



MINUTES OF FORTY SECOND MEETING OF THE ACADEMIC COUNCIL

Date : 08.07.2023

Venue: Richard Dawkins Hall

Time : 10.30 A.M

Place : PMIST, Vallam – Thanjavur

The Forty Second Meeting of the Academic Council of the Periyar Maniammai Institute of Science & Technology (PMIST), Vallam, Thanjavur held on 08.07.2023 at 10.30 a.m.

Prof.S.Velusami, Hon'ble Vice-Chancellor, chaired the meeting.

The following Academic Council Members were present

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|---|--------|
| 1. Dr.D.Aarthi Saravanan | Member |
| 2. Dr.A.Anand Jerard Sebastine | Member |
| 3. Dr.S.Arumugam | Member |
| 4. Dr.A.P.Aruna | Member |
| 5. Dr.P.Aruna | Member |
| 6. Dr.S.Asokan | Member |
| 7. Dr.P.Balakumar | Member |
| 8. Dr.S.Buvaneswari | Member |
| 9. Dr.P.Guru | Member |
| 10. Dr.K.Geetha | Member |
| 11. Dr.A.George | Member |
| 12. Dr.A.Manohar (Represented for Dr.S.Gomathi) | Member |
| 13. Dr.V.Hamsadhwani | Member |
| 14. Dr.R.Jayanthi | Member |
| 15. Dr.N.Jayanthi | Member |
| 16. Dr.J.Jeyachidra | Member |
| 17. Dr.D.Jeyasimman | Member |
| 18. Mr.I.Karthic Subramaniayan | Member |
| 19. Dr.R.Kathiravan | Member |

20.	Dr.T.Kavitha	Member
21.	Dr.K.Kesavan	Member
22.	Dr.S.P.Kulanthaivel Babu	Member
23.	Dr.D.Kumar	Member
24.	Dr.S.Kumaran	Member
25.	Dr.D.Maghesh Kumar	Member
26.	Dr.B.Mahendra Mohan	Member
27.	Dr.Nam.Srinivasan	Member
28.	Dr.C.Narmadha	Member
29.	Prof.Dr.G.Palanithurai	External Member
30.	Dr.S.Parameswaran	Member
31.	Mr.A.Pugazhenth	Member
32.	Dr.C.Rajanandhini	Member
33.	Dr.KVR.Rajandran	Member
34.	Mr.R.Rakesh	Member
35.	Dr.D.Ramesh	Member
36.	Ar.N.Ramesh Babu	Member
37.	Dr.D.Ruby	Member
38.	Dr.J.Santhosh	Member
39.	Mr.Callaghan Gerard Patrick (Represented for Dr.V.Saranya)	Member
40.	Dr.J.Sathyapriya	Member
41.	Dr.K.Selvakumar	Member
42.	Dr.K.Selvam	Member
43.	Dr. S.Senthamil Kumar	Member
44.	Dr.S.Sharmila Begum	Member
45.	Dr.V.K.Stalin	External Member
46.	Dr.C.V.Subramanian	Member
47.	Mr.Suresh Sambandam	External Member
48.	Dr.D.Thaiyalnayaki	Member
49.	Dr.G.Tamilvanan	Member
50.	Dr.K.Thirumaran	External Member

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| 51. | Dr.D.Umameheswari | Member |
| 52. | Dr.P.Vijayalakshmi | Member |

ADDRESS BY THE VICE-CHANCELLOR

Hon'ble Chair Person welcomed all the Internal & External Members of the Academic Council. He presented all the academic activities held in the campus after the previous meeting.

1. BUSINESS BROUGHT FORWARD BY THE VICE-CHANCELLOR

VC 42.1.1 TO CONSIDER AND APPROVE the confirmation of the minutes of the 41st Academic Council Meeting held on 10.12.2022.

Notes:

The Minutes of the 41st Academic Council Meeting held on 10.12.2022 were communicated to all members. The same was placed before the Board of Management Meeting held on 27.12.2022 and got approved; no dissent / corrections have been received from the members.

The matter is placed before the Academic Council for approval.

Resolution

RESOLVED TO APPROVE the confirmation of the minutes of the 41st Academic Council Meeting held on 10.12.2022.

VC 42.1.2 TO CONSIDER AND RATIFY the course works offered for the Research scholars registered in the academic year 2022-23 under Regulations 2022.

Notes:

The respective Doctoral Committees of the following departments have discussed and finalized the course work syllabi for the Research Scholars registered in the academic year 2022-23. The list is given below:

Sl. No	Department	Sub. Code	Subject Title	Credit			
				L	T	P	C
1.	Computer Science and Applications	RCA039	Machine Learning	3	0	0	3
2.	Computer Science and Applications	RCA040	Data Science	3	0	0	3
3.	ECE	REC048	Network Routing Algorithms	3	0	0	3
4.	ECE	REC049	Cognitive Radio Networks	3	0	0	3
5.	Commerce	RCO004	Social Entrepreneurship	3	0	0	3
6.	Commerce	RCO005	Fundamentals of Management for Social Enterprise	3	0	0	3
7.	Commerce	RCO006	Social Marketing	3	0	0	3
8.	Management Studies	RBA076	Employee Engagement	3	0	0	3
9.	Mechanical Engineering	RME041	Materials and Characterization Techniques	3	0	0	3
10.	Mechanical Engineering	RME042	CAD for Additive Manufacturing	3	0	0	3
11.	Mechanical Engineering	XMEON13	Metal Additive Manufacturing	3	0	0	3
12.	Languages	REG039	Introduction to African American Novels	3	0	0	3
13.	Languages	REG040	Representation of Subaltern Identity in Tamil Literature	3	0	0	3
14.	Languages	REG041	Feminist Aspects in the works of P.Sivakami and Gloria Naylor	3	0	0	3
15.	Languages	REG042	English for Specific Purposes	3	0	0	3
16.	Languages	REG043	Essentials of Language Teaching	3	0	0	3
17.	Languages	REG044	Reading Comprehension	3	0	0	3
18.	Languages	REG045	The Posthuman Condition	3	0	0	3
19.	Mathematics	RMA023	Advanced Graph Theory and its Applications	3	0	0	3
20.	Mathematics	RMA024	Domination In Graphs	3	0	0	3

The matter is placed before the Academic Council for ratification.

Resolution

RESOLVED TO RATIFY the course works offered for the Research scholars registered in the academic year 2022-23 under Regulations 2022.

VC 42.1.3 TO CONSIDER AND RATIFY the recommendations of the Exam Advisory Committee held on 14.06.2023

The recommendations are given in annexure

The matter is placed before the Academic Council for ratification.

Resolution

RESOLVED TO RATIFY the recommendations of the Exam Advisory Committee held on 14.06.2023.

VC 42.1.4 TO CONSIDER AND RATIFY renaming the “Centre for Scholarly Scientific Training and Publishing (CSSTP)”, as “Centre for Research and Scholarly Communication (CRSC)”.

Notes:

The Centre does not involve in any direct publishing role. However, the primary aim of the Center is to enhance scholarly communication and quality research outcomes with PMIST affiliation. In this context, the Center is renamed as “Centre for Research and Scholarly Communication (CRSC)”

The matter is placed before the Academic Council for ratification.

Resolution

RESOLVED TO RATIFY renaming the “Centre for Scholarly Scientific Training and Publishing (CSSTP)”, as “Centre for Research and Scholarly Communication (CRSC)”

VC 42.1.5 TO CONSIDER AND RECORD starting of new programmes in the forthcoming Academic Year 2023-24.

Notes:

The following new programs are proposed to start from the forthcoming Academic Year 2023-24. In this regard, the agenda was circulated to all members through mail on 29.04.2023 and sought approval for initiating admission process.

Sl. No	Programme	Eligibility	Intake
1	BBA (Digital Marketing)	Candidate should have passed 10+2 examination or equivalent	30
2	BA.- Political Science	Candidate should have passed 10+2 examination or equivalent	30
3	M.Sc. Augmented Reality and Virtual Reality (AR & VR)	B.Sc. Computer Science / B.Sc. IT / B.Sc. Data Science / B.C.A / B.Sc. Artificial Intelligence	20
4	B.Tech.-CSE (Artificial Intelligence and	Candidate should have passed 10+2 examination with Physics & Mathematics subject and any one of	30

	Machine Learning)	the following Chemistry/ Computer Science/ Electronics / Information Technology/ Biology/ Informatics Practices/ Biotechnology/ Technical Vocational Subject/ Agriculture/Engineering Graphics/ Business Studies/Entrepreneurship.	
5	B.Tech.-CSE (Cyber Security)	Candidate should have obtained at least 45% marks (40% marks in case of candidates belonging to reserved category) in the above subjects taken together.	30

The matter is placed before the Academic Council for information and record.

Resolution

RESOLVED TO TAKE INTO RECORD starting of new programmes in the forthcoming Academic Year 2023-24.

2. BUSINESS BROUGHT FORWARD BY DEAN ACADEMIC

DEAN ACADEMIC 42.2.1

TO CONSIDER AND APPROVE the following amendment brought in the 25th ACM (Item No.25.7.6) towards encouraging students paper publication with effect from 2023-24 academic year onwards.

Existing:

- a. All UG programmes – 2 articles (1 paper in National/International Journal and 1 in National or International Conference).
- b. All PG programmes – 2 Papers (1 in National/International Journal and 1 in National/ International Conferences)

To be amended as:

- a. All UG programmes – 1 article (1 paper publication in National Journal or Conference ISBN publication).
- b. All PG programmes– 1 paper (1 publication in National Journal or 1 Conference ISBN publication).

Explanation:

The above amendments are necessitated in view of the delay encountered by the final year students while receiving acceptance for publication.

The matter is placed before the Academic Council for Approval.

Dr.P.K.Srividhya, Registrar suggested that paper publication can be optional for UG. It is mandatory for PG and they should publish at least one paper in National Journal or in the Conference ISBN Publication.

Resolution

RESOLVED TO APPROVE the amendment brought in the 25th ACM (Item No.25.7.6) towards encouraging student's paper publication with effect from 2023-24 academic year onwards.

The above publication/conference presentation may be considered as optional for all UG Programmes and mandatory for all PG Programmes.

DEAN ACADEMIC 42.2.2

TO CONSIDER AND APPROVE the existing and proposed intake of various programmes offered from the Academic year 2023-24 onwards.

Notes:

The existing and proposed intake for various programmes offered in the Academic year 2023-24 are given as follows:

PROGRAMME OFFERED (2023 - 24)

Under Graduate & Integrated Programmes (Full-Time)

Sl.No.	Programme	Duration	Intake
1.	B. Arch.	5 Years	80
2.	B.Tech.-Aerospace Engineering Specialization B.Tech. (Hons.) - Aerospace Engineering with specialization in <i>Unmanned Aerial Vehicle</i>	4 Years	30
3.	B.Tech.-Biotechnology Specialization B.Tech. (Hons.) - Biotechnology with specialization in <i>Computer Science and Biology</i>	4 Years	60
4.	B.Tech.-Civil Engineering Specialization B.Tech. (Hons.) - Civil Engineering with specialization in <i>GIS and Remote Sensing</i>	4 Years	60

Sl.No.	Programme	Duration	Intake
5.	B.Tech.-Computer Science and Engineering Specialization a) B.Tech. (Hons.) - CSE with specialization in AI and ML b) B.Tech. (Hons.) - CSE with specialization in Data Science c) B.Tech. CSE (AI & ML) – 30 Nos. d) B.Tech. CSE (Cyber Security) - 30 Nos.	4 Years	180
6.	B.Tech.-Electrical and Electronics Engineering Specialization a) B.Tech. (Hons.) - EEE with specialization in Electric Vehicles b) B.Tech. (Hons.) - EEE with specialization in Energy Engineering	4 Years	30
7.	B.Tech.-Electronics and Communication Engineering Specialization a) B.Tech. (Hons.) - ECE with specialization in AI and ML b) B.Tech. (Hons.) - ECE with specialization in Robotics and Industrial Automation	4 Years	60
8	B.Tech.-Mechanical Engineering Specialization a) B.Tech. (Hons.) - Mechanical Engineering with specialization in Robotics and Industrial Automation b) B.Tech. (Hons.) - Mechanical Engineering with specialization in Energy Engineering	4 Years	60
9.	B.C.A.	3 Years	180
10.	B.Sc. - Data Science	3 Years	60
11.	B.Sc.- Computer Science	3 Years	120
12.	B.Sc. (Computer Science) with specialization in Cyber Security	3 Years	30
13.	B.Sc.- Animation & Multimedia	3 Years	30
14.	B.Sc.- Artificial Intelligence	3 Years	30
15.	B.Sc.- Mathematics	3 Years	30
16.	B.Sc.- Physics	3 Years	30
17.	B.Sc.- Chemistry	3 Years	30
18.	B.Com.	3 Years	120
19.	B.Com. (Professional Accounting)	3 Years	60
20.	B.Com. -Corporate Secretaryship	3 Years	60
21.	B.Com. - Computer Applications	3 Years	60
22.	B.B.A.	3 Years	60

Sl.No.	Programme	Duration	Intake
23.	B.B.A. - Hospitality Management	3 Years	30
24.	B.B.A. - Logistics and Supply Chain Management	3 Years	30
25.	B.B.A.- Digital Marketing	3 Years	30
26.	B.A.- English	3 Years	30
27.	B.A – Tamil	3 Years	30
28.	B.A.- Political Science	3 Years	30
29.	B.A - Journalism and Mass Communication	3 Years	30
30.	B.Sc. B.Ed. (4 Years Integrated) Stream: Mathematics, Physics & Chemistry	4 Years	50
31.	B.Ed.	2 Years	100
Shift-2			
32.	BCA	3 Year	60
33.	B.Sc. (Computer Science)	3 Year	60
34.	B.Com (Computer Applications)	3 Year	60
35.	B.B.A	3 Year	60

POST GRADUATE PROGRAMMES (FULL-TIME)

Sl.No.	Programme	Duration	Intake
1.	M. Arch.	2 Years	20
2.	M.Tech.- Environmental Engineering	2 Years	18
3.	M.Tech.- Nano Technology	2 Years	18
4.	M.Tech.- Renewable Energy	2 Years	18
5.	M.Tech.- Wireless Communications	2 Years	18
6.	M.Tech.- Power Electronics and Drives	2 Years	18
7.	M.B.A. (Dual Specialization) <ul style="list-style-type: none"> • Finance • Human Resource • Marketing • Operations • Business Analytics 	2 Years	180
8.	M.S.W. - Social Work	2 Years	20
9.	M.Sc.-Chemistry	2 Years	20
10.	M.Sc.-Mathematics	2 Years	20
11.	M.Sc.-Physics	2 Years	20
12.	M.Sc.-Biotechnology	2 Years	20
13.	M.Sc.- Augmented Reality and Virtual Reality (AR & VR)	2 Years	20
14.	M.Sc.- Computer Science	2 Years	20
15.	M.Sc.- Data Science	2 Years	20
16.	M.A.- English	2 Years	20
17.	M.A.- Political Science	2 Years	20
18.	M.A.- Periyar Thought	2 Years	20
19.	M.A.- History	2 Years	20
20.	M.A.- Tamil	2 Years	20
21.	M.C.A.	2 Years	180
22.	M.Com.	2 Years	20

Ph.D Programmes (Full-Time & Part-Time)

Sl.No	Programme
Architecture	
1	Architecture
Engineering & Technology	
1	Biotechnology
2	Civil Engineering
3	Electrical & Electronics Engineering
4	Electronics & Communication Engineering
5	Mechanical Engineering
6	Nano Technology
Humanities, Sciences and Management	
Sl.No	Programme
1	Chemistry
2	Commerce
3	English
4	Management Studies
5	Mathematics
6	Periyar Thought
7	Physics
8	Social Work
9	Political Science
Computing Sciences and Engineering	
1	Computer Science and Applications

The matter is placed before the Academic Council for Approval.

