ADAMAS
UNIVERSITY
KOLKATA
PURSUE EXCELLENCE

ADAMAS
SCHOOL OF ENGINEERING AND
TECHNOLOGY

SOET PROGRESS REPORT
2020

CONTENTS

EXECUTIVE SUMMARY

This report describes the achievements, advancements and planned activities under the heads of Academics, Admission and Placement of School of Engineering and Technology (SOET) for the year 2020.

Let us start with one of the most important pillars of our School, which is Officiating Dean's office of SOET, spearhead this odyssey with the Faculty-In-Charge in different administrative areas of our school to perform the myriad responsibilities allocated to each of them. To begin with, the University and our School has achieved laurels from the QS I-GUAGE E-LEAD (E-Learning Excellence for Academic Digitization) and BW Education respectively with the spearheading of the *Quality Assurance and Accreditation team. The Consultancy and Outreach* team started discussion for 'big tickets' collaboration with Microsoft and Oracle in Dec 2020. The Hybrid blended learning model developed by Blending Learning team has been embraced by us with the availability of study materials in TCSION portal and access to AU smart labs with 119 experiments till date. The Research and Development team has initiated the formation of inter-disciplinary research groups and the SOET Research Crush team has been formed. Most of our faculties are either PhD holder or pursuing PhD from various Universities/Institutes including Adamas University. The number of research articles published jointly by both Faculty and Students during the period is as follows: Conference Proceedings: 46; Journals: 15; Book Chapter: 13 & Patents: 9. SOET Research Colloquium, which is a lecture colloquium series by our faculties, has been started from Sep 2020 and continued.

Every faculty member completed at least 2-4 FDPs (including Coursera & NPTEL certification courses). This is administrated by FDP team. Branding Team of SOET created landing page content, various course contents for AU Website, flyers and brochures for each

department, etc. An impressive number of webinars, workshops in different areas and SOET Equity videos were executed with active participation from both the faculties and students. This is managed by Event Management team. The Examination team conducted online and offline examinations like: mid semester, end semester, improvement and supplementary till date. A three months long program of cross skilling the technical assistants of SOET was executed enabling skill up gradation in multidisciplinary domains. The program benefitted about 17 technical assistants.

OBE preparation for all the curriculum and syllabi across SOET were completed. That is headed by the HoD of CE, the leader of OBE initiative of AU.

Almost all the programs running under each department in SOET were revamped by the introduction of *specialization* programs or new programs. In 2020, twenty-two new programs were introduced. We offered three capstone projects from SOET: Smart City, Electric Vehicles, and Aerial Robotics for the students admitted in 2020 session. These are *flagship* project in SOET.

A self-learning program namely 'Beautiful Mind' was launched by SOET and inaugurated by hon'ble VC in 2020. 136 students have registered and chosen their learning path for this program across all the schools and multiple disciplines and they have been working on these.

The team of Planning and Operational Management led by HoD of ME completed the Faculty resource planning for AY 2020-'21, Quality circle formation, Minor program implementation, Student attendance monitoring, TCSiON implementation, etc. Student mentoring is done here to lend a helping hand to the students for their issues

related to academics etc. Every faculty is a mentor and the mentoring ratio is 1:18. Now, let us have a quick glance at the admission related steps from our school. SOET team Admission collected the details of potential candidates from the faculties and staff members of our school under the Each One Reach One (EORO) initiative. Phone calls to prospective candidates were made during the period of Aug to Dec, 2020. All HODs, Dean actively involved in various online talk shows, interactive sessions, webinars to motivate the students and share their knowledge with them. With our continuous effort to increase Student Admission numbers, the total number of students admitted in the academic session 2020-'21 in SOET is at an equivalent level to that of previous year's admission.

Right from mapping the students to companies, interacting with the industry, and ensuring faculty participation during the student Internship, SOET had further augmented the efforts of the Career Development Cell (CDC). In addition to the aptitude classes organized by CDC, SOET successfully planned and executed industry specific Pre-placement Training in the Core and IT skill domains leading to an elevated rate of conversion in the Placement drives conducted during the period.

For the Project 1 (Academic Branding Strategy) and Project 2 (Rejuvenating SOET) in Project 30, both supervised by Officiating Dean, the primary steps are done, for execution date wise tracker is formed. Under the supervision of

Project 3 (Fabrication in-house) in Project 30 by him, Cast-stone project has been introduced in pan-university level. Total 10 numbers of projects are introduced (5 numbers from SOET) from AU. Under the head of Project 23 (AU Smart Labs) in Project 30, which is supervised by Officiating Dean, a total of 119 experiments across STEM are already floating in virtually. The SOET Equity Newsletter is another important tool for our brand-building. We published eight newsletters till now on themes like "Engineering Career and Courses", "Robotics", "Computing Plus", "Infrastructure Plus", etc.

For COVID-19 precaution measure, a team consisting of faculty members and students developed indigenously and commissioned Handsfree Sanitizer Dispenser at different functional units of the University.

We are indebted to Hon'ble Chancellor and Hon'ble Vice Chancellor for their motivation and support to run SOET with a flying colour during the challenging time in 2020.
Dean office is thankful to HoDs, all faculty members, technical assistants and office staff. With their hard-passionate work, SOET was in a commendable position in AU in 2020.

Prof. (Dr.) Amitava Mukherjee
Acting Dean, SOET
Adamas University

From the beginning of 2020, SOET has reformed the organizational structure in several ways to execute work seamlessly. In this journey, few new critical responsibilities are manifested in various fields. Academics, admission and placement are main three areas that will be covered in this report.

ACADEMIC ADMINISTRATION, RESEARCH & OUTREACH

Work Summary of various Faculty-In-Charge(s) in SOET:

Prof. (Dr.) Amitava Mukherjee. Officiating dean of SOET patron this odyssey with other Faculty-In-Charge(s) to make this reformation successful.

Quality Assurance and Accreditation (In-charge: Mr. Bibhas Das)

Achieved:

- QS I-GUAGE E-LEAD (E-Learning Excellence for Academic Digitisation) Certification
- SOET was ranked 4th among the top Private University in West Bengal by BW Education Engineering Ranking 2020
- OBE Conversion of B. Tech Syllabus of SOET for AY 2019-20 & all the Syllabuses of SOET for AY 2020-21
- NAAC Document Preparation for Criteria – I
- Successfully submitted necessary data for ET Industry Leader East 2020 Award
- Successfully submitted necessary data to the office of the Registrar Sir for preparing AU Annual Report.

Ongoing:

- Remaining NAAC Document Preparation for Criteria – I

Plan for 2021:

- Complete the NAAC Document Preparation for Criteria – I.
- Provide all the necessary information and support as when required to the IQAC team of Adamas University.

Consultancy and Outreach team (In-charge: Mr. Pabak Indu)

The team Consultancy and Outreach is focused on achieving industry collaborations with a different state of the art industries for various collaborative opportunities. These collaborations are basically focused on making an industry-oriented state of art unique curriculum that can cater to the present-day industry needs and help us to build a brand of developing a state-of-the-art department. Along with setting up a state-of-the-art department, we are also focused on some industry collaborations for our certification programs, where students and industry professionals will be interested to go for different skill enhancement programs. They are also focused on various collaborative opportunities for brining industry-based projects and setting up industry centre of excellences.

SI	Program Name	Name of the Industry House	Status
1	IBM Global University Programs Initiative.	IBM India Limited.	Initial Level Discussion
2	Academic Collaboration with Oracle-Oracle University	Oracle India.	Internal Level Discussion for collaboration opportunities.
3	TEC on Industry 4.0 at Adamas University.	SSIG Manufacturing Advancements Pvt. Ltd.	Internal Level Discussion for collaboration opportunities.
4	Co-creating a world class institution-Adamas University.	Microsoft Corporation (India) Pvt. Ltd.	Internal Level Discussion for collaboration opportunities.
5	Emerging Skills Programme -New as per Times.	ET Labs.	Initial Level Discussion.
6	Adobe Tech Day for Adamas University.	Adobe India.	Initial Level Discussion.

