SREYAS
INSTITUTE OF ENGINEERING AND TECHNOLOGY

Sreyas Institute of Engineering and Technology

An Autonomous Institution

Approved by AICTE, Affiliated to JNTUH

Accredited by NAAC-A Grade, NBA (CSE, ECE & ME) & ISO 9001:2015 Certified

Department of Computer Science and Engineering

Circular

***

It is informed that the fourth BoS Meeting will be held on 7th February at 02:00 PM in the Principal's chamber to discuss the following agenda points.

AGENDA

Item-1: Introduction of Board of Studies (BoS) Members.

Item-2: About the Department / Accreditations / Recognitions

Item-3: To approve syllabus proposal for IV B.Tech I Semester Theory subjects, taught by Computer Science and Engineering department to Computer Science and Engineering students of SIET

Item-4: To approve syllabus proposal for IV B.Tech I Semester Practical subjects, handled by Computer Science and Engineering department to Computer Science and Engineering students of SIET

Item-5: To approve Project Stage-I offered to the students of IV B.Tech I Semester students of Computer Science and Engineering.

Item-6: To approve syllabus proposal for IV B.Tech I Semester Theory subjects (Open Elective-II), taught by Computer Science and Engineering department to the students of other branch of SIET

Item-7: To approve syllabus proposal for IV B.Tech II Semester Theory subjects, taught by Computer Science and Engineering department to Computer Science and Engineering students of SIET

Item-8: To approve syllabus proposal for IV B.Tech II Semester Theory subjects (Open Elective-III), taught by Computer Science and Engineering department to the students of other branch of SIET.

Item-9: To approve Project Stage-II offered to the students of IV B. Tech II Semester students of Computer Science and Engineering

Item-10: Any other points with the permission of chair

Dr. U.M.Fernandes Dimlo
HoD & Chairman BoS

HOD-CSE
SREYAS INSTITUTE OF ENGG. & TECH.
Beside Indu Aranya, Nagole, Hyd. - 068.

Computer Science and Engineering

Fourth BoS Meeting Minutes

Minutes of Board of Studies of Computer Science and Engineering Meeting was held on 7th February 2025 at 2 PM for B.Tech students admitted during the academic year 2022-23 as per SIET 22 Regulations.

1) The minutes of the previous BOS meeting have been confirmed.

2) The syllabus for IV B.Tech I Semester theory subjects, offered by the Computer Science and Engineering department to Computer Science and Engineering students of SIET, has been approved. Based on the suggestion of the BOS University nominee, Dr. D. Vasumathi, Professor of CSE, JNTUH, the Data Mining course has been moved from Professional Elective-VI to Professional Elective-IV.

S.No	Course Code	Course	L	T	P	Credits	Remarks
1		Cryptography and Network Security	3	0	0	3	
2		Dev Ops	3	0	0	3	
3		Professional Elective - IV	3	0	0	3	
4		Professional Elective -V	3	0	0	3	
5		Open Elective - II	3	0	0	3	

Professional Elective –IV

	Graph Theory
	Distributed Databases
	Quantum Computing
	Computer Graphics
	Data Mining

Professional Elective -V

	Advanced Algorithms
	Agile Methodology
	Robotic Process Automation
	Block chain Technology
	Software Process & Project Management

3) The syllabus for B.Tech: IV-I-Semester practical subjects, offered by the Computer Science and Engineering department to Computer Science and Engineering students of SIET, has been approved.

S.No	Course Code	Course	L	T	P	Credits	Remarks
1		Cryptography and Network Security Lab	0	0	2	1	
2		Dev Ops Lab	0	0	2	1	

4) The Project Stage-I course, offered to B.Tech: IV-I-Semester students of Computer Science and Engineering, has been approved.

S.No	Course Code	Course	L	T	P	Credits	Remarks
1		Project Stage - I	0	0	6	3	

5) The syllabus for B.Tech: IV-I-Semester Theory subjects (Open Elective-II), taught by Computer Science and Engineering department to the students of other branch of SIET are approved.

