DELHI TECHNOLOGICAL UNIVERSITY

MINUTES

of

4th Meeting

PLANNING BOARD

Date : **11.10.2021**

Time : **11:30 A.M.**

Venue : **Vigyan Hall, Administrative Block, DTU (Hybrid mode)**

Shahbad Daulatpur, Bawana Road, Delhi-110042

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Delhi Technological University

(Established by Govt. of NCT of Delhi vide Act 6 of 2009)
(Formerly Delhi College of Engineering)

Minutes of 4th meeting of the Planning Board held online on 11th October, 2022 at 11:30 A.M are as follows:

The following members were present :

1. Prof. J.P. Saini, Vice Chancellor, Delhi Technological University.
2. Prof. M.N. Doja, Director, Indian Institute of Information Technology, Sonepat, Haryana.
3. Prof. Anu Singh Lather, Vice Chancellor, Ambedkar University Delhi attended the meeting in virtual mode
4. Prof. Madhusudan Singh, Registrar, Delhi Technological University.

Prof. I.K. Bhat, Vice Chancellor, Manav Rachna University, Faridabad; Prof. Neharika Vohra, Former Vice Chancellor, Delhi Skill and Entrepreneurship University, Dwarka, Delhi and Prof. Rajive Kumar, Member Secretary, All India Council for Technical Education, Delhi could not attend the meeting due to their pre-occupations.

Prof. Nirendra Dev, Dean (Planning and Consultancy) and Sh. D.P. Dwivedi, I.A.S.(Retd.), Consultant (F&P) attended the meeting as special invitees.

Agenda 4.1 : Opening remarks by the Chairperson.

The Vice Chancellor welcomed all the members in the 4th meeting of the Planning Board. He informed the members that there was delay in convening this meeting and assured that in future the meetings will be held in time.

Agenda 4.2 : Confirmation of the minutes of 3rd meeting of the Planning Board held on 15.01.2021.

It was submitted to the Planning Board that the minutes of the 3rd meeting of the Planning Board of the University held on 15.01.2021, were circulated among all the members vide forwarding number F.DTU/Council/Plg. Board/ 33/2019/Vol-II/2414-22 dated 25.01.2021. No comments received.

Decision : The Planning Board confirmed the minutes of its 3rd meeting held on 15.01.2021.

Agenda 4.3 : Action taken report on the decisions taken in the 3rd meeting of the Planning Board held on 15.01.2021.

The Planning Board was informed that 6 agenda items were discussed in the 3rd meeting held on 15.01.2021. The details of the agenda, decisions taken thereon and the action taken by the University were given for information of the Hon'ble members as hereunder.

Item No.	Agenda Item	Decision Taken	Action taken by Council Branch	Action Taken Report
3.1	Opening remarks by the Chairperson.	Noted.	Noted.	Matter of record.
3.2	Confirmation of the minutes of 2nd meeting of the Planning Board held on 31.01.2020.	The Planning Board confirmed the minutes of its 2nd meeting held on 31.01.2020	Noted.	Matter of record.
3.3	Action taken report on the decisions taken in the 2nd meeting of the Planning Board held on 31.01.2020.	The Planning Board took the Action Taken Report on record.	Noted.	Matter of record.
3.4	Progress and Accomplishments of the University (2015-20).	The Planning Board considered the Progress and Accomplishments of the University 2015-20 and took it on record.	Decision conveyed to Dean (IRD) vide letter no. 2511 dated 29.01.2021.	Matter of record.
3.5	Approval for construction of Lecture/Theatre Room in Delhi School of Management (DSM) at DTU main campus.	The Planning Board considered and approved for construction of Lecture/Theatre Room in Delhi School of Management (DSM) at DTU main campus. The Board further advised that IT infrastructure/ Audio-Video conferencing should be also added in the existing proposal.	Decision conveyed to CPO vide letter no. 2512 dated 29.01.2021.	A multi-purpose hall with a capacity of 2500 persons is ready in the University. Therefore, this proposal was dropped.
3.6	Any other item with the permission of the chair.	No other item.	Noted.	Matter of record.

Decision : The Planning Board took the Action Taken Report on record.

Agenda 4.4 : Vision Document 2022-2047 of the University.

It was submitted to the Planning Board that the University prepared Vision Document – 2047 and submitted to the Government of NCT of Delhi. The salient features of the Vision Document 2047 of the University are as under:

VISION DOCUMENT – 2047

A). Research & Development

S. No.	Theme/Focus	Key Performance Indications / data points	Action Plan
1.	• Research in the emerging areas of technology, science, management and other related and/or interdisciplinary areas. • Creation of world-class environment for enabling education, research and innovation.	• Creation of centres of excellence in areas with potentially large societal impact. • To establish centre for excellence in emerging areas to promote research. • Attract best minds to enrich research.	• Increase in number of intellectual property rights including publications. • Promote and facilitate every research initiative. • Development of State-of-Art research infrastructure, facilities and support. • Funding avenues from government agencies, private industries, alumni and society.

B). Innovation & Entrepreneurship

S. No.	Theme/Focus	Key Performance Indications/ data points	Action Plan
1.	Strengthening research, innovation, incubation and entrepreneurship	Developing a critical mass of motivated students and faculties with entrepreneurial orientation and skills	• Developing an Innovative and Entrepreneurial Mind set through Series of Activities • Participation in co-curricular events related to Innovation and Entrepreneurship (I & E) conducted by the university. • Participation in events related to I&E organized by external organizations where student's/faculty members of the university sent to participate/represent. • Participation in Academic Programmes related to Innovation & Entrepreneurship (I & E) & IPR offered by the university.

			• Participation in full-fledged programmes/courses in Innovation / Entrepreneurship / Intellectual Property offered by the university (Diploma/ UG/ PG/ PhD) • Participation in short-term Certificate courses or Elective group(s)/ Major or Minor Specializations/ Core Credit courses offered by the university in Innovation and Entrepreneurship (I & E) of minimum 30 contact hours of duration. • Participation in I & E related MDP, EDP, FDP, Employment Generation Skill Development Programs conducted by HEI (Approved by Regulatory bodies of Universities or other State and Central government agencies) of minimum 30 contact hours of duration. • Participation in full-time faculty who have completed any specialized training programme of I & E (MDP, EDP, FDP, Certificate course of minimum 30 contact hours of duration) conducted by State and Central government agencies (for example AICTE, MIC, Ministry of MSME etc.), knowledge agencies etc.
		Building innovation & early stage enterprises by supporting & enabling access to resource and facilities at institute	• Dedicated Infrastructure & Facilities to Promote Innovation, Entrepreneurship and IPR. • Active Ideas/ Innovation centric Student Clubs in the university with access to co-working space/ work- stations for students with facilities & equipment available for I & E activities. • Existence of IPR Cell / Patent Facilitation Unit / Technology Transfer Centre at the institute.

			• Dedicated staff to oversee I & E activities under the leadership of a senior professor/Head of the institute. • Empanelled external experts/ agencies for mentorship regarding IPR, innovation development and enterprise development. • Ideas or innovative projects implemented in the community/Social Innovations. • Ideas or innovative projects/TRLs/Social Innovations implemented with financial support from HEIs. • Awards won by the student and faculty innovations at State/National/International Level in I & E related events
		In house competency development to serve potential and early stage entrepreneurs	• Trained Innovation Ambassadors at the university • Training /FDP on innovation and entrepreneurship and IPR. • Participation in Smart India Hackathon (SIH), Knowledge partnership programs.
		Strengthen the intra and inter-institutional linkage with ecosystem enablers at different	• Collaborations with incubation units outside the University either to provide or receive Incubation Support. • Collaborations with other universities as mentor/ mentee Institute to promote I&E in the Campus. • Collaborations with start-ups /Industry Associations /Knowledge Agencies to promote I & E activities and/or internship opportunities

C). Future of Education

S. No.	Theme/Focus	Key Performance Indications / data points	Action Plan
1.	Promoting equitable access and modernizing teaching, learning, and students' assessments to enhance employability	• Activities linked to modernizing teaching, learning, and students' assessments	• Curricula upgradation, • Creation and Dissemination of E-resources • Upgradation of physical infrastructure including digital infrastructure • Introduction of multidisciplinary courses and programs, • Development of Flexible Teaching-Learning Environment • Faculty development programs, seminar, workshop, Short Term Training Program, Skill Development Program and Conferences • Development of customized assessment tools
		• Initiatives to enhance employability	• strengthening industry-academia linkages, • employability skills training (soft,interview/technical) • Implementation of Competitive exam ecosystem • Industry Readiness Courses including future skills • Internships • Start-ups/ Entrepreneurs • students learning assessment at regular intervals including entry and exit, • strengthening industry internships and • project-based learning.
		• Equitable access	• Programs related to outreach and mentoring of high-school students to prepare them for higher education in STEM (Science, Technology, Engineering, Mathematics); • Support services such as bridge programmes, remedial programmes, guidance, and counselling for students from disadvantaged (socio economically) groups.
		• Support for technical assistance (TA) activities	• Developing guidelines for curriculum revision, • Evaluation of digital and blended delivery and students' assessment, • Review of financial assistance schemes for students.
		• Initiatives on Psychological well-being of students	• Research on individual differences and respective counselling requirements.

			• Policies to encouragement aptitude-based learning to avoid depression and feeling of incapability amongst students seeking higher education.
		• Initiatives for engagement in community development for creating responsible citizens	• Design and implementation of social welfare • programs and projects as a pre requisite for attaining degree/diploma
2.	strengthening research, innovation, incubation and entrepreneurship	• Support for establishment of Centers of Excellence (CoE) and PhD programs in priority research areas	• strengthen innovation eco-systems at University level • capacity-building on patent filing, technology transfer, and commercialization. • establishment of incubation cells and skill labs.
		• Research collaborations with cross national universities to prepare a multicultural trained human resource	• International collaborations in terms of MOUs, and faculty and student exchange programmes and research initiatives

D). Building Green Infrastructure & Sustainable Urbanisation

S. No.	Theme/Focus	Key Performance Indications / data points	Action Plan
1.	Infrastructure & Sustainable Construction	• Reduction in percentage use of waste material • Reduction in material having high carbon footprints. • Reduction in the use of cements. • Reduction in the use of natural material.	• Develop new material & techniques. • Promoting use of waste material. • Promoting use of alternate material of cement.
2.	Green Construction Technology		

The milestones to be achieved by the University upto 2047 in different areas are projected as under:-

S.No.		Present status in 2022	Planned to be achieved in 2027	Planned to be achieved in 2032	Planned to be achieved in 2037	Planned to be achieved in 2042	Planned to be achieved in 2047
1	**Total Intake**						
i)	Female intake	242	300	380	450	500	600
ii)	Foreign Students	595	700	900	1200	1500	2000
iii)	No. of students in UG courses	3370	4044	4853	5900	7200	8000
iv)	No. of students in PG courses	650	750	950	1150	1350	1550
v)	No. of programes offered at UG levels	17	20	25	28	30	35
vi)	No. of programes offered at PG levels	32	37	42	48	55	60
vii)	No. of programes offered at Ph.D levels	20	25	31	36	42	50
2	**Present Skill Integration courses within the University system**						
i)	certificate level courses	1	3	5	8	11	15
ii)	Diploma level courses	NIL					
3	No. of Teachers	337	525	700	1055	1325	1750
4	Mooc courses	NIL	3	7	7	8	25
5	Foreign collaborations						
i)	Collaboration with foreign Universities	33	40	50	60	80	100
ii)	Collaboration with foreign Industries	3	5	9	15	20	25
iii)	Industry collaboration	10	15	22	33	45	60