Ongoing:
- Collaboration with Oracle and Microsoft Plan for 2021:
- Completion MOU with various Industries for developing an industry-standard curriculum and industry-standard certification program.

**Hybrid blended learning
(In-charge: Mr. Sudip Chakraborty)**
Virtual labs are simulated learning environments that allow students to complete laboratory experiments online and explore concepts and theories without stepping into a physical science lab. In order to augment the learning of science and engineering subjects through remote triggered performing experiments, online or virtual labs can be greatly beneficial. Students can conduct the experiments at their own convenience and pace, obviously curated by faculty members to enhance the touch-and-feel as far as possible. The physical laboratories are being converted into virtual mode using word-press interface for core branches and for CSE code editor is being used for making it smart and virtual. Students are accessing AUSmartLab portal using their official credentials for viewing and learning the virtual experiments.

Achieved:
- Department of Mechanical Engineering (Completed – 15 Virtual Experiments)
- Department of Civil Engineering (Completed – 15 Virtual Experiments)
- Department of Electrical Engineering (Completed – 15 Virtual Experiments)
- Department of Electronics and Communication Engineering (Completed – 15 Virtual Experiments)
- Department of Computer Science & Engineering (Completed – 34 Virtual Experiments using Code Editor);

Ongoing:
- Department of Mechanical Engineering (Ongoing – 3 Virtual Experiments)
- Department of Civil Engineering (Ongoing – 3 Virtual Experiments) Department of Electrical Engineering (Ongoing – 3 Virtual Experiments)
- Department of Electronics and Communication Engineering (Ongoing – 3 Virtual Experiments)
- Department of Computer Science &

Engineering (Ongoing – 14 Virtual Experiments using Code Editor);

Plan for 2021:
- SOET has taken the strategy for the AU Smart Lab as 3 experiments per department per month including one experiment per department for first year students. We will follow this strategy to produce virtual labs for the students as per the semester. Again, it has been planned to include smart labs for elective papers and simulation-based projects. The platform is undergoing constant development by IT Team of Techverita Consulting Pvt Ltd. Some of the following could be expected to be implemented in the next 6 months– UI update.
- Support for HTML/CSS/JS coding.
- Functionalities to efficiently conduct classes.
- Support for file programming Simulators.

Research and Development (In-charge: Mr. Ranjan Kumar)
The research team for School of engineering and Technology is devoted to develop the research culture and ecosystem within school. It is also working dedicatedly to map the University Level R&D requirements within the school. It has a major role set to develop the strategies and provide leadership and guidance to the research centres within SOET with respect to new research projects and publications.

Achieved:
- UG, PG and Ph.D students are encouraged to involve in research activities, e.g. Interdisciplinary groups are formed to escalate this culture in 2020.
- Research Crush Team with HODs and faculties having PhD or almost completion of PhD is formed in this year. They would lead the research in interdisciplinary groups within SOET and pan University also.

Plan for 2021:
- To promote the interdisciplinary research group within the school by exploring all possibilities of individual research areas to link with the cutting-edge research areas.

- Target is to involve the UG students along with PG/PhD Scholars in the research pool and to create their bonding towards research.
  - To develop a simulation research lab in the school.
  - Submission of research proposals to various Govt./Non-Govt. funding agencies.

Faculty Development Program (In-charge: Ms. Gulfishan Mobin)
The Faculty Development Program (FDP) expect to promote innovative teaching for an enhanced learning experience and to enable learning by creating a welcoming environment that provides the resources and support needed for all faculty at all stages of their professional and research career.

Achieved:
Every faculty member completed at least 2-4 FDPs (including Coursera & NPTEL certification courses) in their respective research domain. Mr. Nisarga Chand and Mrs. Rupanwita Das Mahapatra completed maximum number of certification courses in Coursera and received appreciation certificate from VC.

Partially Achieved:
Acquire knowledge about current technological developments in relevant fields.

Plan for 2021:
- Have to design and implement a variety of programs to meet diverse needs.
- Have to be focus on realistic outcomes through training and workshops.
- Will Build a culture for learning based on collaboration, teamwork, and shared vision.

School and faculty Brand Development (In-charge: Mr. Nisarga Chand)
Effective strategic planning and brand management require more than traditional advertising, marketing or identity development. Institutions that craft, present and manage a unified brand message, experience and environment achieve a competitive advantage in recruiting, retaining and building loyalty amongst their students, parents, staff, faculty and alumnae.

Achieved:

● = Completed

SL	WORK DONE	M1 (June)	M2 (July)	M3 (Aug.)	M4 (Sep.)	M5 (Oct.)	M6 (Nov.)	M7 (Dec.)
1	Prepared Landing Page Contents for SOET http://applications.adamasuniversity.ac.in/engineering/	●						
2	Prepared two PPT templates for SOET (online class and generic both)	●						
3	Review the Flyers (one by one) based on Specializations and final copy are now ready to use for Marketing with Proper Design	●	●					
4	Prepared AU course content with the help of Nodal Officers and finally it reflects on AU Website	●	●					
5	Prepared Project Status Report for SOET		●					
6	Prepared E Mail and SMS Contents of SOET for Admission purpose	●	●					
7	Continuously reviewing the Web Site Contents under SOET, generate reports and sent to AU Website Team	●	●	●				
8	Prepared one standard template including salient features of SOET and reviewed the vanilla flyers.		●					
9	Prepared script for SOET Engineering+		●	●				
10	Prepared all story boards for marketing		●	●				
11	Prepared various SOET templates for Branding			●				
12	Brief the new courses to Nodal Officers and assigned TAs for admission purpose			●				
13	Prepared Academic Branding Strategy (Project I) Tracker & ppt for SOET				●	●		
14	Compiled & Prepared Fabricating equipment in-house and Inter Disciplinary Project Trackers for SOET				●	●		
15	Conduct Beautiful Mind Pre-Launch Webinar Program & Inaugural Ceremony						●	●
16	Prepared Beautiful Mind Pre-Launch Webinar Report for Branding						●	
17	Prepared Rejuvenating SOET (Project II) Tracker & ppt						●	●
18	Prepared templates and contents for SOET Report							●

Plan for 2021:
- Initiate the Faculty Web Page Creation part for our University Web Site
- Super 30 Projects Execution at School level (Academic Branding Strategies for SOET)
- Campus open house events

Certification Program (In-charge: Mrs. Sunam Saha)
Plan and execute certificate programs for different disciplines of SOET

Achieved:
- Five courses for certificate program has been selected.

Ongoing:
- The course instructors are preparing the course materials for certificate program

Plan for 2021:
- To complete the video lecture shoot for the courses.
- To start the certificate program.
- Five certification programs are finalized. Preparation for course structure and materials are going on by the instructors.

Events (In-charge: Mrs. Soodipa Chakraborty)
Plan, lead and execute the yearly 2+ day Tech flagship event. Plan, lead and execute the monthly flagship "fire-side chat" program. Ensure all events are primarily self-sponsored. Have significant external participation in these events.

Achieved:
- Successful conduction of Webinars/ SOETEQUITY for the year 2020

Ongoing:
- Planning for ENGINEERINGPLUS+ (2 Day Flagship Event)

Plan for 2021:
- Lecture Series (3rd week Tuesday of every month), Fire Side Chat, Hackathon

Examination (In-charge: Mr. Dipanjan Banerjee)

In the adopted Outcome based Education, continuous evaluation is an integral part of the effective Teaching- Learning system. Examination Cell plays a very important role in Assessment of outcome. Examination cell plays a key role in evaluation part. The major responsibilities of Examination Cell involve smooth and impartial conduction of Mid Semester Examinations, Make up Exams & Supplementary Examinations, Conduction of Evaluation with confidentiality under the directions of the Coordinator of Examination of Adamas University.

Achieved:
- He and his team conducted various online and offline examinations like: mid semester, end semester, improvement and supplementary.