S.No	Course Code	Course	L	T	P	Credits	Remarks
1		Python Programming	3	0	0	3	
2		Software Engineering	3	0	0	3	

6) The syllabus for B.Tech: IV-II-Semester Theory subjects, taught by Computer Science and Engineering department to Computer Science and Engineering students of SIET are approved. Based on the suggestion of BOS University nominee Dr.D.Vasumathi, Professor of CSE, JNTUH Big Data Analytics course is placed in Professional Elective-VI instead of Data Mining course. Based on the recommendation of BOS subject expert Dr.K.Shyamala, Professor, Department of CSE, Osmania University Reinforcement Learning course is introduced in Professional Elective-VI

S.No.	Course Code	Course	L	T	P	Credits	Remarks
1		Organizational Behavior	3	0	0	3	
2		Professional Elective – VI	3	0	0	3	
3		Open Elective – III	3	0	0	3	

Professional Elective – VI

	Reinforcement Learning
	Distributed Systems
	Big Data Analytics
	Human Computer Interaction
	Cyber Forensics

7) The syllabus for B.Tech: IV-II-Semester theory subjects (Open Elective-III), offered by the Computer Science and Engineering department to students of other branches at SIET, has been approved.

S.No.	Course Code	Course	L	T	P	Credits	Remarks
1		Algorithms Design and Analysis	3	0	0	3	
2		Deep Learning	3	0	0	3	

8) The Project Stage-II course, offered to B.Tech: IV-II-Semester students of Computer Science and Engineering, has been approved.

S.No.	Course Code	Course	L	T	P	Credits	Remarks
1		Project Stage – II including Seminar	0	0	22	11	

9) The fourth BoS meeting was concluded with vote of thanks.

Dr. U.M.Fernandes Dimlo
HoD & Chairman BoS

HOD-CSE
SREYAS INSTITUTE OF ENGG. & TECH.
Beside Indu Aranya, Nagole, Hyd. - 068.

Sreyas Institute of Engineering and Technology

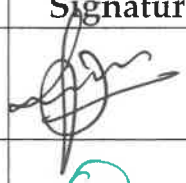
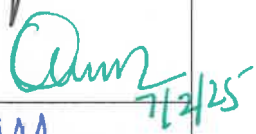
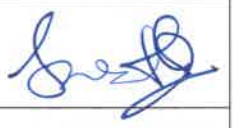
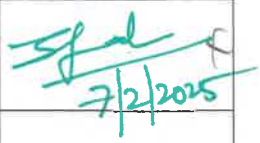
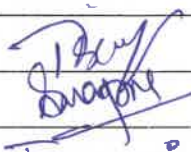
An Autonomous Institution

Approved by AICTE, Affiliated to JNTUH

Accredited by NAAC-A Grade, NBA (CSE, ECE & ME) & ISO 9001:2015 Certified

Department of Computer Science and Engineering

Board of Studies Members

S.No	Name	Designation	Position	Signature
1	Dr. U.M.Fernandes Dimlo	Prof. & HoD of CSE	Chairman	
2	**Dr. Devara Vasumathi**	**Prof. of CSE, JNTUH, UCESTH**	**University Nominee**	
3	Dr.Varsha Srivastava	Staff Scientist & Head CDFD-Hyd	Scientist, CDFD	
4	Dr. A.Swathi	HoD of CSE (AI&ML), SIET	Specialized Faculty-1	
5	Dr. Kallepalli Rohit kumar	HoD of CSE (DS), SIET	Specialized Faculty-2	
6	Mrs. Swathi Varala	Co-Founder, Techshine Solutions,Hyderabad	Alumni Student	
7	**Dr. K.Shyamala**	**Professor, Department of CSE, Osmania University**	**Subject Expert-1**	
8	**Dr.Sunil Bhutada**	**Professor & Head - Department of IT, Sreenidhi Institute of Science & Technology - Hyderabad**	**Subject Expert-2**	
9	Dr. T.Swarnalatha	Prof. of CSE, SIET	Faculty	
10	Dr. M.Swapna	Prof. of CSE, SIET	Faculty	
11	Dr. Ch.Jankamma	Associate Prof. of CSE, SIET	Faculty	
12	Dr. M.Ananda R. Kumar	Associate Prof. of CSE, SIET	Faculty	


meet.google.com/hzh-fijk-vye?authuser=0
principal sreyas (Presenting)
Details of Board of Studies Members
S. No
Name
Designation
Category
vasumathi v...
Someone wants to join this call
People
Mute all
Add people
Search for people
Waiting to be admitted
1
Deny all
Admit all
Shyamala ravi
Admit
Contributors
4
pa principal (You)
2:41 PM | Sreyas Engg. College, BoS M...

