शैक्षणिक परिषद की 01/2024-25 बैठक का कार्यवृत्त

MINUTES OF THE 01/2024-25 MEETING OF THE ACADEMIC COUNCIL

16th October, 2024

DEFENCE INSTITUTE OF ADVANCED TECHNOLOGY

(DEEMED TO BE UNIVERSITY UNDER SECTION 3 OF UGC ACT 1956)

GIRINAGAR, PUNE - 411025

DEFENCE INSTITUTE OF ADVANCED TECHNOLOGY
(DEEMED TO BE UNIVERSITY), GIRINAGAR, PUNE

01/2024-25 MEETING OF THE ACADEMIC COUNCIL
10:00 HRS, WEDNESDAY, 16th Oct 2024

Item. No.	Particulars
1	Opening remarks by the Vice-Chancellor and Chairman, Academic Council
2	Progress/Action taken report on minutes of the last Academic Council meeting
3	Confirmation of the minutes of the last Academic council meeting held on 10th May 2024

4	**Reporting Items-**
	
	a) 13th Convocation of DIAT
	
	b) NBA Accreditation for M.Tech programmes
	  • M.Tech in Materials Engineering
	  • M.Tech in Sensor Technology/LEOC
	
	c) NIRF Ranking
	
	d) 10% of our faculty members are listed in top 2% influential researchers as per the records of Stanford University USA (Elsevier, in the domain of Materials, Metallurgy, Chemical Engg, Natural Science and Polymers).

	AGENDA POINTS FOR DISCUSSION
5.	Collection and Issue of Migration Certificates from all PG & PhD students may be waived from the Academic Year 2025-26 onwards
6.	Admissions of PG & PhD program for the Academic Year 2024-25
7.	Introduction of online M.Tech in Systems Engineering (subject to approval of AICTE)
8.	Any other point with the permission of the chair

DIAT/F/REG/ACAD/AC/01/2024-25   Dated 16th Oct 2024

Minutes of the meeting of Academic Council held on Oct 16th, 2024 at 1000 Hrs, 4th floor conference room, DIAT, Pune

The Following Members were present: -

Sl.No	NAME	Description
1.	Dr. B.H.V.S. Narayana Murthy	Chairman
2.	Dr. S.K. Singh	Member
3.	Prof. K. Sudhakar	Member
4.	Prof. Rajeev Srivastava	Member
5.	Prof. Avinash Mahajan	Member
6.	Prof. P.K. Khanna	Member
7.	Prof. K. Balasubramanian	Member
8.	Prof. Sangeeta Kale	Member
9.	Prof. G. Raghavan,	Member
10.	Prof. R.K. Satapathy	Member
11.	Dr. Manisha Nene	Member
12.	Prof. Prashant Kulkarni / CoE	Member / Permanent Invitee
13.	Prof. Shaibal Banerjee/ Rep	Member
14.	Prof. S. K. Panigrahi	Member
15.	Prof. A. Kumaraswamy	Member
16.	Prof. C. R. S. Kumar	Member
17.	Prof. Suwarna Datar	Member
18.	Dr. Sumati Sidharth	Member
19.	Dr. Ganapathi Joshi	Member
20.	Dr. Shweta Saxena, Sc "F"	Member
21.	Prof. Sunil Chandel	Member
22.	Dr. Tejashree Bhave	Member
23.	Prof. A. A. Bazil Raj	Member

24.	Dr. Debashish Pradhan,	Member
25.	Dr. Sunita Dhavale, Asst.	Member
26.	Dr.S.S.Sirurmath	Member, Permanent Invitee
27.	Dr. Vidya K. Gargote	Member, Permanent Invitee
28.	Dr. Odelu Ojjela	Member
29.	Dr. H.S.Panda	Member, Permanent Invitee
30.	Shri. Kamal Kumar Bajre	Secretary

Leave of absence was granted to the following:

1. Dr. R.K. Satapathy, School of Robotics
2. Dr. Manisha Nene, Dept of Computer Science Engineering.
3. Prof. Somanchi V.S.S.N.V.G. Murthy, Dept of Applied Mathematics.
4. Prof. D. G. Thakur, Dept of Mechanical Engineering.
5. Prof. K. P. Ray, Dept of Electronics Engineering.