Plan for 2021:
- To uphold procedures for various works involved with accountability directed by COE.
- To keep providing qualitative and reliable educational assessment utilizing the resources as per the expertise of an individual.
- To keep ensuring students in getting academic excellence by participating in assessment process devotedly.

Project 1 (Academic Branding Strategy – Supervisor: Prof. (Dr.) Amitava Mukherjee)
- The primary steps are done, for execution date wise tracker is formed.
- Different projects are already introduced under the different key milestones like; state-of-the-art Departments, Faculty qualifications, Quality Research and consultancy, Incubation, Innovative Pedagogy and Assessment approach, Industry partnerships, International collaborations, etc.

Project 2 (Rejuvenating SOET– Supervisor: Prof. (Dr.) Amitava Mukherjee)

- The primary steps are done, for execution date wise tracker is formed.
- Different professional certification program, placement strategies, academic collaboration, student competitions, rejuvenating innovation & learning etc are adopted.
- Capstone projects, Beautiful Mind program, Boot Camp class etc. have been started during this year and will be continued in the year 2021.
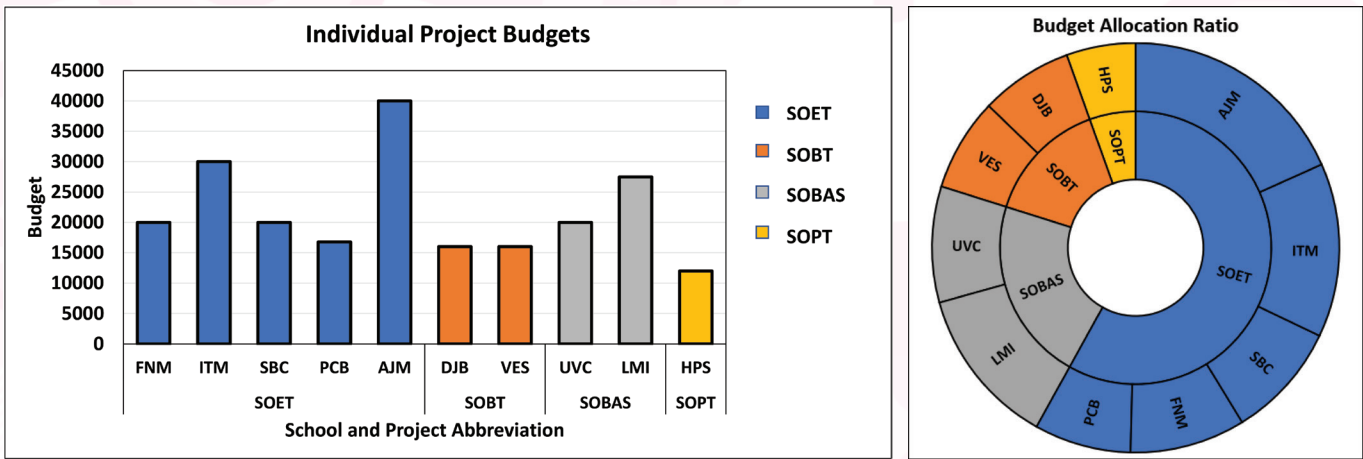
Project 3 (Fabrication in-house – Supervisor: Prof. (Dr.) Amitava Mukherjee)

The "CAST-STONE" is a pan-university level endeavour led by Dr. Amitava Mukherjee (Dean, Adamas University), which encapsulates 10 projects that aims to furnish or improve various laboratories of Adamas University with modern tools for research and education by fabricating the necessary equipment in house rather than buying from vendors.
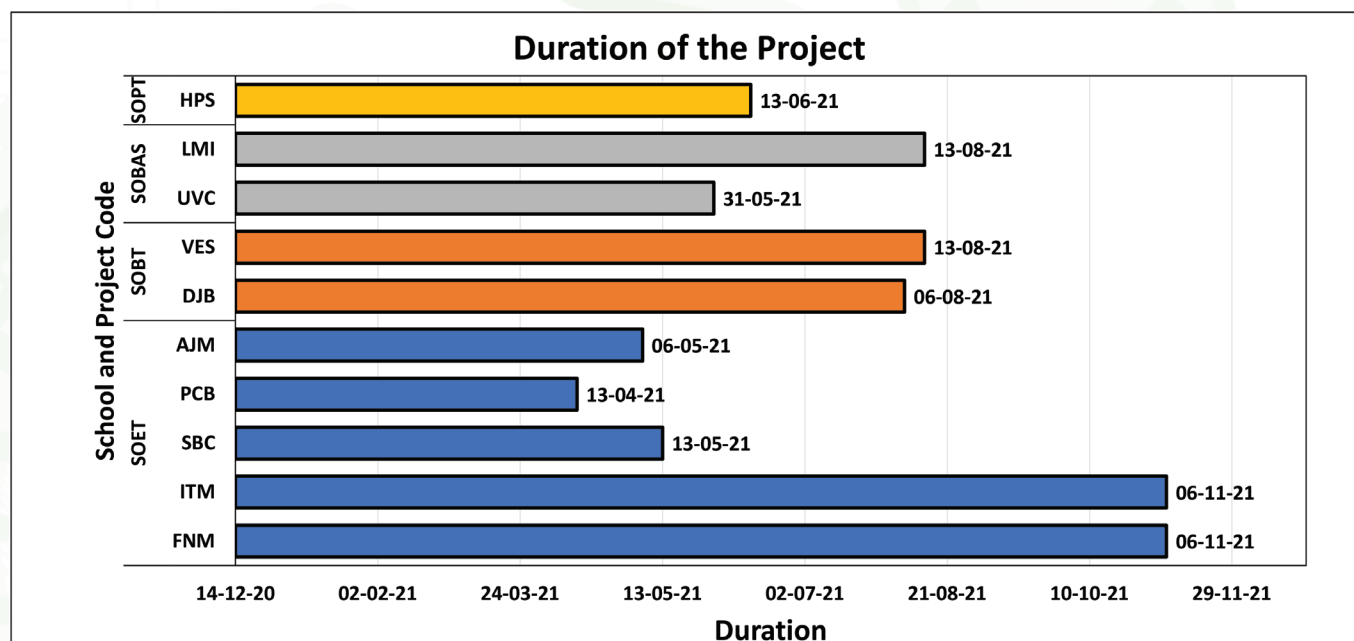
Achieved:

School	Code	Project Titles	Budget
SOET	FNM	Flow net model	20000
	ITM	Impact Testing Machine	30000
	SBC	A Single Board Portable Computer for testing computer vision applications in practical environment	20000
	PCB	Design and Fabrication of Printed Circuit Boards & Microstrip Patch Antennas	16780
	AJM	Fabrication of Abrasive Jet Machining Experimental Setup	40000
SOBT	DJB	A Double-layered Jacketed Bioreactor with regulated temperature and pH for batch and continuous culture	16000
	VES	A Vertical Electrophoresis System for Acrylamide Gel Electrophoresis for Separation of Various Biomolecules	16000
SOBAS	UVC	Smart low-cost UV C sanitizer Development	20000
	LMI	Development of low-cost measurement instruments for laboratory use	27500
SOPT	HPS	Fabrication of laboratory scale Hot Plate System with temperature control	12000

Project Statistics:

Interdisciplinary interaction in the Cast Stone Projects (Projects Statistics)

Duration of the Project

School and Project Code	Project Code	Date
SOPT	HPS	13-06-21
SOBAS	LMI	13-08-21
SOBAS	UVC	31-05-21
SOBT	VES	13-08-21
SOBT	DJB	06-08-21
SOET	AJM	06-05-21
SOET	PCB	13-04-21
SOET	SBC	13-05-21
SOET	ITM	06-11-21
SOET	FNM	06-11-21

x-axis (Duration): 14-12-20, 02-02-21, 24-03-21, 13-05-21, 02-07-21, 21-08-21, 10-10-21, 29-11-21

Current Status:
- A fund of Rs. 2,18,280/- has been approved by the Vice-Chancellor's Office.
- Procurement for raw-materials have been initiated by all projects.

