ACADEMIC CURRICULA

UNDERGRADUATE DEGREE PROGRAMMES

Bachelor of Technology

(B.Tech. - Four Years)

in

ARTIFICIAL INTELLIGENCE

(Choice Based Flexible Credit System)

Regulations 2018

CURRICULUM and SYLLABUS

SRM INSTITUTE OF SCIENCE AND TECHNOLOGY

(Deemed to be University u/s 3 of UGC Act, 1956)

Kattankulathur, Chengalpattu District 603203, Tamil Nadu, India

B.Tech. in Artificial Intelligence

1. Department Vision Statement

Stmt - 1	To produce students with a comprehensive understanding of the essentials of the theory and application of Artificial Intelligence
Stmt - 2	To enable students to become leaders in the industry and academia nationally and internationally.
Stmt - 3	To meet the persistent demands in the area of Artificial Intelligence.

2. Department Mission Statement

Stmt - 1	To develop, test, iterate and demonstrate how Artificial Intelligence can be used to tackle the problems in divergent domains that serves the nation and humanity.
Stmt - 2	To collaborate with other disciplines that includes but not limited to Engineering and Technology, Science, Humanities, Medicines, Agriculture, Management, Law, etc.
Stmt - 3	To advance the research collaboration with communities for a healthy, and sustainable world.
Stmt - 4	To impart societal, safety, cultural, environmental and ethical responsibilities in the professional activities.
Stmt - 5	To produce successful Artificial Intelligence graduates with the ability to work in multidisciplinary teams and commitment to lifelong learning.

3. Program Education Objectives (PEO)

PEO - 1	Graduates will be able to analyze the problems by applying the principles of computer science, mathematics, and scientific investigation and to design and implement industry accepted solutions using latest AI technologies
PEO - 2	Graduates will be able to develop a basic understanding of the building blocks of AI in terms of intelligent agents like Search, Knowledge representation, inference, logic, and learning
PEO - 3	Graduates will be able to aid computers perform intellectual tasks such as decision making, problem solving, perception, understanding human communication in any language, and translate among them
PEO - 4	Graduates will be able to be work productively in supportive, leadership and entrepreneurial roles with multidisciplinary teams through effective communication and high regard to legal and ethical responsibilities.
PEO - 5	Successfully pursue higher education in reputed institutions
PEO - 6	Be able to embrace lifelong learning to meet ever changing developments in computer science

4. Consistency of PEO's with Mission of the Department

	Mission Stmt. - 1	Mission Stmt. - 2	Mission Stmt. - 3	Mission Stmt. - 4	Mission Stmt. - 5
PEO - 1	H	H	H	M	M
PEO - 2	H	H	H	M	M
PEO - 3	H	H	M	M	H
PEO - 4	H	H	M	H	H
PEO - 5	H	H	H	H	H
PEO - 6	H	H	H	H	H

5. Consistency of PEO's with Program Learning Outcomes (PLO)

	Program Learning Outcomes (PLO)														
	1. Scientific Knowledge	2. Problem Analysis	3. Design & Development	4. Analysis, Design, Research	5. Modern Tool Usage	6. Society & Culture	7. Environment & Sustainability	8. Ethical Reasoning	9. Individual & Team Work	10. Communication	11. Project Mgt. & Finance	12. Life Long Learning	13. Critical Thinking	14. Reflective Thinking	15. Scientific Reasoning
PEO - 1	H	H	H	M	H	L	H	L	H	L	L	H	H	H	H
PEO - 2	H	H	H	M	H	L	M	L	H	L	L	H	H	H	H
PEO - 3	H	H	H	M	H	M	M	L	H	L	L	H	H	H	H
PEO - 4	M	M	M	H	L	L	H	H	H	H	M	L	L	L	L

PEO - 5	M	M	M	H	M	L	M	L	H	L	L	H	H	H	H
PEO - 6	H	M	M	M	L	L	M	L	L	L	L	H	L	L	L

H – High Correlation, M – Medium Correlation, L – Low Correlation

PSO – Program Specific Outcomes (PSO)

PSO-1	Ability to learn Artificial Intelligence and its relative fields
PSO-2	Ability to create new techniques, develop algorithms and validate in the field of Artificial Intelligence
PSO-3	Ability to develop systems using techniques and tools in the field of Artificial Intelligence

