

Nutan Maharashtra Vidya Prasarak Mandal's

NUTAN MAHARASHTRA INSTITUTE OF ENGINEERING & TECHNOLOGY



Approved by AICTE

Accredited by NAAC & NBA

Affiliated to SPPU

"Samarth Vidya Sankul", Vishnupuri, Telegaon Dabhade, Pune - 410507

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Action Taken by the affiliating university on Feedback

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Action Taken Report



Nutan Maharashtra Vidya Prasarak Mandal`s Nutan Maharashtra Institute of Engineering and Technology Samarth Vidya Sankul, Vishnupuri, Talegaon Dabhade, Pune – 410507



ACTION TAKEN REPORT

ACADEMIC YEAR 2022-23

- Suggestion given by faculties from Department of Computer Engineering for syllabus restructuring – Deep learning and Natural Language processing separate subject will included in Final year Computer Engg. Syllabus BE syllabus.
- Action Taken By University Board of Study

The Deep learning and Natural Language processing separate subject is included in Final year Computer Engg. Syllabus BE syllabus.



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"Samarth Vidya Sankul" Vishnupuri
Talegaon Dabhade, 410507

Syllabus Copy

Faculty of Engineering Savitribai Phule Pune University, Pune

Maharashtra, India



Curriculum for Fourth Year of Computer Engineering (2019 Course) (With effect from 2022-23)

www.unipune.ac.in



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Talegaon Dabhade, 410507

Final Year of Computer Engineering (2019 Course) (With effect from 2022-23)

Prologue

It is with great pleasure and honor that I share the syllabi for Fourth Year of Computer Engineering (2019 Course) on behalf of Board of Studies, Computer Engineering. We, members of BoS are giving our best to streamline the processes and curricula design.

While revising syllabus, honest and sincere efforts are put to tune Computer Engineering program syllabus in tandem with the objectives of Higher Education of India, AICTE, UGC and affiliated University (SPPU) by keeping an eye on the technological advancements and industrial requirements globally.

Syllabus revision is materialized with sincere efforts, active participation, expert opinions and suggestions from domain professionals. Sincere efforts have been put by members of BoS, teachers, alumni, industry experts in framing the draft with guidelines and recommendations.

Case Studies are included in almost all courses. Course Instructor is recommended to discuss appropriate related recent technology/upgrade/Case Studies to encourage students to study from course to the scenario and think through the largest issues/ recent trends/ utility/ developing real world/ professional skills.

I am sincerely indebted to all the minds and hands who work adroitly to materialize these tasks. I really appreciate your contribution and suggestions in finalizing the contents.

Thanks,

Dr. Varsha H. Patil Chairman, Board of Studies (Computer Engineering), SPPU, Pune

links for First Year, Second Year and Third Year Computer Engineering Curriculum 2019:

- 1. http://collegecirculars.unipune.ac.in/sites/documents/Syllabus%202019/Rules%20and%20Regulations%20F.E.%202019%20Patt 10.012020.pdf
- 2. http://collegecirculars.unipune.ac.in/sites/documents/Syllabus%202019/First%20Year%20Engine ering%202019%20Patt.Syllabus 05.072019.pdf
- 3. http://collegecirculars.unipune.ac.in/sites/documents/Syllabus2020/SE%20Computer%20Engg.%202019%20%20Patt 03.072020.pdf
- 4. http://collegecirculars.unipune.ac.in/sites/documents/Syllabus2021/Third%20Year%20Engineering%202019%20Pattern 16022022.rar

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Syllabus for Fourth Year of Computer Engineering

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Savitribai Phule Pune University Fourth Year of Computer Engineering (2019 Course) (With effect from Academic Year 2022-23) **Table of Contents** Page Title Sr. No. Number 5 1. Program Outcomes 5 Program Specific Outcomes 2. 6 3. Course Structure (Course titles, scheme for teaching, credit, examination and marking) 8 4. General Guidelines 5. Course Contents (Semester VII) 410241: Design and Analysis of Algorithms 10 13 410242: Machine Learning 17 410243: Blockchain Technology 20 410244A: Pervasive Computing 23 410244B: Multimedia Techniques 26 410244C: Cyber Security And Digital Forensics 29 410244D: Object Oriented Modeling And Design 32 410244E: Digital Signal Processing 35 410245A: Information Retrieval 410245B: GPU Programming And Architecture 38 41 410245C: Mobile Computing 44 410245D: Software Testing And Quality Assurance 48 410245E: Compilers 51 410246: Laboratory Practice III 56 410247: Laboratory Practice IV 64 410248: Project Stage I 65 410249: Audit Course 7 Course Contents (Semester VIII) 6. 72 410250: High Performance Computing 75 410251: Deep Learning 78 410252A: Natural Language Processing 81 410252B: Image Processing 84 410252C: Software Defined Networks