Plan for 2021:
- All projects are set to complete the procurement, training, design, development, testing, documentation and demonstration of the projects during within this year.
- The duration of projects varies from one another, ranging from 4 months to 11 months.

Project 23
(AU Smart Labs- Supervisor: Prof. (Dr.) Amitava Mukherjee)

For the ease of students, total 119 experiments are already floating in virtually and 57 more experiments are yet to be completed. UI update, simulators are going to be introduced in next six months.

School of Engineering & Technology (SOET)
Completed Experiments 82
On Going Experiments 26
Expeiment to be started 42

School of Life Science & Bio-Technology (SOLB)
Completed Experiments 05
On Going Experiments 00
Expeiment to be started 12

School of Pharmaceutical Technology (SOPT)
Completed Experiments 25
On Going Experiments 26
Expeiment to be started 29

School of Basic & Applied Science (SOBAS)
Completed Experiments 07
On Going Experiments 05
Expeiment to be started 07

AU/PROJ/2020/23: Total
Completed Experiments 119
On Going Experiments 57
Expeiment to be started 90

Project 30 (OBE – Supervisor: Prof. (Dr.) T. Senthil Vadivel)

Outcome Based Education (OBE) is a student-centered learning philosophy, which measures student's performance based on definite outcomes by providing structured curriculum, teaching pedagogy and assessment methods to meet the global standards in higher education. It starts with a clear statement on what knowledge, skills and attitudes that the graduates will be able to demonstrate on successful completion of study. Educationists are curious to know about the need of changing the traditional, teacher-centered education system which focused on input-based education process. The answer to them is OBE helps the institution to measure their institutional standard through proper learning outcomes, meanwhile it enables students to enhance their knowledge and skillsets to global standards. In the rapidly changing technological era, the education should be result oriented rather process oriented. In this context, the Adamas University taken a mammoth initiative to implement OBE in its all nine schools with the below listed

- To Transform Teacher Centered Educational System to Student Centered-Participatory Learning Educational Culture which enhances students' performance.
- To Prepare Structured Curriculum, Teaching Pedagogy and Assessment Methods to meet the global standards in higher education.
- To Provide Clarity in Learning with Flexible Teaching Methods which provides equal opportunity to all kind of learners to improve their standards by qualitative and quantitative measurements.
- To Provide Holistic Learning Environment which engage all stake holders and enriches students' Knowledge, Skills and Ethical Values.
- To Provide Society with reliable information on Quality of Education offered by Adamas University and To Meet the Accreditation Requirements.

Achieved:

- Created Awareness and Emphasized the Importance of OBE and its Framework

(Vision, Mission, PEOs, POs and COs) from the traditional education system to OBE system which has greater focus on student centered education.

- Framed the Vision, Mission, Program Educational Objectives, Graduate Attributes, Program Outcomes, Program Specific Outcomes for their Respective Departments and Schools.
- Formulated Course Outcomes and Mapping them to the POs, PSOs, PEOs and Mission.
- Educated Fellow Colleagues in the OBE Framework.
- Prepared OBE based Curriculum and Syllabus for their Respective Programs

Ongoing:

- Course File Preparation and Assessment Process

Plan for 2021:

- Identification of Assessment Methods & Tools (Direct & Indirect Assessment)
- Preparation of Rubrics for Different Assessment Tools
- CO Direct Attainment Evaluation, CO-PO Attainment Mapping for all the Courses & Action Taken Report
- Exit Survey (Indirect Assessment) and Evaluation
- OBE preparation for all the curriculum and syllabus are already done.

Newly introduced programs for each department (B. Tech/ M.Tech/BCA/B.Sc)

School of Engineering & Technology (SOET) is equipped with AICTE approved programs in 2019. SOET is running with five departments namely Computer Science and Engineering, Electronics & Communication Engineering, Electrical Engineering, Mechanical Engineering & Civil Engineering. In 2020-21, SOET has launched several new programs like B. Tech in Bio-Medical Engineering, eight B. Tech with Specialization, three specialized M. Tech, B. Tech with Diploma in Management, B. Tech with Minor in CSE & B.Sc in Computer Science.

Reason to introduce different specialized programs:

- Engineers design the future. They provide innovative solutions to meet the needs of our modern world. From buildings and bridges, to apps and smart devices, to renewable energy, engineering feats are everywhere.
- To develop the skills and knowledge, it needs to get a head start in an engineering career that requires specialist skills and adaptability, or to give you the edge when applying for a higher degree.
- This four-year program is designed to give an overall education in engineering as well as specialist knowledge in fields such as civil, software, electronics, electrical and mechanical engineering.
- Students will graduate with comprehensive knowledge of engineering and a range of practical skills that mean they will be experienced and ready to work.

Benefits:

- Students will be ready to step in to the professional world with transformative educational experience after completing their Degree.
- The curriculum of the B.Tech/M.Tech/ BCA/B.Sc programs are directly link to the emerging technologies leading to Industry 4.0
- School has provided collaborative environment open to the free exchange of ideas, where research, creativity, innovation and entrepreneurship can flourish, and ensured students achieve their full potential.
- School offers different programs designed with specialization subjects in different disciplines along with Project Based Learning in big ticket areas.

Achieved:
Newly Introduced Programs

Category	B. Tech	B. Tech with Special	M. Tech with Special	BCA	Diploma	Minor	B.Sc
No of program	01	08	03	02	01	01	02

The list of launched specialized programs for UG and PG in 2020-21 are as follows.

Department of Computer Science and Engineering
- B. Tech with Specialization in Artificial Intelligence & Machine Learning
- B. Tech with Specialization in Cyber Security and Forensic
- B. Tech with Specialization in Block Chain
- BCA with Specialization in Gaming & Animation
- BCA with Specialization in Banking, Financial Services and Insurance
- B.Sc in Computer Science

Department of Electronics and Communication Engineering
- B. Tech with Specialization in IoT and Embedded Systems
- B. Tech with Specialization in Robotics
- M. Tech with Specialization in IoT and Embedded Systems
- M. Tech with Specialization in Robotics

Department of Electrical Engineering
- B. Tech with Specialization in Sustainable Energy

Department of Mechanical Engineering
- B. Tech with Specialization in Design Engineering
- M. Tech with Specialization in Design Engineering

Department of Civil Engineering
- B. Tech with Specialization in Infrastructure Management
- BSc in Environmental Science

Department of Biomedical Engineering
- B. Tech in Biomedical Engineering

Professional Skill Enhancement Programs launched for all the departments
- B. Tech Regular course with Diploma in Management

Programming for All through Minor Courses
- B. Tech Regular course with Minor in CSE

Plan for 2021:
- OBE syllabus preparation for various specialization programs

- Process for BOS/AC/FC Approval
- Calibrate of existing Specialized Programs to be associated with big ticket Industries.