Program Structure: B.Tech. In Artificial Intelligence

1. Humanities & Social Sciences including Management Courses (H)

Course Code	Course Title	L	T	P	C
18LEH101J	English	2	0	2	3
18LEH102J	Chinese				
18LEH103J	French				
18LEH104J	German	2	0	2	3
18LEH105J	Japanese				
18LEH106J	Korean				
18PDH101T	General Aptitude	0	0	2	1
18AIH201T	Professional Ethics of Artificial Intelligence	2	0	0	2
18PDH201T	Employability Skills and Practices	0	0	2	0
	Total Learning Credits				9

2. Basic Science Courses (B)

Course Code	Course Title	L	T	P	C
18MAB101T	Calculus and Linear Algebra	3	1	0	4
18MAB102T	Advanced Calculus and Complex Analysis	3	1	0	4
18PCB101J	Engineering Physics, Chemistry and Biology	3	1	2	5
18MAB201T	Transforms and Boundary Value Problems	3	1	0	4
18MAB206T	Numerical Methods and Analysis	3	1	0	4
18MAB304T	Probability and Applied Statistics	3	1	0	4
18MAB302T	Discrete Mathematics for Engineers	3	1	0	4
	Total Learning Credits				29

3. Engineering Science Courses (S)

Course Code	Course Title	L	T	P	C
18AIS101J	Introduction to MATLAB for Artificial Intelligence	1	0	4	3
18EES101J	Basic Electrical and Electronics Engineering	3	1	2	5
18CSS101J	Programming for Problem Solving	3	0	4	5
18AIS102J	Smart Manufacturing	1	0	4	3
18AIS201T	Linear Systems and Signal Processing	3	0	0	3
18AIS202T	Digital Logic and Computer Architecture	3	0	0	3
18AIS203J	Computer Networks and Communications	2	0	2	3
	Total Learning Credits				25

4. Professional Core Courses (C)

Course Code	Course Title	L	T	P	C
18AIC101J	Foundation of Data Analysis	3	0	2	4
18AIC201J	Foundation of Artificial Intelligence	2	0	2	3
18AIC202J	Data Structure and its Applications	3	0	2	4
18AIC203J	Object Oriented Design and Programming	3	0	2	4
18AIC204T	Software Engineering Principles	3	0	0	3
18AIC205J	Neural Networks and Machine Learning	3	0	2	4
18AIC206J	Analysis and Design of Algorithms	3	0	2	4
18AIC207J	Database Management Systems for Artificial Intelligence	2	0	2	3
18AIC208J	Operating System Design	2	0	2	3
18AIC209T	Foundation of Metric Spaces	1	0	0	1
18AIC301J	Deep Learning Techniques	3	0	2	4
18AIC302J	Web Programming for Artificial Intelligence	3	0	2	4
18AIC303T	Formal Language and Automata Theory	3	0	0	3
18AIC304J	Reinforcement Learning Techniques	2	0	2	3
18AIC305T	Inferential Statistics and Predictive Analytics	2	0	0	2
18AIC306J	Design of Artificial Intelligence Products	2	0	2	3
18CSC208L	Competitive Professional Skills - I	0	0	2	1
18CSC306L	Competitive Professional Skills-II	0	0	2	1
18CSC307L	Competitive Professional Skills – III	0	0	2	1
18CSC350T	Comprehension	0	1	0	1
	Total Learning Credits				56

5. Professional Elective Courses (E) (Any 6 Elective Courses)

Course Code	Course Title	L	T	P	C
18AIE321T	Optimization Techniques	3	0	0	3
18AIE322T	Stochastic Decision Making	3	0	0	3
18AIE323T	Information Theory and Coding	3	0	0	3
18AIE324T	Cognitive Science & Analytics	3	0	0	3
18AIE325T	Internet of Things Architecture and Protocols	3	0	0	3
18AIE326T	Intelligent Autonomous Systems	3	0	0	3
18AIE327T	Intelligence of Biological Systems	3	0	0	3
18AIE328T	Marketing Analytics	3	0	0	3
18AIE329T	Information Retrieval	3	0	0	3
18AIE330T	Text Processing	3	0	0	3
18AIE331T	Advanced Social, Text and Media Analytics	3	0	0	3
18AIE332T	Image and Video processing	3	0	0	3
18AIE333T	Biometrics	3	0	0	3
18AIE334T	Pattern Recognition Techniques	3	0	0	3
18AIE335T	Surveillance Video Analytics	3	0	0	3
18AIE336T	Medical Signal Processing	3	0	0	3
18AIE337T	Speech Recognition and Understanding	3	0	0	3
18AIE338T	Logic and Knowledge Representation	3	0	0	3
18AIE339T	Matrix theory for Artificial Intelligence	3	0	0	3