Resolution

RESOLVED TO APPROVE the existing and proposed intake of various programmes offered from the Academic year 2023-24 onwards.

**DEAN
ACADEMIC
42.2.3**

TO CONSIDER AND RECORD the procedures followed for admitting candidates in to various programmes offered during the academic year 2023-24.

Notes:

The procedure for admitting candidates in to various programmes like Engineering, Architecture, Arts, Sciences, Humanities, Management and Education programmes has been framed based on the guidelines given in the AICTE handbook of approval process 2023-24, CoA, UGC and NCTE for the academic year 2023-24.

The matter is placed before the Academic Council for information and record.

Resolution

RESOLVED TO TAKE INTO RECORD the procedures followed for admitting candidates in to various programmes offered during the academic year 2023-24.

**DEAN
ACADEMIC
42.2.4**

TO INFORM AND RECORD the various scholarship schemes provided for students admitted during the Academic year 2023-24.

Notes:

Various scholarship schemes have been introduced for the students admitted for the Academic year 2023-24.

The matter is placed before the Academic Council for information and record.

Resolution

RESOLVED TO TAKE INTO RECORD the various scholarship schemes provided for students admitted during the Academic year 2023-24.

3. BUSINESS BROUGHT FORWARD BY FACULTY OF ENGINEERING AND TECHNOLOGY (FET)

DEPARTMENT OF BIO-TECHNOLOGY

**FET
B.Tech.-
Biotech.
42.3.1**

TO CONSIDER AND APPROVE the Curriculum and Syllabi for B.Tech. – Bio-Technology program under Full-Time (Regulation 2021 Revision II)

Notes:

The Board of Studies of the Department of Biotechnology recommended the Curriculum from I to VIII Semesters and Syllabi from I to VIII Semesters for the B.Tech.-Bio-Technology program under Full-Time (Regulation 2021 Revision II)

Modifications are brought in the Department's Vision and Mission to fulfill the newly added program M.Tech (Nanotechnology). The modified Vision and Mission are given in Annexure.

The curriculum and Syllabus is in line with AICTE proposed guidelines 2020 with 36% of revision from the previous syllabus. The syllabus revision included feedback on curricular aspects from students, teachers, employers, and alumni. The new courses of Regulations 2021, Value added courses to be offered by the department, and Open Elective courses offered by the department for other department students introduced are

New courses

1. Bioprocess Control and Instrumentation
2. Tissue Engineering
3. Human Genetics
4. Bioreactor Design and Scale up Process
5. Biomaterials
6. Fundamentals of Algorithms for Bioinformatics
7. Molecular Therapeutics and Diagnostics
8. Transport Phenomena in Biological System
9. Biosafety and Hazard Management
10. Molecular Modelling
11. Clinical Trials and Healthcare Policies in Biotechnology
12. Biotechnological Approach in Crop Improvement

Open Electives

1. Biosafety Management (Open Elective) (3 Credit)
2. Application of Nanotechnology (Applicable only for engineering, Dept of Physics and Chemistry) (Open Elective) (3 Credit)

Value Added Courses

1. R Program and R Studio for Biotechnologists
2. Python for Biotechnologist
3. Training in Hospital's Clinical Research Lab
4. Downstream Manufacturing (Microbial)
5. Personal and professional development skill,
6. R program and R studio
7. Statistics and Data Analytical skill and Control
8. MS Office
9. Control and Maintenance of Bioanalytical instruments

The matter is placed before the Academic Council for approval.

Dr.K.Thirumaran, External Member asked whether extra credits are offered for B.Tech programmes.

Dr.P.K.Srividhya, Registrar replied that if the student attains extra 18 credits offered for the programme he / she can obtain Honours Degree.

Resolution

RESOLVED TO APPROVE the Curriculum and Syllabi for B.Tech. – Bio-Technology program under Full Time (Regulation 2021 Revision II).

TO CONSIDER AND APPROVE the eligibility for M.Sc. (Biotechnology).

Notes:

**FET
M.Sc.-
Biotech.
42.3.2**

Programme	Eligibility
M.Sc. (Biotechnology)	Pass in Bachelor's Degree in any branch of Life Sciences (Biotechnology, Microbiology, Zoology, Biochemistry, Agricultural Sciences or equivalent from any recognized University of National and International repute.

The matter is placed before the Academic Council for approval.

Dr.S.Asokan, Controller of Examinations suggested to add Botany in the eligibility list.

Dr.K.Geetha, HoD/ Biotechnology informed that Botany subject may not be much relevant for M.Sc. Biotechnology.

Dr.A.P.Aruna, CEO Periyar TBI suggested not to include B.Sc. Agri in the eligibility list and also enquired whether M.Sc. Biotechnology can be registered as professional course? Also added that the eligibility criteria should be made clear to students during admission.

Resolution

RESOLVED TO APPROVE the eligibility for M.Sc. (Biotechnology).

Programme	Eligibility
M.Sc. (Biotechnology)	Pass in Bachelor's Degree in any branch of Life Sciences (Biotechnology, Microbiology, Biochemistry).

**FET
M.Sc.-
Biotech.
42.3.3**

TO CONSIDER AND APPROVE the Curriculum and Syllabi for M. Sc – Biotechnology program under Full-Time (Regulation 2023).

Notes:

The Board of Studies of the Department of Biotechnology- Post Graduate recommended the curriculum from I to IV Semesters and Syllabi from I to IV Semesters for the M.Sc. Biotechnology program under Full-Time (Regulation 2023).

Curriculum and Syllabi is in line with Learning Outcomes Based Curriculum Framework (LOCF) and TANSCHÉ proposed guidelines. The following courses and proposed Value added courses are given below:

New Courses

1. Cell Biology and Molecular Biology
2. Biochemistry
3. Microbiology
4. Bioanalytical Technique
5. Nano Biotechnology
6. Molecular Genetics
7. Lab-I Molecular Biology and Microbiology
8. Lab-II Biochemistry
9. Communication Skills and Scientific Writing
10. Recombinant DNA Technology
11. Immunology
12. Biostatistics
13. Stem Cell Biology and Tissue Engineering
14. Animal and Plant Biotechnology
15. Pharmaceutical Biotechnology
16. Lab-III Immunology lab
17. Lab-IV r DNA lab
18. Research Methodology, Ethics, and IPR
19. Enzymology

20. Bioprocess Technology
21. Computational Biology
22. Medical Biotechnology and Drug Design
23. Agricultural Biotechnology
24. Food Processing Techniques
25. Microbial Biotechnology
26. Environmental Biotechnology
27. Regulatory affairs and Industrial standards
28. Bioprocess Technology Lab
29. Lab V- Computational Biology
30. Entrepreneurship

Value-added courses

1. Basics of Computer and its Applications
2. Personal and professional development skill
3. Scientific Writing
4. Nano Materials synthesis for biomedical applications
5. Bio Fertilizer development
6. Downstream Manufacturing (Microbial)
7. Genomics and Proteomics

The matter is placed before the Academic Council for approval.

Resolution

RESOLVED TO APPROVE the Curriculum and Syllabi for M.Sc – Biotechnology program under Full Time (Regulation 2023).

**FET
M.Tech.-
Nano
42.3.4**

TO CONSIDER AND APPROVE the Curriculum and Syllabi for M.Tech. Nanotechnology program under Full Time (Regulation 2023).

Notes:

The Board of Studies of the Department of Biotechnology- Post Graduate recommended the Curriculum from I to IV Semesters and Syllabi from I to IV Semesters for the M. Tech Nanotechnology program under Full Time (Regulation 2023). The details of new courses introduced and value added are:

New courses

1. Materials Science & Engineering
2. Nano composites

3. Nanofluid Dynamics
4. Cell and Molecular Biology
5. 3D Printing
6. Graphene Nanotechnology
7. Carbon Nanotube
8. Quantum Dot

Value added course

1. Electrospinning
2. Spray Pyrolysis
3. GCMS
4. Microbial production using Fermenter
5. PCR
6. SEM
7. Molecular Docking

The matter is placed before the Academic Council for approval.

Resolution

RESOLVED TO APPROVE the Curriculum and Syllabi for M.Tech. Nanotechnology program under Full Time (Regulation 2023).

DEPARTMENT OF CIVIL ENGINEERING

**FET
B.Tech.-
Civil Engg.
42.3.5**

TO CONSIDER AND APPROVE the B.Tech. – Civil Engineering programme and B.Tech.- Civil Engineering with specialization in GIS and Remote Sensing Programme syllabus under Full Time (Regulation 2021 Revision -I).

Notes:

The Board of Studies of the Department of Civil Engineering recommended minor modifications in the syllabus.

The syllabus revision included feedback on curricular aspects from students, teachers, employers and alumni. The syllabus has 94% courses having focus on employability/entrepreneurship/skill development. The complete curriculum and syllabi with details are given in the Board of Studies minutes document attached as Annexure. The new courses (Regulations 2021 Revision -I), Value added courses and Open Elective courses offered by the department for other department students are given as follows:

New Courses in Core Elective

Sl.No	Name of the course
1.	Fundamentals of Building Services
2.	Trenchless Technology
3.	Safety in Civil Engineering Construction
4.	Pre Engineered Structures
5.	Sustainable Engineering

Open elective courses

Sl.No	Name of the course
1.	Sustainable Engineering

Value added course

- Mechanical Electrical and Plumbing

The matter is placed before the Academic Council for approval.

Resolution

RESOLVED TO APPROVE the B.Tech. – Civil Engineering programme and B.Tech.- Civil Engineering with specialization in GIS and Remote Sensing Programme syllabus under Full Time (Regulation 2021 Revision -I).

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

**FET
B.Tech.-
ECE.
42.3.6**

TO CONSIDER AND APPROVE the Revised Elective Courses offered from V to VIII semesters of B.Tech.- Electronics and Communication Engineering under full time Regulation 2021.

Notes :

The Board of Studies of the B.Tech.-Electronics and Communication Engineering recommended to add four new electives to the existing list of Electives which are to be offered from V to VIII semesters of B.Tech. Electronics and Communication Engineering under full time (Regulation 2021).

Program Elective PE	CODE NO.	Existing	Proposed
PE1 505*	XEC505A	Computer Organization and Architecture	Computer Organization and Architecture
	XEC505B	Introduction to Artificial Intelligence	Introduction to Artificial Intelligence
	XEC505C	Radio Frequency Electronics	Radio Frequency Electronics

	XEC505D		Radar Technologies
PE2 603*	XEC603A	Introduction to Data Structure	Introduction to Data Structure
	XEC603B	Applied Machine Learning	Applied Machine Learning
	XEC603C	Wireless Communications	Wireless Communications
	XEC603D		Avionics Systems
PE3 703*	XEC703A	Introduction to Operating Systems	Introduction to Operating Systems
	XEC703B	Artificial Intelligence for Robotics	Artificial Intelligence for Robotics
	XEC703C	Wireless Networks	Wireless Networks
	XEC703D		Satellite Communication
PE4 801*	XEC801A	Fundamentals of Kotlin Programming	Fundamentals of Kotlin Programming
	XEC801B	Internet of Things	Internet of Things
	XEC801C	Fundamentals of 5G Technology	Fundamentals of 5G Technology
	XEC801D		Remote Sensing

The matter is placed before the Academic Council for approval.

Resolution

RESOLVED TO APPROVE the Revised Elective Courses offered from V to VIII semesters of B.Tech.- Electronics and Communication Engineering under full time Regulation 2021.

**FET
B.Tech.-
ECE.
42.3.7**

TO CONSIDER AND APPROVE the Open Elective Courses offered by the Department of Electronics and Communication Engineering from the Academic Year 2023-24.

Notes :

The Board of Studies of the Department of Electronics and Communication Engineering recommended the Open Elective courses offered from the Academic Year 2023-24.

Open Elective OE	Code No	Existing	Proposed
OE	XECOE1	Entertainment Electronics and Management	Display Systems
	XECOE2	-	Human Assist Devices

The matter is placed before the Academic Council for approval.

**FET
ECE
42.3.8**

Resolution

RESOLVED TO APPROVE the Open Elective Courses offered by the Department of Electronics and Communication Engineering from the Academic Year 2023-24.

TO CONSIDER AND APPROVE the value added courses offered by the Department of Electronics and Communication Engineering from the academic year 2023-24

Notes:

Feedback from various stake holders were received and the suggestions on value added courses were discussed in the Board of Studies meeting. Based on the discussions the proposed value added courses are listed below:

Sl.No	Course Name
1	Industrial Automation
2	Matlab and its applications
3	Internet of Things and its applications
4	Machine learning using Python

The matter is placed before the Academic Council for approval.

Resolution

RESOLVED TO APPROVE the value added courses offered by the Department of Electronics and Communication Engineering from the academic year 2023-24.

DEPARTMENT OF MECHANICAL ENGINEERING

**FET
Mech
M.Tech.-RE
42.3.9**

TO CONSIDER AND APPROVE the Syllabi of the following new elective courses offered for M.Tech.-Renewable Energy under Full Time (Regulation 2022 – Revision I).

COURSE CODE	COURSE TITLE	L	T	P	C	H
YRE104D	Computational Optimization Methods	3	0	0	3	3
YRE105D	Energy Storage Systems for E-Vehicles	3	0	0	3	3

Notes:

The Board of Studies of the Department of Mechanical Engineering recommended the Syllabus for the above new elective courses offered in I Semester for M.Tech.-Renewable Energy (Regulation 2022 – Revision I).

The matter is placed before the Academic Council for approval.

Resolution

RESOLVED TO APPROVE the Syllabi of the following new elective courses offered for M.Tech.-Renewable Energy under Full Time (Regulation 2022 – Revision I).

**FET
Mech
M.Tech.-RE
42.3.10**

TO CONSIDER AND APPROVE the changes in the syllabi and title of the following courses offered for M.Tech.-Renewable Energy under Full Time (Regulation 2022 – Revision I).

COURSE CODE	COURSE TITLE	L	T	P	C	H
YRE102	Wind, Ocean, Hydro and Geothermal Energy Systems (Title in Regulation 2022 Wind, Ocean and Geothermal Energy Systems)	3	0	0	3	3
YRE103	Process Modelling in Energy Systems (Title in Regulation 2022 Process Modelling and Simulation in Energy Systems)	3	0	0	3	3
YRE105C	Waste Management and Circular Economy (Title in Regulation 2022 Waste Management and Energy Recovery)	3	0	0	3	3
YRE205D	Green Building Technologies (Title in Regulation 2022 Energy Efficient Building)	3	0	0	3	3

Notes:

The Board of Studies of the M.Tech. Renewable Energy under Department of Mechanical Engineering recommended the modified Syllabus with change of titles for the above courses offered in I and II Semesters for M.Tech. Renewable Energy (Regulation 2022 – Revision I).

- In the modified course of Process Modelling in Energy Systems, Units IV and V are revised by including more topics related to Numerical methods, Differential equations and Finite Element Methods.
- In the modified course of Wind, Ocean, Hydro and Geothermal Energy Systems few topics related to Hydro energy is added.
- In the modified course of Waste Management and Circular Economy, Unit V is replaced by topics related to Circular Economy.
- As suggested by BOS members, the title of the course YRE205D is changed from Energy Efficient Building into Green Building Technologies without any change in the syllabus.

The matter is placed before the Academic Council for approval.

Resolution

RESOLVED TO APPROVE the changes in the syllabi and title of the following courses offered for M.Tech.-Renewable Energy under Full Time (Regulation 2022 – Revision I).

**FET
Mech
B.Tech.-
Mech
42.3.11**

TO CONSIDER AND APPROVE the changes in the syllabus of the following courses offered for B.Tech.-Mechanical Engineering under Full Time (Regulation 2021 – Revision II).