SOET Research Activities

PhD Status @ SOET:
Most of the faculties at SOET are either PhD or pursuing PhD from various reputed Universities including Adamas University. Apart from the faculty members, some external students are also showing their interests to do PhD from AU.
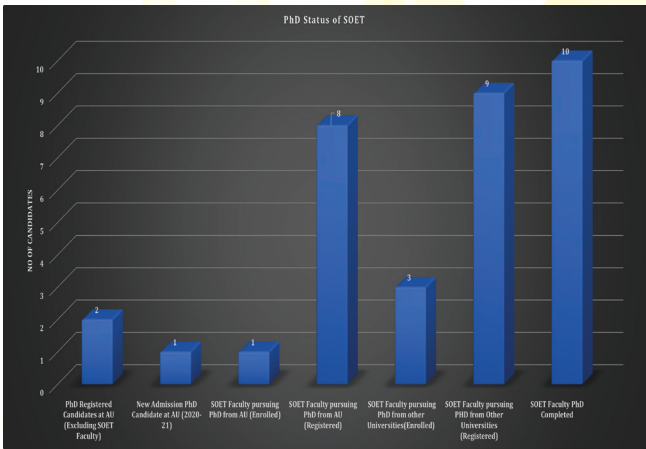
Research Publications:
A good number of research publications have been done by both Faculty members and Students of SOET in the year 2020.
(Conference Proceedings: 46; Journals: 15, Book Chapter: 13 & Patents: 9)
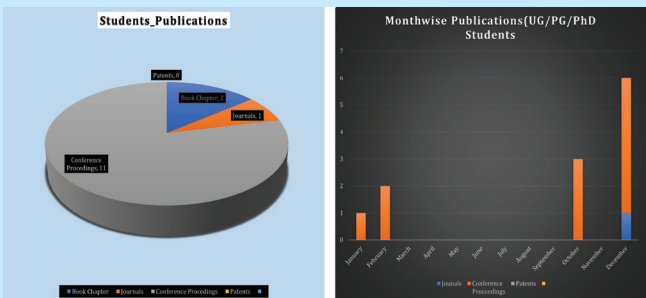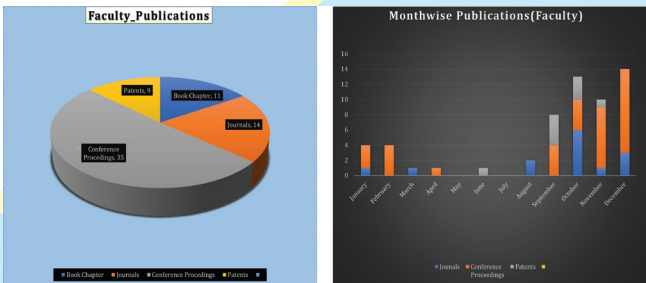
SOET Research Colloquium:
School has started lecture colloquium series from the month of September 2020 on every Wednesday evening (8.00 – 9.00 pm) where faculty members discussed about their research areas.

Interdisciplinary Research Initiative:
Formed a Research Crush Team and they have started the initiative to make the interdisciplinary research.

Project Proposal:
An entrepreneurship development project proposal in the area of Automated Sanitizer Dispenser was submitted to NRDC, DSIR. From the incubation cell of AU with Dr. Saikat Chaterjee and Mrs. Rupanwita Das Mahapatra as key resource persons.

Participation in AU Research Colloquium:
4 faculties presented their research topics.

Name	Topic
Prof. S.N. Roy	Waste to Wealth
Dr. Saikat Chaterjee	Piezoelectric Materials for Biomedical Applications: Current Trends and Future Scope
Prof. (Dr.) Amitava Mukherjee	Industry Trends in Biocomputing Research
Dr. Sulagna Chatterjee	Strain & Semiconductors: Multi-dimensional Explorations

Achievements/Recognitions:

Faculty Achievements:
- **Prof. (Dr.) Amitava Mukherjee received Best Researcher Award-2020**
- **Prof. (Dr.) T. Senthil Vadivel received International Distinguished Researcher Award-2020 & Best Researcher Award-2020 at AU**
- **Dr. Sulagna Chatterjee received Young Achiever, Research Excellence Award from InSC-2020, Global Teaching Excellence Award-2020, Certificate of Excellence in Quality of Journal-2020.**
- **Dr. Rituparna Mitra received Best Paper Award in ICAMCI2020, Best Teacher Award-2020 at AU.**

- **Dr. Dipak Kumar Ghosh** participated as an Organizing Chair for IEEE AMPHE-2020
- **Mr. Bibhas Das** received Appreciation Letter from NPTEL-2020
- **Mr. Nisarga Chand** received Appreciation Letter from The Vice Chancellor, AU for highest number of Coursera Courses from SOET
- **Mr. Jeet Banerjee** participated as a Session Chair & Reviewer (IOTWR-2020 International Conference)
- **Mrs. Rupanwita Das Mahapatra** received Appreciation Letter from The Vice Chancellor, AU for highest number of Coursera Courses from SOET
- **Mr. Soumya Ghosh** published three blogs in TOI and Statesman Paper

Student Achievements:
- **Mr. Rahul Sarker** (EE Dept.) received Award in Arduino Hackathon, International Science Festival, All India Student Design Event, Adinova-2020
- **Mr. Shibasish Kanti Ghosh** (EE Dept.) received Best Actor Award for presenting a short film
- **Mr. Tushnik Biswas** (EE Dept.) Awarded by NPTEL with Elite Gold Batch-2020
- **Mr. Indranil Dutta** (CSE Dept.) Awarded by NPTEL in 2020
- **Mr. Abhinabo Sarkar** (ME Dept.) received Navyug Star Millennium Award
- **Mr. Bikramjit Hazra** (ECE Dept.) received Award in ATOS IT CHALLENGE-2020
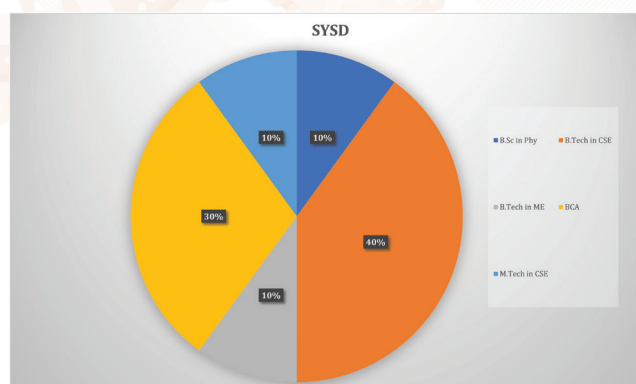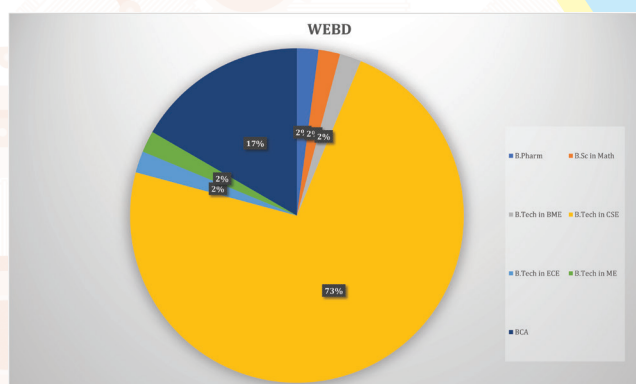- **Mr. Sukanta Das & Mr. Arnab Hazra** (CE Dept.) received Award for Best Project Model-2020

Beautiful Mind Program

- A self-learning program titled 'Beautiful Mind' has been initiated by SOET to stimulate industry-oriented environment among students. Four learning paths are introduced and students were free to choose any one of them.
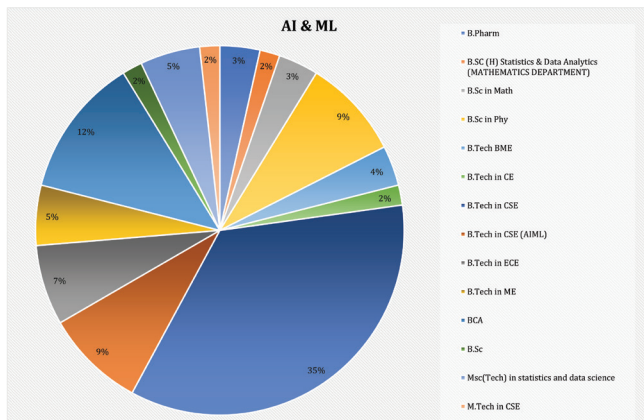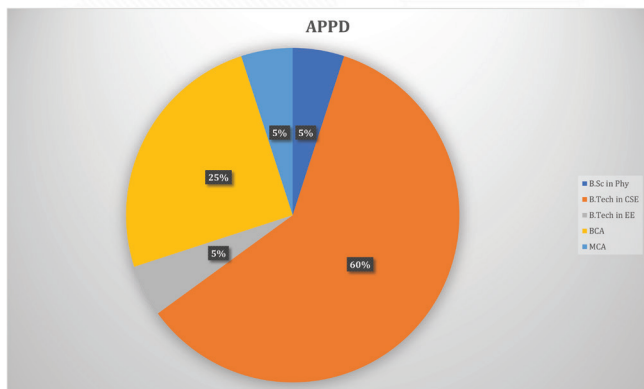
- Concept:
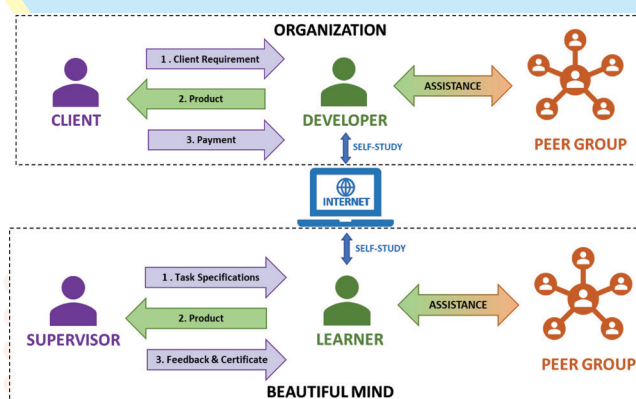
- 136 students have registered and chosen their learning path for this program across all the schools and multiple disciplines. (58 students for Machine Learning Application, 20 students for Application Development, 10 students for System Software Development and 44 students for Web Development)