6	Plan to open off-share campuses of foreign universities						
7	**Excellence in Research**						
i)	Research publications	1562	3000	5000	6500	7800	9000
ii)	Patents	8	16	24	40	55	70
iii)	Technology transfer	3	20	30	40	55	80
iv)	Product Development	3	10	20	40	60	100
8	**Incubation Centers**						
i)	No. of start ups	46	80	95	135	180	250
ii)	No. of startups converted into successful company	12					50
9	Revenue Generation	136Cr	140Cr	200Cr	350Cr	500Cr	700Cr
10	Consultancies	25Cr.	35Cr	45Cr	55Cr	62Cr	70Cr
11	Scholarship Plans	18Cr	20Cr	25Cr	30Cr	40Cr	50Cr
12	University ranking						
i)	NIRF	38	28	20	15	12	Top 10
ii)	Times Higher Education Ranking	601-800	450-500	400-450	350-399	200-349	Top 1-200
iii)	QS World University Ranking		Top 400	Top 350	Top 300	Top 250	Top 200

TIMELINES

1	Timelines to improve above rankings	Next 25year DTU aspires to be among Top 200 universities of the world.
2	Timelines to get NAAC A++ accreditation	Next 10 years
3	Timelines to get NBA Accreditations	Next 5 years all programs will be accredited
4	Timeline for Digitization of University processes & Records	University already using an ERP System to maintain the complete lifecycle of the student data. The University is already planning to use e-office and using blended learning and flipped classroom
5	Timeline for Implementation of CBCS & courses to be offered under CBCS	All the courses of the University are being offered on the basis of CBCS curriculum since 2016. The University is in the process of revising its curriculum in line with NEP 2020 to further enhance interdisciplinary courses with multiple entry and multiple exit option
6	Timeline to Register with the Academic Bank of credits	Next 5 year
7	Timeline to be adopted in self-sustained energy models.	
i)	Solar energy	400kwp already installed and aim to install upto 1Mwp in next 10 years
ii)	Green buildings	The University is having a Water Harvesting system and using Solar light. The University has set-up/installed Electric Vehicle Charging Station. It shall be State of Art building which will be energy efficient, water conservative and eco-friendly

The above projections are subject to creation of adequate infrastructure and sanction of faculty and staff positions in the university.

Decision : **The Planning Board considered and approved the Vision Document – 2047 with the suggestion that the same should be sent to all Deans and HODs to enable them to prepare the timelines of the departments/branches on the basis of this Vision Document. After receipt of the same from all concerned, a booklet containing all above details on the pattern of Strategic Plan 2030 be published by the University.**

Agenda 4.5 : Approval for construction of multi-storeyed building (G+20) at DTU main campus.

It was submitted to the Planning Board that foreseeing the future infrastructural requirement of the University, Engineering Wing of the University has proposed for construction of one Multi-storeyed Building (G+20) at DTU main campus. The existing space for various departments likewise, T&P, Incubation Center, Data Center, Computer Center are facing extensive space problems due to expansion of the University in respect of departments. Therefore, it is proposed to enhance the common facilities by constructing a new building (G+20), near new building of Design Center and backside of Library building. This was decided in a meeting under the chairmanship of Hon'ble Vice Chancellor held on 02.07.2021 with all officers of the University. It was unanimously agreed that there is requirement of a Multi-storeyed Building (G+20) at DTU main campus. Accordingly, a draft estimate has been prepared amounting to Rs. 177 crores.

Decision : The Planning Board considered and approved for construction of multi-storeyed building (G+20) at DTU main campus.

Agenda 4.6 : Approval for construction of Multi-level Parking.

In its Strategic Plan of 2019-2030, the University proposed for construction of multi-level parking.

It was submitted to the Planning Board that recently construction of new buildings under Stage-I Phase-II has been completed. The strength of faculty and non-teaching staff has also increased along with the number of students. The University is facing an acute shortage of parking space in the premises. It was proposed to construct a multi-level parking in the University in an appropriate area.

Decision : The Planning Board considered and approved in principle for construction of a Multi-level Parking in the University. However, it was suggested that in the month of November, 2022 a survey to assess the volume of traffic may be undertaken by Chief Security Officer. In the survey all passenger vehicles (private as well as commercial) such as 2-wheelers, 4-wheelers, taxis and rikshaws should be mapped. Chief Project Officer may identify the appropriate place as per Layout Plan of the University for construction of the multi-level parking.

Agenda 4.7 : Strategic Plans of departments/branches of the University for the year 2022-24.

The Planning Board was informed that different academic departments have submitted their Strategic Plan for two years (2022-2024) as under:

1. Electrical Engineering Department

Strategic Plan 2022-24

Education:

Total Number	Existing	Target	Date of Achievement
DTU Ph.D. Scholarships	31	31+9*=40	2024
Junior Research Fellowship of UGC, CSIR, DST, DBT etc. funding agencies	05	5+5*=10	2024
MOOC Developed	00	02	02 (In process)
Percentage of Female Students in the Department	11%	15%	2024
Minor Specialization	03	----	

No. of Foreign Students	Existing	Target	Date of Achievement
UG	40	40+10*=50	2024
PG	09	09+06*=15	2024
Ph.D.	02	05+05*=10	2024

Research:

Sr. No.	Action	Existing	Target(s)	Target Date of Achievement(s)
1.	Citations of the department	11924	13000	2024
2.	Number of SCI/SCIE/SSCI/Scopus Indexed Publications	1063	1200	2024
3.	Number of Ph.D. students in the department	147	160	2024
4.	Number of Research Projects (more than 5 Lacs each)	11	11+9*=20	2024
5.	Number of Consultancy Projects (More than 5 Lacs each)	8	8+5*=13	2024
6.	Number of Consultancy Projects (between 1 Lac to 5 Lac)	3	3+2*=5	2024
7.	Number of Patents:- (a) Filed	05	06	2024
	(b) Published	03	04	2024
	(c) Granted	00	02	2024
8.	Centre of excellence in emerging areas of Technology/Science/ Management & allied areas	01 (CoE EVRT)	01+01*=02 (*CoE RED)	2024
9.	Commercially sustainable Products	NIL	01	2024
10.	Number of research laboratories	12 Research Areas	12+5*= 17	2024
11.	MoUs with National & International Institutions/ Organizations	6	6+4*=10	2024

Technical and Non-Technical Staff:

S.No.	Number of technical staff in position:-	Sanctioned Posts (Erstwhile DCE)	Existing	Vacant	Additional Requirement for Proposed Labs	Additional Total Requirements	Total
1.	Technical Officer/Foreman	03	02	01	+02*	03	05
2.	Senior Technical Assistant/ Sr. Mechanic	10	02	08	+08*	16	18
3.	Junior Technical Assistant	---	07	05	+04*	09	16
4.	Jr. Mech.	03	02	01	---	01	03
5.	Draftsman	01	---	01	---	01	01
	Total	17	13		12	30	43

S.No.	Number of technical staff in position	Existing	Additional Requirement	Total
1.	Ministerial Staff	01	+01*	02
2.	Multi Tasking Staff	11	+12*	23
	Total	12	13	25

Infrastructure: New UG Laboratories

Name of Lab	Significance
1. Basic Electrical Engineering Lab (EE101/102)	• At present BEE lab is being conducted in 03 labs. There is only one dedicated lab with capacity of 25 students and the remaining 55 students (approximately) perform experiments in other labs on rotation basis. Therefore it is proposed that lab of capacity of 90 students may be provided.
2. Electric Drives Lab (EE302) 3. Microprocessor Lab (EE306) 4. Digital Systems Lab (EE204)	• Core Courses and there is no dedicated lab space for these labs. • These labs were shared with other laboratories such as Power Electronics, LIC Lab, Control Systems Lab • Number of Students have increased so not possible to conduct the lab in the existing infrastructure
5. Computational Lab	• There are number of core and electives courses offered by the department in which the students are required to perform simulations using different software's MATLAB, ANSYS, PSIM, ETAP, Mi-Power.

Infrastructure : New PG Laboratories

Name of Lab	Significance
1. Power Electronic Converters and Control Lab (PES 501/502, PSY501)	• A new M.Tech Power Electronics System program has been introduced w.e.f AY 2020-21. • Labs of three core courses of M.Tech will be conducted in this lab. Due to COVID-19 these labs were conducted in online mode.
2. Advanced Power System Analysis Lab (PSY 501)	• As such there is no dedicated lab for M.Tech Power System. • M.Tech students are performing experiments in UG labs and most of the experiments are of B.Tech level due to limited space • Further 04 UG labs are being conducted in the Power System Lab

Infrastructure: Research Laboratories

Name of Lab	Status
Grid Interactive Power Electronics Interface Lab	Under Progress
Power Quality Research Lab	Under Progress
Robotics and Automation Lab	----
Intelligent Sensors & Instrumentation System	----

Infrastructure : Budget

S. No.	Nature of work	Proposed Budget for AY 2022-23
1.	Establishment of New Teaching Labs (UG+PG)	38,404,993/-
2.	Upgradation of Existing Teaching Labs (UG+PG)	42,999,463/-
3.	Upgradation of Existing Research Areas	28,346,667/-
4.	Establishment of New Research Labs	90,00,000/-
5.	Establishment of New Consultancy Labs	500,000/-
6.	Student Room	5,000,000
	TOTAL AMOUNT	**12,42,51,123/- (Rs. Twelve crore forty two lakhs fifty one thousand one hundred twenty three)**

Other details:

- In each UG/PG lab there is a dedicated space for Research work.
- In these research areas the UG and PG students are performing simulations and developing hardware for their major project.
- Total 12 research areas have been developed in the department.
- In the same manner 04 more research areas will be developed in the newly proposed UG labs.
- Setting up of Advanced Test Lab for Consultancy Work is in progress.
- Setting up of CoE for Renewable Energy Development
- Engagement of Foreign/ Adjunct Faculty
- To apply for NBA of M.Tech (PES) in AY 2022
- Increase Industry institute interaction by engaging industry experts to teach some portion of the syllabus of at least 10% of the subjects
- Increase the number of Ph.D. degree awarded to 10 per year
- To develop the Departmental library
- Establishment of Student Room for
- One International Conference to be organized bi-annually
- Two FDPs to be organised annually

2. Mechanical Engineering Department

Academic details

Sr. No.	Action	Existing (2021-22)	Target(s) (2024-25)	Date of Achievement(s)
1.	Number of UG Students	1700	No Change	
2.	Number of PG Students	83	220	2024
3.	Number of Ph.D. Students	195	300	2024
4.	Annual Intake:-			
	(a) UG	456	456	No Change
	(b) PG	44	110	2022-23
5.	Number of UG Programs	3	3	No Change
6.	Number of PG Programs	2	5	2022-23
7.	DTU Ph.D. Teaching-cum-Research Fellowships	37	50	2022-23
8.	Junior Research Fellowship of UGC, CSIR, DST, DBT etc. funding agencies	2	5	2024
9.	Development of MOOCs Courses	-	5	2024
10.	Percentage of Female Students in the Department	6.1%	15%	2024
11.	Number of Foreign Students:-			
	(a) UG	49	100	2024
	(b) PG	2	20	2024
	(c) Ph.D.	1	20	2024
12.	Minor Specialisation:- (a) UG	-Mechanical -Production -Automotive -Energy -Operation and SC -Design & Automation	No Change	

	(b) PG	(a) THERMAL (b) PRODUCTION	M Tech (Industrial Engineering and Management)	2022-23
			M Tech (Computer Aided Analysis and Design)	
			M Tech (Energy Systems and Management	