COURSE CODE	COURSE TITLE	Credits				Hours			
		L	T	P	C	L	T	P	H
XEM206	Engineering Mechanics	3	0	0	3	3	0	0	3
XWP205	Workshop Practices	1	0	2	3	1	0	4	5

Notes:

The Board of Studies of the Department of Mechanical Engineering recommended the modified Syllabus for the above courses offered in the First Year for various B.Tech.-programmes (Regulation 2021 – Revision II).

- In the modified course of Engineering Mechanics topics on stability of equilibrium, mass moment of inertia of hook and instantaneous centre of rotation are removed in Units III and IV.

- In the modified course of Workshop Practices, exercises related to sheet metal works are added.

The matter is placed before the Academic Council for approval.

Resolution

RESOLVED TO APPROVE the changes in the syllabus of the following courses offered for B.Tech.-Mechanical Engineering under Full Time (Regulation 2021 – Revision II).

4. BUSINESS BROUGHT FORWARD BY FACULTY OF COMPUTING SCIENCES & ENGINEERING (FCSE) DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

**FCSE
B.Tech.-
CSE
42.4.1**

TO CONSIDER AND APPROVE the new programme B.Tech.-Computer Science and Engineering – (AI & ML) and B.Tech.- Computer Science and Engineering (Cyber Security) under Full Time (Regulation 2023). This is applicable for the students admitted in the academic year 2023-2024 onwards.

Notes:

The Board of Studies of the Department of Computer Science and Engineering recommended the curriculum from I to VIII Semesters and Syllabi for I and II Semesters for B.Tech.- Computer Science and Engineering programme (AI & ML) and B.Tech.-Computer Science and Engineering programme (Cyber Security) under Full Time (Regulation 2023). The matter is placed before the Academic Council for approval.

Dr. P.K.Srividhya, Registrar suggested that Workshop practices can be offered in the I semester.

Dr.M.Sharmila Begum, HoD / CSE agreed to change the revision accordingly.

Resolution

RESOLVED TO APPROVE the new programme B.Tech.-Computer Science and Engineering – (AI & ML) and B.Tech.- Computer Science and Engineering (Cyber Security) under Full Time (Regulation 2023). This is applicable for the students admitted in the academic year 2023-2024 onwards.

DEPARTMENT OF COMPUTER SCIENCE AND APPLICATIONS

FCSE BCA 42.4.2

TO CONSIDER AND APPROVE the introduction of BCA-Batch-II (Intake- 60 Nos) and M.Sc.-Data Science (Intake-20 Nos) during the academic year 2023-2024.

Notes:

Due to the increasing demand for the course BCA and M.Sc. Data Science the Department of Computer Science and Applications introduced a new Batch (BCA-Batch-II) and a new programme M.Sc.-Data Science.

The matter is placed before the Academic Council for approval.

Resolution

RESOLVED TO APPROVE the introduction of BCA-Batch-II (Intake- 60 Nos) and M.Sc.-Data Science (Intake-20 Nos) during the academic year 2023-2024.

FCSE BCA, B.Sc.-DS 42.4.3

TO CONSIDER AND APPROVE the revision and introduction of Value Added Courses for BCA (Regulation 2021, Rev 02) and B.Sc.-Data Science (Regulation 2022, Rev 01).

The Value Added Courses are:

- DevOps
- AWS
- Google Cloud
- GO Programming
- Data Visualization

Notes:

The Board of Studies of the Department of Computer Science and Applications recommended the introduction of Value Added Courses and curriculum and syllabi from I to VI Semesters of BCA Programme Under Full Time (Regulation 2021, Rev 02) and B.Sc.-Data Science Programme under Full Time (Regulation 2022, Rev 01).

The matter is placed before the Academic Council for approval.

Resolution

RESOLVED TO APPROVE the revision and introduction of Value Added Courses for BCA (Regulation 2021, Rev 02) and B.Sc.-Data Science (Regulation 2022, Rev 01).

**FCSE
MCA
42.4.4**

TO CONSIDER AND APPROVE increasing intake for MCA programme from 120 to 180 from the academic year 2023-2024.

Notes:

Due to the increased demand in admission the Department of Computer Science and Applications proposed to increase the intake of MCA programme from 120 to 180 from the academic year 2023-2024 onwards.

The matter is placed before the Academic Council for Approval.

Resolution

RESOLVED TO APPROVE increasing intake for MCA programme from 120 to 180 from the academic year 2023-2024.

**FCSE
MCA,
M.Sc.-DS
42.4.5**

TO CONSIDER AND APPROVE the Curriculum and Syllabi from I to IV semester of MCA programme under Full Time (Regulation 2023) and M.Sc Data Science programme Under Full Time (Regulation 2023) along with the introduction of Value Added Courses in MCA Programme Under Full Time (Regulation 2023 and) M.Sc Programme Under Full Time (Regulation 2023).

The Value Added Courses are:

- DevOps
- AWS
- Google Cloud
- GO Programming
- Data Visualization

Notes:

The Board of Studies of the Department of Computer Science and Applications recommended the introduction of Value Added Courses and

curriculum and syllabi from I to IV Semesters of MCA Programme under full time Regulation 2023 and M.Sc.-Data Science Programme under Full-Time Regulation 2023.

The matter is placed before the Academic Council for Approval.

Resolution

RESOLVED TO APPROVE the Curriculum and Syllabi from I to IV semester of MCA programme under Full-Time (Regulation 2023) and M.Sc Data Science programme Under Full Time (Regulation 2023) along with the introduction of Value Added Courses in MCA Programme Under Full-Time (Regulation 2023 and) M.Sc Programme Under Full-Time (Regulation 2023).

DEPARTMENT OF SOFTWARE ENGINEERING

**FCSE
Soft. Engg.
B.Sc.-CS
42.4.6**

TO CONSIDER AND APPROVE the Curriculum and Syllabi for B.Sc. – Computer Science programme under Full-Time (Regulation 2023).

Notes:

The Board of Studies of the Department of Software Engineering recommended the Curriculum from I to VI Semesters and Syllabi from I to VI Semesters for B.Sc. – Computer Science programme under Full-Time (Regulation 2020 Revision 2).

Based on UGC - Learning Outcomes based Curriculum Framework (LOCF) the modifications in the curriculum are made.

Curriculum and Syllabi is in line with UGC proposed guidelines 2020 with 50 % revision from previous syllabus. The syllabus revision included feedback on curricular aspects from students, teachers, employers and alumni. The syllabus has 87.5% courses having focus on employability / entrepreneurship / Soft Skill/Skill development.

The new courses and Value added courses (Regulation 2020 Revision 2) to be offered by department are:

(Note: Theory cum Lab courses are separated into Theory and Lab courses)

New courses

1. Programming in C
2. Programming in C Lab
3. Computer Fundamentals Lab
4. Data Structures Lab
5. Object oriented programming Lab
6. Tamil-III/Foundational Tamil-III
7. English – III
8. Algorithms Lab
9. Auxiliary Physics Lab
10. Dreamweaver(Minor Course)
11. Tamil-IV/Foundational Tamil-IV
12. English-IV
13. Programming in Java Lab
14. DBMS Lab
15. Online Content creation
16. Fundamentals of R Programming
17. MATLAB Programming Lab(Elective)
18. R Programming Lab(Elective)
19. Python Programming Lab(Elective)
20. .NET Lab (Elective)
21. GIMP (GNU Image Manipulation Program) Lab (Elective)
22. Theory of Computation Lab (Elective)
23. Introduction to Machine Learning
24. Web Technologies Lab(Elective)
25. Mobile Application Development Lab(Elective)
26. Cloud Computing Lab (Elective)

Courses Moved:

Sl.No	Course Name	Previous Regulation	Regulation 2023
01	Object oriented Programming	III Semester	Moved to II Semester
02	Programming in Java	V Semester	Moved to IV Semester

Value Added Courses

1. Computer Hardware
2. Problem Solving Techniques
3. Enhancing Skills in Excel
4. Practical Computer networking
5. Data Science
6. UI Design

The matter is placed before the Academic Council for Approval.

Resolution

RESOLVED TO APPROVE the Curriculum and Syllabi for B.Sc. – Computer Science programme under Full Time (Regulation 2023).

**FCSE
Soft. Engg.
B.Sc.-CS
42.4.7**

TO CONSIDER AND APPROVE the Curriculum and Syllabi for B.Sc. – Computer Science with specialization in Cyber Security Programme under Full Time (Regulation 2023).

Notes:

The Board of Studies of the Department of Software Engineering recommended the curriculum from I to VI Semesters and Syllabi from I to VI Semesters for B.Sc. Computer Science with specialization in Cyber Security programme under Full Time (Regulation 2023).

Curriculum and Syllabi of B.Sc. – Computer Science with specialization in Cyber Security) includes the feedback on curricular aspects from students, academicians, industrial experts and alumni.

Value Added Courses

1. Computer Hardware
2. Problem Solving Techniques
3. Enhancing Skills in Excel
4. Practical Computer networking
5. Data Science
6. UI Design

The matter is placed before the Academic Council for Approval.

Resolution

RESOLVED TO APPROVE the Curriculum and Syllabi for B.Sc. – Computer Science with specialization in Cyber Security Programme under Full Time (Regulation 2023).

**FCSE
Soft. Engg.
B.Sc.-A&M
42.4.8**

TO CONSIDER AND APPROVE the Curriculum and Syllabi for B.Sc. – Animation and Multimedia programme under Full Time (Regulation 2021 Revision 2).

Notes:

The Board of Studies of the Department of Software Engineering recommended the curriculum from I to VI Semesters and Syllabi from I to VI Semesters for B.Sc. – Animation and Multimedia programme under Full Time (Regulation 2020 Revision 2).

Value Added Courses

1. Office Automation
2. Coral Draw
3. Adobe Indesign
4. Film Appreciation
5. 3D Modeling with Blender
6. Creative Art

The matter is placed before the Academic Council for Approval.

Resolution

RESOLVED TO APPROVE the Curriculum and Syllabi for B.Sc. – Animation and Multimedia programme under Full-Time (Regulation 2021 Revision 2).

**FCSE
Soft. Engg.
B.Sc.-AI
42.4.9**

TO CONSIDER AND APPROVE the revision in Curriculum and Syllabi for B.Sc. – Artificial Intelligence programme under Full-Time (Regulation 2021 Revision 2).

Notes:

The Board of Studies of the Department of Software Engineering recommended the curriculum from I to VI Semesters and Syllabi from I to VI Semesters for B.Sc. – Artificial Intelligence programme under Full-Time (Regulation 2020 Revision 2).

Value Added Courses

1. Office Automation
2. Problem Solving Techniques
3. Digital Electronics
4. Practical Computer networking
5. Data Science
6. UI Design

The matter is placed before the Academic Council for approval.

Resolution

RESOLVED TO APPROVE the revision in Curriculum and Syllabi for B.Sc. – Artificial Intelligence programme under Full Time (Regulation 2021 Revision 2).

**FCSE
Soft. Engg.
M.Sc (AR &
VR) &
Ph.D.-CS
42.4.10**

TO CONSIDER AND APPROVE starting of new programmes.

Notes:

It is proposed to start the following new programmes in the forthcoming Academic Year 2023-24 onwards.

1. M.Sc.- Augmented Reality and Virtual Reality (AR & VR)
2. Ph.D. in Computer Science

The matter is placed before the Academic Council for approval.

Resolution

RESOLVED TO APPROVE starting of new programmes.

**FCSE
Soft. Engg.
M.Sc.-CS
42.4.11**

TO CONSIDER AND APPROVE the Curriculum and Syllabus for M.Sc. – Computer Science programme under Full Time (Regulation 2023).

Notes:

The Board of Studies of the Department of Software Engineering recommended the curriculum from I to IV Semesters and Syllabus from I to IV Semesters for M.Sc. – Computer Science programme under Full Time (Regulation 2021 Revision 1).

Modifications in the curriculum are based on Learning Outcomes based Curriculum Framework released from University Grant Commission.

Curriculum and Syllabi is in line with UGC proposed guidelines 2020 with 25% revision from previous syllabus. The syllabus revision included feedback on curricular aspects from students, teachers, employers and alumni. The syllabus has 85% courses having focus on employability/entrepreneurship/Soft Skill/Skill development.

The new courses are listed below (Regulation 2021 Revision 1).

(Note: Theory cum Lab Courses are separated into Theory and Lab Courses.)

New courses

1. Advanced Database Management System Lab
2. Web Technologies Lab
3. Advanced Java Programming Lab
4. Machine Learning Lab
5. Wireless Networks Lab
6. Big Data and Analytics Lab

The matter is placed before the Academic Council for approval.

Resolution

RESOLVED TO APPROVE the Curriculum and Syllabus for M.Sc. – Computer Science programme under Full Time (Regulation 2023).

5. BUSINESS BROUGHT FORWARD BY FACULTY OF HUMANITIES, SCIENCES AND MANAGEMENT (FHSM)

DEPARTMENT OF CHEMISTRY

**FHSM
M.Sc
Chemistry
42.5.1**

TO CONSIDER AND APPROVE the Curriculum and Syllabi for I to IV Semester for M.Sc. Chemistry programme under Regulation 2023 and Proposed Value-Added Courses.

Notes:

The Board of Studies of Department of Chemistry recommended the Curriculum and Syllabi for I to IV Semester for M.Sc. Chemistry programme under full-time Regulation 2023 for the candidates admitted from 2023 – 24 onwards. Curriculum and Syllabus with 18% revision from previous syllabus. The syllabus revision included feedback on curricular aspects from students, teachers, Industrialist, employers and alumni. The syllabus and courses are having focus on employability/ entrepreneurship / skill development.

The new courses offered by the department are

Sl.No.	Course Name
1.	Bio-Inorganic Chemistry
2.	Medicinal Chemistry
3.	Research Methodology
4.	Chemical Biology
5.	Chemistry of Natural Products

Value-Added Courses

Sl.NO.	VAC	Offered in Semester
1	Spectral Interpretation	III
2	Fundamentals in Bio molecules	III
3	Cheminformatics	IV

The matter is placed before the Academic Council for Approval.

Resolution

RESOLVED TO APPROVE the Curriculum and Syllabi for I to IV Semester for M.Sc. Chemistry programme under Regulation 2023 and Proposed Value-Added Courses.

**FHSM
B.Sc
Chemistry
42.5.2**

TO CONSIDER AND APPROVE the Curriculum and Syllabi for I to VI Semester for B.Sc. Chemistry programme under Regulation 2023 and Proposed Value-Added Courses.

Notes:

The Board of Studies of Department of Chemistry recommended the Curriculum and Syllabi for I to VI Semester for B.Sc. Chemistry programme, Allied Chemistry syllabus for III & IV Semester for B.Sc. Physics and the common course Environmental Studies for B.Sc./B.Com./B.B.A/B.A/B.C.A under full time (Regulation 2023) for the candidates admitted from the Academic Year 2023 –24 onwards.

Curriculum and Syllabus is with 99% revision from previous syllabus. The syllabus revision included feedback on curricular aspects from students, teachers, Industrialist, employers and alumni. The syllabus has courses having focus on employability/entrepreneurship/skill development.