Course Code	Course Title	L	T	P	C
18AIE421T	Soft Computing and its Applications	3	0	0	3
18AIE422T	Artificial Intelligence and High-Performance Computing	3	0	0	3
18AIE423T	Business Intelligence and Analytics	3	0	0	3
18AIE424T	Artificial Intelligence and Internet of Things	3	0	0	3
18AIE425T	Compiler Design	3	0	0	3
18AIE426T	Virtual Reality and Augmented Reality	3	0	0	3
18AIE427T	Data Mining and Analytics	3	0	0	3
18AIE428T	Time Series Analysis	3	0	0	3
18AIE429T	Cloud Computing	3	0	0	3
18AIE430T	Distributed Systems	3	0	0	3
18AIE431T	Big Data Analytics: Hadoop, Spark and NoSQL	3	0	0	3
18AIE432T	Brain Machine Interface	3	0	0	3
18AIE433T	Nature Inspired Computing	3	0	0	3
18AIE434T	Bio Informatics	3	0	0	3
18AIE435T	Theoretical and Computational Neuroscience	3	0	0	3
18AIE436T	Autonomous Navigation and Vehicles	3	0	0	3
18AIE437T	Mobile Game Development	3	0	0	3
Total Learning Credits					**18**

7. Project Work, Seminar, Internship In Industry / Higher Technical Institutions (P)

Course Code	Course Title	Hours/week L	T	P	C
18AIP101L	MOOC / Industrial Training / Seminar 1	0	0	2	1
18AIP102L	MOOC / Industrial Training / Seminar 2	0	0	2	1
18AIP103L	Project (Phase-I) Internship (4-6weeks)	0	0	6	3
18AIP104L	Project (Phase-II) / Semester Internship	0	0	20	10
Total Learning Credits					**15**

8. Mandatory Courses (M)

Course Code	Course Title	Hours/week L	T	P	C
18PDM 101L	Professional Skills & Practices	0	0	2	0
18LEM101T	Constitution of India	1	0	0	0
18GNM101L	Physical and Mental Health using Yoga	0	0	2	0
18LEM102J	Value Education	1	0	1	0
18GNM10XL	NCC / NSS / NSO	0	0	2	0
18PDM201L	Competencies in Social Skills	0	0	2	0
18PDM203L	Entrepreneurial Skill Development	0	0	2	0
18PDM202L	Critical and Creative Thinking Skills	0	0	2	0
18PDM204L	Business Basics for Entrepreneurs	0	0	2	0
18CYM101T	Environmental Science	1	0	0	0
18PDM301L	Analytical and Logical Thinking Skills	0	0	2	0
19PDM302L	Entrepreneurship Management	0	0	2	0
18LEM109T	Indian Traditional Knowledge	1	0	0	0
18LEM110L	Indian Art Form	0	0	2	0
Total Learning Credits					**0**

6. Open Elective Courses (O) (Any 3 Open Elective Courses)

Smart Healthcare

	Course Title	L	T	P	
O	Biomaterials and Artificial Organs	3	0	0	3
O	Machine Vision in Medical Technology	3	0	0	3
O	Home Medicare Technology	3	0	0	3
O	Computational Methods for Signal and Image Processing	3	0	0	3
O	Acoustics and Optical Imaging	3	0	0	3
O	Body Area Networks and Mobile Healthcare	3	0	0	3
O	Medical Electronics	3	0	0	3
O	Human Genetics	3	0	0	3
O	Recombinant DNA Technology	3	0	0	3

Robotics

	Course Title	L	T	P	
O	Fundamentals of Robotics	3	0	0	3
O	Machine Vision and Image Processing	3	0	0	3
O	Sensors and Signal Conditioning	3	0	0	3
O	Robot Kinematics and Dynamics	3	0	0	3
O	Robot Control Programming	3	0	0	3
O	Intelligent Vehicle Technology	3	0	0	3
O	Automotive Communication Protocols	3	0	0	3