Faculty & Staff:-

Sr. No.	Action	Existing	Target(s)	Date of Achievement(s)
1.	Number of sanctioned teaching posts :-			
	(a) Professor	12	15	2024
	(b) Associate Professor	26	32	2024
	(c) Assistant Professor	82	90	2024
2.	Number of faculty in position :-			
	(a) Professor	**5**	**12+CAS**	**2024**
	(b) Associate Professor	**14**	**26+CAS**	**2024**
	(c) Assistant Professor	**21**	**82-CAS**	**2024**
3.	Number of sanctioned technical posts:-			
	(a) Technical Officer/Foreman	**8**	**8**	**2024**
	(b) Senior Technical Assistant	**46**	**46**	**2024**
	(c) Technical Assistant			
	(d) Junior Technical Assistant	**10**	**10**	**2024**
	(e) Others			
4.	Number of technical staff in position:-			
	(a) Technical Officer/Foreman	**6**	**8**	**2024**
	(b) Senior Technical Assistant	**9**	**46**	**2024**
	(c) Technical Assistant	-		
	(d) Junior Technical Assistant	**5**	**10**	**2024**
	(e) Others			
5.	Number of Ministerial Staff	**0**	**4**	**2024**
6.	Number of Multi-Tasking Staff	**1**	**10**	**2024**

Details of ongoing research projects (more than 05 lacs):-

Sr. No.	Title	Funding Agency	Grant	Date of start of Project	Name of PI
1	Development of a Stand-Alone Spray Assisted Solar Thermal Desalination System	DST	517880	06-12-2019	Dr. Anil Kumar
2	Investigation of Stones as Sensible Thermal Heat Storage Materials for Concentrated Solar Power Applications	SERB	24,85,934	3-3-2022	Dr Anil Kumar
3.	**Design and development of an intelligent unmanned aerial vehicle applied to open cast minefield surveillance for real-time monitoring, hazards and vulnerability assessment**	**IHFC, Technology Innovation Hub for Cobotics, IIT Delhi**	**49.98 Lakhs**	**3-10-2021**	**Prof. Vikas Rastogi**

Details of proposed Research Projects:-

a) Design and development of reliable, energy efficient and cost effective spray assisted solar desalination system
b) Design and development of energy efficient and cost effective greenhouse
c) Study of heavy metals accumulation and risk assessment in agricultural crops in selected areas of Indo-ASEAN region
d) ICT based smart energy management system for built infrastructure with renewable resources
e) A project proposal for harnessing the solar energy in Ladakh worth is underway

Details of existing research laboratories:-

Advanced Machining Lab, Design Centre, Biodiesel Lab, Metal Forming Lab, Theory of Machine Lab

Details of proposed research laboratories:-

CFD Lab, CAD Lab, Robotics Lab, Industrial Engineering Lab.

3. Department of Information Technology

Education

To acquire in-depth knowledge of software and hardware techniques, which provide a solid foundation to pursue continuing education and nurture the talent for innovation and research. Further, to nurture talent in leadership qualities, at levels appropriate to their experience, which addresses issues in a responsive, ethical, and innovative manner. To excel in careers by being a part of success and growth of an organization with which they are associated. Holistic development of students by active participation in self-study courses, seminars, research projects focusing on workshops, conferences for lifelong continuous learning.

Academic details: -

Sr. No.	Action	Existing	Target(s)	Date of Achievement(s)
1.	Number of UG Students	180*4=720	240*4=960	01/08/2024
2.	Number of PG Students	25*2=50	30*2=60	01/08/2024
3.	Number of Ph.D. Students	32	40	01/08/2024
4.	Annual Intake:- (a) UG	180	240	01/08/2024
	(b) PG	25	30	01/08/2024
5.	Number of UG Programs	01	02	01/08/2024
6.	Number of PG Programs	01	01	01/08/2024
7.	DTU Ph.D. Teaching-cum Research Fellowships	06	10	01/08/2024
8.	Junior Research Fellowship of UGC, CSIR, DST, DBT, etc. funding agencies	03	06	01/08/2024
9.	Development of MOOCs Courses	00	05	01/08/2024
10.	Percentage of Female Students in the Deptt.	14.97	20.00	01/08/2024

11.	Number of Foreign Students:- (a) UG	31	35	01/08/2024
	(b) PG	01	02	01/08/2024
	(c) Ph.D.	00	02	01/08/2024
12.	Minor Specialization:- (a) UG	03	05	01/08/2024
	(b) PG	01	02	01/08/2024

Details of proposed MOOCs Courses to be developed:-

Sr. No.	Title	Name of Faculty	Proposed date of Completion
01	High Speed Networks and Applications	Ms Anamika Chauhan	June 2022
02	IoT with Cloud Computing and its applications	Dr. Jasraj Meena	December 2022
03	Digital Forensics	Dr Ritu Agarwal	June 2023
04	Image processing	Dr. Priyanka Meel	June 2023
05	Deep Learning	Dr. Bindu Varma	December 2023

Research / Patent

To encourage students for publication in B.Tech / M.Tech Projects. New research groups are formed for filing patents. Hackathons provide a platform for hands-on learning which leads to new ideas for patents filling.

Research Parameters/Metrics

Sr. No.	Action	Existing	Target(s)	Date of Achievement(s)
1.	h-index of the department	20	25	01/08/2024
2.	Citations of the department	1723	2500	01/08/2024
3.	Number of SCI/SCIE/SSCI/Scopus Indexed Publications	300	400	01/08/2024
4.	Number of Ph.D. students in the department	32	40	01/08/2024
5.	Number of Research Projects (more than 5 Lacs each)	00	02	01/08/2024
6.	Number of Consultancy Projects (More than 5 Lacs each)	00	01	01/08/2024
7.	Number of Consultancy Projects (between 1 Lac to 5 Lac)	00	01	01/08/2024
8..	Number of Patents:- (a) Filed	02	03	01/08/2024
	(b) Published	02	04	01/08/2024
	(c) Granted	02	02	01/08/2024
9.	Centre of excellence in emerging areas of Technology/Science/ Management & allied areas	00	01	01/08/2024
10.	Commercially sustainable Products	00	01	01/08/2024

11.	Number of research laboratories	02	05	01/08/2024
12.	MOUs with National & International Institutions/Organizations	00	02	01/08/2024

Faculty & Staff:-

Sr. No.	Action	Existing	Target(s)	Date of Achievement(s)
1.	Number of sanctioned teaching posts :-			
	(a) Professor	04	06	01/08/2024
	(b) Associate Professor	06	08	01/08/2024
	(c) Assistant Professor	19	22	01/08/2024
2.	Number of faculty in position:-			
	(a) Professor	03	06	01/08/2024
	(b) Associate Professor	01	08	01/08/2024
	(c) Assistant Professor	07	22	01/08/2024
3.	Number of sanctioned technical posts:-			
	(a) Technical Officer/Foreman	00	00	01/08/2024
	(b) Senior Technical Assistant	00	00	01/08/2024
	(c) Technical Assistant	01	07	01/08/2024
	(d) Junior Technical Assistant	--	--	
	(e) Others	--	--	
4.	Number of technical staff in position:-			
	(a) Technical Officer/Foreman	--	--	
	(b) Senior Technical Assistant	--	--	
	(c) Technical Assistant	01	10	01/08/2024
	(d) Junior Technical Assistant	--	--	

	(e) Others	--	--	
5.	Number of Ministerial Staff	01	02	01/08/2024
6.	Number of Multi-Tasking Staff	05	10	01/08/2024
7.	Number of International faculty engaged	00	00	01/08/2024
8.	Number of faculty deputed for higher studies/PDFs	00	00	01/08/2024
9.	Number of faculty members sent to industry	00	00	01/08/2024
10	Number of Adjunct/Honorary Faculty	00	00	01/08/2024

Details of new Laboratories proposed for UG Programs: -

A) A new Deep learning lab for the study of advanced neural networks. Approx. cost is Rs. 90 lacs for GPU-based machines.

B) IOT and Cloud Computing Lab for the study of Internet of Things and Cloud Computing approx. the cost is 90 Lakhs for equipment and software.

Details of new Laboratories proposed for PG Programs: -

A) Machine Learning lab carries out research and develops different theoretical foundations for machine learning such as Reinforcement Learning, Deep Learning, Statistical Learning Theory, Multi-agent Systems, Game Theory and Mechanism Design, Blockchains, Explainable and Fair AI. Approx. cost is 95 lakh.

B) High-performance computing Lab for the study of High Computing applications. The approximate cost is 1 crore needed.

Details of proposed centers of excellence in emerging areas of Technology/ Science/Management & Allied Areas: -

Cyber Security Centre that will reduce the risk of cyber security threats by protecting University technology assets. Services include secure computing such as data protection and encryption, and vulnerability scans by employing High-Performance Computing machines approx. rupees one crore investment by 2024.

Data Analytics Center that will be used for data analysis. Approx. rupees 80 lakh will be invested by 2024 for purchasing tools for required center approx. rupees one crore investment by 2024.

Details of new proposed UG/PG/PhD laboratories: -

- **Machine Learning and Deep Learning Lab:**

The Laboratory is planned for the design and development of new algorithms and techniques for pattern recognition machine learning for real world applications. New algorithms can be tested on real world datasets in Computer vision, natural language processing and data mining. The aim would be to achieve high performance using faster algorithms.

Approximate Cost required: 90 Lacs

Date of Completion: 01/08/2024

- **Cloud & IoT Security Lab Laboratory:**

The aim of this proposed Lab is to create facilities for UG/PG/PhD students to enhance the efficiency of computing & security in everyday tasks in both Cloud computing and IoT. The IoT generates massive amounts of data, and cloud computing provides a pathway for this data to travel. This laboratory needs good qualities of computing resources such as (workstations, GPUs, etc.) and different sensors and softwares as per requirements of UG/PG/PhD students for study of various light weight solutions.

Approximate Cost required: 50 Lacs

Date of Completion: 01/08/2024

- **Human-Computer Interaction Lab**

The purpose of this lab is to study how humans interact with computers, how we can make an efficient user interface, practical implementations of different applications of human-computer interaction such as human-robot interaction, hand gestures controlled devices, emotion-based system, brain-computer interface, virtual reality, etc. The major goal of this lab is for students to work on IT401-B.Tech Project-1 and IT402-B.Tech Project-2 in many real-time applications such as hand gestures to control household devices, operating TV menus, emotion-based room light control, and assistive devices etc. Students can visualize such systems and implement them in real-time. This lab may be utilize by students of bachelor of design.

Approximate Cost required: 71 Lacs

Date of Completion: 01/08/2024

- **Multimedia Data Analytics Research Laboratory:**

The aim of this lab is to perform real-time data analytics for the following applications:

Data analysis and multimedia information retrieval, Multimodal sentiment analysis, Social media data analytics,

3D Computer Vision, Image processing and pattern recognition

Social multimedia signal processing

Approximate Cost required: 70 Lacs

Date of Completion: 01/08/2024

Details of proposed CoEs in emerging areas of Technology Science/ Management & Allied Areas

Cyber Security Centre that will reduces risk of cyber security threats by protecting University technology assets. Services include secure computing such as data protection and encryption, and vulnerability scans by employing High Performance Computing machines through approx. Rs. 01 crore will be invested by 2024.

AI Center that will be used for research and analysis. Approx. Rs. 2.5 crore will be invested by 2024.

Details of Proposed STC/FDP

- One Week Faculty Development Programme (FDP) on Recent trends in Deep Learning and Machine Learning proposed by Dr. Bindu Verma & Ms. Varsha Sisaudia. The lectures / lab sessions will be taken by experts from the department from academic institutions, R&D organizations and industry. It is expected to have 60 participants. Registration kit and hospitality shall be extended to all registered participants. Proposed budget for 60 participants in details is Rs. 3 lacs.
- One Week FDP on Internet of Things (IoT), Cloud Computing and its applications. The lectures / lab sessions will be taken by experts from the department from academic institutions, R&D organizations and industry. It is expected to have 60 participants. Registration kit and hospitality shall be extended to all registered participants. Proposed budget for 100 participants in details is Rs. 5 lacs.

Any other details: -

- ✓ A fund of Rs.15 lacs for consumable items will be needed for smooth functioning of departmental Labs (purchase of computer-related items)
- ✓ The total approx. budget of the Department for the year 2022-24 will be needed Rs. 250.02 Lacs.