The new courses offered by the department are

Sl. No.	Name of the course
1.	Quantitative Inorganic estimation (titrimetry) and Inorganic Preparations
2.	Qualitative Organic Analysis and preparation of Organic Compounds
3.	General Chemistry–III
4.	Qualitative Inorganic Analysis
5.	General Chemistry–IV
6.	Physical Chemistry Practical- I
7.	Organic Chemistry –I
8.	Inorganic Chemistry – I
9.	Physical Chemistry –I
10.	Project Phase I
11.	Organic Chemistry –II
12.	Inorganic Chemistry – II
13.	Physical Chemistry –II
14.	Gravimetric Estimation practical
15.	Cosmetics and Personal care Products
16.	Dairy Chemistry
17.	Food Chemistry
18.	Chemistry in day today life
19.	Pesticide Chemistry
20.	Instrumental Methods Of Chemical Analysis
21.	Forensic Science
22.	Industrial Chemistry
23.	Python for Chemist
24.	Foundation Course
25.	Tamil – III
26.	English – III
27.	Tamil – IV
28.	English – IV

Allied Chemistry Courses

Sl.No.	Name of the course
1.	Inorganic, Organic and Physical Chemistry I
2.	Inorganic, Organic and Physical Chemistry II

Value-Added Courses

B.Sc. Chemistry	Courses	Semester	Batch
II Year	Entrepreneurship Skills in Chemistry	III	2023 - 26
III Year	Industrial chemistry	V	2023 - 26

The matter is placed before the Academic Council for Approval.

Resolution

RESOLVED TO APPROVE the Curriculum and Syllabi for I to VI Semester for B.Sc.-Chemistry programme under Regulation 2023 and Proposed Value-Added Courses.

DEPARTMENT OF MATHEMATICS

**FHSM
M.Sc.-Maths
42.5.3**

TO CONSIDER AND APPROVE the Curriculum and Syllabi for I to IV Semester for M.Sc.-Mathematics programme under Regulation 2023 and Proposed Value-Added Courses.

Notes:

The Board of Studies of Department of Mathematics recommended the Curriculum and Syllabi for I to IV Semester for M.Sc.-Mathematics programme under full time (Regulation 2023) for the candidates admitted from 2023–24 onwards. Curriculum and Syllabus is with 39% revision from previous syllabus. The syllabus revision included feedback on curricular aspects from students, teachers, Industrialist, employers and alumni. The syllabus has courses having focus on employability / entrepreneurship / skill development.

The new courses offered by the department are

Sl.No.	Course Name
1	Linear Algebra
2	Machine Learning and AI
3	Advanced Algebra
4	Data Science using R programming
5	Python for Mathematics
6	Numerical Methods Practical usingMAT LAB
7	Data Analytics Practical with Python
8	Research Methodology
9	Measure theory and Integration
10	Core Industry Module: Mathematics of Finance and Insurance
11	Probability Theory
12	Design and Analysis of Algorithms

Proposed Value-Added Courses

M.Sc. Mathematics	Courses	Semester	Batch
I Year	Office Automation and ICT Tools	II	Batch 2023-25
I Year	Mathematical Documentation Using Latex-Practical	II	Batch 2023-25
II Year	Communicative Skill and	III	Batch 2023-25

	Personality Development		
II Year	Python Programming	III	Batch 2022-24
II Year	Communicative Skill and Personality Development/ Public speaking skills/Interview skills	III	Batch 2022-24

The matter is placed before the Academic Council for Approval.

Resolution

RESOLVED TO APPROVE the Curriculum and Syllabi for I to IV Semester for M.Sc.-Mathematics programme under Regulation 2023 and Proposed Value-Added Courses.

**FHSM
B.Sc.-Maths
42.5.4**

TO CONSIDER AND APPROVE the Curriculum and Syllabi for I to VI Semester for B.Sc.-Mathematics programme under Regulation 2023 and Proposed Value-Added Courses.

Notes:

The Board of Studies of Department of Mathematics recommended the Curriculum and Syllabi for I to VI Semester for B.Sc.-Mathematics programme under full time (Regulation 2023) for the candidates admitted from 2023 –24 onwards.

Curriculum and Syllabus is with 35% revision from previous syllabus. The syllabus revision included feedback on curricular aspects from students, teachers, Industrialist, employers and alumni. The syllabus has courses having focus on employability/entrepreneurship / skill development.

The new courses offered by the department are

S.No	Name of the course
1.	Vedic Mathematics – I
2.	Vedic Mathematics – II
3.	Introduction to Machine Learning
4.	Numerical Methods with MATLAB
5.	Statistics for Data Science - I
6.	Statistics for Data Science –I Lab using R-Programming
7.	Statistics for Data Science - II
8.	Statistics for Data Science – II Lab using R-Programming
9.	Object Oriented Programming with C++
10.	Foundation Course
11.	Mathematics for Finance

Proposed Value Added Courses

B.Sc. Mathematics	Courses	Semester	Batch
I Year	Introduction to MATLAB	II	Batch 2023-26
II Year	Data analytics using spreadsheet/ Computing skills (Office Automation)	III& IV	Batch 2023-26
III Year	Data Analysis using latest package (R / Matlab / Maxima/ Torus / GeoGebra /GIMP)	V & VI	Batch 2023-26
II Year	Python Programming/ Introduction to Machine Learning	III	Batch 2022-25
	Personality Development/Vedic Mathematics	IV	Batch 2022-25
III Year	Public speaking skills/Interview skills	VI	Batch 2022-25

The matter is placed before the Academic Council for Approval.

Resolution

RESOLVED TO APPROVE the Curriculum and Syllabi for I to VI Semester for B.Sc.-Mathematics programme under Regulation 2023 and Proposed Value-Added Courses.

DEPARTMENT OF PHYSICS

**FHSM
M.Sc.-
Physics
42.5.5**

TO CONSIDER AND APPROVE the Curriculum and Syllabi for I to IV Semester for M.Sc. Physics Full-Time regular programme under Regulation 2023 for the candidate admitted from 2023 – 24 onwards.

Notes:

The Board of Studies of the Department of Physics recommended the Curriculum and Syllabi for I to IV Semester for M.Sc. Physics programme under Full-Time (Regulation 2023) for the candidates admitted from 2023 –24 onwards with 30% from previous syllabus.

The syllabus revision included feedback of stake holders.

The new courses offered by the department are

S. No.	Course Code	Course title	Semester
1.	YPH104B	Aerospace Dynamics	I
2.	YPH104C	Physics in Linear and Nonlinear circuits	I
3.	YRM001	Research Methodology	II
4.	YPH202	Quantum Mechanics	II
5.	YPH304A	Data Science and Physicist	III
6.	YPH304B	Physics in IOT	III
7.	YPH304C	Artificial Intelligence and Machine Learning	III

The matter is placed before the Academic Council for Approval.

Resolution

RESOLVED TO APPROVE the Curriculum and Syllabi for I to IV Semester for M.Sc. Physics Full-Time regular programme under Regulation 2023 for the candidate admitted from 2023 – 24 onwards.

**FHSM
B.Sc.-
Physics
42.5.6**

TO CONSIDER AND APPROVE the Curriculum and Syllabi for I to VI Semester for B.Sc. Physics – Full-Time regular programme under Regulation 2023. For B.Sc. Mathematics & B.Sc. Chemistry programmes, Allied Physics I & II to be offered for the students admitted from the academic year 2023 – 24 onwards.

Notes:

The Board of Studies of Department of Physics recommended the Curriculum and Syllabi for I to VI Semester for B.Sc. Physics full time regular programme (Regulation 2023) for the candidates admitted from 2023-24 onwards. For B.Sc. Mathematics & B.Sc. Chemistry programmes, Allied Physics I & II to be offered for the students admitted from the academic year 2023 – 24 onwards.

Curriculum and Syllabus is revised with 95% from the previous syllabus. The syllabus revision included feedback on curricular aspects from stake holders.

The new courses offered by the department are:

Newly introduced courses in B. Sc. Physics programme (Regulation 2023)

Sl. No.	Course Code	Course Name	Semester
1	XPH106	Physics for Everyday Life	I
2	XPH107	Foundation course	I
3	XPH206	Home Electrical Installation	II
4	XPH207	Numerical Methods and C Programming	II
5	XGT301	Tamil – III	II
6	XGE302	English – III	III
7	XPH303	Mechanics	III
8	XGT401	Tamil – IV	IV
9	XGE402	English – IV	IV
10	XPH403	Optics and Laser Physics	IV
11	XPH407	Energy Physics	IV
12	XPH408	Nano Science and Technology	IV
13	XPH407	Energy Physics	IV
14	XPH501	Electricity, Magnetism and Electromagnetism	V
15	XPH502	Atomic and Nuclear Physics	V
16	XPH503	Analog and Communication Electronics	V
17	XPH504A	Classical and Statistical Mechanics	V
18	XPH504B	Material Science	V
19	XPH505A	Bio Physics	V
20	XPH505B	Condensed Mater Physics	V
21	XPH504C	Opto Electronics	V
22	XPH601	Quantum Mechanics and Relativity	VI
23	XPH603	Digital Electronics and Microprocessor 8085	VI
24	XPH604A	Elements of Modern Physics	VI
25	XPH607	Communication Physics	VI

Value-Added Courses

1. Python
2. Research Methodology

The matter is placed before the Academic Council for Approval.

Resolution

RESOLVED TO APPROVE the Curriculum and Syllabi for I to VI Semester for B.Sc. Physics – Full time regular programme under Regulation 2023. For B.Sc. Mathematics & B.Sc. Chemistry programmes, Allied Physics I & II to be offered for the students admitted from the academic year 2023–24 onwards.

DEPARTMENT OF COMMERCE

**FHSM
B.Com.-PA
42.5.7**

TO CONSIDER AND APPROVE the Curriculum and Syllabi for B.Com Professional Accounting under Full-Time (Regulation 2023).

Notes:

The Board of Studies of Department of Commerce recommended the Curriculum and Syllabi for I to VI Semester B.Com Professional Accounting under Full-Time (Regulation 2023).

The Curriculum focuses the courses of 96% with either employability / entrepreneurship / or skill development.

The new courses offered by the department in Regulation 2023 for B.Com Professional Accounting.

Sl.No	Course Name
1.	Financial Accounting
2.	Spread Sheet Accounting
3.	Business Organisation and Management
4.	Performance Management
5.	Advanced Corporate Accounting
6.	Financial Management and Data Analytics
7.	Financial Reporting
8.	Macro Economics
9.	Business Mathematics and Statistics
10.	Income Tax Theory Law and Practice
11.	Banking Theory Law and Practice
12.	Business Economics
13.	Advanced Financial Accounting
14.	Corporate Accounting
15.	Legal Aspects in Business
16.	Goods and Service Tax and Customs Law
17.	Cost Accounting
18.	Computerised Accounting – Tally Practical
19.	Auditing and Assurance
20.	Innovative Entrepreneurial Development
21.	Management Accounting
22.	Communication and Documentation in Business
23.	Digital Marketing
24.	Human Resource Management
25.	E-Commerce
26.	Corporate Law and Secretarial Practice
27.	Financial Markets and Institutions
28.	International Business
29.	Investment Management
30.	Business Environment

31.	Principles of Insurance
32.	Financial Technology and Analytics
33.	Micro Finance
34.	Corporate Governance

The matter is placed before the Academic Council for approval.

Resolution

RESOLVED TO APPROVE the Curriculum and Syllabi for B.Com Professional Accounting under Full Time (Regulation 2023).

**FHSM
B.Com
42.5.8**

TO CONSIDER AND APPROVE the Curriculum and Syllabi for B.Com under Full-Time (Regulation 2022 Revision-I).

Notes:

The Board of Studies of Department of Commerce recommended the revision in the curriculum and Syllabi for B.Com Programme under Full-Time (Regulation 2022, Revision I) for the students admitted during the Academic Year 2023-24.

The new courses offered by the department in Regulation 2022 Revision-I for B.Com.

1. Tamil III / Foundational Tamil III
2. Tamil IV/ Foundational Tamil IV
3. English III
4. English IV

The matter is placed before the Academic Council for approval.

Resolution

RESOLVED TO APPROVE the Curriculum and Syllabi for B.Com under Full-Time (Regulation 2022 Revision-I).

**FHSM
B.Com.-CS
42.5.9**

TO CONSIDER AND APPROVE the revision in Curriculum and Syllabi for B.Com.-Corporate Secretaryship Programme under Full-Time (Regulation 2023).

Notes:

The Board of Studies of Department of Commerce recommended the revision in the Curriculum and Syllabus for B.Com Corporate Secretaryship

Programme under Full-Time (Regulation 2023) for the students admitted during the academic year 2023-24. Curriculum and Syllabus is with 44% revision from previous syllabus. The syllabus revision included feedback on curricular aspects from students, teachers, Industrialist, employers and alumni. The curriculum focuses of including 98% of courses with employability/ entrepreneurship/ skill development.

The new courses offered by the department in Regulation 2023 for B.Com(CS).

1. Tamil III / Foundational Tamil III
2. Tamil IV / Foundational Tamil IV
3. English III
4. English IV
5. Logistics Management
6. Basics of Personal Finance and Investment Management
7. Business Mathematics and Statistics
8. Principles of Marketing
9. Event Management
10. Banking and Micro Finance
11. Mind Management
12. Financial Services
13. New Venture Planning and Development
14. Business Communication
15. Consumer Affairs
16. Mutual Fund Operations
17. International Business

The matter is placed before the Academic Council for approval.

Resolution

RESOLVED TO APPROVE the revision in Curriculum and Syllabi for B.Com.-Corporate Secretaryship Programme under Full-Time (Regulation 2023).

**FHSM
B.Com.-CA
42.5.10**

TO CONSIDER AND APPROVE the revision in Curriculum and Syllabi for B.Com Computer Applications Programme under Full-Time Regulation (2021 Revision- II).

Notes:

The Board of Studies of Department of Commerce recommended the revision in the curriculum and Syllabus for B.Com Computer Applications Programme under Full-Time Regulation 2021, (Revision II) for the students admitted during the academic year 2023-24.

The new courses offered by the department in Regulation 2021 Revision-II for B.Com Computer Applications.

1. Tamil III / Foundational Tamil III
2. Tamil IV / Foundational Tamil IV
3. English III
4. English IV

The matter is placed before the Academic Council for approval.

Resolution

RESOLVED TO APPROVE the revision in Curriculum and Syllabi for B.Com Computer Applications Programme under Full-Time Regulation (2021 Revision- II).

**FHSM
M.Com.
42.5.11**

TO CONSIDER AND APPROVE the revision in Curriculum and Syllabi for M.Com Programme under full-time Regulation 2023.

Notes:

The Board of Studies of Department of Commerce recommended the revision in the Curriculum and Syllabus for M.Com Programme under Full-Time (Regulation 2023) for the students admitted during the academic year 2023-24. The curriculum focuses of including 98% of courses with either/ and employability/ entrepreneurship/ skill development.

The new courses offered by the department in Regulation 2023 for M.Com

1. Computerized Accounting – Tally Practical
2. Enterprise Resources Planning
3. Capital Markets
4. Applied -E Commerce
5. Credit Management
6. Financial Derivatives
7. Credit Management
8. Consumer rights and Education

9. Management Information System
10. Change management

Proposed Value-Added Courses

Commerce	Courses	Semester	Batch
I Year	Social Media Marketing	I	Batch 2023-26
I Year	Word press Website	II	Batch 2023-26
II Year	Photoshop	III	Batch 2022-25
II Year	Tally with GST	IV	Batch 2022-25
III Year / II Year M.Com	Introduction to SPSS	V	Batch 2021-24 / Batch 2022-24
III Year	NCFM	VI	Batch 2021-24
III Year	Search Engine Optimization	VI	Batch 2021-24
I Year M.Com	Business Analytics	II	Batch 2023-25
II Year M.Com	NCFM	III	Batch 2022-24

The matter is placed before the Academic Council for approval.

Resolution

RESOLVED TO APPROVE the revision in Curriculum and Syllabi for M.Com Programme under Full-Time Regulation 2023.

DEPARTMENT OF MANAGEMENT STUDIES

**FHSM
MBA
42.5.12**

TO CONSIDER AND APPROVE the Curriculum and Syllabi of III & IV semesters of MBA Full-Time programme Regulation 2021 (Revision –I).

