JSS Mahavidyapeetha
JSS Academy of Technical Education
Department of Information Science and Engineering
Consolidated Innovation Details - 2021-22 ODD Semester

Innovations by the Faculty in Teaching and Learning

Innovation and Creativity bring about interest and motivation to learners, which eventually lead to better learning. Few of the innovation techniques adopted in our teaching - learning process is specified herewith.

All the works presented below are made available for peer review and critics, kept in department library and shared in Google drive link: **CLICK HERE**

➢ **AY: 2021-22 Even Semester**

Sl. No.	Faculty Name & Designation	Course: ISE / sem	Course Name	Innovative / Novel Approach Practiced	Learning Style
1	Mrs. Sudha P.R Assistant Professor	IV	Operating Systems 18CS43	Case Study-Linux OS	Case based Learning
2	Dr. Dayananda P Professor	IV	Object Oriented Concepts 18CS45	Java Algorithm usage for Application Development - Contest	Activity based Learning
3	Dr. Sowmya K.N Associate Professor	IV	Object Oriented Concepts 18CS45	Java Algorithm usage for Application Development - Contest	Activity based Learning
4	Mrs. Nagashree S Assistant Professor	IV	Data Communication 18CS46	Numericals	Problem solving
5	Dr. Nagamani N.P Associate Professor	VI	File Structures 18IS61	Case Based Learning: Advanced File Structure Methods used in Various Applications	Case based Learning

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6	Mrs. Sudha P.R Assistant Professor	VI	Software Testing 18IS62	Software Testing Tool Demo	Activity based learning
7	Mrs. Nagashree S Assistant Professor	VI	Web Technology And Its Applications 18CS63	Observe and Answer	Activity based learning
8	Dr. Malini M Patil Associate Professor	VI	Data Mining and Data Warehousing 18CS641	Data Warehouse tools	Case based learning
9	Dr. Rekha P.M Professor & HOD	VI	Cloud Computing and its Applications 18CS643	Think and Write	Case based Learning
10	Mrs. Punitha M Assistant Professor	VI	Microcontroller and Embedded Systems 18CS44	Hands on Training Workshop	Activity based learning
11	Dr. Rekha P.M Professor & HOD	VIII	Storage Area Network 18CS822	Think and Draw	Activity based Learning

➢ Total Innovations:11 in even semester

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➢ **AY: 2021-22 Odd Semester**

Sl. No.	Faculty Name & Designation	Course : ISE / sem	Course Name	Innovative / Novel Approach Practiced	Learning Style
1	Mrs. Sudha P.R Assistant Professor	III	18CS32 Data Structures and Applications	Aptitude Test on C	Activity based Learning
2	Mrs. Anitha P Assistant Professor	III	18CS32 Data Structures and Applications	Mini Project on Data structures concepts	Experiential Learning
3	Dr. Rekha P.M Associate Professor & HOD	III	18CS33 Analog and Digital Electronics	DESIGN OF LED DECORATIVE LIGHTS	Experiential Learning
4	Dr. Rekha P.M Associate Professor & HOD	III	18CS33 Analog and Digital Electronics	REMEMBER CIRCUITS and LIST APPLICATIONS	Case based Learning
5	Mrs. Sahana V Assistant Professor	III	18CS34 Computer organization	Role Play on Interrupt Hardware	Collaborative Learning
6	Mrs. Nagashree S Assistant Professor	III	18CS34 Computer organization	Watch, Observe and Answer	Case based learning
7	Dr. B.Nethravathi Assistant Professor	III	18CS35 Software Engineering	SDP on SE	Activity based Learning
8	Dr. Sowmya K.N Assistant Professor	III	18CS35 Software Engineering	Virtual Lab	Case based Learning
9	Dr. Sowmya K.N Assistant Professor	III	18CS35	Case study demo on Aspice Model	Case based learning