4. DELHI SCHOOL OF MANAGEMENT

Education:

1. Annual live projects for students – Six.
2. One MDP per year.
3. Six events of student societies per year.
4. Introduction of a new UG program in management.

Research:

1. To have Two active MoUs with reputed National/ International Universities.
2. Two sponsored Research Projects.
3. Establish lab in the area of Digital Marketing and Finance.
4. To organize one International Conference.
5. To organize one FDP per year.
6. To increase number of Ph.D. students to 65

Innovation and Entrepreneurship:

1. Two new start-ups.
2. Increase consultancy income to 10 lakhs in two years.

Faculty and Staff:

1. Encourage faculty to publish at least one quality research paper per year.
3. To encourage faculty to attend at least one capability enhancing program per year.
4. To encourage faculty to develop MOOC Courses in their respective areas of expertise.
5. Recruitment of faculty and staff against the sanctioned intake.

Infrastructure:

1. To add more e-databases, books and simulation softwares.
2. Purchase of software to equip teaching and research lab.
3. To develop a recreation room with a few indoor games.
4. Creation of new classrooms and labs for the new UG program.

Estimated Budget:

Action	Estimated Budget
New UG Program	Expenditure would be required for creation of new facilities such as classrooms, labs, etc.
International Conference	Rs.1.5 lakh
FDP	Rs. 1.5 lakh per year
Software to equip Teaching and Research Lab	Rs. 20 lakh
E-databases, Books and Simulation Software	Rs. 5 lakhs per year
Recreation room with a few Indoor Games	Rs. 2 lakh

5. Department of Biotechnology

Details of UG & PG Courses: -

Sr. No.	Program	Annual Intake	Year of Start	Number of students admitted in 2021-22
1	B.Tech Biotechnology	83	2004	67
2	M.Tech (Bioinformatics)	25	2010	08
3.	M.Tech (IBT)	25	2013	21
3	M.Sc (Biotechnology)	55	2019	53

Future Academic Plan: -

Sr. No.	Action	Existing	Target(s)	Date of Achievement(s)
1.	Number of UG Students	279 (67+81+68+63)	310	31-07-2024
2.	Number of PG Students	131	160	31-07-2024
3.	Number of Ph.D. Students	52	65	31-07-2024
4.	Annual Intake: - (a) UG	83	83	31-07-2024
	(b) PG	113	150	31-07-2024
5.	Number of UG Programs	01	01	31-07-2024
6.	Number of PG Programs	03	04	31-07-2024
7.	DTU Ph.D. Teaching-cum-Research Fellowships	0	01	31-07-2024
8.	Junior Research Fellowship of UGC, CSIR, DST, DBT etc. funding agencies	16	20	31-07-2024
9.	Development of MOOCs Courses	00	01	31-07-2024

10.	Percentage of Female Students in the Department	40.58	50	31-07-2024
11.	Number of Foreign Students: - (a) UG	05	10	31-07-2024
	(b) PG	02	04	31-07-2024
	(c) Ph.D.	01	02	31-07-2024
12.	Minor Specialization: - (a) UG	03	03	31-07-2024
	(b) PG	00	02	31-07-2024

Details of new UG/PG Program(s)

Sr. No.	Program	Annual Intake	Proposed date of start of program
1	M.Sc. Food Technology	35	31-07-2023

Research Parameters/Metrics

Sr. No.	Action	Existing	Target(s)	Date of Achievement(s)
1.	h-index of the department (cumulative of all faculty)	352	400	31-07-2024
2.	Citations of the department	24719	26000	31-07-2024
3.	Number of SCI/SCIE/SSCI/Scopus Indexed Publications	339	360	31-07-2024
4.	Number of Ph.D. students in the department	52	60	31-07-2024
5.	Number of Research Projects (more than 5 Lacs each)	02	04	31-07-2024
6.	Number of Consultancy Projects (More than 5 Lacs each)	00	01	31-07-2024

7.	Number of Consultancy Projects (Between 1 Lac to 5 Lac)	00	01	31-07-2024
8..	Number of Patents: - (a) Filed	0		
	(b) Published	0		
	(c) Granted	0		
9.	Centre of excellence in emerging areas of Technology/Science/ Management & allied areas	0	01	31-07-2024
10.	Commercially sustainable Products	0		
11.	Number of research laboratories	08	12	31-07-2024
12.	MOUs with National & International Institutions/Organizations	00	02	31-07-2024

Faculty & Staff: -

Sr. No.	Action	Existing	Target(s)	Date of Achievement(s)
1.	Number of sanctioned teaching posts: -			
	(a) Professor	02	03	31-07-2024
	(b) Associate Professor	05	05	31-07-2024
	(c) Assistant Professor	08	08	31-07-2024
2.	Number of faculty in position: -			
	(a) Professor	03	04	31-07-2024
	(b) Associate Professor	00	02	31-07-2024
	(c) Assistant Professor	06	06	31-07-2024
3.	Number of sanctioned technical posts: -			
	(a) Technical Officer/Foreman	01	01	31-07-2024
	(b) Senior Technical Assistant	00	01	31-07-2024

	(c) Technical Assistant	05	10	31-07-2024
	(d) Junior Technical Assistant	03	05	31-07-2024
	(e) Others			
4.	Number of technical staff in position: -			
	(a) Technical Officer/Foreman	00	01	
	(b) Senior Technical Assistant	00	01	31-07-2024
	(c) Technical Assistant	03	05	31-07-2024
	(d) Junior Technical Assistant	01	03	31-07-2024
	(e) Others			
5.	Number of Ministerial Staff	00	01	31-07-2024
6.	Number of Multi-Tasking Staff	04	04	31-07-2024
7.	Number of International faculty engaged	00	02	31-07-2024
8.	Number of faculty deputed for higher studies/PDFs	00	01	31-07-2024
9.	Number of faculty members sent to industry	00	01	31-07-2024
10	Number of Adjunct/Honorary Faculty	01	01	31-07-2024

Details of new Laboratories proposed for UG/ PG Programs: -

Establishment of three new teaching laboratories for UG/PG programs: -

S.no	Lab (capacity 30 students)	Faculty In-Charge	Cost
1.	Teaching laboratory 1	Prof. Pravir Kumar	1 Crore
2.	Teaching laboratory 1	Prof. Jai Gopal Sharma	1 Crore
3.	Teaching laboratory 1	Prof. Yasha Hasija	85 Lacs
	Total		**2.85 Crores**

Details of proposed centers of excellence in emerging areas of Technology/ Science/Management & Allied Areas: -

Center for Diagnostic and Disease control (CDDC)

We are setting up a Center for Diagnostic and Disease control to create a dynamic translational research environment in the university so that we can create a strong translational research team, Screening and development of drugs/biomolecules, In vivo study to testing medical plants' drug and Preclinical and clinical trials in association with leading hospitals could be carried out.

Details of proposed research laboratories: -

a. Development of Central Instrumentation Facility

Following equipment's will be procure to upgrade the Central Instrumentation Facility-

- NMR
- Amino acid analyzer
- GC-MS/MS
- LC-MS/MS
- FACS
- Confocal microscope
- Green House
- Animal House
- GPU Server
    - 2 x Intel® Xeon® Xeon E-2176M processors
    - GPU: 8 x Nvidia Quadro P5000 with 16GB
    - RAM: 128GB (4 x 32GB) DDR4-2666 ECC RDIMM
    - HDD: 6 x 2000GB, 7200RPM, Enterprise SATA
- High performance computing facility
    - Servers
    - GPUs
    - 64 Intel Xeon core processors, 256-500 RAM, HDD 50 TB
- - 80 °C Refrigerator
- Sequencing Facility
- Real Time PCR Facility
- ICP-MS
- Growth Chamber for plants
- FTIR
- Muffle Furnace
- TGA (Thermogravimetric Analysis)
- Moisture Analysis
- Pressure reactor

b. Development of Three Teaching Laboratories

S.no	Lab (capacity 30 students)	Faculty In-Charge	Cost
1.	Teaching laboratory 1	Prof. Pravir Kumar	1 Crore
2.	Teaching laboratory 1	Prof. Jai Gopal Sharma	1 Crore
3.	Teaching laboratory 1	Prof. Yasha Hasija	85 Lacs
	Total		**2.85 Crores**

6. Department of Humanities

Details of proposed MOOCs Courses to be developed:

Sr. No.	Title	Name of Faculty	Proposed date of Completion
1.	Communication Skills	Dr. R.R. Dwivedi	January 2023
2.	TECHNICAL COMMUNICATION	PARINITA SINHA	June 2023

Faculty and Staff

Sr. No.	Action	Existing	Target(s)	Date of Achievement(s)
1.	Number of Sanctioned teaching posts			
	(a)Professor	1	1	
	(b)Associate Professor	2	2	
	(c) Assistant Professor	9	9	
2.	Number of faculty in position	--	--	--
	(a)Professor	2	3	
	(b)Associate Professor	2	3	
	(c)Assistant Professor	1	3	
3.	Number of Ministerial Staff	1	1	
4.	Number of Multi- Tasking Staff	1	2	

Sr. No.	Action	Existing	Target(s)	Date of Achievement(s)
1.	h-index of the department	10	15	
2.	Citations of the department	400	500	
3.	Number of SCI/SCIE/SCOPUS Indexed publication	20	40	
4.	Number of PhD students in the department	26	28	
5.	Number of Research Projects (More than 5 Lacs each)	01	02	

7. University School of Management and Entrepreneurship

Details of proposed new UG/PG Programs(s)/ proposed to be approved

S.No.	Program	Annual Intake	Proposed date of start of program
1.	MA Applied Economics	60	2022-23
2.	BBA – IEV	30	2022-23
3.	Executive MBA – Data Science and Analytics	30	2023-24

Research

The research output of faculty and scholars has been slowly increasing and is expected to increase as the doctoral research programs progresses, and number of faculty overall and faculty engaged in research increases during this period.

There is an effort for sponsored research programs, and three proposals have so far been made. It is expected that with a more concerted effort at least two sponsored research proposals will be awarded to faculty at USME in the next two years.

The following table summarizes the efforts so far and plans for the future.

S. No	Activity/Outcome	Target 2021	Achieved	Target 2024
1.	SCI/SCIE Indexed publication	10	5	20
2	Awards/DTU Research Excellence/Other	2	3	10
3	PhD Scholars in Department	40	35	45
4.	PhD Degrees awarded	-	-	10
5.	Projects – sponsored research/consulting	One	Nil	Two

Faculty and Staff Strength

The following table shows the existing and proposed faculty and staff strength required for smooth functioning and growth of the USME.

Sr. No.	Action	Status in 2019-20	Target 2021-22	Achievements	Target 2024
1.	Number of sanctioned teaching posts:-			8 Faculty positions proposed in IEV discipline, approved by	
	(a) Professor	8	9		9

	(a) Associate Professor	15	17	BoM, under sanction process	17
	(b) Assistant Professor	45	50		50
2.	Number of faculty in position:-				
	(a) Professor	3 (1 on deputation, 2 on contract)	5	5 (Four Visiting Positions)	At least 5 at regular position
	(b) Associate Professor	0	6	Final Position – 3 faculty (two visiting) 3 Regular faculty and 2 visiting appointed (2020-2022), of which 2 regular faculty have reverted.	6
	(c) Assistant Professor	15	30	14	35

3.	Number of sanctioned technical posts:-				
	(a) Technical Officer/Foreman	Nil	Nil	Not required	Nil
	(b) Senior Technical/Assistant	1	1	0	1
	(c) Technical Assistant	2	2	0	1
	(d) Junior Technical Assistant	2	2	0	1
	(e) Others	53	53	5	12
5.	Number of Ministerial Staff	7	11	10	13
6.	Number of Multi-Tasking Staff	9	11	10	12
7.	Number of International faculty engaged	0	2	0	5
8.	Number of faculty deputed for higher studies/PDFs	0	2	0	2
9.	Number of faculty members sent to industry	0	4	0	2
10.	Number of Adjunct/Honorary Faculty	2	5	1	5

Key initiatives for 2022-24 period

1. **Industry engagement**: wider engagement with industry in the form of the following:
   a. Guest faculty from Industry: Currently few guest faculty are engaged from industry particularly for MBA-IEV. However, twenty five percent of all guest faculty will be targeted from industry in coming period, where around 30-40 guest faculty are seen as likely, for the other programs such as MBA, MBA Analytics, Economics etc.
   b. Guest lectures: With the help of senior alumni from DCE with premier management institute education, all courses in each program would have at least two guest lectures on the related topics, from people from industry.
   c. Training programs for industry executives: this is mentioned in detail in the next section.
   d. MOUs with leading firms for joint projects, research, such as in the case of the current discussion with Dell Computers.