- Registration details

APPD

Legend:
- B.Sc in Phy
- B.Tech in CSE
- B.Tech in EE
- BCA
- MCA

(Values: 5%, 5%, 25%, 5%, 60%)

AI & ML

Legend:
- B.Pharm
- B.SC (H) Statistics & Data Analytics (MATHEMATICS DEPARTMENT)
- B.Sc in Math
- B.Sc in Phy
- B.Tech BME
- B.Tech in CE
- B.Tech in CSE
- B.Tech in CSE (AIML)
- B.Tech in ECE
- B.Tech in ME
- BCA
- B.Sc
- Msc(Tech) in statistics and data science
- M.Tech in CSE

(Values: 5%, 2%, 3%, 2%, 3%, 9%, 4%, 2%, 35%, 9%, 7%, 5%, 12%)

Delivery methodology

- For each learning pathway and each level, a learning kit has been designed. The learning kit consists of the level objective, a set of tasks, links of relevant online resources and a set of deliverables required to clear the level and a deadline.
- Registered learners have been provided with the level 1 learning kit for their opted learning pathway. If the learner submits the required set of deliverables within the deadline, then he would be provided with level 2 learning kit. This process would continue until the learner submits the deliverables for level 4 or he resigns from the programme in the middle.
- The learner would be provided with a certificate with the information about the levels completed. The entire process can be carried out using an online platform like MS Teams.
- Learners are required to carry their own laptops. Requests for using lab resources may be considered but is not guaranteed.

Future Plans for Upgradation:

- Including class XII students to opt the program
- Students will get exposure about life at a university and the concepts of an IT industry before they opt for it.
- Specially designed learning pathway (1 month) will be provided catering to their level of skills in domains like
  - Application Development
  - Web Development
- Learners completing higher levels can be assigned a special role of mentor.
- Higher level learners can guide lower level learners.
- Simulates the hierarchical structure of a team in an IT industry
- Mentors will receive a special "MENTOR" certificate
- Inclusion of more learning pathways
- covering more interdisciplinary fields
- IOT
- Android Development

Capstone Project Details

Capstone Project alternatively named as a capstone experience, culminating project, or senior exhibition can be defined as a multifaceted assignment that serves as a culminating academic and intellectual experience for students. In SOET, we are offering a learning-pathway experience for the UG 1st Semester (2020-2024 batch) and 3rd Semester (2019-2023 batch) students through capstone projects. The course will be skilled for 5 semesters sequentially. Capstone projects are long-term investigative approaches culmination a final product/ presentation/ performance. Here, students are asked to maintain a portfolio of findings or results, create a final product demonstrating their learning acquisition or conclusions, and give an oral presentation on the project to a panel of teachers, experts, and community members who collectively evaluate its quality.

Achieved:

- SOET introduced 3 capstone projects: Smart City, Electric Vehicles, and Aerial Robotics.
- In 1st semester, students have learned the basics of all three projects.
Ongoing:

- This semester, they will learn about the physical and analytical approach of these projects.

Plan for 2021:
- Outline of derivation of the dynamic equations of motion for quadrotors.
- Identification of appropriate motor and converter for EV applications.
- Summarization of the energy management system of smart cities.

School level Webinars/ Seminars/Workshops

Webinars conducted throughout 2020 broadly covered a gamut of domains starting from recent technological advancements to adapting to digital teaching learning. Major focus was to connect the students to each and every corner of the world and uplift their moral strength as well as make them market ready to cater to the recent technical requirements.
- SOET organized various types of events in different fields. Also, in this year technical webinars (total 21) are conducted where national and international speakers delivered their lectures through the digital platform.

SL No	CATEGORY (Webinars/Seminars/ Workshops etc.)	No of Events
1	Webinar	21
2	Seminar	13
3	Workshop	12
4	Quiz Competition	4
5	Technical Competition	2
6	Guest Lecture	4

Operational Management Progress

Operational management encompasses planning, implementing, and monitoring the entire gamut of activities connected to academic administration of the School. The operational management team has responsibilities in both strategic and day-to-day functions. The team ensures effective communication within the School, and successful culmination of work flow at the

University level.
- To ensure that the School complies with the academic procedures and guidelines framed by the University.
- To collect, analyze and interpret academic data at School level on a periodic basis.
- To maintain relevant data on faculty work load, areas of specialization, performance output.
- To review and work upon further improvement of academic processes and standards.
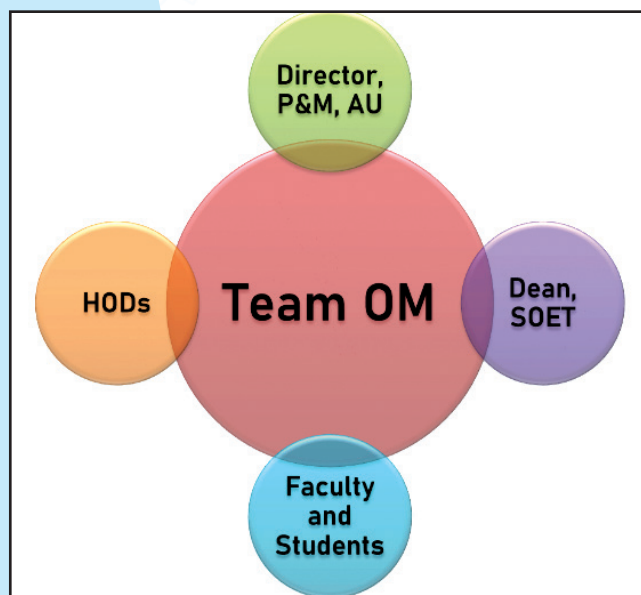
Team Operational Management (OM):

- Faculty course allocation for AY 2020-'21, Quality circle formation, conduction and analysis of Student's feedback survey and Revision of course structures of B. Tech programmes etc are completed till date.

|	
Faculty Resource	Faculty course allocation for AY 2020-21. Faculty portfolio assessment vis-a-vis new programmes launched
Quality Circle Survey	Quality Circle formation, conduction & analysis of Students Feedback Survey, and identification of action pointers
Course Structure	Revision and operationalization of course structure of BTECH programmes
Minor Programmes	Consolidation of Minor programmes at School level as per the University guidelines
Student Attendance	Monthly consolidation of attendance, and report filing of corrective measures taken
ERP (TCSiON)	Implementation of TCSiON Campus Management including academic processes of listing of courses, faculty mapping, and student tagging
Time Table	Coordination with Time Table Coordinators at School and University levels, conduction of training on aSc time table software
Online Class	Operationalization of SOP for conduction of online classes

Activity Completion Statement

Plan for 2021:

- Operationalization of Adamas Comprehensive Excellence (ACE) scorecard for students.
- Operationalization of Comprehensive Faculty Feedback process at the end of each semester.
- Implementation of time table generation for Even Sem 2020-21 using aSc time table management software.
- Moderation of School's Event Planner

Mentoring Report

- In SOET; 1:18 mentoring ratio and every faculty is a mentor.
- Average mentee interaction rate of thrice in a month till March, 2020.