Syllabus for Fourth Year of Computer Engineering

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BE Computer Engineering 2019 Course tentative Curriculum structure:

Savitribai Phule Pune University Fourth Year of Computer Engineering (2019 Course) (With effect from Academic Year 2022-23)

						auemie ,										
				Sei	mest	ter VII										
Course Code	Course Name	,	each Scher ours/v	ne	I	Examinat	Credit Scheme									
		Lecture	Practical	Tutorial	Mid-Sem	End-Sem	Term work	Practical	Oral\Pre	Total	Lecture	Practical	Tutorial	Total		
410241	Design and Analysis of Algorithms	03	1-	-	30	70	-	-	-	100	3	-	-	3		
410242	Machine Learning	03	-	-	30	70		-	-	100	3	-	-	3		
410243	Blockchain Technology	03	-	-	30	70	-	- 1	-	100	3	-	-	- 3		
410244	Elective III	03	-	-	30	70	1-	-	-	100	3	-	-	3		
410245	Elective IV	03	-	-	30	70	11-	-	-	100	3	-	-	3		
410246	<u>Laboratory Practice III</u>	-	04	-			50	50	-	100	-	2	-	2		
410247	<u>Laboratory Practice IV</u>	-	02	-	-		50	-	-	50	-	1	-	1		
410248	Project Stage I	-	02	-	-	-	50	-	-	50	-	2		2		
								To	tal C	Credit	15	05	-	20		
	Total	15	08		150	350	150	50	-	700	15	05	4.	20		
410249	410249 <u>Audit Course 7</u>											Grade				
Elective	III					Elective IV										
410244(A) Pervasive Computing 410244(B) Multimedia Techniques 410244(C) Cyber Security and Digital Forensics 410244(D) Object Oriented Modeling and Design 410244(E) Digital Signal Processing						410245(A) Information Retrieval 410245(B) GPU Programming and Architecture 410245(C) Mobile Computing 410245(D)Software Testing and Quality Assurance 410245(E) Compilers										
Laborator 410243	Laboratory Practice III: Laboratory assignments Courses- 410241, 410242, 410243 Audit Course 7(AC7) Options:							ictice I		ırses- 4	11024	4, 41	0245			

AC7- I MOOC- Learn New Skills
AC7- II Entrepreneurship Development

AC7- III Botnet of Things AC7- IV 3D Printing

AC7- V Industrial Safety and Environment Consciousness

Syllabus for Fourth Year of Computer Engineering

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Savitribai Phule Pune University Final Year of Computer Engineering (2019 Course) (With effect from Academic Year 2022-23)

Semester VIII

Course Code	Course Name	Teaching Scheme (Hours/week)				Examination Scheme and Marks						Credit Scheme				
		Lecture	Practical	Tutorial	Mid-Sem	End-Sem	Term	Practical	Oral/Pre	Total	Lecture	Practical	Tutorial	Total		
410250	High Performance Computing	03	-	-	30	70	-	1-1	-	100	03			03		
410251	Deep Learning	03	-	1	30	70			-	100	03			03		
410252	Elective V	03	-	-	30	70	1-1-	1-1	-	100	03			03		
410253	Elective VI	03	-	-	30	70	-	-	-	100	03			03		
410254	<u>Laboratory Practice V</u>	-	02	-	-		50	50	-	100		01		01		
410255	Laboratory Practice VI	-	02	-		-	50	-	-	50		01		01		
410256	Project Stage II	1	06	-	-	-	100	2	50	150		06		06		
					T	otal (redit	12	08	-	20					
	<u>Total</u>	12	10		120	0 280	200	50	50	700	12	08	-	20		
410257	Audit Course 8						3.55					Grade				
Elective		Elective VI														
410252(410252(A) Natural Language Processing						410253(A) Pattern Recognition									
410252(B) Image Processing						410253(B) Soft Computing										
410252(C) Software Defined Networks 410252(D) Advanced Digital Signal Processing						410253(C) Business Intelligence 410253(D) Quantum Computing										
		410253(E) Open Elective II														
410252(E) Open Elective I Lab Practice V:						Lab Practice VI:										
Laboratory assignments Courses- 410250, 410251						Laboratory assignments Courses- 410252, 410253										

Audit Course 8(AC8) Options:

AC8- I Usability Engineering

AC8- II Conversational Interfaces

AC8- III Social Media and Analytics AC8- IV MOOC- Learn New Skills AC8- V Emotional Intelligence



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Syllabus for Fourth Year of Computer Engineering

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