Infrastructure

	Course Title	L	T	P	
O	Intelligent Transportation Systems	3	0	0	3
O	Urban Planning And Sustainable Development	3	0	0	3
O	Intelligent Irrigation System	3	0	0	3
O	Geographical Information System	3	0	0	3
O	Remote Sensing And Its Applications	3	0	0	3
O	RS And GIS For Environmental Engineering	3	0	0	3

Business Analytics

	Course Title	L	T	P	
O	Information Management	3	0	0	3
O	Managerial Skills and Communication	3	0	0	3
O	Research Methods in Business	3	0	0	3
O	Social Media and Digital Marketing	3	0	0	3

Cyber Security and Intelligence

	Course Title	L	T	P	
O	Cryptography and Network Security	3	0	0	3
O	Security Scripting and Analysis	3	0	0	3
O	Storage Management and Security	3	0	0	3
O	Cyber Law and Ethics	3	0	0	3

Agriculture

	Course Title	L	T	P	
O	Agricultural Finance and Cooperation	3	0	0	3
O	Fundamentals of Agricultural Extension Education	3	0	0	3
O	Agricultural Marketing Trade and Prices	3	0	0	3
O	Entrepreneurship Development and Business communication	2	0	0	2
Total Learning Credits					**9**

B.Tech. in ARTIFICIAL INTELLIGENCE (4 years)
Curriculum – Regulations 2018

Semester - I

Code	Course Title	L	T	P	C
18LEH101J	English	2	0	2	3
18MAB101T	Calculus and Linear Algebra	3	1	0	4
18AIS101J	Introduction to MATLAB for Artificial Intelligence	1	0	4	3
18EES101J	Basic Electrical and Electronics Engineering	3	1	2	5
18CSS101J	Programming for Problem Solving	3	0	4	5
18PDM 101L	Professional Skills & Practices	0	0	2	0
18LEM101T	Constitution of India	1	0	0	0
18GNM101L	Physical and Mental Health using Yoga	0	0	2	0
Total Learning Credits					20

Semester - II

Code	Course Title	L	T	P	C
18LEH102J/ 18LEH103J/ 18LEH104J/ 18LEH105J/ 18LEH106J	Chinese / French / German / Japanese/ Korean	2	0	2	3
18MAB102T	Advanced Calculus and Complex Analysis	3	1	0	4
18AIC101J	Foundation of Data Analysis	3	0	2	4
18PCB101J	Engineering Physics, Chemistry and Biology	3	1	2	5
18AIS102J	Smart Manufacturing	1	0	4	3
18PDH101T	General Aptitude	0	0	2	1
18LEM102J	Value Education	1	0	1	0
18GNM10XL	NCC / NSS / NSO	0	0	2	0
Total Learning Credits					20

Semester - III

Code	Course Title	L	T	P	C
18MAB201T	Transforms and Boundary Value Problems	3	1	0	4
18AIC201J	Foundation of Artificial Intelligence	2	0	2	3
18AIC202J	Data Structure and its Applications	3	0	2	4
18AIC203J	Object Oriented Design and Programming	3	0	2	4
18AIC204T	Software Engineering Principles	3	0	0	3
18AIS201T	Linear Systems and Signal Processing	3	0	0	3
18AIS202T	Digital Logic and Computer Architecture	3	0	0	3
18PDM201L	Competencies in Social Skills	0	0	2	0
18PDM203L	Entrepreneurial Skill Development				
Total Learning Credits					24

Semester - IV

Code	Course Title	L	T	P	C
18MAB206T	Numerical Methods and Analysis	3	1	0	4
18AIC205J	Neural Networks and Machine Learning	3	0	2	4
18AIC206J	Analysis and Design of Algorithms	3	0	2	4
18AIC207J	Database Management Systems for Artificial Intelligence	2	0	2	3
18AIC208J	Operating System Design	2	0	2	3
18AIS203J	Computer Networks and Communications	2	0	2	3
18AIC209T	Foundation of Metric Spaces	1	0	0	1
18AIH201T	Professional Ethics of Artificial Intelligence	2	0	0	2
18CSC208L	Competitive Professional Skills - I	0	0	2	1
18PDM202L	Critical and Creative Thinking Skills	0	0	2	0
18PDM204L	Business Basics for Entrepreneurs				
18CYM101T	Environmental Science	1	0	0	0
Total Learning Credits					25

