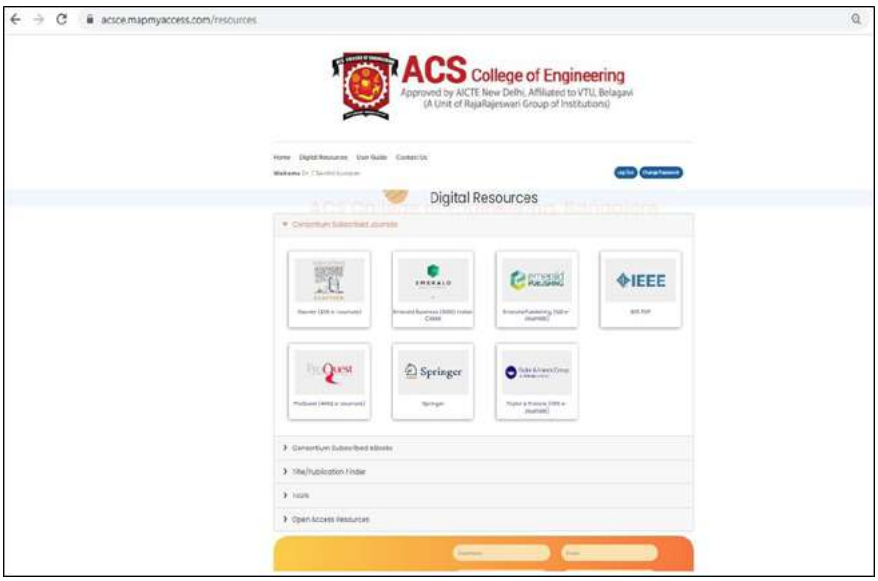


e-Resource (VTU Consortium)

E- Resources

IEEE – IEL Online	www.ieeexplore.ieee.org (http://www.ieeexplore.ieee.org)
Elsevier Science (Science Direct)	www.sciencedirect.com (http://www.sciencedirect.com)
Springer e-Journals	www.link.springer.com (http://www.link.springer.com)
Taylor & Francis Journals	www.tandfonline .com
ProQuest – Engineering/Management	www.search.proquest.com (http://www.search.proquest.com)
K-Nimbus: Digital Library Platform	https://www.knimbus.com/user/auth.do
Remote Access Solution	

Link for E-Resources https://acsce.mapmyaccess.com/ (https://acsce.mapmyaccess.com/)



Support to students for self-learning activities:

Accessibility to students Apart from Print Resources the following e-Resources are also available for the benefit of the staff and students. All these resources are very much relevant to the course curriculum.

E- Journals Package:

- Elsevier Science Direct e-Journals
- Springer Nature e-Journals
- Taylor and Francis e-Journals
- K-nimbus (Digital Library Platform and Remote Access Solution)
- Turnitin (Similarity check tool)
- online NPTEL Videos
- Online IIT Bombay Spoken Tutorial Videos
- Online Infosys Spring Board Videos
- Digital Library with a Capacity of 25 Computers linked to E-resources
- https://www.acsce.edu.in/e-learning/
- https://acsce.mapmyaccess.com/

10.4.2 Internet (10)

Institute Marks : 10.00

Name of the Internet provider	Railtel
Available band width	1 Gbps
WiFi availability	20 Access Points
Internet access in labs, classrooms, library and offices of all Departments	LAN Connectivity: LABs, Class Rooms, office of all the departments, Seminar Halls, Conference Hall, Digital Library
Security arrangements	Whole Campus is Enabled with CCTV Surveillance Radius Manager

Annexure I

(A) PROGRAM OUTCOME (POs)

Engineering Graduates will be able to:

1. **Engineering Knowledge :** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. **Problem Analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. **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.
4. **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.
5. **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
6. **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.
7. **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.
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 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.
11. **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.
12. **Life-long 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.

(B) PROGRAM SPECIFIC OUTCOME (PSOs)

PSO1	Professional Skills Apply the knowledge of aerospace engineering in innovative, dynamic and challenging environment for design and development of flight/space vehicles through simulation, Programming skills and general-purpose CAE packages
PSO2	Practical implementation and Testing Skills Providing different types of in-house training and industry practice to fabricate, test and develop the products with more innovative technologies
PSO3	Successful Career and Entrepreneurship To prepare the students to become technocrats with broad aerospace knowledge for design and development of systems and subsystems for aerospace and associated fields

Declaration

The head of the institution needs to make a declaration as per the format given -

- I undertake that, the institution is well aware about the provisions in the NBA's accreditation manual concerned for this application, rules, regulations, notifications and NBA expert visit guidelines inforce as on date and the institutes hall fully abide by them.
- It is submitted that information provided in this Self Assessment Report is factually correct.
- I understand and agree that an appropriate disciplinary action against the Institute willbe initiated by the NBA. In case, any false statement/information is observed during pre-visit, visit, postvisit and subsequent to grant of accreditation.

Head of the Institute
Name : Dr. M. S. Murali
Designation : Principal
Signature :

Seal of The Institution :

Place : Bangalore
Date : 03-04-2023 16:04:19