Notes:

The Department Advisory Committee members met on 20.05.2023 to review the Curriculum and Syllabi of the III & IV Semester of MBA Full-Time programme Regulation 2021 (Revision –I) Further, the Board of studies of Department of Management Studies has met on 08.06.2023. The members of the Board discussed and finalized the Curriculum and Syllabi for III and IV semester MBA Full-Time programme Regulation 2021 (Revision-I) for students admitted from the Academic Year 2022-23.

There is a 17% change in curriculum and syllabus. The syllabus has 97% courses having focus on employability / entrepreneurship / skill development. The new courses introduced are as follows:

SL.No.	Course name
1	Business Analytics
2	Business Analytics using Python
3	Human Resource Analytics
4	Marketing Analytics
5	Financial Modelling using Excel

The value added courses offered for MBA students are as follows:

SL.No.	Course Name	Semester
1.	Digital Banking	I semester
2.	Art of Selling	II semester
3.	Six Sigma	III semester
4.	Design Thinking	IV semester

The matter is placed before the Academic Council for approval.

Resolution

RESOLVED TO APPROVE the Curriculum and Syllabi of III & IV semesters of MBA Full-Time programme Regulation 2021 (Revision –I).

TO CONSIDER AND APPROVE the Curriculum and Syllabi from I to VI Semesters of BBA Full-Time programme Regulation 2023.

Notes:

The Department Advisory Committee members met on 20.05.2023 to review the Curriculum and Syllabi of BBA Full-Time programme Regulation 2023. Further, the Board of Studies of Department of Management studies has met on 12.06.2023 the member of the Board discussed and finalized the Curriculum and Syllabi from I to VI Semesters of BBA Full-Time programme (Regulation 2023) for students admitted from the Academic Year 2023-24.

There is a 60% change in curriculum and syllabus. The syllabus has 71% courses having focus on employability / entrepreneurship / skill development. The new courses introduced are as follows:

Sl.No.	Course Name
1	Accounting for Managers I
2	Managerial Economics
3	Basics of Event Management
4	Managerial Communication
5	Accounting for Managers II
6	International Business
7	Managerial Skill Development

**FHSM
BBA
42.5.13**

8	Business Etiquette and Corporate Grooming
9	Tamil – III
10	English – III
11	Computer Applications in Business
12	New Venture Development
13	Tamil – IV
14	English – IV
15	Business Environment
16	Business Regulatory Framework
17	Operations Research
18	Tally
19	Intellectual Property Rights
20	Research Methodology
21	Business Taxation
22	Management Information System
23	Digital Marketing
24	Industrial Relations
25	Financial Services
26	Value Education
27	Entrepreneurial Development
28	Services Marketing
29	Production and Materials Management
30	Consumer Behaviour
31	Innovation Management
32	Security Analysis & Portfolio Management
33	Fundamentals of Logistics
34	E-Business
35	Strategic Management

The value added courses offered for BBA students are as follows:

SL.No.	Course Name	Semester
1.	Introduction to MS Office Suite	IV semester
2.	Six Sigma	V semester
3.	Selling Skills	VI semester

The matter is placed before the Academic Council for approval.

Resolution

RESOLVED TO APPROVE the Curriculum and Syllabi from I to VI Semesters of BBA Full-Time programme Regulation 2023.

**FHSM
BBA
(LSCM)
42.5.14**

TO CONSIDER AND APPROVE the Curriculum and Syllabi of I to VI Semesters of BBA (Logistics and Supply Chain Management) Full-Time programme (Regulation 2023).

Notes:

The Department Advisory Committee members met on 20.05.2023 to review the Curriculum and Syllabi of BBA (Logistics and Supply Chain Management) Full-Time programme (Regulation 2023). Further, the Board of Studies of Department of Management studies met on 12.06.2023 the member of the Board discussed and finalized the Curriculum and Syllabi from I to VI Semesters of BBA (Logistics and Supply Chain Management) Full-Time programme Regulation 2023 for students admitted from the Academic Year 2023-24.

There is a 58% change in curriculum and syllabus. The syllabus has 71% courses having focus on employability / entrepreneurship / skill development. The new courses introduced are as follows:

Sl.No.	Course Name
1	Accounting for Managers I
2	Introduction to Logistics Management and Shipping
3	Basics of Event Management
4	Managerial Communication
5	Transportation and Distribution Management
6	Port and Terminal Management
7	Export and Import Management
8	Custom Procedures
9	Managerial Skill Development
10	Business Etiquette and Corporate Grooming
11	Tamil – III
12	English – III
13	Computer Applications in Business
14	New Venture Development
15	Tamil – IV
16	English – IV
17	Business Environment
18	Business Regulatory Framework
19	Operations Research
20	Tally
21	Intellectual Property Rights
22	Research Methodology
23	Business Taxation
24	Management Information System
25	Freight Forwarding and Port Operations

26	E-logistics
27	Total Quality Management
28	Entrepreneurial Development
29	Warehousing and Inventory Management
30	International Business
31	Services Marketing
32	Innovation Management
33	Consumer Behaviour
34	Supply Chain Management
35	Strategic Management
36	E-Business

The value added courses offered for BBA (LSCM) students are as follows:

SL.No.	Course Name	Semester
1.	Introduction to MS Office Suite	IV semester
2.	Six Sigma	V semester
3.	Selling Skills	VI semester

The matter is placed before the Academic Council for approval.

Resolution

RESOLVED TO APPROVE the Curriculum and Syllabi of I to VI Semesters of BBA (Logistics and Supply Chain Management) Full-Time programme (Regulation 2023).

**FHSM
BBA (HM)
42.5.15**

TO CONSIDER AND APPROVE the Curriculum and Syllabi of I to VI Semesters of BBA (Hospitality Management) Full-Time programme (Regulation 2023).

Notes:

The Department Advisory Committee members met on 20.05.2023 to review the Curriculum and Syllabi of BBA (Hospitality Management) Full-Time programme Regulation 2023. Further, the Board of Studies of Department of Management studies has met on 12.06.2023 the members of the Board discussed and finalized the Curriculum and Syllabi from I to VI Semesters of BBA (Hospitality Management) Full-Time programme (Regulation 2023) for students admitted from the Academic Year 2023-24.

There is a 48% change in curriculum and syllabus. The syllabus has 71% courses having focus on employability / entrepreneurship / skill development. The new courses introduced are as follows:

Sl.No.	Course Name
1	Accounting for Managers I
2	Managerial Economics
3	Basics of Event Management
4	Managerial Communication
5	Accounting for Managers II
6	International Business
7	Managerial Skill Development
8	Business Etiquette and Corporate Grooming
9	Tamil – III
10	English – III
11	Computer Applications in Business
12	New Venture Development
13	Tamil – IV
14	English – IV
15	Business Regulatory Framework
16	Operations Research
17	Tally
18	Intellectual Property Rights
19	Research Methodology
20	Business Taxation
21	Value Education
22	Entrepreneurial Development
23	Production and Materials Management
24	Customer Relationship Management
25	Services Marketing

The value added courses offered for BBA (HM) students are as follows:

SL.No.	Course Name	Semester
1.	Introduction to MS Office Suite	IV semester
2.	Six Sigma	V semester
3.	Selling Skills	VI semester

The matter is placed before the Academic Council for approval.

Resolution

RESOLVED TO APPROVE the Curriculum and Syllabi of I to VI Semesters of BBA (Hospitality Management) Full-Time programme (Regulation 2023).

**FHSM
BBA (DM)
42.5.16**

TO CONSIDER AND APPROVE the Curriculum and Syllabi of I to VI Semesters of BBA (Digital Marketing) Full-Time programme Regulation 2023.

Notes:

The Department Advisory Committee members met on 20.05.2023 to review the Curriculum and Syllabi of BBA (Digital Marketing) Full-Time programme (Regulation 2023). Further, the Board of Studies of Department of Management studies has met on 12.06.2023 the member of the Board discussed and finalized the Curriculum and Syllabi from I to VI Semesters of BBA (Digital Marketing) Full-Time programme Regulation 2023 for students admitted from the Academic Year 2023-24.

There is a 100% change in curriculum and syllabus since this is a new programme offered from 2023-24 academic year onwards. The syllabus has 71% courses having focus on employability / entrepreneurship / skill development.

The value added courses offered for BBA (DM) students are as follows:

Sl.No.	Course Name	Semester
1.	Introduction to MS Office Suite	IV semester
2.	Six Sigma	V semester
3.	Selling Skills	VI semester

The matter is placed before the Academic Council for approval.

Resolution

RESOLVED TO APPROVE the Curriculum and Syllabi of I to VI Semesters of BBA (Digital Marketing) Full-Time programme Regulation 2023.

DEPARTMENT OF SOCIAL WORK

**FHSM
MSW
42.5.17**

TO CONSIDER AND APPROVE the Curriculum and Syllabi for Master of Social Work (2 Years) Programme under Full-Time (Regulation 2023).

Notes:

The Board of Studies of Department of Social Work recommended the curriculum and Syllabi for Master of Social Work Programme under Full-Time (Regulation 2023) for the students admitted during the academic year 2023-24.

The Curriculum and Syllabus has 38% revision from the previous syllabus.

The new courses and Value added Course (Regulation 2023) to be offered by the department are:

New Courses:

1. Society and Human Behavior.
2. Rural Community Development.
3. Tribal Development in India.
4. Mental Health and Psychiatric Disorders.
5. Clinical Social Work.
6. Urban Community Development.
7. NGO Management.
8. Strategic Human Resource Management.
9. Therapeutic Intervention in Social Work.
10. Society and Human Behavior.
11. Sociological and Psychological Foundations for Social Work.
12. Entrepreneurship Development.
13. Disaster Management.
14. Green Social Work.
15. Corporate Social Responsibility.
16. Counselling in Social Work.
17. Public Health in India.
18. Foundation of Artificial Intelligence and Machine Learning for Social Work.
19. Application of Data Analytics in Social Work.
20. Rural / Tribal Camp.
21. Study Tour.
22. Communication for Social Work.
23. Life Skills for Social Work.
24. Employability Skills for Social Workers.

Value Added Courses:

1. Empowerment of persons living with Disability.
2. Social Marketing and Entrepreneurship Development.

The matter is placed before the Academic Council for approval.

Resolution

RESOLVED TO APPROVE the Curriculum and Syllabi for Master of Social Work (2 Years) Programme under Full-Time (Regulation 2023).

**FHSM
MSW
42.5.18**

TO CONSIDER AND APPROVE inclusion of the proposed Value added Courses and Internship-Summer Placement Training for 2022-24 Batch (Regulation 2022).

Notes:

The Board of Studies of Department of Social Work recommended to include the proposed Value added courses and Internship as follows:

Value added Courses	Semester	Academic Year	Batch
Foundation of AI & ML for Social Work practices.	III	2023-24	2022-24
Applications of Data Analytics in Social Work	IV		

Internship	During	Academic Year	Batch
Summer Placement Training	II Semester vacation	2023-24	2022-24

The matter is placed before the Academic Council for approval.

Dean FAP enquired about the number of days given for summer placement training

Director CRD replied that 15 days are given for summer placement training.

Resolution

RESOLVED TO APPROVE inclusion of the Value added Courses and Internship-Summer Placement Training for 2022-24 Batch (Regulation 2022).

DEPARTMENT OF POLITICAL SCIENCE

**FHSM
B.A.-PS
42.5.19**

TO CONSIDER AND APPROVE the Curriculum and Syllabi for B.A. Political Science - Semester I to VI (Regulation 2023) & the Value Added Courses offered from the Academic Year 2023-24 onwards.

Notes:

The Board of Studies of the Department of Political Science recommended the Curriculum and Syllabi for B.A. Political Science offered from the academic year 2023-24 (Regulation 2023) & the Value Added Courses offered for BA.-Political Science and MA.-Political Science from the Academic Year 2023-24 onwards

The following courses and proposed Value added courses are given below:

Sl.No	Title of the Paper
1.	Principles of Politics and political Theory
2.	Comparative Government and Politics
3.	Western Political Thought
4.	International Relation
5.	Indian Political Thought
6.	Indian Administration
7.	International Organizations
8.	India's foreign Policy
9.	Indian Government and Politics
10.	Contemporary World Politics
11.	Tamil Nadu Government and Politics.
12.	Fundamentals of Public Law
13.	Principles of Geo Politics
14.	Political Ideologies

The proposed Value added courses are:

1.	Gender Issues and Development
2.	Development Administration concept and principles
3.	Contemporary Political Analysis

The matter is placed before the Academic Council for approval.

Resolution

RESOLVED TO APPROVE the Curriculum and Syllabi for B.A. Political Science - Semester I to VI (Regulation 2023) & the Value Added Courses offered for BA.-Political Science and MA.-Political Science from the Academic Year 2023-24 onwards.

**FHSM
B.A.-PS
42.5.20**

TO CONSIDER AND APPROVE the following AICTE mandatory courses offered by the Department of Political Science for B.Tech. and M.Tech Programmes.

Notes:

The Board of Studies of the Department of Political Science approved the revision in Syllabus for Constitution of India (XUM 106) offered to all B. Tech during I Semester and renaming the course title as **Introduction to Constitution of India** instead of Constitution of India offered for M. Tech during II Semester

The matter is placed before the Academic Council for approval.

Resolution

RESOLVED TO APPROVE the following AICTE mandatory courses offered by the Department of Political Science for B.Tech and M.Tech Programmes.

DEPARTMENT OF LANGUAGES

**FHSM
Languages
BA-Tamil
42.5.21**

TO CONSIDER AND APPROVE the Curriculum I to VI Semesters and Syllabi of I to & II Semesters for B.A.-Tamil regular Programme Under Full-Time (Regulation 2023).

Notes:

The Board of Studies of Department of Languages recommended the Curriculum I to VI Semesters and Syllabi for I & II Semester for BA.-Tamil regular programme under Full-Time (Regulation 2023) for the candidates admitted from 2023 –24 onwards.

Curriculum and Syllabus has 25% revision from previous syllabus. The syllabus revision included feedback on curricular aspects from students, teachers and alumni. The syllabus has 94% of courses having focus on employability/entrepreneurship / skill development.

The new courses offered are

Sl No	Course Title
1	இக்கால இலக்கியம்
2	தமிழக வரலாறும் பண்பாடும்
3	அற இலக்கியம்
4	தமிழ் இலக்கிய வரலாறு
5	காப்பியங்கள்
6	நன்னூல் எழுத்து
7	பெரியாரியம்
8	நன்னூல் சொல்லதிகாரம்
9	விளம்பரத் தமிழ்
10	இதழியல்
11	சிறுநிலக்கியம்
12	இலக்கணம் – பொருள்
13	நாட்டுப்புறவியல்
14	சங்க இலக்கியம்
15	இலக்கணம் – யாப்பும் அணியும்
16	இலக்கியத் திறனாய்வு

The matter is placed before the Academic Council for approval.

Resolution

RESOLVED TO APPROVE the Curriculum I to VI Semesters and Syllabi of I to & II Semesters for B.A.-Tamil regular Programme Under Full-Time (Regulation 2023).

**FHSM
Languages
MA-Tamil
42.5.22**

TO CONSIDER AND APPROVE the Curriculum I to IV Semesters and Syllabi for I & II Semester for M.A.-Tamil regular Programme under Full-Time (Regulation 2023).

Notes:

The Board of Studies of Department of Languages recommended the Curriculum I to IV Semesters and Syllabi for I & II Semester for MA.-Tamil regular programme under Full-Time (Regulation 2023) for the candidates admitted from 2023 –24 onwards.

Curriculum and Syllabus has 25% revision from previous syllabus. The syllabus revision included feedback on curricular aspects from students, teachers and alumni. The syllabus has 98% of courses having focus on employability/entrepreneurship / skill development.