2. Strengthening of MBA program as a national level premier program
   a. Review of curriculum has been initiated and alumni of DCE with premier management institute education are being identified for inputs for the curriculum and industry relevance, making it a cutting edge program.
   b. More applied focus with case study based curriculum, pedagogy and skill development is being brought in through faculty training in Case Methods, and other FDPs.
   c. The structure will be reviewed during this period to make it relevant, impactful and providing students with a platform to compete with the best at the national level.
   d. NBA accreditation is also being planned for the PG courses at USME, including MBA.

3. Launch of the new programs.
   a. BBA-IEV. A section of the current BBA program is proposed to be earmarked for the BBA-IEV track leading to the entrepreneurship focused BBA curriculum, and BBA-IEV degree, or integrated BBA-MBA-IEV degree. Intake is planned from the successful participants of the Delhi Government's vaunted Business Blaster's entrepreneurship program, and if needed other participants who may be wishing to get admitted to this program aimed at mentoring, education and facilitating new ventures started by the participants of BBA-IEV.

   b. MA Economics program has been approved by the Academic Council, and is proposed to be fleshed out in full during this period and launched. Intake of 60 candidates through an entrance exam is being proposed, and requisite faculty strength in Economics discipline is also being proposed during this period to ensure a strong program delivery.

c. Executive MBA- Data Sciences and Analytics is approved in principle by the Academic Council in its 32nd Meeting and will be launched with faculty level collaboration with Computer Science and Applied Mathematics Departments in AY 2023-24. The target audience is to prepare mid-level executives for roles in Data Science/Analytics. There may possibly be a collaboration with overseas Universities in this program to offer a dual degree, which will be put up for approval subsequently after due processes.

4. **Advanced Analytics Lab**

a. **Objective:** The **A**dvanced **D**ata **A**nalytics **L**ab (ADAL) will be a centre for learning the advanced statistical methodology, machine learning algorithm along with open-source tools and technologies. The State-of-the-art research in the field of advanced analytics will also have collaboration with government and industry to analyze, develop and implement the advanced analytics-based solutions. This will be drive on the basic principle of learning analytics for all.

b. **Hardware Requirement:** Lab is already having 60 + systems with good configurations computers and need one high-end server with high computing power (GPU enabled) to make analytics, machine learning and deep learning possible with in lab as well over cloud platform. The system should be made accessible from outside the campus to key people through security and authorization process.
Software Requirement: Most of the advanced analytics, graph analytics and machine learning solutions will be developed on open-source tools/technologies and will use the already available proprietary tools with us.

c. **Creation of Capabilities:** USME will use the internal as well as the external capabilities to learn, develop and deploy our advanced analytics, machine learning and AI based solution for different purposes for government/PSU/Industry etc.
Target Users: All industry/ Government/ PSU employees and Interns/ UG/ PG/ Research Scholars.

d. **Collaborations/ Sponsored/Consultancy Project: The Lab will also** collaborate with industry, academia as well as various government and social sectors to identify and work on diverse business problems. Collaboration with industry will help **ADAL** to create several application based teaching case studies for practical learning.

e. **Short-term/ long-term training/ Internship/ workshops:** Along with several proof of concepts, conferences and classes on analytics/machine learning/AI/Cognitive Science will help both academia, government and industry to learn and excel their skills in business analytics, advanced analytics and develop analytical mindset for solving complex analytical problem with generation of useful insights.

f. **Advanced Research/ Patents/ Blog:** We will involve our 30+ research scholar/students to conduct the research in the area of advanced analytics, machine learning, cognitive science and knowledge graph in various domain specially:
    i. Educational
    ii. Government
    iii. Pharma
    iv. Medical Tourism
    v. Digital India Initiative
    vi. BFSI

g. **Joint Research with industry Experts: The experience sharing from industry expert will to crack various problem with structured/ unstructured/semi-structured data.** Their knowledge coupled with real-life experience makes them an invaluable tool to find meaning in the chaos of data. **ADAL**'s quantitative horsepower and business domain expertise are unparalleled in providing context driven and customized solutions.

h. **Support Required:** The analytics lab need one dedicated senior (5+ years' experience) and one junior technical employee to drive the entire lab and help in the logistics of organizing the different workshop/training/ POC. The requirement of more resource will depend on the funded projects time to time. We can also have a tie-up with one external firm to help fulfil the requirement of a specific skill set.

5. **Management Development Programs/Training for executives from Industry**
    a. The following programs are being envisaged during the coming period.
        i. Faculty Development Programme for Discipline of Innovation Entrepreneurship and Venture Development
        ii. Workshop on Mentoring of Innovation and Entrepreneurship
        iii. Workshop Five-weekend Programme on Python.
        iv. Workshop on Business Plan Development
        v. Short Term Management Development / Training Programmes on
        vi. Customer Relationship Management
        vii. Project Management Changing Focus towards Customer Value
        viii. Leadership Development
        ix. Stakeholder Management
        x. Creative Problem Solving Techniques

6. **Infrastructure Development**
   a. The fully equipped studio- classroom which can accommodate upto 40 students/executives and provides for multi-media broadcast, including dual camera audio-visual broadcast, computer and touchscreen screen content etc, is to be made ready by the time MDP and Executive MBA programs are launched during the 2022-23 period.
   b. Major Infrastructure development project is planned to be initiated, and sintead of earlier planned 4 story SPS structure, it ie proposed to have a high-rise multistory structure (upto 20 stories may be feasible) which may take care of the growing need for infrastructure for classrooms, incubation, research labs and other requirements, including faculty rooms and corporate interaction spaces, cafeteria, etc. This should be able to cater to the need for sports, for student interactions, for MDP programs including a Guest House for executives and overseas visitors who may be present under collaborations.

7. **Collaborations With Leading Overseas Universities.**
   a. It is proposed that the some of the existing programs may be offered under dual degree program collaborations with leading institutions in its area overseas. The PhD in Data Sciences, the DBA, Executive MBA and other such programs, as well as training programs, FDPs and MDPs may be offered under collaboration with overseas Institutions.
   b. Overseas faculty exchange programs and faculty visitors: It is being proposed that in the thrust area of analytics, entrepreneurship and leadership, leading overseas faculty would be invited to deliver sessions, as well as jointly organize international conferences.

8. **Interdepartmental collaboration:**
   a. It is proposed that collaboration between the Entrepreneurship Development Center of USME, the IIC and the DTU-IIF may be further strengthened for incubation processes, as well as major events around research and practices in Enetrpreneurship including a major conference, mentoring of incubatees in business processes, student and faculty workshops in specific areas of innovation and entrepreneurship.
   b. Programs like the Executive MBA Data sciences are proposed to be delivered through collaborations with other departments such as Computer Sciences, Applied Mathematics etc. Further joint research and development in advanced analytics area is also being proposed.
   c. The discipline of IEV, when further faculty strength is added will collaborate with the DTU-IIF and Centers of Excellence for strengthening the innovation and related practices and research, bringing a cross functional orientation and fulfilling the mission of being a hub for innovation and entrepreneurship.

8. Examination Department

Review of Strategic Plan 2019-21 :

Targets & Achievements

Target	Achievement
To implement CBCS based for All Programs by 2021	Implemented
To conduct Examinations at Multiple Campuses by 2021	Implemented
To build capacity to conduct examinations for 20000 students by 2021	System in place for the existing 15000 students and is ready for further enhancing of strength
To implement Screen Marking for Evaluation by 2021	Onscreen Marking was carried out for End Term Examination, May/June 2020.
To reduce the average time taken to declare results to 15 days by 2021	Achieved for final year students
To make 100% automation of Examination Department by 2021	Implemented
To build strong rooms to secure keeping of records by 2021	Record rooms created with compactors
To digitally store all records by 2021	Implemented
To upload all degrees on NAD platform by 2021	Uploaded on NAD through CDSL Platform. Now Govt. of India directed to upload on NAD through Digilocker platform for which the work is in progress.
To incorporate latest security features in the marksheets and degrees	Implemented
To periodically audit the quality of question of papers and publish reports	Implemented

Targets & Strategies for 2022 – 2024

1. Integration of Course Registration with Annual Fee Payment.
2. To build capacity to conduct examinations for 25000 students.
3. To reduce the average time taken to declare results to 15 days for all semesters.
4. To increase number of Officers and Staff to 33.
5. To upload all marksheets and degrees on NAD-Digilocker platform.
6. To digitally store record on cloud platform.
7. To periodically audit the quality of question of papers and publish reports.

9. DTU- Innovation and Incubation Foundation (DTU-IIF)

As per the Strategic plan 2019-30, DTU-IIF is required to increase its startups number to 100 Startups that requires DTU-IIF has to add 10 number of companies every year.

2022		2023 (Projected)		2024 Projected)	
50 Startups		**60 Startups**		**70 Startups**	
Manpower requirement		Manpower requirement		Manpower requirement	
CEO	1	CEO	1	CEO	1
Incubator Manager	1	Incubator Manager	2	VP (head operations)	1
Attendants	2	Attendants	4	Incubator Manager (IT)	1
JAO	2	JAO	3	Incubator Manager (HR)	1
I M (East Campus)	1	I M (East Campus)	1	Incubator Manager (BD)	1
		JAO (East Campus)	1	Incubator Manager (OP)	1
		Attendants (East campus)	1	JAO	**5**
				SAO	1
				I M (East Campus)	1
				JAO (East Campus)	**2**
				Attendants (East campus)	**2**
Seed fund for Startups		**Seed fund for Startups**		**Seed fund for Startups**	
2.5 lac× 20 Startups =50 Lacs		2.5 lac× 25 Startups =62.50Lacs		2.5 lac×30 Startups =75.00 lacs	
0.5 lac × 30 Startups =15 lacs		0.5 lac × 35 Startups =17.50 lacs		0.5 lac × 40 Startups = 20.00 lacs	
salary and misc. Exp.= 55.40 lacs		salary and misc. Exp.= 54.60 lacs		salary and misc. Exp.= 123.60 lacs	
Total requirement - 120.40 lacs		Total requirement- 134.60 lacs		Total requirement - 218.60 lacs	

Source of Revenue/Grants :

From Govt: State Govt. Shecme/ Invest India Schemes/ DST/ Startup India/ Ministry of Commerce/ DTU/CSR from Corporates/ Consultancy, venture and rent.