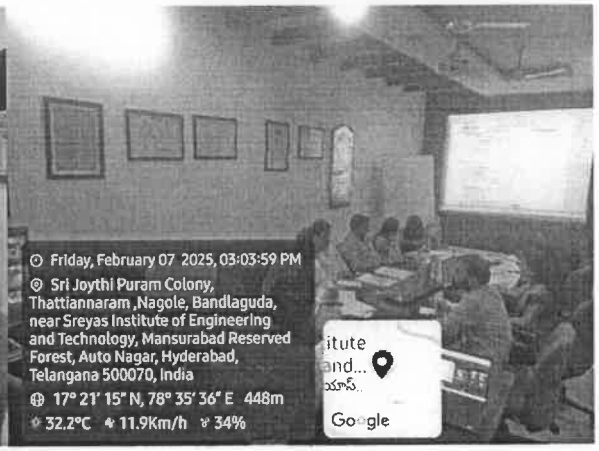

meet.google.com/heh-fijk-vye?authuser=0
vasumathi vasumathi
principal sreyas
shyamala ravi
pa principal
People
Mute all
Add people
Search for people
Contributors
4
pa principal (You)
principal sreyas
shyamala ravi
vasumathi vasumathi
2:45 PM | Sreyas Engg. College, BoS M...


meet.google.com/heh-fijk-vye?authuser=0
vasumathi vasumathi
principal sreyas
shyamala ravi
a
aiml .hod
pa principal
3:08 PM | Sreyas Engg. College, BoS M...


GPS Map Camera
Hyderabad, Telangana, India
Sreyas Institute Of Engineering And Technology, Mansurabad
Reserved Forest, Auto Nagar, Hydersbad, Telangana 500070, India
Lat 17.364326° Long 78.693471°
07/02/2025 03:30 PM GMT +05:30
Google


GPS Map Camera
Hyderabad, Telangana, India
Sreyas Institute Of Engineering And Technology, Mansurabad
Reserved Forest, Auto Nagar, Hyderabad, Telangana 500070, India
Lat 17.364326° Long 78.693471°
07/02/2025 03:30 PM GMT +05:30
Google


GPS Map Camera
Hyderabad, Telangana, India
Sreyas Institute Of Engineering And Technology, Mansurabad
Reserved Forest, Auto Nagar, Hyderabad, Telangana 500070, India
Lat 17.364326° Long 78.693471°
07/02/2025 03:21 PM GMT +05:30
Google


Friday, February 07 2025, 03:03:59 PM
Sri Joythi Puram Colony, Thattiannaram ,Nagole, Bandlaguda, near Sreyas Institute of Engineering and Technology, Mansurabad Reserved Forest, Auto Nagar, Hyderabad, Telangana 500070, India
17° 21' 15" N, 78° 35' 36" E 448m
32.2°C 11.9Km/h 34%
Google


Friday, February 07 2025, 03:04:36 PM
Sri Joythi Puram Colony, Thattiannaram ,Nagole, Bandlaguda, near Sreyas Institute of Engineering and Technology, Mansurabad Reserved Forest, Auto Nagar, Hyderabad, Telangana 500070, India
17° 21' 15" N, 78° 35' 36" E 448m
32.2°C 11.9Km/h 34%
Friday, February 07 2025, 03:09:34 PM
9H3V+MF4, Mansurabad Reserved Forest, Auto Nagar, Hyderabad, Telangana 500068, India
17° 21' 16" N, 78° 35' 38" E 448m
32.2°C 11.9Km/h 34%
Friday, February 07 2025, 03:04:13 PM
Sri Joythi Puram Colony, Thattiannaram ,Nagole, Bandlaguda, near Sreyas Institute of Engineering and Technology, Mansurabad Reserved Forest, Auto Nagar, Hyderabad, Telangana 500070, India
17° 21' 15" N, 78° 35' 36" E 448m
32.2°C 11.9Km/h 34%
Friday, February 07 2025, 03:04:51 PM
Sri Joythi Puram Colony, Thattiannaram ,Nagole, Bandlaguda, near Sreyas Institute of Engineering and Technology, Mansurabad Reserved Forest, Auto Nagar, Hyderabad, Telangana 500070, India
17° 21' 15" N, 78° 35' 36" E 448m
32.2°C 11.9Km/h 34%
Google