1. Welcome remarks by Vice Chancellor & Chairman, Academic Council:

At the outset, the Chairman welcomed all the members of the Academic Council, specially the esteemed members from the other organization, Prof. K. Sudhakar, Former Professor, Department of Aerospace Engineering, IIT Bombay, Prof. Rajeev Srivastava, Professor, Department of Computer Science and Engineering, IIT (BHU) Varanasi, Prof. Avinash Mahajan Dept. of Physics, IIT Bombay and Shri S.K. Singh, DHRD, DRDO HQ, New Delhi. He informed that, DIAT conducted couple of workshops and CEP courses and it will be continued for all other departments as well. Further, DIAT will conduct one more batch of POINTS for newly inducted DRDO Scientists is scheduled in Nov 2024. Besides, DIAT has been identified as one of the institutions by Ministry of Home Affairs for Cyber Commando training course, schedule on 4th of November 2024. Further, the institution is organizing international IEEE conference on Sustainable Digital Transformation jointly with IEEE, Pune chapter in December 13th -15th 2024.

2. Progress/Action taken report (ATR) on minutes of the last Academic Council meeting:

The Joint Registrar (Acad) I/c, presented Action Taken Report on the decisions taken in the last Academic Council Meeting held on 10th May 2024 is as detailed below:

Sl. No.	Academic Council No & Date	Point	Action taken /Status
1.	A.C. Meeting held on 10th May 2024	Possibility of offering M.Sc. admission for left out seats after CCMN admissions through DIAT's own admission test	Action to be initiated from O/o JR(Acad)I/c - HoD, Applied Chemistry The admissions for all M.Sc programmes were almost filled up through CCMN and the quota is full. -JR(Acad) I/c
2.		Presentation of Result of Doctoral & Master student of final semester for awarding degrees in the upcoming Convocation.	CoE has presented the result of 2022-24 batch. Accordingly, marksheets were prepared and sent to JR(Acad) for distribution in convocation. - CoE
3.		Introduction of M.Tech programme in " Systems Engineering".	M.Tech in System Engineering started from July 2024 session. Total 09 Officers of L&T have joined for the said programme. - HoD, Mechanical Engineering
4.		PGC calendar 2024-25	The Academic Calendar 2024-25 approved by the competent authority was uploaded on the institute website on 01/07/2024. - Chairman, PGC
5.		Modification in the passing percentage criteria in a subject for PG courses in DIAT	The modification in pass criteria, recommended by the UGC and approved by the competent authority were sent for implementation and broadcast to students via academic section and CoE. Ref.No:DIAT/F/YSD/PGC/2024/01 dated 22/07/2024 -Chairman, PGC

3.   **Confirmation of the minutes of the last Academic Council Meeting held 10th May 2024.**

The minutes of meeting of the Academic Council held on 10th May 2024 were circulated to members. It was noted that no comments were received thereupon. Therefore, the minutes of Academic Council meeting held on 10th May 2024 were confirmed, as circulated.

4.   **Following reporting items were noted:**

- **13th Convocation of DIAT**

   The 13th Convocation of DIAT held on 07th September 2024. Dr. Sameer V. Kamat, Secretary DD R&D, Chairman, DRDO and Chairman, Governing Council, DIAT presided over the Ceremony. A Total 262 students graduated (Master of Technology – 216, Master of Science – 22, Doctor of Philosophy – 23, Master of Science (By Research) – 01).

- NBA Accreditation for M.Tech programmes
  - ❖ M.Tech in Materials Engineering
  - ❖ M.Tech in Sensor Technology/LEOC

  Pre-qualifier forms have been uploaded on the NBA portal with respect to the above mentioned M.Tech programmes and upon confirmation DIAT will upload the final report.

- **10% of our faculty members are listed in top 2% influential researchers as per the records of Stanford University USA (Elsevier, in the domain of Materials, Metallurgy, Chemical Engg, Natural Science and Polymers).**

- Dean (Acad) informed A.C. about the progression in NIRF Scores from last five year: (41.37)→ (43.29)→ (43.13) → (50.14) → 63 (50.37) and the 63rd rank in the Engineering category in 2024. He further informed A.C. that during DIAT Innovative Council meeting VC addressed all faculty, on areas to focus to enhance the NIRF ranking.

<u>Agenda Points for discussion:</u>

5. **Collection and Issue of Migration Certificates from all PG & PhD students may be waived from the Academic Year 2025-26 onwards**

   Dr. H.S Panda, Joint Registrar (Acad) I/c presented the proposal about waiver of "Collection and Issue of Migration Certificates from all PG & PhD students from the Academic Year 2025-26 onwards". He explained the problems faced by the students during the Admission process, with regard to submission of Migration certificate. He informed A.C. that many colleges/ institutions are neither issuing migration certificate nor collecting the same. After detailed discussion, the A.C. approved to waive collection and issue of migration certificates from all PG & PhD students from the Academic Year 2025-26 onwards. However, Transfer Certificate must be obtained and issued at the time of admission and degree completion, respectively. In addition, an undertaking may be taken from students about nothing outstanding in their last Academic Institution/University.