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			Software Engineering		
10	Dr. Malini M Patil Associate Professor	III	18CS36 Discrete mathematical structures	Implementation of 0-1 matrices in 'C'	Experiential Learning
11	Mr. Anil B.C Assistant Professor	III	18CS36 Discrete Mathematical Structures	CROSSWORD PUZZLE	Activity based Learning
12	Mr. Anil B.C Assistant Professor	III	18CS36 Discrete Mathematical Structures	Applications of Discrete Mathematics in real life	Experiential Learning
13	**Dr. D V Ashoka Professor & Dean Research**	V	18CS51 Management and Entrepreneurship for IT Industry	Popular Logo identification	Collaborative learning
14	**Mrs. Nagashree S Assistant Professor**	V	18CS51 Management and Entrepreneurship for IT Industry	Case Study on different Entrepreneurs in India	Case based learning
15	**Mrs. Sahana V Assistant Professor**	V	18CS52 COMPUTER NETWORKS AND. SECURITY.	Role Play on Link state Routing Algorithm	Collaborative Learning
16	**Mrs. Sumathi H R Assistant Professor**	V	18CS52 COMPUTER NETWORKS AND. SECURITY.	Implementation of Communication protocols in Java	Experiential learning
17	**Dr. Dayananda P Professor**	V	18CS53 Database Management System	THINK PAIR- SHARE	Experiential Learning

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18	**Mrs. Mamatha.G Assistant Professor**	V	18CS54 Automata Theory and Computability	"Train your Brain"- Crack tricky numerical and explore facts of Automata models- FSM, RE, CFG, PDA, TM.	Case based learning
				"Tool Ogle"- hands-on JFLAP for Automata modeling	Experiential learning
				"Team Seminar Skill"- Presentations on Key application areas of Automata theory	Collaborative learning
19	**Dr. Sowmya K.N Assistant Professor**	V	18CS55 Application Development using Python	Image Processing using Python Workshop	Experiential Learning
20	**Mrs. Punitha M Assistant Professor**	V	18CS55 Application Development using Python	Image Processing using Python Workshop	Experiential Learning
21	**Dr. Nagamani N.P Assistant Professor**	V	18CS56 UNIX Programming	Discuss and Code	Active Learning
22	**Dr. Malini M Patil Associate Professor**	VII	18CS71 Artificial Intelligence and Machine Learning	Hands on Session on WEKA: A MACHINE LEARNING TOOL	Experiential Learning
23	**Dr. Malini M Patil Associate Professor**	VII	18CS71 Artificial Intelligence and Machine Learning	KDD process in Machine Learning	Experiential Learning
24	**Dr. B.Nethravathi Assistant Professor**	VII	18CS71	Technical Paper	Case based learning

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			Artificial Intelligence and Machine Learning (AIML)		
25	**Mrs. Sumathi H R Assistant Professor**	VII	18CS72 Big Data Analytics	Using Hadoop tools solve basic problems(word count)	Case based learning
26	**Dr. Dayananda P Professor**	VII	18CS734 User Interface Design	THINK PAIR- SHARE	Experiential Learning
27	**Mr. Anil B.C Assistant Professor**	VII	18CS734 User Interface Design	Case Study on UID	Case based learning
28	**Mrs. Sudha P.R Assistant Professor**	VII	18CS744 Cryptography	Crack the Secret	Activity based Learning
29	**Dr. Nagamani N.P Assistant Professor**	VII	18CS744 Cryptography	Experiential Learning: Download the Simulator and implement the algorithms	Experiential Learning
30	**Mrs. Punitha M Assistant Professor**	VII	18CS752 Python Application Programming	MCQs	Activity based Learning
31	**Mrs. Anitha P Assistant Professor**	VII	18CS752 Python Application Programming	DATA VISUALIZATION	Activity based Learning

➢ Total Innovations:31 in Odd Semester

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➢ **AY: 2020-21 Even Semester**