Semester - V

Code	Course Title	L	T	P	C
18MAB304T	Probability and Applied Statistics	3	1	0	4
18AIC301J	Deep Learning Techniques	3	0	2	4
18AIC302J	Web Programming for Artificial Intelligence	3	0	2	4
18AIC303T	Formal Language and Automata Theory	3	0	0	3
18CSC306L	Competitive Professional Skills-II	0	0	2	1
E	Professional Elective – 1	3	0	0	3
E	Professional Elective – 2	3	0	0	3
O	Open Elective – 1	3	0	0	3
18AIP101L	MOOC / Industrial Training / Seminar 1	0	0	2	1
18PDM301L	Analytical and Logical Thinking Skills	0	0	2	0
19PDM302L	Entrepreneurship Management				
18LEM109T	Indian Traditional Knowledge	1	0	0	0
Total Learning Credits					26

Semester - VI

Code	Course Title	L	T	P	C
18MAB302T	Discrete Mathematics for Engineers	3	1	0	4
18AIC304J	Reinforcement Learning Techniques	2	0	2	3
18AIC305T	Inferential Statistics and Predictive Analytics	2	0	0	2
18AIC306J	Design of Artificial Intelligence Products	2	0	2	3
18CSC307L	Competitive Professional Skills – III	0	0	2	1
18AIC350T	Comprehension	0	1	0	1
E	Professional Elective – 3	3	0	0	3
E	Professional Elective – 4	3	0	0	3
O	Open Elective – 2	3	0	0	3
18AIP102L	MOOC / Industrial Training / Seminar 2	0	0	2	1
18PDH201T	Employability Skills and Practices	0	0	2	0
18LEM110L	Indian Art Form				
Total Learning Credits					24

Semester - VII

Code	Course Title	L	T	P	C
E	Professional Elective –5	3	0	0	3
E	Professional Elective – 6	3	0	0	3
O	Open Elective – 3	3	0	0	3
18AIP103L	Project (Phase-I) Internship (4-6weeks)	0	0	6	3
Total Learning Credits					12

Semester – VIII

Code	Course Title	L	T	P	C
18AIP104L	Project (Phase-II) / Semester Internship	0	0	20	10
Total Learning Credits					10

Category of Courses and Credits Table

Category	Credits per semester								Total credits
	I	II	III	IV	V	VI	VII	VIII	
Humanities & Social Sciences / Management (H)	3	4	-	2	-	-	-	-	09
Basic Sciences (B)	4	9	4	4	4	4	-	-	29
Engineering Sciences (S)	13	3	6	3	-	-	-	-	25
Professional Core (C)	-	4	14	16	12	10	-	-	56
Professional Elective (E)	-	-	-	-	6	6	6	-	18
Open Elective (O)	-	-	-	-	3	3	3	-	09
Project / Seminar / Internship (P)	-	-	-	-	1	1	3	10	15
Total Credits	20	20	24	25	26	24	12	10	161

Professional Electives

Category I – Core AI & ML

S. No.	Course Name	L	T	P	C
		Hours/ Week			
18AIE321T	Optimization Techniques	3	0	0	3
18AIE322T	Stochastic Decision Making	3	0	0	3
18AIE323T	Information Theory and Coding	3	0	0	3
18AIE324T	Cognitive Science & Analytics	3	0	0	3
18AIE325T	Internet of Things Architecture and Protocols	3	0	0	3
18AIE326T	Intelligent Autonomous Systems	3	0	0	3
18AIE327T	Intelligence of Biological Systems	3	0	0	3
18AIE338T	Logic and Knowledge Representation	3	0	0	3
18AIE339T	Matrix theory for Artificial Intelligence	3	0	0	3
18AIE421T	Soft Computing and its Applications	3	0	0	3
18AIE422T	Artificial Intelligence and High-Performance Computing	3	0	0	3
18AIE423T	Business Intelligence and Analytics	3	0	0	3
18AIE424T	Artificial Intelligence and Internet of Things	3	0	0	3
18AIE425T	Compiler Design	3	0	0	3
18AIE426T	Virtual Reality and Augmented Reality	3	0	0	3
18AIE436T	Autonomous Navigation and Vehicles	3	0	0	3
18AIE437T	Mobile Game Development				