10. Applied Mathematics

Academic details: -

Sr. No.	Action	Existing	Target(s)	Date of Achievement(s)
1.	Number of UG Students	610 (187+155+142+128)		
2.	Number of PG Students	98 (40+58)		
3.	Number of Ph.D. Students	60		
4.	Annual Intake:- (a) UG	182 (JAC)		
	(b) PG	60		
5.	Number of UG Programs	1		
6.	Number of PG Programs	1		
7.	DTU Ph.D. Teaching-cum-Research Fellowships	nil		
8.	Junior Research Fellowship of UGC, CSIR, DST, DBT etc. funding agencies	36 (20 DTU + 4 UGC + 11 CSIR + 1 DST-Inspire)		
9.	Development of MOOCs Courses	0	1	
10.	Percentage of Female students in the department	15.4%		
11.	Number of Foreign Students:- a) UG	22 (6 first year)		
	b) PG	NIL		
	c) Ph.D.	NIL		
12.	Minor Specialisation:- (a) UG	i. Mathematics and Computing, ii. Industrial Mathematics, iii. Computational Intelligence		
	(b) PG	Mathematics		

Details of admitted students:-

Sr. No.	Programs (UG & PG)	Annual Sanctioned Intake	Actual Admitted Students in 2021-22
1.	UG Programs		
	(a) B.Tech.	182 (JAC)	187 (181 (JAC) + 3(NRI/ICCR) + 3(CW + PMSSS))
	(b)		
	(c)		
2.	PG Programs		
	(a) M.Sc.	60	58
	(b)		
	(c)		

Details of proposed MOOCs Courses to be developed:-

Sr. No.	Title	Name of Faculty	Proposed date of Completion
1	Complex Analysis	Prof. S. Sivaprasad Kumar	2024

Research Parameters/Metrics

Sr. No.	Action	Existing	Target(s)	Date of Achievement(s)
1.	h-index of the department	8.143 (data taken from google scholar)	10	2024
2.	Citations of the department	338 (data taken from google scholar)	600	2024
3.	Number of SCI/SCIE/SSCI/Scopus Indexed Journals	50 (2020-21) 15 (2021-22 till date) Total – 65 (till date)	80 (2022-23) 90 (2023-24)	2024
4,	Number of Ph.D. students in the department	60	96	2024
5.	Number of Research Projects (more than 5 Lacs each)	01	02	2024
6.	Number of Consultancy Projects (More than 5 Lacs each)	NIL	NIL	
7.	Number of Consultancy Projects (between 1 Lac to 5 Lac)	NIL	NIL	

8.	Number of Patents:- (a) Filed	NIL	01	
	(b) Published			
	(c) Granted			
9.	Centre of excellence in emerging areas of Technology/Science/ Management & allied areas	NIL	01	
10.	Commercially sustainable Products	NIL	01	
11.	Number of research laboratories	NIL	03	
12.	MOUs with National & International Institutions/Organisations	NIL	01	

Infrastructure:-

Details of new Laboratories proposed for UG Programs:-

Two labs with a capacity of 40 computers are needed for UG programs by the department. Proposal for the same will be processed soon.

Details of new Laboratories proposed for PG Programs:-

One labs with a capacity of 40 computers are needed for PG programs by the department. Proposal for the same will be processed soon.

11. Computer Science & Engineering

Education

The department will contribute towards increasing the strength of students in the university in the undergraduate programs and will start a new postgraduate program. The following are the resolutions of the department for contributing towards education:

Objectives	Actions
To increase student strength in B.Tech(Computer Science and Engineering) from 400 to 450	In progress
To develop at least 2 MOOC courses	In progress
To provide a large number of choicesto students in courses	To add 3-5 more electives in B.Techprogram till 2024
To provide minor specialized in B.Tech Program	In progress

Research

The department is committed to producing high-quality research publications. The following are the resolutions of the department towards promoting research in the coming two years:

Objectives	Actions
To develop Research lab in Block Chain, Quantum Computing, Information Security and Cyber Intelligence, Swarm Intelligence and Evolutionary Computing, AR-VR,	To be completed by 2024.
To increase the number of PhDs enrollment	To add at least 30 PhD enrollmenttlll 2024
To collaborate with international institutions	To add one International institute by2024.
To publish papers in SCI/SCIE indexed Publications	To add at least 50 SCI/SCIE indexed publications till 2024

Faculty

The following are the resolutions of the department towards increasing the numberof highly qualified faculty:

Objectives	Actions
To add at least 15 new faculty and 10 new staffin the department	Recruitment process in progress
To motivate faculty to pursue higher educationincluding PhD and post doctorate	90% faculty to complete PhD till 2024 and increased post-doctorate from 1 to 2 innext two years
To conduct Faculty Development Program inthe department	Conduct atleast two FDPs inthe department
To conduct Workshop in the department.	Conduct atleast two workshop in the department
To conduct International Conference in thedepartment	Conduct atleast one international conference inthe department.

Infrastructure

The following are the resolutions of the department towards the development ofnew laboratories and centres of Excellence:

Objectives	Actions
New 10 storeyed building to be constructed	In progress and to be completed till 2022
To develop Departmental Library.	In progress to be completedtill 2024
To develop one Departmental Record Room	In progress
To develop Sitting Space with computingfacility for Research Scholars	In progress
To develop two SMART classrooms with ICTfacility	In progress to be completedtill 2024

Innovation and Entrepreneurship

Objectives	Actions
To bring Consultancy projects	In progress and to be completed till 2024
To promote innovative projects	In progress to be completedtill 2024
To publish patent	In progress and will publishatleast 2 patent till 2024
To promote startup	To add atleast 2 startup till 2024

Finance

Objectives	Actions
To increase computers and peripheral devices.	Purchase 300 computers till2024
To purchase Furniture for Research Labs inthe department.	Purchase table, chair, almirahtill 2024
To purchase High-Performance Computersand Peripherals in Research Laboratory	Purchase High-Performance Computers till 2024.
To purchase recent softwares for thedepartment	To purchase softwares till 2024

Budget

Items	Estimated Cost
Computers and peripheral devices.	Rs. 3.00 Crores
To purchase Furniture for Research Labs inthe department.	Rs. 50.00 Lacs
To purchase High-Performance Computersand Peripherals in Research Laboratory	Rs 4.50 Crores
To purchase recent softwares for thedepartment	Rs. 50.00 Lacs
Total	**Rs. 8.50 Crores**

12. Electronics and Communication Engineering

Education
Academic details:-

Sr. No.	Action	Existing	Target(s)	Date of Achievement(s)
1.	Number of UG Students	240	---	--
2.	Number of PG Students	38	75	2023
3.	Number of Ph.D. Students	115	120	2024
4.	Annual Intake:- (a) UG	240	---	---
	(b) PG	73	---	2024
5.	Number of UG Programs	01	---	
6.	Number of PG Programs	03	01	2024
7.	DTU Ph.D. Teaching-cum-Research Fellowships	----	05	2024
8.	Junior Research Fellowship of UGC,CSIR, DST, DBT etc. funding agencies	06	07	2024
9.	Development of MOOCs Courses	NIL	02	2024
10.	Percentage of Female Students in the Department	UG 7.78% PG 30.5%	UG 10% PG 50%	2024
11.	Number of Foreign Students: (a) UG	43	50	2024
	(b) PG	03	05	2024
	(c) Ph.D.	03	05	2024
12.	Minor Specialization:- (a) UG	3 minor specialization baskets established	----	----
	(b) PG	---	---	---

Details of admitted students:-

Sr. No.	Programs (UG & PG)	Annual Sanctioned Intake	Actual Admitted Students in 2022-23
1.	UG Programs		
	(a)ECE	240	241
2.	PG Programs		
	(a)VLSI	25	25
	(b)SPDD	24	10
	(c)MOC	24	00

Details of proposed MOOCs Courses to be developed:-

Sr. No.	Broad Subject Area	Name of Faculty	Proposed date of Completion
1.	VLSI	Mr. Akshay Mann and Mr. Kaustubh	2024
2.	Control systems	Dr. Pankaj Dahiya and Dr. Rohit Kumar	2024

Research/Patent

Sr. No.	Action	Existing	Target(s)	Date of Achievement(s)
1.	h-index of the department	32	35	2024
2.	Citations of the department	6000 approx.	7500	2024
3.	Number of SCI/SCIE/SSCI/ScopusIndexed Publications	Scopus 2100	2500	2024
4.	Number of Ph.D.students in the department	115	120	2024
5.	Number of Research Projects (more than 5Lacs each)	04	06	2024
6.	Number of ConsultancyProjects (More than 5 Lacs each)	---	-01	2024

7.	Number of ConsultancyProjects (between 1 Lac to 5 Lac)	01	01	2024
8..	Number of Patents:- (a) Filed	02	10	2024
	(b) Published	20	25	2024
	(c) Granted	02	08	2024
9.	Centre of excellence inemerging areas of Technology/Science/ Management & allied areas	00	02	2024
10.	Commercially sustainable Products	---	---	---
11.	Number of research laboratories	04	05	2024
12.	MOUs with National & International Institutions/Organisations	08	10	2024

Faculty & Staff: -

Sr. No.	Action	Existing	Target(s)	Date of Achievement(s)
1.	Number of sanctioned teaching posts :-			
	(a) Professor	07	04	----
	(b) Associate Professor	14	03	----
	(c) Assistant Professor	40	---	----
2.	Number of faculty in position :-			
	(a) Professor	15	----	----
	(b) Associate Professor	01	----	----
	(c) Assistant Professor	32	----	----
3.	Number of sanctioned technical posts:-			
	(a) Technical Officer/Foreman	01	----	----
	(b) Senior Technical Assistant	04	----	----
	(c) Technical Assistant	01	----	----
	(d) Junior Technical Assistant	02	----	----
	(e) Others			

4.	Number of technical staff in position:-			
	(a) Technical Officer/Foreman	01	----	----
	(b) Senior Technical Assistant	03	----	----
	(c) Technical Assistant	03	----	----
	(d) Junior Technical Assistant	01	----	----
	(e) Others (lab Attendant's)	10	----	----
5.	Number of Ministerial Staff	01	----	----
6.	Number of Multi-Tasking Staff	01	----	----
7.	Number of International facultyengaged	------	----	----
8.	Number of faculty deputed for higher studies/PDFs	07	----	----
9.	Number of faculty members sent toindustry	------	----	----
10	Number of Adjunct/Honorary Faculty	01	----	----

Infrastructure: -

Details of new Laboratories proposed for UG Programs:

i. Circuit Fabrication Lab established

Details of proposed Research Projects: -

i. Mental Stress Detection Using Signal Processing and Machine Learning BasedAlgorithm for EEG and ECG Signal. Applied at: SERB, Amount: 30 lakh.

ii. Investigation of ZnO based MXene manocomposites with various morphologies forsuper capacitor applications. Applied at SERB. High Power AlGaN MOS-HEMT for different Sensing Application. Applied at SERB POWER.

Details of proposed research laboratories:-

i. Computational Intelligence Research Laboratory
ii. Data Science Research Laboratory
iii. Advanced VLSI and Nanoscale devices Laboratory

Details of proposed centres of excellence in emerging areas of Technology/Science/Management & Allied Areas:-

I. Development of Center of excellence in 5G/6G Technology

Details of new Laboratories proposed for PG Programs: -

i. IoT and 5G Lab

Details of Proposed STC/FDP

I. One week FDP on "VLSI Design, Hands on Practice from Schematic to Post Layout Simulations".
II. One week FDP on "Recent emerging trends in VLSI Design and research issues in industry compliance".
III. FDP on "Advances in Machine Learning".
IV. Online FDP on "Recent challenges on methods for signal, image, and video understanding.
V. Online FDP on "Recent advances in signal, image, and Vision applications".
VI. Online FDP on "Recent advances in AI/ML applications for communication and signal processing".
VII. Online FDP on "Recent trends on communication and signal processing applications".

Details of MOUs with National & International Institutions/Organisations:-

i. Memorandum of Understanding (MOU) between Delhi Technological Universityand Lithion Power Private Limited.
ii. Memorandum of Understanding (MOU) between Delhi Technological Universityand NXP India Private Limited
iii. Memorandum of Understanding (MOU) between Delhi Technological University and CSIR-Central Electronics Engineering Research Institute PILANI, India
iv. IEEE for VLSI based certificate course
v. MOU between DTU and Aksaray University, Turkey
vi. MOU between Indian Navy and DTU.
vii. MOU between DTU, ADANI Defense Systems and Technologies Limited andFlaire Unmanned systems private limited.
viii. MOU for technical evaluation of SIC layout design stored in the GDS-II formatwith Indian Patent Office.