   Action: Joint Registrar (Acad) I/c

6. **Admissions of PG & PhD program for the Academic Year 2024-25**

   Dr. H.S Panda, Joint Registrar (Acad) I/c presented the details of Admission in PG & PhD program for the Academic Year 2024-25. He informed A.C. that in AY 2024-25 most of the M.Tech/M.Sc. seats are filled, except for few M.Tech programs. He also informed A.C. that, the four M.Tech programs (mentioned below*) had admission over and above the sanctioned strength of AICTE, due to the demand from sponsored/self-financed category. However, the total scholarship seats intake is within the sanctioned strength. The institution has intimated about the extra admissions to AICTE for regularization. Detailed chart of admissions is given at **Annexure-1.**

   (*) M.Tech in Aerospace Engineering (Guided Missiles)
        M.Tech in Cyber Security
        M.Tech in Computer Science Engineering (Artificial Intelligence)
        M.Tech in Data Science

   Action: Joint Registrar (Acad) I/c

7. **Introduction of online M.Tech in Systems Engineering (subject to approval of AICTE)**

The proposal for Introduction of online M.Tech programme in "Systems Engineering" was presented by Dr. Ganapati Joshi, HoD, Department of Aerospace Engineering. The programme is designed for working professionals of engineering background in general, especially manufacturing and production sector. The thought of online M.Tech in Systems Engineering evolved during the meeting with DG & DRDO cluster council meetings. The A.C. inquired about AICTE approval for online M.Tech programs. The Chairman PGC & HoD, Aerospace Engineering clarified that the progrm will be started only after approval from AICTE. After detailed discussion the A.C. approved for the proposal. The detailed proposal and syllabus are given at **Annexure-2**.

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Action: HoD, Aerospace Engineering

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8 **Concluding remarks by Chairman:**

With no further items for discussion, the Chairman extended his gratitude to all the members for their valuable suggestions. The meeting concluded with a vote of thanks to the Chairman and members for their participation.

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24/10/24

(Kamal Kumar Bajre)
Registrar & Secretary, Academic Council

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Sr. No	Programme	Specialisation	Sponsored	Self-Sponsored	Self-Financed	Scholarship	Total Joined	Total Seat Approved by AICTE
				M. TECH STUDENTS as on 22/10/2024				
1	Aerospace Eng.	Guided Missiles	4	0	12	15	31	24
		UAVs	0	0	11	12	23	24
2	Computer Science & Eng.	Artificial Intelligence	5	3	8	21	37	24
3	Cyber Security	--------	6	0	11	19	36	24
4	Renewable Energy	--------	1	1	6	8	16	18
5	Green Technology	--------	0	0	0	0	0	24
6	Electronics & Comm. Engi.	Radar & Comm.	1	0	9	4	14	17
		Defence Electronics System	0	0	5	9	14	17
		Signal Processing & Comm.	1	0	3	4	8	17
		VLSI	0	0	11	17	28	24
7	Data Science	--------	2	0	9	28	39	30
8	Quantum Computing	Quantum Comm. & Sensing	0	0	7	13	20	30
9	Material Engineering	--------	3	0	19	3	25	30
10	Mechanical Eng.	Marine Engineering	3	1	1	0	5	16
		Armament & Combat Vehicles	6	0	8	4	18	16
		Mechanical System Design	1	0	8	5	14	16
11	Automation and Robotics	--------	2	0	11	17	30	30
12	Modelling & Simulation	--------	0	0	7	16	23	24
13	Sensor Tech./ LEOC	LEOC	0	0	4	1	5	12
		Sensor Technology	0	0	4	3	7	13
14	Technology Management	--------	10	0	3	1	14	30
15	Nano Science and Technology	--------	2	0	6	3	11	18
	Total		47	5	163	203	418	478
15	System Engineering	System Engineering	9	0	0	0	9	9

M.Sc. Admissions for the AY 2024-25:

Total intake - 75; Total Admissions - 57

M.Sc. in Data Science	- 14/15
M.Sc. In Applied Chemistry	- 09/15
M.Sc. In Applied Physics (Photonics)	- 09/15
M.Sc. In Applied Physics (Tech. Photonics)	- 13/15
M.Sc. In Material Science	- 12/15

M.Sc. Admissions for the AY 2024-25: (Sponsored Category)

M.Sc in Food Technology	-03
M.Sc in Tank Technology	-30
M.Sc in Information Technology	-11

Ph.D Admissions for the Academic Year 2024-25: Total Admissions - 57

2024 January session	-19
2024 July session	-38

Defence Institute of Advanced Technology
Department of Aerospace Engineering

Proposal to start online
M. Tech. in Systems Engineering

(Subject to approval of AICTE)

Systems Engineering: Introduction

- Systems engineering is a multidisciplinary approach in designing, developing, and managing complex systems over their life cycles.
- It integrates different engineering disciplines and ensures that all system components work together efficiently.