GPS Map Camera
Hyderabad, Telangana, India
Sreyas Institute Of Engineering And Technology, Mansurabad
Reserved Forest, Auto Nagar, Hyderabad, Telangana 500070, India
Lat 17.354326° Long 78.593471°
07/02/2025 03:21 PM GMT +05:30
Google

B.Tech. in COMPUTER SCIENCE AND ENGINEERING
COURSE STRUCTURE & SYLLABUS
(R22 Regulations-Autonomous)
Applicable from 2022-23 Batch

IV YEAR I SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1		Cryptography and Network Security	3	0	0	3
2		Dev Ops	3	0	0	3
3		Professional Elective -IV	3	0	0	3
4		Professional Elective -V	3	0	0	3
5		Open Elective - II	3	0	0	3
6		Cryptography and Network Security Lab	0	0	2	1
7		Dev Ops Lab	0	0	2	1
8		Project Stage - I	0	0	6	3
		Total Credits	**15**	**0**	**10**	**20**

IV YEAR II SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1		Organizational Behavior	3	0	0	3
2		Professional Elective – VI	3	0	0	3
3		Open Elective – III	3	0	0	3
4		Project Stage – II including Seminar	0	0	22	11
		Total Credits	**9**	**0**	**22**	**20**

Professional Elective -IV

	Graph Theory
	Distributed Databases
	Quantum Computing
	Computer Graphics
	Data Mining

Professional Elective -V

	Advanced Algorithms
	Agile Methodology
	Robotic Process Automation
	Block chain Technology
	Software Process & Project Management

Professional Elective – VI

	Reinforcement Learning
	Distributed Systems
	Big Data Analytics
	Human Computer Interaction
	Cyber Forensics

1. 2. 7/2/25 3. 4.

5 6 7 7/2/25 8

9 10 11 12

Open Elective -II:

	Python Programming
	Software Engineering

Open Elective -III:

	Algorithms Design and Analysis
	Deep Learning

1. 2 7/2/25 3 4 5

6 7 7/2/25 8 9

10 11 12

CRYPTOGRAPHY AND NETWORK SECURITY

B.Tech. IV Year I Sem.

L	T	P	C
3	0	0	3

Course Objectives:

- Explain the importance and application of each of confidentiality, integrity, authentication and availability
- Understand various cryptographic algorithms.
- Understand the basic categories of threats to computers and networks
- Describe public-key cryptosystem.
- Describe the enhancements made to IPv4 by IPSec
- Understand Intrusions and intrusion detection

Course Outcomes:

- Student will be able to understand basic cryptographic algorithms, message and web authentication and security issues.
- Ability to identify information system requirements for both of them such as client and server.
- Ability to understand the current legal issues towards information security.

UNIT - I

Security Concepts: Introduction, The need for security, Security approaches, Principles of security, Types of Security attacks, Security services, Security Mechanisms, A model for Network Security
Cryptography Concepts and Techniques: Introduction, plain text and cipher text, substitution techniques, transposition techniques, encryption and decryption, symmetric and asymmetric key cryptography, steganography, key range and key size, possible types of attacks.

UNIT - II

Symmetric key Ciphers: Block Cipher principles, DES, AES, Blowfish, RC5, IDEA, Block cipher operation, Stream ciphers, RC4.
Asymmetric key Ciphers: Principles of public key cryptosystems, RSA algorithm, Elgamal Cryptography, Diffie-Hellman Key Exchange, Knapsack Algorithm.

UNIT - III

Cryptographic Hash Functions: Message Authentication, Secure Hash Algorithm (SHA-512), **Message authentication codes:** Authentication requirements, HMAC, CMAC, Digital signatures, Elgamal Digital Signature Scheme.
Key Management and Distribution: Symmetric Key Distribution Using Symmetric & Asymmetric Encryption, Distribution of Public Keys, Kerberos, X.509 Authentication Service, Public – Key Infrastructure

Unit IV: Web Security

Web Security Considerations, Secure Electronic Transactions, Characteristics, Types of Firewalls, Placement of Firewalls, Firewall Configuration, Next generation Firewalls, Trusted systems.