Any other details: -

International Conference to be organized in 2023.

13. Civil Engineering

Education

Academic details:-

Sr. No.	Action	Existing	Target(s)	Date of Achievement(s)
1.	Number of UG Students	594	608	August 2024
2.	Number of PG Students	114	150	August 2024
3.	Number of Ph.D. Students	91	100	August 2024
4.	Annual Intake:- (a) UG	152	152	August 2024
	(b) PG	92	92	August 2024
5.	Number of UG Programs	01	01	August 2024
6.	Number of PG Programs	04	04	August 2024
7.	DTU Ph.D. Teaching-cum-Research Fellowships	34	34	August 2024
8.	Junior Research Fellowship of UGC,CSIR, DST, DBT etc. funding agencies	05	05	August 2024
9.	Development of MOOCs Courses	Nil	02	August 2024
10.	Percentage of Female Students in the Department	20%	20%	August 2024
11.	Number of Foreign Students:- (a) UG	28	30	August 2021
	(b) PG	08	10	August 2024
	(c) Ph.D.	05	05	August 2024
12.	Minor Specialisation:- (a) UG	3	3	August 2024
	(b) PG	Nil	Nil	August 2024

Details of proposed MOOCs Courses to be developed:- 02 (One related to Structural Engineering and one related to Geotechnical Engineering)

Research/ Patent

Sr. No.	Action	Existing	Target(s)	Date of Achievement(s)
1.	h-index of the department	25	28	August 2024
2.	Citations of the department	2663	3000	August 2024
3.	Number of SCI/SCIE/SSCI/Scopus Indexed Publications	185	200	August 2024
4.	Number of Ph.D. students in the department	91	100	August 2024
5.	Number of Research Projects (more than 5 Lacs each)	08	10	August 2024
6.	Number of Consultancy Projects (More than 5 Lacs each)	10	15	August 2024
7.	Number of Consultancy Projects (between 1 Lac to 5 Lac)	10	15	August 2024
8..	Number of Patents:- (a) Filed	02	03	August 2024
	(b) Published	Nil	Nil	August 2024
	(c) Granted	Nil	Nil	August 2024
9.	Centre of excellence in emerging areas of Technology/Science/ Management & allied areas	01	01	August 2024
10.	Commercially sustainable Products	Nil	Nil	August 2024
11.	Number of research laboratories	06	08	August 2024
12.	MOUs with National & International Institutions/Organizations	04	05	August 2024

Faculty & Staff:-

Sr. No.	Action	Existing	Target(s)	Date of Achievement(s)
1.	Number of sanctioned teaching posts :-			August 2024
	(a) Professor	05	-	August 2024
	(b) Associate Professor	10	-	August 2024
	(c) Assistant Professor	33	-	August 2024

2.	Number of faculty in position :-			August 2024
	(a) Professor	14	15	August 2024
	(b) Associate Professor	06	08	August 2024
	(c) Assistant Professor	04	08	August 2024
3.	Number of sanctioned technical posts:-			August 2024
	(a) Technical Officer/Foreman/Draftsmen	01	01	August 2024
	(b) Senior Technical Assistant	11	11	August 2024
	(c) Technical Assistant	NIL	Nil	August 2024
	(d) Junior Technical Assistant	01	04	August 2024
	(e) Others	Nil	NIL	August 2024
4.	Number of technical staff in position:-			August 2024
	(a) Technical Officer/Foreman/Draftsmen	Nil	01	August 2024
	(b) Senior Technical Assistant	01	06	August 2024
	(c) Technical Assistant	Nil	Nil	August 2024
	(d) Junior Technical Assistant	01	04	August 2024
	(e) Others	Nil	Nil	August 2024
5.	Number of Ministerial Staff	01	02	August 2024
6.	Number of Multi-Tasking Staff	11	14	August 2024
7.	Number of International faculty engaged	Nil	Nil	August 2024
8.	Number of faculty deputed for higher studies/PDFs	01	01	August 2024
9.	Number of faculty members sent to industry	Nil	Nil	August 2024
10	Number of Adjunct/Honorary Faculty	01	02	August 2024

Infrastructure:-

Details of new Laboratories proposed for UG Programs:- Up gradation of Mechanics of Solids Lab and Structural Analysis Lab

Details of new Laboratories proposed for PG Programs:- Two new laboratories namely

- WIND TUNNEL LAB
- SERVO-HYDRAULIC ACTUATORS in Earthquake Technology Lab
- Computation and Modelling Lab (HWRE)

Details of proposed Research Projects:-

S.N	Project Title	Funder	Project Amount
1	Artificial Intelligence and Machine Learning Methods for Managing land slides and road resilience in Kalimpong Hill Region, India	DST	Rs. 40 Lakhs

Details of Patents:-Two have been filed by Prof.Naresh Kumar

Details of proposed centres of excellence in emerging areas of Technology/ Science/Management & Allied Areas:-

Centre for **Geo-Hazards Studies** in collaboration with leading research institutions of Himalayan Region. Studies will be carried out in Geo-Hazards such as Landslides, earthquakes, Glacier, Lake Outburst Flood etc.

Details of new proposed UG/PG/PhD laboratories:-

- WIND TUNNEL LAB
- SERVO-HYDRAULIC ACTUATORS in Earthquake Technology Lab
- Computation and Modelling Lab (HWRE)

Details of Proposed STC/FDP:- 01

Any other details:-

A Multidisciplinary Centre for Geoinformatics (MCG), under the Department of Civil Engineering of Delhi Technological University was inaugurated on 5th March, 2019. The MCG has been established with the vision to be a world class multidisciplinary centre in the field of geospatial and Geoinformatics education, research and consultancy. The Centre is currently progressing five projects/ awards /fellowships awarded by Department of Science and technology, New Delhi, Space Applications Centre, ISRO, Ahmadabad and national Mission on Himalayan Studies, Almora. In future, the Centre aims to work in close coordination with central/state Govt. agencies and industries in fulfilment of Govt. objectives, capacity building and for research and consultancy.

14. Department of Design

Key Achievements of Department:-

- Approx. 70 publications during last 5 years in SCI/SCIE/SCOPUS/Refereed Journals/Conferences.
- Delivered many expert lectures at different organizations.
- Department faculty members are experts of NBA, UPSC, NAAC, ISO etc.
- The Department has conducted 01 faculty Training and development programs namely 3D Printing and Product Design during the months of June and July 2021.
  - The faculty members namely Prof. Ranganath M Singari (HOD, Design) got research excellence-awards in 2020-21 and 2021-22
  - The department has received many research awards for its students by many organisations
  - Faculty and students of Design Department also presented their work at various platforms locally / globally.

Academic details: -
Details of admitted students: -

Sr. No.	Program	Annual Intake	Year of Start	Number of students Admitted till 2021
01	B.Des.(Bachelor of Design)	120	2018-2019	370
02	M.Des (Master of Design)	75	2021-2022	75
03	PhD (Design)	02	2019-2020	17

Research / Patent

Research Parameters/Metrics

Sr. No.	Action	Existing	Target(s)	Date of Achievement(s)
1.	h-index of the department	20	25	01/08/2024
2.	Citations of the department	500	2500	01/08/2024
3.	Number of SCI/SCIE/SSCI/Scopus Indexed Publications	30	50	01/08/2024

4.	Number of Ph.D. students in the department	17	25	01/08/2024
5.	Number of Research Projects (more than 5 Lacs each)	00	02	01/08/2024
6.	Number of Consultancy Projects (More than 5 Lacs each)	00	01	01/08/2024
7.	Number of Consultancy Projects (between 1 Lac to 5 Lac)	00	01	01/08/2024
8..	Number of Patents:- (a) Filed	00	02	01/08/2024
	(b) Published	00	02	01/08/2024
	(c) Granted	00	02	01/08/2024
9.	Centre of excellence in emerging areas of Technology/Science/ Management & allied areas	01	02	01/08/2024
10.	Commercially sustainable Products	00	01	01/08/2024
11.	Number of research laboratories	02	05	01/08/2024
12.	MOUs with National & International Institutions/Organizations	00	02	01/08/2024

Faculty & Staff:-

Sr. No.	Action	Existing	Target(s)	Date of Achievement(s)
1.	Number of sanctioned teaching posts :-			
	(a) Professor	01	02	01/08/2024
	(b) Associate Professor	03	05	01/08/2024
	(c) Assistant Professor	11	16	01/08/2024
2.	Number of faculty in position:-			
	(a) Professor	01	02	01/08/2024
	(b) Associate Professor	00	05	01/08/2024

	(c) Assistant Professor	05	16	01/08/2024
3.	Number of sanctioned technical posts:-			
	(a) Technical Officer/Foreman	03	05	01/08/2024
	(b) Senior Technical Assistant	03	05	01/08/2024
	(c) Technical Assistant	06	10	01/08/2024
	(d) Junior Technical Assistant	--	--	
	(e) Others	--	--	
4.	Number of technical staff in position:-			
	(a) Technical Officer/Foreman	--	--	
	(b) Senior Technical Assistant	--	--	
	(c) Technical Assistant	01	10	01/08/2024
	(d) Junior Technical Assistant	--	--	
	(e) Others	--	--	
5.	Number of Ministerial Staff	01	02	01/08/2024
6.	Number of Multi-Tasking Staff	02	10	01/08/2024
7.	Number of International faculty engaged	00	04	01/08/2024
8.	Number of faculty deputed for higher studies/PDFs	00	00	01/08/2024
9.	Number of faculty members sent to industry	00	00	01/08/2024
10	Number of Adjunct/Honorary Faculty	02	05	01/08/2024

Infrastructure: -

Details of new Laboratories proposed for UG Programs: -

a) A new Interaction Design Studio for the study of advanced techniques. Approx. cost is Rs. 120 lacs.
b) A new Visual Communication Design Studio for the study of advanced techniques. Approx. cost is Rs. 60 lacs.
c) A new Graphics Design Studio for the study of advanced techniques. Approx. cost is Rs. 200 lacs.
d) Updating CIDE with 3D printing facilities. the cost is 60 Lakhs for equipment and software.

Details of new Laboratories proposed for PG Programs: -

a) High-performance Animation Lab for the study of advanced applications. The approximate cost is 100 lacs needed.

Details of existing research laboratories: -

- Design Workshop
- Fashion Design Studio

Details of new proposed UG/PG/PhD laboratories: -

- **Transportation & Service Design**
  Approximate Cost required: 71 Lacs
  Date of Completion: 01/08/2024

Details of Proposed STC/FDP

- One Week FDP on 3D Printing and its applications. The lectures / lab sessions will be taken by experts from the department from academic institutions, R&D organizations and industry. It is expected to have 60 participants. Registration kit and hospitality shall be extended to all registered participants. Proposed budget for 100 participants in details is Rs. 5 lacs.

Details of Proposed Conference

- Three days International conference International Conference on Materials & Design is proposed. It is expected to have 100 participants. Registration kit and hospitality shall be extended to all registered participants. Proposed budget for 100 participants in details is Rs. 3.7 lacs.