Sl. No.	Faculty Name	Course: ISE / sem	Subject & Code	Innovative / Novel Approach Practiced	Learning Style
1	Dr. D.V Ashoka	II	C Programming for Problem Solving 18CPS23	Participative learning-C Programming by using smart phones	Experimental Learning
2	Dr. Dayanand P	II	C programming for Problem solving 18CPS23	Participative learning-C Programming by using smart phones	Experimental Learning
3	Anitha P	IV	Design and Analysis of Algorithms 18CS42	Test of Knowledge	Activity Based Learning
4	Dr. Rekha P.M	IV	Micro Controller And Embedded Systems 18CS44	IDENTIFY AND WRITE	Activity Based Learning
5	Dr.Dayanand	IV	Object Oriented Concepts 18CS45	THINK PAIR- SHARE	Activity Based Learning
6	Dr. Sowmya K.N	IV	Object Oriented Concepts 18CS45	Imitation of Language Transcoder	Activity Based Learning
7	Dr. D.V Ashoka	IV	Data Communication 18CS46	Analogy based learning Description: How network protocols tend to work	Analogy based learning

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8	Mrs Mamatha G	IV	Data Communication 18CS46	Squad Seminar Skill revelation	Activity Based Learning
9	Mrs. Punitha M	VI	18IS61 File Structures	Case Study on File Structures used in Social Media Platform	Case Based Learning
10	Dr. Nagamani N P	VI	18IS61 File Structures	Case Based Learning: File Structures used in Social Media Platform	Case Based Learning
11	Mrs. Sudha P.R	VI	18IS62 Software Testing	Bug hunting	Experimental Learning
12	Mrs. Nagashree S	VI	18CS63 Web Technology and its applications	Think and Execute	Activity Based Learning
13	Dr. Nethravathi B	VI	18CS643 Cloud Computing and its Applications	"HIDE AND TELL"(MIND GAME)	Activity Based Learning
14	Dr. Nagamani N P	VI	18CS644 Advanced JAVA and J2EE	Implementation of JDBC and Servlets	Experimental Learning:
15	Dr. Nethravathi B	VIII	Internet of Things & Applications 17CS81	Case study on IoT Application	Case Based LearningActivity Based Learning
17	Dr. Sowmya K.N	VIII	Internet of Things & Applications 17CS81	Case Study on IOT Applications	Case Based Learning
18	Mrs. Sudha P.R	VIII	System Modeling & Simulation 17CS834	Simulate the Problem	Activity Based Learning

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19	Mrs. Mamatha G	VI	18CS653 Programming in JAVA	Crack ur Understanding	Activity Based Learning

➤ Total Innovations:19 in even semester

➤ **AY: 2020-21 Odd Semester**

Sl. No.	Faculty Name	Course: ISE / sem	Subject & Code	Innovative / Novel Approach Practiced	Learning Style
1	Dr. Rekha P.M	II	C Programming for Problem Solving 18CPS23	Demo using Virtual Lab	Activity based Learning
2	Mrs. Sudha P.R	III	Data Structures and Applications 18CS32	Aptitude Test on C	Activity based Learning
3	Mrs. Anitha P	III	Data Structures and Applications 18CS32	Working with Datastructures using vlab	Experimental Learning
4	Dr. Rekha P M	III	Analog and Digital Electronics 18CS33	THINK & WRITE	Case based Learning
5	Dr. Rekha P M	III	Analog and Digital Electronics 18CS33	Design and Simulation of Decoders, Encoders, Multiplexer, Demultiplexer, ADC, DAC Using VLAB	Activity based Learning