The new courses offered are

Sl No	Course Title
1	இக்கால இலக்கியம்
2	அற இலக்கியம்
3	தொல்காப்பியம் பொருளதிகாரம்
4	பெரியாரியம்
5	காப்பிய இலக்கியம்
6	தொல்காப்பியம் பொருளதிகாரம்
7	சிறுநிலக்கியம்
8	தொல்காப்பியம் எழுத்ததிகாரம்
9	ஆராய்ச்சி நெறிமுறைகள்
10	சங்க இலக்கியம்
11	தொல்காப்பியம் சொல்லதிகாரம்

The matter is placed before the Academic Council for approval.

Resolution

RESOLVED TO APPROVE the Curriculum I to IV Semesters and Syllabi for I & II Semester for M.A.-Tamil regular Programme under Full-Time (Regulation 2023).

**FHSM
Languages
BA.-English
42.5.23**

TO CONSIDER AND APPROVE the Curriculum and Syllabi for I to VI Semesters B.A.-English regular Programme under Full-Time (Regulation 2023).

Notes:

The Board of Studies of Department of Languages recommended the Curriculum I to VI Semesters and Syllabi for I & II Semester for BA.-English regular programme under Full-Time (Regulation 2023) for the candidates admitted from 2023 –24 onwards.

Curriculum and Syllabus has 26% revision from previous syllabus. The syllabus revision included feedback on curricular aspects from students, teachers and alumni. The syllabus has 93% of courses having focus on employability/entrepreneurship / skill development.

The new courses offered are:

Sl No	Course Title
1	Fundamentals of Academic Writing
2	Film Appreciation
3	Myth and Literature
4	Mass Communication and Literature
5	Authors in Focus
6	Indian Writing in Translation
7	World Literatures in Translation
8	English Teaching Methods and Materials
9	Modern English Grammar and Composition
10	Writing for the Web
11	Technical Writing

Proposed Value Added Course:

- Conversation Skills

The matter is placed before the Academic Council for approval.

Resolution

RESOLVED TO APPROVE the Curriculum and Syllabi for I to VI Semesters B.A.-English regular Programme under Full-Time (Regulation 2023).

**FHSM
Languages
42.5.24**

TO CONSIDER AND APPROVE the Curriculum and Syllabi for Part-I Tamil courses along with Foundational Tamil, Part-II English courses for all UG Arts & Science and Scientific Tamil (Open Elective) for all B.Tech / B.Arch programmes based on AICTE guidelines under Full-Time (Regulation 2023).

Notes:

The Board of studies of the Languages recommended the Curriculum and Syllabi for Part-I Tamil along with Foundational Tamil (for students who have not studied Part-I Tamil in their Higher Secondary) and Part II English for all UG Arts & Science programmes.

Also, based on the AICTE guidelines recommended the scientific Tamil Syllabus for B.Tech / B.Arch to be offered as Open Elective from the Academic year 2023-24 under Full-Time (Regulation 2023).

Part offered to	Title	Regulation
Part I All UG Arts & Science programmes Semester- I to IV	1. பொதுத்தமிழ்- I (கவிதைகள், சிறுகதைகள், இலக்கிய வரலாறு) 2. பொதுத்தமிழ் – II (நீதி இலக்கியங்கள் மற்றும் பிற இலக்கியங்கள்) 3. பொதுத்தமிழ் – III (பெருங்காப்பியங்கள்இ சித்தர் பாடல்கள் மற்றும் புதினம்) 4. பொதுத்தமிழ் – IV (சங்க இலக்கியங்கள் மற்றும் நாடகம்)	2023
Foundational Tamil All UG Arts & Science programmes Semester- I to IV	அடிப்படைத் தமிழ் – I அடிப்படைத் தமிழ் – II அடிப்படைத் தமிழ் – III அடிப்படைத் தமிழ் – IV	2023
Part-II All UG Arts & Science programmes Semester- I to IV	1. English I (Poetry, Prose, Short stories & Language Competency) 2. English II (Poetry, Prose, Fiction & Language Competency) 3. English III (Life writing, One act plays, Interview skills & Language Competency) 4. English IV (Poetry, Prose, Short stories & Language Competency)	2023
Open Elective To all B.Tech / B.Arch	1. தமிழர் மரபு 2. தமிழரும் தொழில்நுட்பமும்	2023

The matter is placed before the Academic Council for approval.

Resolution

RESOLVED TO APPROVE Part-I Tamil courses along with Foundational Tamil, Part-II English courses for all UG Arts & Science and Scientific Tamil (Open Elective) for all B.Tech / B.Arch programmes under Full-Time (Regulation 2023).

6. BUSINESS BROUGHT FORWARD BY DEAN RESEARCH

**Dean
Research
42.6.1**

TO CONSIDER AND APPROVE the Research Methodology course Syllabus reframed for the Ph.D. Research Scholars.

This Syllabus is approved by Research Advisory Committee

The matter is placed before the Academic Council for approval.

Resolution

RESOLVED TO APPROVE the Research Methodology course Syllabus reframed for the Ph.D. Research Scholars enclosed the Syllabus.

**Dean
Research
42.6.2**

TO INFORM AND RECORD the list of research scholars who have completed their Public *Viva voce*.

Notes:

Two (2) Research scholars who have completed their Public *Viva voce* between December 2022 and June 2023 are listed below.

Sl.No	Name of the candidate / Reg. No	Department	Name of the Research Supervisor / Co- Supervisor	Date of Public <i>Viva voce</i>	Thesis Title
1	Mr.K.Soundararajan / 210012864006	Chemistry	Dr.S.Gomathi	5.12.2022	Structural studies on selected intermediates of pharmaceutical importance and some of their Schiff bases and salts
2	Mr.Syed Bava Bakrudeen A / 214012860015	Mechanical Engineering	Dr.J.Jeyasimman	20.4.2023	An Investigation on shape recoverability of Fe-Mn-Si-Cr-Ni shape memory alloy using various process control parameters

The matter is placed before the Academic Council for information and record.

Resolution

RESOLVED TO TAKE INTO RECORD the list of research scholars who have completed their Public *Viva voce*.

**Dean
Research
42.6.3**

TO INFORM AND RECORD the List of Ph.D. thesis submitted.

Notes:

One (1) Research scholar has submitted her Ph.D. thesis

Sl.No	Name / Department / Reg.No.	Name of the Research Supervisor / Co- Supervisor	Date of Submission	Title of the Thesis
1	Ms.S.Manjula CSE 213011854021	Dr.M.Sharmila Begum	09.06.2023	Deep Learning Models to Identify the Abnormal Activities in Surveillance Videos in Academic Zone

The matter is placed before the Academic Council for information and record.

Resolution

RESOLVED TO TAKE INTO RECORD the List of Ph.D. thesis submitted.

**Dean
Research
42.6.4**

TO INFORM AND RECORD the Extension time and Break period is granted to Research scholars.

Notes:

Based on the Research Advisory Committee recommendations eleven registered research scholars have been granted extension of time up to one year.

Sl. No	Name / Register No	Name of the Research Supervisor / Co-Supervisor	Department	Duration of extension	Date of completion of research programme	Extension up to
1	Mr.M.S.S.Sasikumar 216012854030	Dr. Narayanan A.E	CSE	One year	17.9.2022	16.09.2023
2	Mr.P.Ilangovan 215012854027	Dr. Sharmila Begum M & Dr.P.K.Srividhaya	CSE	One year	11.10.2022	10.10.2023
3	Mr.M.Muralidharan 115012755006	Dr. Jeyachidra J	CSA	Six months	10.10.2022	30.04.2023
4	Mr.Jaison M Peter 215012873010	Dr. Thamilvanan G	Education	One year	10.10.2022	09.10.2023
5	Ms.K.Vedavalli 212012857005	Dr. Muruganantham N	EEE	One year	23.09.2022	22.09.2023
6	Ms.K.Rajeswari 215011861015	Dr. George A	Mathematics	One year	10.10.2022	09.10.2023
7	Ms.N.Anusha 215011861014	Dr. George A	Mathematics	One year	10.10.2022	09.10.2023
8	Ms.K.Gayathri 213011861010	Dr. Sasikala A	Mathematics	One year	01.10.2022	30.09.2023
9	Ms.E.Veeramanipriya 116011763002	Dr. Umayal Sundari AR	Physics	One year	30.06.2022	07.07.2023
10	Mr.M.Subbarayan 216012866012	Dr Lenin N	Periyar Thought	One year	11.09.2022	10.09.2023

11	Mr.S.Arumugam 216012866009	Dr Lenin N	Periyar Thought	One year	11.09.2022	10.09.2023
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- ❖ Based on Research Advisory Committee recommendation Ms.K.Gayathri (213011861010), Research scholar Department of Mathematics has been granted break period between 1.10.2020 and 30.9.2022, due to health problem.

The matter is placed before the Academic Council for information and record.

Resolution

RESOLVED TO TAKE INTO RECORD the Extension time and Break period is granted to Research scholars.

Dean Research 42.6.5

TO INFORM AND RECORD the Research articles reflected in Scopus database.

January to June 2023 : 42 Nos.

January to December 2022 : 52 Nos.

January to December 2021 : 34 Nos.

The matter is placed before the Academic Council for information and record.

Resolution

RESOLVED TO TAKE INTO RECORD the Research articles reflected in Scopus database.

Dean Research 42.6.6

TO INFORM AND RECORD the 27 Memorandum of Understanding (MoU) signed with Industries and Institutions.

Sl. No	Name of the Industry and Institution	Objectives / Scope / Major activities	MoU Date	Validity
1	Ticel Bio Park Limited, Taramani Road Taramani Chennai-600113 Tamil Nadu	Co-Incubation opportunities Joint academic & Research activities and events	2.12.2022	2 Years

Sl. No	Name of the Industry and Institution	Objectives / Scope / Major activities	MoU Date	Validity
2	IPCS Global Solutions (Global view Automation & Technologies) Chitra Complex Chathiram Bus Stand, Trichy – 620002 Tamil Nadu	Industrial Training & Visits Guest Lectures Placement of Trained Students	7.12.2022	Indefinite
3	Pay Back to the Society (Reg. No:27/2022) 32/10, 5 th Street, Ashok Nagar, Chennai Tamil Nadu E-Mail: paybacktothesociety.ambedkar@gmail.com	To deliver guest lectures and organizing workshop, conferences, seminars and educational events to the students and staff	15.12.2022	Indefinite
4	Meenakshi Chandrasekaran College of Arts & Science, Karambayam, Pattukkottai – 614 626 Tamil Nadu	<ul style="list-style-type: none"> • Collaborative research and joint research programs • Exchange of information by faculty, researchers and students 	21.12.2022	3 Years
5	Seeking Modern Applications for Real Transformation (SMART), S-79, 2 nd Floor, Panchsheel park, New Delhi – 11017	Periyar Community Radio 90.4	5.1.2023 31.10.2023	9 months
6	Sri Kannapiran Mills Ltd, Coimbatore Tamil Nadu	<ul style="list-style-type: none"> • PMIST students shall undergo internship with SKML on TAPE (Textile Apprentice program for Engineers) programme during their final year 	6.2.2023	Indefinite

Sl. No	Name of the Industry and Institution	Objectives / Scope / Major activities	MoU Date	Validity
7	Wiskill Learning (OPC) Private Limited No.21, 3 rd Floor, main High School Teachers Layout, Nava India, SNR College road, Coimbatore – 641 037	<ul style="list-style-type: none"> • Industrial training and Visit • Guest Lectures • Placement of Training Students 	25.2.2023	Indefinite
8	Vimanna Labs India Private Limited (VLIND) PTBI, Vallam, Thanjavur, Tamil Nadu	<ul style="list-style-type: none"> • VLIND will provide Industry based skill development training programme for students and assist to organizing seminars, workshops & other academic activities along with DoAS • VLIND will offer internship programmes to students and provide placement assistance to the trained students of DoAS, PMIST • VLIND will establish an integrated “TECH & ME” laboratory with various technologies such as Aeromodelling, Drone, Robotics, 3D Printing, IoT and Artificial Intelligence at the premises of PMIST • Each party shall appoint one nodal officer to periodical review and identify ways to strengthen cooperation between them. 	1.3.2023	3 Years

Sl. No	Name of the Industry and Institution	Objectives / Scope / Major activities	MoU Date	Validity
9	Sri Design CAD Technologies Solutions PVT LTD (SDCTS), Chennai Tamil Nadu	<ul style="list-style-type: none"> • SDCTS will provide training and technical support of Research & Development for CAD, CAE, CFD at PMIST which would be relevant for students of Department of Aerospace Eng. • SDCTS will share the industry based projects related to design and analysis with PMIST on consultancy basis. • SDCTS will offer summer internship and placement assistance for the interested students • Each party shall appoint one nodal officer to periodical review and identify ways to strengthen cooperation between them. 	1.3.2023	3 Years
10	Taylor's University Malaysia	Research and academic collaborations	6.3.2023	5 Years
11	uLektz Learning Solutions Private Limited, No. 100, Lake View Estate, Porur, Chennai – 600 116 Tamil Nadu	Research and academic collaborations	10.3.2023	3 Years
12	M/s. Twirltact Technology Solutions Pvt. Limited, Coimbatore Tamil Nadu	Research and academic collaborations	14.3.2023	3 Years
13	Social Health and Education Development India (SHED India, Thanjavur Tamil Nadu	As guest lecture, resource persons and Trainers to share their expertise and knowledge with the students and faculty	14.3.2023	3 Years
14	Maruthupandiyar College, Thanjavur Tamil Nadu	<ul style="list-style-type: none"> • Exchange of Scholars • Exchange of Students • Exchange of Research Materials • Joint Research Programs • Joint Conferences 	15.3.2023	3 Years

Sl. No	Name of the Industry and Institution	Objectives / Scope / Major activities	MoU Date	Validity
15	M/s BRIDGE Bharat Council for Promotion of Innovation, Research and Entrepreneurship #139/1B, nRoot Headquarters, Near Air Force Station Thanjavur, Pudukkottai Road, Thanjavur – 613 403 Tamil Nadu	<ul style="list-style-type: none"> To conduct / facilitate workshops, guest lectures, Provide technical knowledge as related project or other relevant areas within the ambit of the scope of work of the collaboration. To facilitate industrial visit, project participation, in-plant training for students and to provide career guidance, counseling and placement of students of PMIST 	18.3.2023	3 Years
16	Unique MEP Engineering Academy Private Limited, No. 447/265, Third Floor, Poonamallee High Road, Aminjikarai, Chennai- 600 029, Tamil Nadu	<ul style="list-style-type: none"> Curriculum Design Industrial Design & Visits Research and Development Skill Development Programs Internship & Placement Training of Students 	27.3.2023	3 Years
17	Rabiammal Ahamed Maideen College for Women, Tiruvarur – 610 001 Tamil Nadu	<ul style="list-style-type: none"> To promote academic collaborative research and extension programmes To contemplate, provide and promote Academic Interaction by delivering special Lectures Conduction of Workshops/Conference/Seminar and Webinar Skill enhancement programmes for faculty staff and students 	27.3.2023	3 Years
18	Illustrious Institute of Green Environmental Management Private Limited(IIGEM), Malaysia MS.Shaliha Mohamed Jaffer P-19, Level 9, Block B, Kelana Square, 17, Jalan SS 7/26, Petaling Jaya, Kampong Tanjong, Selangor, Malaysia Leading MEP&BIM. Malaysia	<ul style="list-style-type: none"> Curriculum Design Industrial Design & Visits Research and Development Skill Development Programs Internship & Placement Training of Students 	27.3.2023	3 Years