15. Dean Academic (PG)

Strategic Plan for the period 2022-24 is as under:

Academic Details: -

S. No.	Action	Existing	Target(s)	Date of Achievement(s)
1.	Number of PG Students	1639	2584	July 2024
2.	Number of Ph.D. Students	1441		July 2024
3.	Annual Intake: - PG	2020-1059 2021-1262	2584	July 2024
4.	Number of PG Programs	04 (i) MBA-6 (ii) M. Tech-20 (iii) M. Sc.-4 (iv) M. Des.-3	(i) MBA-8 (ii) M. Tech-23 (iii) M. Sc.-5 (iv) M. Des.-3	July 2024
5.	DTU Ph.D. Teaching-cum-Research Fellowships	364	402	July 2024
6.	Junior Research Fellowship of UGC, CSIR, DST, DBT etc. funding agencies	114	150	July 2024
7.	Percentage of Female Students in the Department	37.70%	50%	July 2024
8.	Number of Foreign Students: - 1. PG	67 M. Tech-40 MBA-26 M.Sc.-01	145	July 2024
	2. Ph.D.	37	45	July 2024

Details of new PG Program(s)

S. No.	Program	Annual Intake	Proposed date of start of program
1.	M. Tech. Industrial Engineering and Management	30	July 2022
2.	M. Tech Computer Aided Analysis and Design	30	July 2022
3.	M. Tech in Energy Management Systems	30	July 2022

16. Dean Academic (UG)

- **Outcomes of strategic plan 2019-21 & proposed Strategic Plan 2022-24**

The Academic UG Section is the facilitating link among University academic departments HODs/School heads, faculty members, students and the University administration. All activities and roles of this section are undertaken in light of furthering the best interests of the students of Delhi Technological University. This office provides supports to Departments/ Schools in a manner that promotes excellence in teaching learning process, scholarly and creativity among students.

The section ensures framing and implementation of academic policies/regulations in compliance with the University's Act and Statutes, ordinance and regulations and other Government policies/ schemes/ directions.

There are 8 staff members including 1 Junior Office Assistant, 5 Data Entry Operators and a Multi-Tasking Staff in the section. At supervisory level one section officer, Associate Dean and Dean Academic. The total strength of staff and officers in the section is 9.

The section handles following administrative activities pertaining to students' related matters- Framing /planning curriculum development, revising academic ordinances and regulations, Academic Calendar, seat matrix/admissions in different undergraduate programs, orientation of newly admitted students, printing and issue of Id-Cards, students' academic records, allocations of class rooms, central time table and grade moderation for first year; coordination of Foundation Electives, and elective courses on Research work, Product development, Entrepreneurship and Venture Development related tracks; issuance of various certificates such as Provisional, Bonafide, Character, Migration, Fee Structure, Transcripts; processing Course/ Semester/ Year/ admission withdrawal requests/ cancellation of admissions, refund of Security Money; Attendance Monitoring, examining the cases of mid and end term makeup examination; Fee Monitoring, handling DTU Fee Concession and DTU Merit Scholarship; Govt. Scholarships, processing requests of students for financial assistance for Conferences/ Competitions/ Academic activities/ Internship etc. Additionally, the section handles all the students' related activities for Convocation which is the most ceremonial function of the University.

DTU offers following Undergraduate Programs -B. Tech, B. Tech (Continuing Education), B. Des, BA(H) ECO and BBA and currently the details of present the UG students is as under:-

Program	YEAR	Sanctioned intake (Including DASA & FN)	Total Number of Students	Students Admitted	TOTAL
B.Tech (including LE)	2k18	2289	10379	2112	9594
	2k19	2434		2283	
	2K20	2732		2547	
	2K21	2924		2652	
BBA	2K19	150	549	133	482
	2K20	198		182	
	2K21	200		167	
BAE	2K19	150	549	128	442
	2K20	198		152	
	2K21	200		162	
B.DES	2K18	60	374	58	322
	2K19	66		66	
	2K20	107		83	
	2K21	141		115	
B.Tech (Cont. Edu)	2k18	240	960	223	477
	2k19	240		50	
	2K20	240		114	
	2K21	240		90	
Total UG Students			12811		11317
UG Student Intake/Admissions in 2K21			3705		3186

Outcomes of Strategic Term Plan 2019-21

In line with Strategic Term Plan **2019-20** of DTU, the Strategic Term plan **2020-21** of UG section was proposed with a focus on increased intake, extending financial support to students of low income group, travel grant to attend conference/workshops and increasing number of student registrations in three tracks of electives namely research, product development and entrepreneurship which will lead to enhanced research outcome and patents filed/publications. The subhead wise outcome of the strategic Term Plan 2019-21 is presented below: -

(a) Increase in Student Intake at UG level programs (Implementation of EWS quota)

Intake	Target 2020-21		Outcome 2020-21	
Seats	Sanctioned	Supernumerary (DASA/FN/SII) (15%)	Sanctioned (Increase in)	Supernumerary (15%)
B. Tech	2399	318	2399	317
B. Des	70	10	98	09
BBA	152	20	180	18
B.A(H) Eco	152	20	180	18

(b) Financial Assistance to Students

(i) Fee Concession to the students whose family income < Rs. 4.5 Lakh per annum are given for 50/100% tuition fee waiver. In exceptional cases the full fee concession is also granted based on the family income of the students.

(ii) Travel grant to students for attending conferences/workshops (Once in 4/3 yrs of study at DTU).

(iii) Merit scholarship to the toppers of each branch of B. Tech programs.

The outcome under various financial assistance sub heads is presented below: -

Head	Target 2020-21	No of students benefited	Outcome 2020-21
Fee Concession	6,25,00,000/-	654	6,18,52, 125/-
Travel Grant	10,00,000/-	41	5,95,880/-
Merit Scholarship	8,20,000/-	106	8,05,000/-

(c) Provisions for Research Project/Mini Project/Entrepreneurship and Venture Development track in B. Tech Curriculum

To promote research, innovation and entrepreneurship among the UG students three track in elective courses are offered namely (a) Research project (b) Mini Project and (c) Entrepreneurship and Venture Development. A student may register for research project/mini project/Entrepreneurship course of 04 credits in V semester against his/her DEC/GEC course. The outcome of the research/project work Entrepreneurship and Venture Development would be considered for the award of the credits based upon published work/Product developed/Venture development. The Target registration and actual registration is presented below:-

Courses	Target Registration 2020-21	Outcome Registered students 2020-21
Research Project	45	11
Mini Projects	60	21
Entrepreneurship and Venture development	20	31

It is observed that the registration in Research Project is not encouraging and students are dropping the course in final semester. It is therefore proposed that a review in this regard would be essential, for which the number of successful students shall be obtained from the examination branch for analysis and further conclusions.

Strategic Term Plan 2022-24

a. Increase in Student Intake at UG level programs

Intake/ Seats	Target 2022-23	
	Sanctioned	Supernumerary (DASA/FN/SII) (15%)
B. Tech	2529	380
B. Des	123	18
BBA	182@	18
B.A(H) Eco	182	18

@ Intake may be increased due to Business Blaster Program

b. Financial Assistance to Students

Head	Target Expenditure 2022-23
Fee Concession	8,50,00,000/-
Travel Grant	10,00,000/-
Merit Scholarship	8,50,000/-

c. Provisions of Minor for the students of B. Tech Program

The university has introduced the provision of Minor for the students admitted from academic year 2019-20 onwards to enhance their knowledge base in a specific domain and employability. Minor is a secondary area of study which students can opt either from their own discipline or any other discipline. A minor is awarded to a student along with major discipline provided the student earns requisite credits from the prescriber basket of courses for that Minor. In all 44 Minors have been introduced by various academic Departments. A student may register for courses from baskets of Minor from V semester onwards against his/her DEC/GEC course. The section will focus on promoting the Minor among students which will enhance their knowledge base in diverse disciplines. Further this provision would be extended to other UG programs.

d. Provisioning of manpower and computation facility

The strategic plan 2019-20 of the university focuses on enhancing the student strength from 11000 including UG/PG and PhD in 2019 to 30000 in 2020. The undergraduate programs draw major student strength and would continue to grow. The current UG strength is 11317 whereas in 2019-20 this strength was 9359. Year wise strength of admitted UG students in past five is placed below for ready reference:

S. No.	Academic year	Admitted students
1.	2017-18	7074
2.	2018-19	8260
3.	2019-20	9359
4.	2020-21	10658
5.	2021-22	11317

In view of the above, there is a need to enhance manpower and computation infrastructure for smooth and time bound disposal of students concerns and to monitor fee and scholarship related issues. Following is the manpower requirement for 2022-22:

Manpower	Existing 2020-21	Target 2022-24
Programmer	-	1
Dealing Assistant	6	7
Attendant	1	2

Computation Facility	Existing 2020-21	Target 2022-24
Computers	09	11
Printers	08	09
UPS	01	09

17. Internal Quality Assurance Cell (IQAC)

The Internal Quality Assurance Cell (IQAC) was established in DTU on 30th December 2015.

IQAC is responsible for following activities:-

1. Career Advancement Scheme (CAS) implementation in the University
2. NAAC Annual Quality Assurance Report (AQAR) submission
3. NAAC Re-Assessment.
4. NBA Accreditation of UG/PG Programs.
5. Annual Report & monthly data collection from Departments.
6. ISO 9001:2015 Internal and External audit.
7. Academic & Administration audit (internal and external) stakeholder's feedback collection, Analysis and reporting.
8. NABL Accreditation of labs.
9. Green Audit of the University
10. IT/ERP Audit of the University
11. Safety Audit of the University
12. Content development for ICT enabled learning
13. IQAC website and interfacing with centralized databased/ERP of the University.
14. Monthly data collection from departments
15. Conduct of IQAC meetings.

STRATEGIC PLAN FOR THE PERIOD OF 2022-2024

Sr. No.	Task	Target till 2024
S1	NBA Accreditation of selected courses	(05) Programs namely B. Tech Engineering Physics, Chemical Engineering, Mathematics & Computing, M. Tech VLSI Design and Embedded System and SPD have been selected for possible NBA Accreditation.
S2	Content development for ICT enabled learning	One course will be developed from each department in every semester in coordination with DTU Studio and also the required multimedia facilities in the DTU

		Studio for course recording will be established.
S3	IT audit of the university and ERP audit	For conducting IT & ERP audit - National Informatics Centre (NIC) or other similar agencies will be contacted and IT/ERP audit will be conducted.
S4	Organizing of training/workshop/ conferences related to quality	Workshop on feedback, NAAC Accreditation Process etc. will be conducted from time to time
S5	Implementation of recommendation of Green Audit	To complete action on all Green Audit recommendation
S6	NABL Accreditation of Labs	04 labs one each from Mechanical, Civil, Environmental, Electrical Engineering Department has been identified and documentation will be prepared for NABL accreditation.
S7	Workshop on E-waste Management	HOD, ENE will be requested to conduct workshop and create awareness for E-Waste Management.
S8	Safety audit of DTU	Structural Safety Audit of the University has been conducted as per the notification from MCD of Delhi and Disability audit will be conducted by EOC.
S9	Monthly report collection from various Department/Division	Online System will be created and data entry will be started
S10	Annual report on pattern of NAAC	Continuous Process
S11	IQAC website and interfacing with centralized Database of the university	In process
S12	AQAR Submission on NAAC Portal	Timely submission of AQAR on NAAC portal
S13	Academic internal and external Audit	Internal Academic Audit will be conducted annually.
S14	ISO Internal and External Audit	Renewal of ISO certification from STQC and conduct annual Internal ISO audit and Management Reviews.
S15	Stakeholder's feedback collection and analysis	Workshop on feedback collection and develop mechanism for collecting feedback from all stakeholder's.

BUDGET ESTIMATE PERIOD OF 2022-2023

Sr. No.	Head of Expenditure	Estimated Expenditure (in Rs.)
1.	NBA Accreditation Visit (Fees + visit)	10,00,000/-
3.	Internal and External Academic Audit	4,00,000/-
4.	Internal and External ISO Audit	4,00,000/-
5.	NAAC Re-assessment	10,00,000/-
6.	IQAC Meeting	1,00,000/-
7.	Miscellaneous Activities	1,00,000/-
	Total	**30,00,000/-**

Decision : The Planning Board considered and approved the above Strategic Plans 2022-24. It was suggested that development of MOOC courses proposed in the date of achievements by the respective departments may be sent to AICTE for funding. Dean; IRD will initiate the proposal for taking up this matter with AICTE. Further, in case MOOC courses are developed by two faculty members, share of each faculty should be 20 hours each.

Agenda 4.8 : Any other item with the permission of the chair.

The meeting ended with a vote of thanks to the Chair.

(Prof. Madhusudan Singh)
Registrar