Frequency of Meeting(Monthly)

Rate of Issues resolved
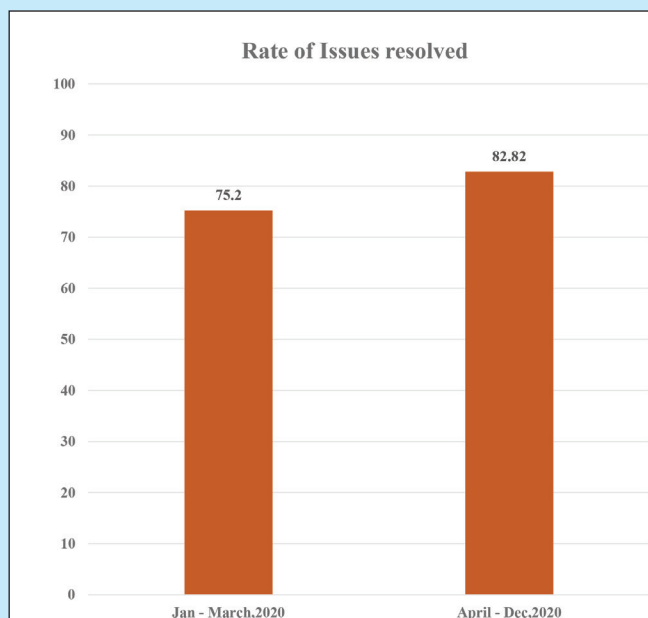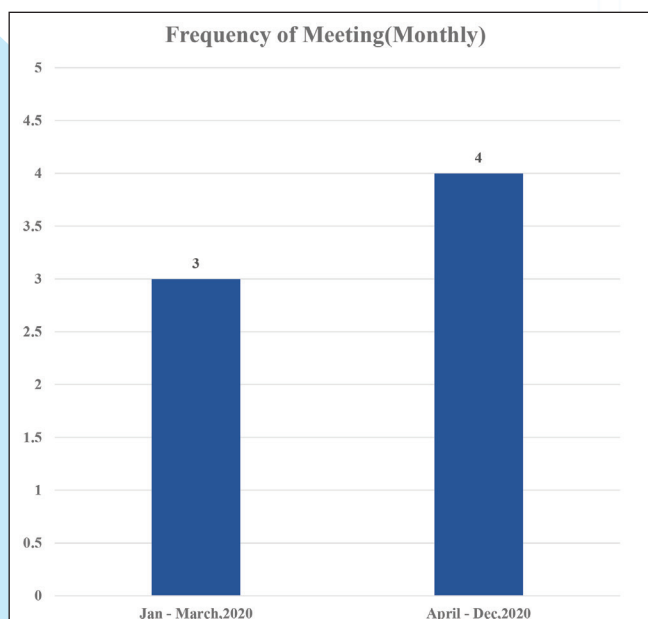
Contributory Roles & Responsibilities at AU level

The SOET members have added value to the various functions and initiatives at University level:

- Research Committee (Dr. Saikat Chaterjee)
- Planning & Monitoring Committee (Dr. Saikat Chaterjee)
- OBE Implementation (Prof. (Dr.) T Senthil Vadivel, Lead)
- Chairman, Disciplinary Committee (Prof. (Dr.) T Senthil Vadivel)
- NAAC Taskforce (Prof. (Dr.) T Senthil Vadivel)
- Adamas University student clubs (Mrs. Rupanwita Das Mahapatra for Robotics Club, Mrs. Soodipa Chakraborty for Entrepreneurship club)
- Online Course Creation Committee (Mr. Sudip Chakraborty)
- Project impact and innovation (Mr. Sudip Chakraborty)
- Institutional Innovation Cell (MHRD) (Mr. Sudip Chakraborty, Mr. Rajat Subhra Roy, innovation coordinators). The initiative of setting up the Institutional Innovation Cell (IIC) was led by SOET.

Other Initiatives

- Covid 19 initiative: A team of faculty members & students indigenously developed and commissioned Handsfree Sanitizer Dispenser at different functional units of the University.
- Cross Skilling initiative: A three months long program of cross skilling the technical assistants of SOET was executed enabling skill upgradation in multidisciplinary domains. The program benefitted about 17 technical assistants.

ADMISSION RELATED STEPS FROM SOET

SOET Web Page Redesign
(http://engineering.adamasuniversity.ac.in/)

Having a well-designed education website is an ideal way to show who you are as an establishment, whether you're an existing institution or building your education brand from the ground up. Remember, you're providing both a valuable and invaluable service: knowledge. The best education website design solutions will support this knowledge through a clean layout, captivating images and engaging features. The purpose of this type of website is to uphold the overall brand of the university. A higher education website contains a great deal of important information for students, faculty and staff. Additionally, it's a way of representing the campus culture for prospective students.

Achieved:

SL.	Work Done	Date of completion
1	Important new courses	May, 2020
2	Key elements of SOET such as beautiful mind, EQ labs, etc	
3	Highlight courses offered by each department	June, 2020
4	Blogs from the School	
5	Student Testimonials	
6	About the school	
7	Innovative project-based study approach	
8	Study Specialized & new generation Programs	
9	Key features of SOET	July, 2020
10	Internship & Placement details for every department	
11	Admission Process & Eligibility for every Program	
12	What our students say	
13	Photo gallery of Our School events	
14	Prepared our school related FAQs and answer	August,2020
15	Wright up of our school events	
16	Introduction to the courses of each department	
17	Learning Outcome, Lab infrastructure, Subjects Covered, Internship/Project work, Research Opportunities & Course Structure of every program is included in our SOET web page.	
18	Prepared Web Page Contents for SOET http://engineering.adamasuniversity.ac.in	

Plan for 2021:

- Initiate the Faculty Web Page Creation part for our SOET Web Site.
- Add the new tab of Smart Virtual Lab in SOET Web page.
- Add the new tab of Award achieved by SOET in this pandemic situation.
- Add the new tab of Research Infrastructure in SOET.

Landing Page Contents
(http://applications.adamasuniversity.ac.in/engineering)

Landing page is a standalone web page that is designed to get students to take a desired action. The action can range from requesting general information to class enrolment to student loan applications. There is no shortage of educational institutions and all have goals to increase brand awareness, attendance rate, and generate new accounts. To meet those goals, many institutions create post-click landing pages with educational post-click landing page elements to convert prospects into leads.

- The main objective of the landing page for SOET is to uphold the overall brand of the University and is updated time to time.

Summary of Tasks executed by Team admission

- Each One Reach One (EORO) initiative: Faculty & staff members of SOET responded to the EORO initiative of the University with an overwhelming input of the details of 337 potential candidates.

- The Team Admission has executed the task of calling prospective candidates for admission to SOET during the session 2020 (odd Semester) and explained newly launched programs in SOET and motivated them to join. A total of 923 calls have been made during the period of Aug to Dec, 2020.

Date of Task Execution	Total No. of Calls Made	No. of Positive Responses
August (19-08-20)	90	27
August (20-08-20)	76	21
August (25-08-2020)	337	55
August (28-08-2020)	66	14
September (01-09-2020)	55	11
September (10-09-2020)	105	15
September (17-09-2020)	24	8
November (09-11-2020)	236	13
	Total -923	Total -135

Story Boards for each department & Capstone Projects

- Every department made storyboard for individual specialization along with all capstone project to attract students and can make them understand the offerings better.
Link: https://riceindia.sharepoint.com/:f:/r/sites/ADAMAS_SOET/Shared%20Documents/Story%20Boards_Different%20Programs%20in%20SOET?csf=1&web=1&e=HCQxHk

Participated in Career Counselling, TV Talks

- All HODs, Dean actively involved in various online talk shows, interactive sessions, webinars to help the student to identify their path.
- Faculty members attended in different career counselling of WBJEE in different places like: Netaji Indoor Stadium, various schools etc.
- The dept. of ME played the role of Speaker/Moderator/Guest Speaker in 27 events, CE in 23 events, ECE in 2 events, EE in 1 event, CSE in 2 events.