Sl. No	Name of the Industry and Institution	Objectives / Scope / Major activities	MoU Date	Validity
19	The Kate Academy, Ganapathy, Coimbatore – 641 006. Tamil Nadu	<ul style="list-style-type: none"> To provide online coaching program in the field of GATE exam for the Architecture students To facilitate and provide value added training for higher education and competitive exams To impact knowledge on higher education in India and Abroad 	27.3.2023	3 Years
20	M/S Q-TEK Devices Tiruchirappalli Tamil Nadu	<ul style="list-style-type: none"> Collaborative research & IPR Exchange of Information on researchers and students Exchange visits by faculty, researchers and students Joint Proposal and engagement in research and training programmes sponsored by funding agencies 	28.3.2023	2 Years
21	Armada Industrial Automation Thanjavur Tamil Nadu	<ul style="list-style-type: none"> Execution of Research & Development work on Electric Vehicle Technology Establishing Electric Vehicle Laboratory 	28.3.2023	5 Years
22	Seleicon Hi-Tec Electronic Systems Pvt. Ltd Tiruchirappalli – 620012 Tamil Nadu	<ul style="list-style-type: none"> Collaborative research & IPR Exchange of Information on researchers and students Exchange visits by faculty, researchers and students Joint Proposal and engagement in research and training programmes sponsored by funding agencies 	28.3.2023	2 Years
23	M/s. High Energy Batteries (India) Ltd, Mathur, Tiruchirappalli – 620 009 Tamil Nadu	<ul style="list-style-type: none"> Collaborative Research Exchange of information for Research and Education programs 	29.3.2023	3 Years

Sl. No	Name of the Industry and Institution	Objectives / Scope / Major activities	MoU Date	Validity
24	M/s ZOHOTECH'S Training and Placement Services, Mahalakshimi Nagar, Chengalpattu, Chennai – 603 101. Tamil Nadu	<ul style="list-style-type: none"> • Guest Lectures and Workshop • Training: Latest Technologies needed for Industry, Internship, Project Works and Placement 	8.4.2023	Indefinite
25	The Erode College of Pharmacy Perundurai Main Road Veppampalayam Erode – 638 112 Tamil Nadu	<ul style="list-style-type: none"> • Organize workshops, seminars, lectures, symposiums and other scientific events on the relevant subjects of research interest such as basic concepts of research, scientific writing, biostatistics and scientific publishing. • Explore the possibilities of developing joint research activities and research collaborations. • Organize Faculty Development Program for the mutual benefits of faculty members. • Facilitate other research exchange events to which both parties agree. 	8.4.2023	3 Years
26	Tamilnadu Forest Department Thanjavur Division Tamil Nadu - 613403	Mutually facilitate and jointly foot forward various events towards sustainable environment development and climate change	29.5.2023	Indefinite
27	Monolith Research and Training Labs Chennai, Tamil Nadu	<ul style="list-style-type: none"> • Collaborative Research, training and project proposals • To contemplate some academic immersion programs • Joint academic program Development 	16.6.2023	3 Years

The matter is placed before the Academic Council for information and record.

Resolution

RESOLVED TO TAKE INTO RECORD the Memorandum of Understanding (MoU) with Industries and Institutions.

Dean **TO INFORM AND RECORD** Patents: Filed / Awarded / Granted.
Research
42.6.7

Sl. No.	Name(s) of the innovators	Patent Number / Design Applications	Title of the IPR	Dated of Filling & Publications
1	Applicant: Periyar Maniammai Institute of Science and Technology Inventors: Dr.P.Vijayalakshmi Dr.R.Sathishkumar Dr.D.Umamakeshwari Dr.N.Jayanthi	202241057756 A	Innovative Approach for Prediction of Stock Price and Movements using Fuzzy Inference system and Machine learning algorithms	10.10.2022 & 21.10.2022
2	Applicant: Periyar Maniammai Institute of Science and Technology Inventors: Dr.J.Jayanthi Dr.R.Balakumar Ms.K.Rajeswari Dr.S.Buvaneswari Dr.C.Vimala Dr.A.Sasikala	202241072401 A	Fuzzy Optimal Control with Desired End State Modeled by a Linguistic Concept	14.12.2022 & 30.12.2022
3	Applicant: Periyar Maniammai Institute of Science and Technology Inventors: Dr.P.N.Sudha Dr.P.Geetha Dr.R.Balakumar Dr.S.Manimozhi Dr.A.Muthamiz Selvan Dr.S.Dilip Jose	202241073073 A	Relating the use of Materials to encode and decode message with population models and control terrestrial traffic	16.12.2022 & 30.12.2022
4	Dr.K.Thiyagarajan	202241057921 A	A Microcontroller-Based Internet of Things System for the Detection of Alive Humans in Disaster and War Areas	10.10.2022 & 14.10.2022

Sl. No.	Name(s) of the innovators	Patent Number / Design Applications	Title of the IPR	Dated of Filling & Publications
5	Dr.K.Thiyagarajan	202241060787A	Using LoRa and a lightweight dynamic clustering algorithm, a mobile data sink can be made wide-area WSNs that are connected to the Internet of Things	25.10.2022 & 28.10.2022
6	Dr.P.Anusha	202241062480 A	Impact of Lorawan on Performance of Cloud-Based IoT Platforms and FOG computing	2.11.2022 & 11.11.2022
7	Dr.P.Anusha	202241062481 A	IoT system for monitoring gateways using Lora and Lorawan	2.11.2022 & 11.11.2022
8	Ms.R.Poonguzhali Ms.T.Kavitha	202141019041 A	A Novel Proposed Autonomic architecture to Enforce and Assure Security in Cloud Environments	26.4.2021 & 7.5.2021
9	Mr.N.Shivakumar Dr.P.K.Srividhya Mr.A.Pugazhenth Mr.R.Rakesh	202241028521 A	Hanger attached with adjustable ironing pad for quick and easy ironing	18.12.2022 & 30.12.2022
10	Applicant: Periyar Maniammai Institute of Science and Technology Inventors: Dr.G.Preethi Dr.S.Manimozhi Dr.V.Srithar Dr.M.Sharmila Begum Dr.M.Chandrakumar Peter Dr.D.Maghesh Kumar	202241072731 A	IOT based water leakage management system	15.12.2022 & 30.12.2022

Sl. No.	Name(s) of the innovators	Patent Number / Design Applications	Title of the IPR	Dated of Filling & Publications
11	Dr.S.Parameswaran	202241026857A	Impact of HR Strategy Linkage with Business Strategy on Organizational Effectiveness	10.5.2022 & 13.5.2022
12	C.M.Vivek	202341007949A	Intelligent autonomous braking control strategy of E-Vehicle based on driving intention recognition	07/02/2023 & 24/02/2023
13	Dr.S.Arunmurugan Mr.K.Sethurajan Mr.S.Arunmurugan	202341016222A	Data Science Work flow Execution Platform with Automatically Managed Code	10.3.2023 & 24.3.2023
14	Dr.A.Tamilmani Mr.D.Narendra Prasad Mr.G.Thirumal Murugan	202341030908A	Efficient Residential Load Scheduling through a Demand Response Multi-Objective Optimization Model	30.4.2023 & 5.5.2023
15	Dr.C.Arun	202341030198A	HSO-Brick and Process for Manufacturing Thereof	26.4.2023 & 26.5.2023
16	Dr.B.Anupriya	202341033458A	An Image Processing System Based on IoT for Obstacle Detection on Roads	15.5.2023 & 23.6.2023

The matter is placed before the Academic Council for information and record.

Resolution

RESOLVED TO TAKE INTO RECORD Patents: Filed / Awarded / Granted.

**Dean
Research
42.6.8**

TO INFORM AND RECORD the list of faculty members availed the Seed money.

Notes:

Fourteen (14) faculty members have been sanctioned 14 Lakhs as a seed money from various departments between December 2022 and June 2023 are listed below:

Sl. No	Name of the Principal Investigator	Name of the Co-Investigator	Title of the Project	Sanction Amount in Rs.	Sanction Date
1	Dr. C. Arun Assistant Professor Department of Biotechnology	NA	Biogenic Synthesis and Characterization of Zinc and Copper Nano-Fertilizer using Garbage Enzyme	1,00,000	6.2.2023
2	Mr. R. Rakesh Assistant Professor Department of ECE	Dr.C.Narmadha, Associate Professor / ECE Mr. U.Saravana Kumar, Assistant Professor / ECE	Development of P-Bot (Periyar BoT)	1,00,000	6.2.2023
3	Dr. S. Janani, Associate Professor / ECE	Dr. C. Narmatha, HOD/ ECE Ms. S. Hemambujavalli, Assistant Professor / ECE	Smart staff cabin & health automation system	1,00,000	28.3.2023
4	Dr. Jeyachidra, Professor – Dean (FCSE)	Dr. P. Aruna, Associate Professor, Department of Software Engg. Dr. D. Christy Sujatha, AP (SG), Department of Software Engg.	An Efficient Machine Learning Framework for Monitoring Glycaemic and Hemodynamic Pattern	1,00,000	28.3.2023
5	Dr. Geetha. K HOD, Biotechnology	Ms. S. Keerthana, Assistant Professor, Department of Biotechnology	Synthesis and Characterization of lysine capped nano zinc oxide for the application of Japanese quail zinc supplementation	1,00,000	28.3.2023
6	Dr. S. Kumaran Professor, Department of Biotechnology	NA	Effect of shock wave in reducing the dormancy of the teak plant seeds and to improve its germination	1,00,000	28.3.2023
7	Dr. Pitchi Balakumar Professor, Department of Biotechnology	NA	Potential pharmacological interventions to ameliorate aminoglycoside - induced experimental acute nephrotoxicity	1,00,000	28.3.2023

Sl. No	Name of the Principal Investigator	Name of the Co-Investigator	Title of the Project	Sanction Amount in Rs.	Sanction Date
8	Mr. R. Natarajan Assistant Professor, Department of Education	NA	Growth and characterization of amino acids based semi-organic crystals	1,00,000	28.3.2023
9	Dr. M. Karthikeyan Asst. Prof. Dept. of Chemistry	NA	Green Synthesis of Ce doped ZnO nanoparticles using Phyllanthus emblica seed extract of biological and energy storage applications	1,00,000	28.3.2023
10	Dr. S. Gomathi Assistant Professor / Dept. of Chemistry	NA	Screening of polymorphic forms and multicomponent of nutraceuticals in combination with antidiabetic drugs	1,00,000	28.3.2023
11	Dr. M. Sharmila Begum, Associate Professor / CSE	Ms. S. Manjula, Asst. Professor Dept. of CSE	Deep Learning based model to detect Human Abnormal Action in Surveillance video	1,00,000	28.3.2023
12	Dr.V.Hamsadhwani Associate Professor Department of EEE	NA	Challenges and Future Directions of High Entropy Materials for Lithium-ion and Sodium-ion Energy Storage Systems	1,00,000	14.6.2023
13	Dr.K.Maruliya Begam Assistant Professor (SG) Department of EEE	Dr.V.Hamsadhwani Associate Professor Department of EEE	Material Characterization and study on High Energy Storage Materials used for Military and Armoured Vehicle	1,00,000	14.6.2023
14	Dr.G.Saravana Venkatesh Assistant Professor Department of EEE	NA	Material Characterization and Study on High Efficiency Energy Storage Materials Used in Wind and Solar Applications	1,00,000	14.6.2023

The matter is placed before the Academic Council for information and record.

Resolution

RESOLVED TO TAKE INTO RECORD list of faculty members availed the Seed money.

**Dean
Research
42.6.9**

TO INFORM AND RECORD the list of faculty members received Students Grant (7), amount of 52,500/- form Tamilnadu State Council for Science and Technology (TNSCST) Academic Year 2022-23 .

Sl. No	Name of Faculty (Principal Investigator)	Title of the Project	Amount Received (In Rupees)
1	Dr.D.Kumar Professor, Dept of Physics	Evolution of cultural traits as inferred in Keezhadi culture using Bayesian method	7,500/-
2	Mr. A. Manohar Associate Professor Dept of Chemistry	Investigation of the level of Lead (Pb) contamination on street foods available at the traffic places of Thanjavur town	7,500/-
3	K.R. Arivukkarasu Assistant Professor Dept of Physics	Thermal imaging of paddy seeds for quality assessment of seeds	7,500/-
4	Ms.P.Mala Assistant Professor Department of Biotechnology	Development of novel wound dressing materials using medicinal plants	7,500/-
5	Dr. S. Gomathi Assistant Professor (S.G) and Head Dept of Chemistry	Removal of micro plastics from waste water using MOF	7,500/-
6	Ms.R.Ramya Assistant Professor Department of Biotechnology	Isolation and estimation of compounds from Musa stem that prevent the formation of kidney stones	7,500/-
7	Ms.K.Sathyalakshmi Assistant Professor Dept. of CSE	Automatic music recommendation based on face expression using machine learning	7,500/-

The matter is placed before the Academic Council for information and record.

Resolution

RESOLVED TO TAKE INTO RECORD the list of faculty members received Students Grant form Tamilnadu State Council for Science and Technology (TNSCST).

**Dean
Research
42.6.10**

TO INFORM AND RECORD the extension of Project titled “Graphene and plant seeds coated clay pot to address the pure drinking water scarcity issue in remote villages by removing salinity and suspended solids” from TNSCST Period from 1.4.2023 to 30.9.2023 without financial commitment.

Principal Investigator :Dr.S.Kumaran, Dean Research

Co- Investigator :Dr.C.Vimala, Department of Mathematics

The matter is placed before the Academic Council for information and record.

Resolution

RESOLVED TO TAKE INTO RECORD the extension of Project titled “Graphene and plant seeds coated clay pot to address the pure drinking water scarcity issue in remote villages by removing salinity and suspended solids” from TNSCST Period from 1.4.2023 to 30.9.2023 without financial commitment.

**Dean
Research
42.6.11**

TO INFORM AND RECORD the list of faculty members (8) submitted research proposals to various funding agencies worth of 161 lakhs.

Sl. No.	Name of Applicant	Department	Title of Project / Scheme	Applied to	Budget proposed in Rs.	Date of applied
1	Dr.K.Geetha Asst. Prof. Dept. of Bio-Tech	Biotechnology	Optimization of nanomineral supplements through oral dispersible film for augmenting productivity in cattle and to reduce wastage and environmental pollution	NABARD under the scheme of Farm sector Promotion Fund Application for Supporting Innovations in Agriculture and Allied Sector	9,60,000	7/10/2022
2	Dr.S.Vasanthavel	Biotechnology	Development of Multifunctional Metal Ferrite/ Bioglass nanocomposites with rare earth additives for post-surgical treatment of osteosarcoma/ State Universities Research Excellence (SURE)	Department of Science & Technology, Government of India	24,01,800	03/10/2022
3	Dr.D.Jeyasimman, Professor	Mechanical Engg	Synthesis, characterization and mechanical properties of $Al_{30}Ni_{30}Re_5Cr_{30}V_5$ refractory high entropy alloy through mechanical alloying	Science and Engineering Research Board (SERB), Government of India	24,93,000	03.03.2023

Sl. No.	Name of Applicant	Department	Title of Project / Scheme	Applied to	Budget proposed in Rs.	Date of applied
4	Dr.M.Sharmila Begum Associate Professor	Computer Science and Engineering	Development of an Integrated System for the Detection of the deep fake videos, images and speech using Artificial Intelligence	Core Research Grant(CRG) Science and Engineering Research Board, Govt of India.	27,41,000	19.03.2023
5	Dr.S.Appavu alias Balamurugan Professor	Computer Science and Engineering	AI driven Automated System for Semantic Analysis of Information in Legal Text	Core Research Grant(CRG) Science and Engineering Research Board, Govt of India.	26,26,000	19.03.2023
6	Dr.S.Appavu alias Balamurugan Professor	Computer Science and Engineering	AI based Agricultural Land Climate Monitoring and Prediction System for improving climate resilience and sustainable farming in Indian agriculture	Teachers Associateship for Research Excellence (TARE) Science and Engineering Research Board, Govt of India.	16,80,000	21.03.2023
7	Dr.S.Appavu alias Balamurugan Professor	Computer Science and Engineering	Leveraging Cultural Trends to Promote Cultural Heritage in Thanjavur District: A Statistical Analysis	MATRICES Science and Engineering Research Board, Govt of India.	6,00,000	28.03.2023
8	Dr.S.Appavu alias Balamurugan Professor		Cloud based transcription and digitization of ancient Tamil manuscript	Science and Heritage Research Initiative (SHRI) Department of Science and Technology (DST), Govt of India.	26,83,600	10.04.2023

The matter is placed before the Academic Council for information and record.