Importance

- Holistic Approach to problem solving
- Managing Complexity
- Risk Mitigation
- Life Cycle Management
- Optimizing Performance and Efficiency
- Ensuring Quality and Reliability
- Cost and Time Efficiency
- Alignment with Standards and Regulations

M. Tech. in Systems Engineering (Online)

- This program is an interdisciplinary especially designed for Defense professionals.

- The program structure for online mode has been prepared as per the guidelines of the PGC and BoS committees.

- As per the PGC guidelines, any online MTech program can be offered after the approval of AICTE.

M. Tech. in Systems Engineering (Online)

Eligibility: BE/BTech degree in any stream of Engineering from a recognised Institute/University (Qualifying percentage/CGPA will be followed as per regular MTech programs offered at DIAT).

Experience:
- Two years of working professional experience in Systems Development Engineering Process (in any engineering field including Software Development like, coding, design, analysis, testing, etc.)
- Candidate has to provide certificate from the employer to confirm his nature of work and candidate has to provide NOC from their respective employer.

Admission: Based on Written Test & Interview (Online/Offline modes as per DIAT norms)

Course Duration:
- Minimum Duration: 2.5 years
- Maximum Duration: 5 years (twice of the minimum duration)

   (Only in case of backlogs in the theory subjects, late submission of thesis and approved semester break)

Assessment/Exam for each course: (As per DIAT PGC guidelines)
- Assignments - 20 marks
- Internal assessment of course - 30 marks (offline/online)
- End semester exam - 50 marks (offline)

Course Structure

Semester-1

#	Course Code	Course Name	L	T	C
1	SE 601	Introduction to Systems Engineering	3	1	4
2	SE 602	Requirements, Design & Tradeoff Analysis	3	1	4
3	AM 607	Mathematics for Engineers	3	1	4
4	PGC 601	Research Methodology & IPR	2		2
		CREDITS FOR FIRST SEMESTER			14

Semester-2

#	Course Code	Course Name	L	T	C
1	SE 603	System Architecture & Design	3	1	4
2	SE 604	Systems Thinking & Modeling	3	1	4
3	SE 605	Introduction to Model Based Systems Engineering	3	1	4
4	PGC 602	Communication Skills & Personality Development	2		2
		CREDITS FOR SECOND SEMESTER			14

Semester-3

#	Course Code	Course Name	L	T	C
1	SE 606	System Verification & Validation	3	1	4
2	SE 607	Multi-Disciplinary Analysis & Optimization	3	1	4
3		Elective-1	3	0	3
4		Elective-2	3	0	3
5	SE 649	Seminar			2
		CREDITS FOR THIRD SEMESTER			16

Semester-4

#	Course Code	Course Name	L	T	C
1		Elective-3	3	0	3
2		Elective-4	3	0	3
3		Elective-5	3	0	3
4	SE 650	Dissertation I			9
		CREDITS FOR FOURTH SEMESTER			18

Semester-5

#	Course Code	Course Name	L	T	C
1	SE 651	Dissertation II			18
		CREDITS FOR FIFTH SEMESTER			18

Total Credits

Semester	1	2	3	4	5	TOTAL
Credits	14	14	16	18	18	80

Note: The total credit requirements for MTech program have been maintained as per the UGC guidelines.

Electives

#	Course Code	Course Name	L	T	C
1	SE 608	Human Factors in Systems Engineering	3	0	3
2	SE 609	System Safety & Reliability	3	0	3
3	SE 610	Systems Life Cycle Cost Analysis & Risk Management	3	0	3
4	SE 611	Engineering Ethics	3	0	3
5	SE 612	AI/ML for Systems Engineering	3	0	3
6		NPTEL / MOOC			3
7		NPTEL / MOOC			3
		Electives of Specific Domain			
8	SE 613	Spacecraft Systems Engineering	3	0	3
9	SE 614	Aircraft Systems Engineering	3	0	3
10	SE 615	Automotive Systems Engineering	3	0	3
11	SE 616	Medical Systems Engineering	3	0	3
12	SE 617	Software Systems Engineering	3	0	3

Students have to take minimum 1 or maximum 2 electives from the list of "Electives of Specific Domain"
Students can opt maximum of 2 NPTEL / MOOC courses of 3 credits each as electives.