SOET Equity Videos & Newsletters for Branding

- SOET Equity Newsletter contains important news and updates to make audience aware of achievements by SOET.

- We have published 7 newsletters in 2020 on themes like "Engineering Career and Courses", "Robotics", "Computing Plus", "Infrastructure Plus" etc.


No. of Items in Newsletter
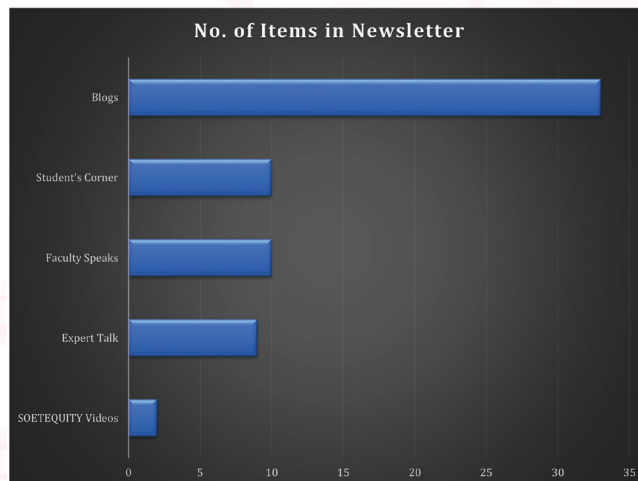
Volume & Issues	Themes
Vol1_Issue1	Engineering career & Courses
Vol1_Issue2	Engineering career & Courses
Vol2_Issue1	Robotics
Vol2_Issue2	Infrastructure Related Technologies
Vol3_Issue1	Engineering Next
Vol3_Issue2	Computing Plus
Vol4_Issue1	Power Plus

Link: https://riceindia.sharepoint.com/:f:/r/sites/ADAMAS_SOET/Shared%20Documents/SOETEquity%20Newsletters?csf=1&web=1&e=sbdwsP

Students Enrolment in the academic session 2020-'21 @ SOET

- 199 students have enrolled in the academic session 2020-'21 in SOET till date.

Number of Students Enrolled in 2020-21 (Total 199)
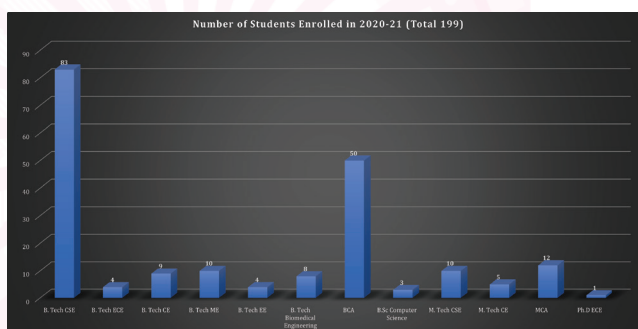
SUPPORT TO CDC FOR INTERNSHIP & PLACEMENT

Organized Bootcamp Session (Domain Knowledge Training for students from all departments)

- In the current academic year, SOET and CDC have jointly organized the boot camp from 14, Oct 2020 to 21, Oct 2020.
- Through this camp 80% of students who opted for placement got benefitted.
- Domain Specific Technical Training and IT Skills Training for Core Branches – started from 04, Dec 2020 and continuing on every Wednesday. Special Training Session for the Eligible Students of 2021 based on the Pipeline Companies Profile, Interview Process and Job Description is underway for the year 2021.

Prepared department wise Student Placement & Internship Record

- Almost all the students of B.Tech. BCA, MCA of 2021 passing batch completed internship at least in one organization provided by either CDC or arranged by themselves.

Internship Record of 2021 Graduation Batch
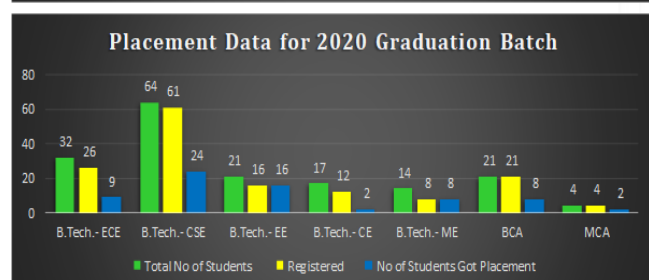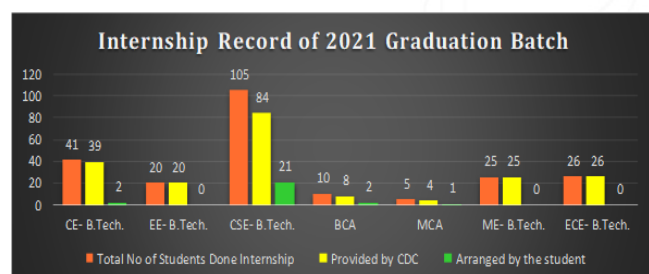
- 69 students from 2020 graduating batch got placed.

Student Feedback Report About Career Development Cell

The objective of Career Counselling is to mentor and counsel the students regarding the various career choices available to them, according to their interests and strengths. This helps the students in developing a clear roadmap regarding their career. The CDC regularly updates the students regarding the various opportunities available to them in the form of vacancies/competitive exams published by both Central and State Governments.

Purpose:
- Clearly identify the progress of SOET in one page
- Use images that reflect SOET's values and priorities
- Students go to decide SOET is a good fit for them
- Emphasize SOET strengths and achievements
- Make it easy for students to view a list of Courses and programs offers by SOET.
- Provide information about job placement in SOET.
- Clearly show the admission deadlines, and offer a step-by-step description of the admission process in this pandemic situation.
- it's a way of representing the campus culture for prospective students.

Achieved:
Total number of final year students participated in this survey from each program:
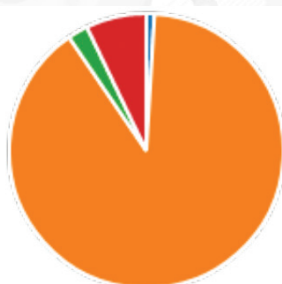

CSE	140
ECE	19
EE	20
CE	10
ME	21
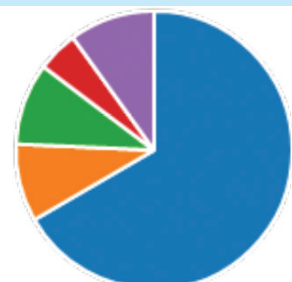
Program

- 🔵 MTECH — 2
- 🟠 BTECH — 188
- 🟢 MCA — 5
- 🔴 BCA — 15

Student Feedback Report for CDC

- 🔵 EXCELLENT — 39
- 🟠 SATISFIED — 117
- 🟢 NOT SATISFIED — 34

Internship Availed

- 🔵 FROM CDC — 158
- 🟠 SELF ARRANGED — 32
- 🟢 NOT AVAILED — 20
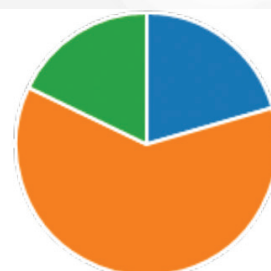
Plan for 2021:

- Provide Online Seminar, Workshop and other events for the enhancement of students' knowledge.
- Provide better placement opportunities for students.

If you have any query, get back to:

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Prof. (Dr.) T. Senthil Vadivel HOD of Civil Engineering	9865780843	tsenthil.vadivel@adamasuniversity.ac.in
Dr. Saikat Chaterjee HOD of Mechanical Engineering	8249893992	saikat.chaterjee@adamasuniversity.ac.in
Dr. Dipak Kumar Ghosh HOD of Electronics & Communication Engineering	8910426538	dipak@adamasuniversity.ac.in