1. 2. 3. 4.
5. 6. 7. 8.
9. 10. 11. 12.

Unit V: Malware, Data Stolen with Social Engineering

Malware and its types, Vulnerabilities and exploits, Protection against from all Malware, Key Loggers and its types, Back Doors,

Hacking (Effects, Types, Purpose, advantages and disadvantages), Types of Hackers, Types of Cybercrimes, Types of Data Stolen and its counter measures, Social Engineering and Types

TEXT BOOKS:

1. Cryptography and Network Security - Principles and Practice: William Stallings, Pearson Education, 6th Edition
2. Cryptography and Network Security: Atul Kahate, Mc Graw Hill, 3rd Edition

REFERENCE BOOKS:

1. Cryptography and Network Security: C K Shyamala, N Harini, Dr T R Padmanabhan, Wiley India, 1st Edition.
2. Cryptography and Network Security: Forouzan Mukhopadhyay, Mc Graw Hill, 3rd Edition
3. Information Security, Principles, and Practice: Mark Stamp, Wiley India.
4. Principles of Computer Security: WM. Arthur Conklin, Greg White, TMH
5. Introduction to Network Security: Neal Krawetz, CENGAGE Learning
6. Network Security and Cryptography: Bernard Menezes, CENGAGE Learning

DEEP LEARNING (Open Elective –III)

B.Tech. IV Year II Sem.

L	T	P	C
3	0	0	3

Prerequisites:

1. linear equations, graphs of functions, histograms, and statistical means
2. Programming in Python

Course Objectives: students will be able

1. To understand complexity of Deep Learning algorithms and their limitations
2. To be capable of performing experiments in Deep Learning using real-world data.

Course Outcomes:

1. Implement deep learning algorithms, understand neural networks and traverse the layers ofdata
2. Learn topics such as convolutional neural networks, recurrent neural networks, training deepnetworks and high-level interfaces
3. Understand applications of Deep Learning to Computer Vision
4. Understand and analyze Applications of Deep Learning to NLP

UNIT - I

Introduction: Feed forward Neural networks, Gradient descent and the back propagation algorithm, Unit saturation, the vanishing gradient problem, and ways to mitigate it. RelU Heuristics for avoiding bad local minima, Heuristics for faster training, Nestors accelerated gradient descent, Regularization, Dropout

UNIT - II

Convolutional Neural Networks: Architectures, convolution/pooling layers, Recurrent Neural Networks: LSTM, GRU, Encoder Decoder architectures. Deep Unsupervised Learning: Auto encoders, Variational Auto-encoders, Adversarial Generative Networks, Auto-encoder and DBM Attention and memory models, Dynamic Memory Models

UNIT - III

Applications of Deep Learning to Computer Vision: image segmentation, object detection, automatic image captioning, Image generation with Generative adversarial networks, video to text withLSTM models, Attention Models for computer vision tasks

UNIT - iV

Applications of Deep Learning to NLP: Introduction to NLP and Vector Space Model of Semantics, Word Vector Representations: Continuous Skip-Gram Model, Continuous Bag-of-Wordsmodel (CBOW), Glove, Evaluations and Applications in word similarity

UNIT - V

Analogy reasoning: Named Entity Recognition, Opinion Mining using Recurrent Neural Networks: Parsing and Sentiment Analysis using Recursive Neural Networks: Sentence Classification using Convolutional Neural Networks, Dialogue Generation with LSTMs

TEXT BOOKS:

1. Deep Learning by Ian Goodfellow, Yoshua Bengio and Aaron Courville, MIT Press.
2. The Elements of Statistical Learning by T. Hastie, R. Tibshirani, and J. Friedman, Springer.
3. Probabilistic Graphical Models. Koller, and N. Friedman, MIT Press.

REFERENCES:

1. Bishop, C, M., Pattern Recognition and Machine Learning, Springer, 2006.
2. Yegnanarayana, B., Artificial Neural Networks PHI Learning Pvt. Ltd, 2009.
3. Golub, G.,H., and Van Loan,C.,F., Matrix Computations, JHU Press,2013.
4. Satish Kumar, Neural Networks: A Classroom Approach, Tata McGraw-Hill Education, 2004.

1. 2. 3. 4.

5. 6. Swathi 7. 8.

9. 10. 11. 4/12