Resolution

RESOLVED TO TAKE INTO RECORD the list of faculty members submitted research proposals to various funding agencies.

**Dean
Research
42.6.12**

TO INFORM AND RECORD the 1st and 2nd slot Ph.D. Admission 2022-23.

Notes:

The details of admissions made for 1st and 2nd slot Ph.D. Admission 2022-23:

Sl.No	Name of the Department	1 st Slot				2 nd Slot			
		Received Applications	Admitted	Full Time	Part Time	Received Applications	Admitted	Full Time	Part Time
1	Biotechnology	2	2	1	1	3	0	0	0
2	Chemistry	2	2	2	0	2	0	0	0
3	Civil Engineering	7	7	3	4	5	0	0	0
4	Computer Applications	3	2	0	2	8	1	0	1
5	EEE	2	0	0	0	3	0	0	0
6	ECE	6	3	1	2	3	1	0	1
7	English	5	3	1	2	5	0	0	0
8	Management Studies	6	5	1	4	11	1	0	1
9	Mathematics	9	4	2	2	13	9	3	6
10	Mechanical	5	2	0	2	3	2	0	2
11	Physics	1	0	0	0	2	0	0	0
12	Political Science	4	0	0	0	0	0	0	0
13	Social Work	2	1	1	0	1	0	0	0
14	Architecture	1	0	0	0	0	0	0	0
15	Commerce	0	0	0	0	5	1	0	1
	Total	52	31	12	19	64	15	3	12

The matter is placed before the Academic Council for information and record.

Resolution

RESOLVED TO TAKE INTO RECORD the 1st and 2nd slot Ph.D. Admission 2022-23.

**Dean
Research
42.6.13**

TO INFORM AND RECORD the Scholarly scientific training Programme.

Notes:

Director, Centre for Scholarly Scientific Training and Publishing (CSSTP) has delivered 25 Scholarly Scientific Training programmes to faculties, UG & PG students.

The matter is placed before the Academic Council for information and record.

Resolution

RESOLVED TO TAKE INTO RECORD the Scholarly scientific training Programme.

**Dean
Research
42.6.14**

TO INFORM AND RECORD the PMIST has participated in NIRF - Innovation and received certificate from National Institutional Framework, Ministry of Education, Government of India, New Delhi.

The matter is placed before the Academic Council for information and record.

Resolution

RESOLVED TO TAKE INTO RECORD the PMIST has participated in NIRF - Innovation and received certificate from National Institutional Framework, Ministry of Education, Government of India, New Delhi.

**Dean
Research
42.6.15**

TO INFORM AND RECORD the Research Scholars receiving Fellowship/ Qualified for Fellowship from Government Bodies.

Notes:

- ❖ One of the Research Scholars Ms.M.Nidhishree, Full-Time Research Scholar, Department of Chemistry is receiving one lakh per year from *Adidraavidar Welfare* fund, Tamilnadu Government.
- ❖ One of the Research Scholars Mrs. K.Jayabharathi, Full-Time Research Scholar, Department of Languages cleared NET-JRF under National fellowship for Other Backward Class (NFOBC-JRF).

The matter is placed before the Academic Council for information and record.

Resolution

RESOLVED TO TAKE INTO RECORD the Research Scholars receiving Fellowship from Government Bodies.

**Dean
Research
42.6.16**

TO INFORM AND RECORD the nomination of Institution Innovation Council Innovation Ambassadors at Foundation Level.

Notes:

List of Nomination for Innovation Ambassador Training at Foundation Level.

Sl.No	Name of the Faculty	Department
1	Dr. A. Anand Jerard Sebastine	Social Work
2	Mr.S.Arunmurugan	ECE
3	Dr.S.Arumugam	CSA
4	Mr.I. Karthic Subramaniyan	Aerospace Engineering
5	Mr. R. Thiyagarajan	Mechanical Engineering
6	Dr. C. Arun	Biotechnology
7	Dr. D. Maghesh Kumar	Software Engineering
8	Ms.S. Suganthi	Architecture
9	Dr. K. Maruliya Begam	EEE
10	Mr.V.Nagaraj	Aerospace Engineering

The matter is placed before the Academic Council for information and record.

Resolution

RESOLVED TO TAKE INTO RECORD the nomination of Institution Innovation Council Innovation Ambassadors at Foundation Level.

MINUTES OF TABLE AGENDA AND NOTES

7. BUSINESS BROUGHT FORWARD BY DEAN ACADEMIC

**Dean
Academic
42.7.1**

TO CONSIDER AND APPROVE general elective courses / open elective courses for all undergraduate students who have enrolled in NCC.

The courses are

SL. No	Army Stream			Airwing Stream		
	Course Code	Course Name	Credits	Course Code	Course Name	Credits
1	XNCCAROE 01	NCC- Army General Elective - 01	3	XNCCAWOE 01	NCC - Airwing General Elective - 01	3
2	XNCCAROE 02	NCC- Army General Elective - 02	3	XNCCAWOE 02	NCC - Airwing General Elective - 02	3

3	XNCCARC1	NCC- Army Camp 1	4	XNCCAWC1	NCC- Airwing Camp 1	4	
4	XNCCAROE 03	NCC- Army General Elective - 03	3	XNCCAWOE 03	NCC - Airwing General Elective - 03	3	
5	XNCCAROE 04	NCC- Army General Elective - 04	3	XNCCAWOE 04	NCC - Airwing General Elective - 04	3	
6	XNCCAROE 05	NCC- Army General Elective - 05	3	XNCCAWOE 05	NCC - Airwing General Elective - 05	3	
7	XNCCARC2	NCC- Army Camp 2	5	XNCCAWC2	NCC- Airwing Camp 2	5	
Total			24	Total			24

Notes:

PMIST have introduced NCC as Generic/Open Elective (For NCC Cadets) from the academic year 2021-22 (through Academic Council Meeting Dean Academic 38.2.6) onwards as per University Grants Commission vide letter D.O.No. 1-8 / 2019 (CPP-II) letter.

At presently PMIST, has three NCC units namely 1. Airwing 2. Army (Boys and Girls). To differentiate two types of the NCC, Generic/Open Elective courses are modified to fit into two streams viz Airwing and Army. The syllabus of the Generic/Open Elective courses are modified and presented in Board of Studies of the Department of Social Work.

The NCC courses will be offered from the first year. NCC cadet can use his / her completed NCC courses (except Camps) for the generic / open electives which are usually offered from second / third year of the program. The credits earned by NCC cadets in excess will be reflected as additional credits in a separate row in his/ her consolidated mark sheet. The courses and syllabi are given in the Annexure.

The matter is placed before the Academic Council for approval.

Resolution

RESOLVED TO APPROVE general elective courses / open elective courses for all undergraduate students who have enrolled in NCC.

**Dean
Academic
42.7.2**

TO CONSIDER AND APPROVE Introduction of the courses related to Indian Knowledge System as Open Electives from 2023-24 year onwards.

Notes:

Based on University Grants Commission (Letter No. D.O.No.F. I -3 12022 (Raj bhasha/NE P) dated June 13, 2023) through an expert group have given

guidelines for introducing courses to students of HEIs on Indian Knowledge System. Elective Courses on Indian Knowledge System will be introduced for the respective domain.

The matter is placed before the Academic Council for approval.

Resolution

RESOLVED TO APPROVE Introduction of the courses related to Indian Knowledge System as Open Electives from 2023-24 year onwards.

**Dean
Academic
42.7.3**

TO CONSIDER AND APPROVE The syllabus for the course ***Social Responsibility and Community Engagement*** to be offered for all under graduate programmes.

Notes :

University Grants Commission (*Letter No. D.O.No.F. I-4/2018(UBA) dated 29th December, 2022*) through an expert group under Unnat Bharat Abhiyan (UBA) have given guidelines for this 2 Credits Course (1 Credit for Classroom and Tutorials and 1 Credit for Field Engagement).

The course will be given as Open Elective from 2023-24 onwards for all UG students. Syllabus for the course is given in the Annexure.

The matter is placed before the Academic Council for approval.

Resolution

RESOLVED TO APPROVE the syllabus for the course Social Responsibility and Community Engagement to be offered as Open Elective for all under graduate programmes from the academic year 2023-24 onwards

8. ANY OTHER POINTS - WITH THE PERMISSION OF THE CHAIR.

Registrar madam recommended rearranging the course “Workshop Practices” in the Curriculum from Academic Year 2023-24 onwards for the B.Tech.-Computer Science and Engineering & Specializations. The course “Workshop Practices” is presently given to all B.Tech programmes in the second semester.

This has led to suboptimal usage of resources. The change will nearly balance the usage of the resources. The changes are given below:

B.Tech CSE & specializations					
Existing			New		
Course Code	Course Name	Semester	Course Code	Course Name	Semester
XCS104	Basics of Electronic Devices and Circuits	I	XWP105	Workshop Practices	I
XWP205	Workshop Practices	II	XCS 205	Basics of Electronic Devices and Circuits.	II

Similarly, she also proposed to introduce Engineering Graphics and Design as per AICTE model curriculum to B.Tech CSE & specializations and B.Tech ECE & specializations from Academic Year 2023-24. To keep the total number of credits of B.Tech programmes around 160, the course XEM206 Engineering Mechanics can be replaced. Head of the Computer Science & Engineering and Electronics & Communication Engineering agreed to the changes.

Therefore the above changes in the Curriculum of B.Tech CSE & specializations and B.Tech ECE & specializations is approved

Dr.P.K.Srividhya, Registrar informed existing and vacancy positions of faculty to the members.

Existing	Vacancy
Prof – 38	Prof – 20
Asso Prof. - 69	Asso Prof. - 32
Asst Prof. - 309	Asst Prof. - 123

Ms.Abirami Ramalingam Batch: 2019-2023, has been selected for Fellowship National Institute of Physiological Sciences, Japan with Stipend 2 Lakhs Japanese Yen.

Hon'ble Chairman wholeheartedly thanked all the external members for their active participation and long association with the Institution and their feedbacks.

Dr.P.K.Srividhya, Registrar thanked everyone for their active participation in the meeting.

**REGISTRAR
Secretary, Academic Council**

RRM001

RESEARCH METHODOLOGY

L T P C

Regulation 2023

3 0 0 3

Aim: This course aims to develop research skills among research students and scholars on the basic concepts of scientific research and scholarly communication.

Objectives:

- a) To learn the six levels of competencies within the cognitive domain and their successful applications in research
- b) To provide students and scholars with knowledge of the principles of research and statistical analysis
- c) To familiarize on various processes of research publications
- d) To learn the art and science of scientific writing and successful publishing
- e) To acquire the skills on information and communications technology (ICT) tools for conducting efficient research
- f) To gain knowledge on the most recent changes in intellectual property rights (IPR)

Unit I: Fundamentals of Scientific Research

Goals of research and critical steps for successful research initiatives, Implications of cognitive, affective and psychomotor domains in research, Types of research, Ideas detection, Divergent and convergent thinking, Inductive and deductive reasoning, Research gap, Identifying research problem, Defining research problem, Formulation of research questions, Hypothesis generation, Listing objectives of the study, Potential targets of a study, Time frame of the research, Impact of research on local and global issues and benefits to the society.

Unit II: Literature Search and Review

Fundamentals of literature search and review, Types and significance of literature search, Research process, Methods of literature search (protocol driven, snowballing, *etc.*), Sources of literature search, Empowering efficient literature search, Search engines and databases: ScienceDirect, JANE, PubMed/Medline, MeSH, Embase, Web of Science, BibliMed, Scopus, Google Scholar, SciFinder, Cochrane library, PubChem, Merck Index, Knovel, ProQuest, Infilbnet, zbMATH, *etc.*

Unit III: Data Analysis and Statistical Tools

Fundamental of descriptive and inferential statistics, Measures of central tendency, Skewness, Kurtosis, Normal distribution, types of data (categorical vs numerical data), scales of measurement, correlation coefficient, types of distribution (Gaussian vs non-Gaussian), types of variables, Parametric and non-parametric statistics, Confidence interval, Hypothesis testing, Statistical tests of significance, Standard deviation and standard error, Sample size calculation, Power of study, Null-hypothesis, Alternative hypothesis, Types of error (False positive and false negative), Level of significance, Outliers, One-tailed and two-tailed test, Conceptual framework for statistical analyses of data: Student t test, ANOVA (one-way, two-way, three-way, repeated measures of ANOVA), Post-hoc statistical tests (Tukey's, Dunnett's, Bonferroni, etc.), Chi-square test, Wilcoxon-matched-pairs signed-ranks test, Mann-Whitney test, Friedman test, Kruskal-Wallis test, *etc.*, Applications of statistical software and tools.

Unit IV: Structuring the Scientific Article and Scholarly Communication

Types of publication, Significance of report writing, Steps in writing reports, Layout of a research report, Principles of scientific writing, Mechanics of writing a research report, Structuring the key components of a research article: title, abstract, introduction, materials and methods, results, discussion, summary, conclusions, funding source, references, legends for figures and tables, *etc.*, Writing a review article, Precautions of writing a research report, Scientific misconduct and ethics in research, Obtaining permission to reuse figures/tables/images from published resources, Identifying legitimate journals, Journal selection, Cover letter, Conflict of interest, Authors contribution statement, Checklist for submission, Journal submission, Gatekeepers and peer-review process, Responding to reviewers, Successful publications.

Unit V: Computing Resources and Tools for Research Reports

Basics of Internet services: various sources of abstracts, articles and papers, and downloading. TOC registration, Online journals, e-books, Courseware and technical reports, Imaging and file formats, File conversions, Tools for report writing: styles and formats, latex, MS Office suite–Word, Excel, PowerPoint, Access for scientific and other applications, Free and Open Source Software (FOSS), AMOS, Graphical and statistical tools, *etc.*

Unit VI: Intellectual Property Rights (IPR) and Funding

Types of IPR, Acts of IPR, Filing procedure of IPR in India and abroad, World Intellectual Property Organization (WIPO), Search and service portals of IPR, Commercialization of IPR, Case studies on IPR disputes, Scholarships and funding agencies for research: National and International perspectives.

References

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2. Jagadeesh G, Murthy S, Gupta YK, Prakash A, editors. Biomedical Research – From Ideation to Publication. New Delhi: Wolters Kluwer Health-Lippincott Williams and Wilkins; 2010.
3. C.R. Kothari, Gaurav Garg, Research Methodology: Methods and Techniques, 4th edition, New Age International Publisher (2019).
4. N.Gurumani, Research Methodology for Biological Science, MJP Publishers, Chennai (2021).
5. Balakumar P, Inamdar MN, Jagadeesh G. The critical steps for successful research: The research proposal and scientific writing. J. Pharmacol. Pharmacother. 2013;4:130-8.

Online Resources

1. NPTEL: https://onlinecourses.nptel.ac.in/noc23_ge36/preview. Accessed 07 July 2023
2. Elsevier Researcher Academy: <https://researcheracademy.elsevier.com/>. Accessed 07 July 2023
3. WIPO: wipo.int. Accessed 07 July 2023
4. IPR India: <https://ipindia.gov.in/>. Accessed 07 July 2023
5. National Digital Library of India: <https://www.ndl.gov.in/>. Accessed 07 July 2023
6. TKDL: <https://www.csir.res.in/documents/tkdl>. Accessed 07 July 2023