Category II – Language Technologies

S. No.	Course Name	L	T	P	C
18AIE328T	Marketing Analytics	3	0	0	3
18AIE329T	Information Retrieval	3	0	0	3
18AIE330T	Text Processing	3	0	0	3
18AIE331T	Advanced Social, Text and Media Analytics	3	0	0	3

Category III – Speech & Vision

S. No.	Course Name	L	T	P	C
18AIE332T	Image and Video processing	3	0	0	3
18AIE333T	Biometrics	3	0	0	3
18AIE334T	Pattern Recognition Techniques	3	0	0	3
18AIE335T	Surveillance Video Analytics	3	0	0	3
18AIE336T	Medical Signal Processing	3	0	0	3
18AIE337T	Speech Recognition and Understanding	3	0	0	3

Category IV– Data Science

S. No.	Course Name	L	T	P	C
18AIE427T	Data Mining and Analytics	3	0	0	3
18AIE428T	Time Series Analysis	3	0	0	3
18AIE429T	Cloud Computing	3	0	0	3
18AIE430T	Distributed Systems	3	0	0	3
18AIE431T	Big Data Analytics: Hadoop, Spark and NoSQL	3	0	0	3

Category V– Neuro Science and Natural Intelligence

S. No.	Course Name	L	T	P	C
18AIE432T	Brain Machine Interface	3	0	0	3
18AIE433T	Nature Inspired Computing	3	0	0	3
18AIE434T	Bio Informatics	3	0	0	3
18AIE435T	Theoretical and Computational Neuroscience	3	0	0	3

Note:
1. Students should choose III year Professional Elective courses from 300 series in category I, II & III.
2. Students should choose Professional Elective courses for VII semester from 400 series in category I, IV & V.

List will be expanded

Open Elective Courses

Code	Course Title	L	T	P	C
	Smart Healthcare				
O	Biomaterials and Artificial Organs	3	0	0	3
O	Machine Vision in Medical Technology	3	0	0	3
O	Home Medicare Technology	3	0	0	3
O	Computational Methods for Signal and Image Processing	3	0	0	3
O	Acoustics and Optical Imaging	3	0	0	3
O	Body Area Networks and Mobile Healthcare	3	0	0	3
O	Medical Electronics	3	0	0	3
O	Human Genetics	3	0	0	3
O	Recombinant DNA Technology	3	0	0	3

Code	Course Title	L	T	P	C
	Robotics				
O	Fundamentals of Robotics	3	0	0	3
O	Machine Vision and Image Processing	3	0	0	3
O	Sensors and Signal Conditioning	3	0	0	3
O	Robot Kinematics and Dynamics	3	0	0	3
O	Robot Control Programming	3	0	0	3
O	Intelligent Vehicle Technology	3	0	0	3
O	Automotive Communication Protocols	3	0	0	3

Code	Course Title	L	T	P	C
	Infrastructure				
O	Intelligent Transportation Systems	3	0	0	3
O	Urban Planning And Sustainable Development	3	0	0	3
O	Intelligent Irrigation System	3	0	0	3
O	Geographical Information System	3	0	0	3
O	Remote Sensing And Its Applications	3	0	0	3
O	RS And GIS For Environmental Engineering	3	0	0	3

Code	Course Title	L	T	P	C
	Business Analytics				
O	Information Management	3	0	0	3
O	Managerial Skills and Communication	3	0	0	3
O	Research Methods in Business	3	0	0	3
O	Social Media and Digital Marketing	3	0	0	3

Code	Course Title	L	T	P	C
	Cyber Security and Intelligence				
O	Cryptography and Network Security	3	0	0	3
O	Security Scripting and Analysis	3	0	0	3
O	Storage Management and Security	3	0	0	3
O	Cyber Law and Ethics	3	0	0	3

Code	Course Title	L	T	P	C
	Agriculture				
O	Agricultural Finance and Cooperation	3	0	0	3
O	Fundamentals of Agricultural Extension Education	3	0	0	3
O	Agricultural Marketing Trade and Prices	3	0	0	3
O	Entrepreneurship Development and Business communication	2	0	0	2

Note:
1. Students should choose their open electives only from the list given above.
2. Students are advised to choose their all 3 open elective from any one of the domain given above.