6	Dr. Rekha P M	III	Analog and Digital Electronics 18CS33	Design and Simulation of Various Counters and Shift Registers Using VLAB	Activity based Learning
7	Mrs. Nagashree.S	III	Computer Organization 18CS34	Think and Ink	Activity based Learning
8	Dr. Nethravathi B	III	Software Engineering 18CS35	Case study on Real time Application through Class Diagram	Case based Learning
9	Dr. Malini M Patil	III	Discrete Mathematical Structures 18CS36	Implementation of 0-1 matrices	Experimental Learning
10	Dr. D.V Ashoka	V	Management, Entrepreneurship for IT Industry 18CS51	Popular Logo identification	Activity based Learning
11	Mrs. Sudha P.R	V	Management, Entrepreneurship for IT Industry 18CS51	Logo Quiz	Activity based Learning
12	Mrs. Sahana S	V	Computer Networks and Security 18CS52	Visual Learning	Case based Learning
13	Dr. Dayananda P	V	Database Management System	THINK PAIR- SHARE	Activity based Learning

			18CS53		
14	Mrs. Mamatha G	V	Automata theory and Computability 18CS54	"Train your Brain" To explore facts of FSM	Experimental Learning
15	Mrs. Punitha M	V	Application Development using Python 18CS55	Problem based Learning	Experimental Learning
17	Dr. Sowmya K.N	V	Application Development using Python 18CS55	Web Scraping using Python	Experimental Learning
18	Dr. Nagamani N P	V	Unix Programming 18CS56	"Execute and appreciate"	Experimental Learning
19	Dr. Nagamani N P	V	Unix Programming 18CS56	Context Based Learning	Experimental Learning
20	Dr. Nagamani N P	VII	Web Technology and its Applications 17CS71	Case study on "working of Siri and Alexa"	Case based Learning
21	Dr. Sowmya K.N	VII	Web Technology and its Applications 17CS71	Case study on "Web Technology Tools"	Case based Learning Collaborative-Learning
22	Mrs. Nagashree.S	VII	Machine Learning 17CS73	Numerical Problem Solving	Case based Learning

23	Dr. Rekha P.M	VII	Storage Area Networks 17CS564	Case Study: Storage Monitoring & Management Software and Tools	Case based Learning
24	Mrs. Punitha M	VII	Storage Area Networks 17CS564	Tool demonstration for SAN	Case based Learning
25	Dr. Nethravathi B	VII	Information & Network Security 17CS743	Role Play On "ONLINE BIDDING"	Case based Learning Collaborative-Learning
26	Mrs. Anitha P	VII	Information & Network Security 17CS743	Tool Demonstration	Case based Learning Collaborative-Learning

Total Innovations:19 in Odd semester: 26

AY: 2019-20 Even Semester

Sl. No.	Subject & Code	Innovative / Novel Approach Practiced	Learning Style
1	C programming for Problem solving 18CPS23	Do it Yourself	Experimental Learning
2	C programming for Problem solving 18CPS23	Programming using V-labs	Activity based Learning
3	Design and Analysis of Algorithms 18CS42	Test of Knowledge	Activity based Learning

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4	Operating Systems 18CS43	Exploring the concept of Round Robin Process scheduling algorithm using virtual labs	Collaborative-Learning
5	Operating Systems 18CS43	Exploring the concept of Round Robin Process scheduling algorithm using virtual labs	Collaborative-Learning
6	Micro Controller And Embedded Systems 18CS44	Embedded Systems –Application And Domain Specific	Case based Learning
7	Micro Controller And Embedded Systems 18CS44	Wheel Of Knowledge	Activity based Learning
8	Object Oriented Concepts 18CS45	THINK PAIR- SHARE	Activity based Learning
9	Data Communication 18CS46	Numerical Problem Solving	Activity based Learning
10	Cryptography, Network Security and Cyber Law 17CS61	Digital Signature vs Electronic Signatures	Collaborative Learning
11	Cryptography, Network Security and Cyber Law 17CS61	Collaborative-Learning: Exploring the Experiments of Cryptography using virtual labs	Collaborative Learning
12	Cryptography, Network Security and Cyber Law 17CS61	Collaborative-Learning: Exploring the Experiments of Cryptography using virtual labs	Collaborative Learning

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13	File Structures 17IS62	Visual Learning	Case based learning Collaborative Learning
14	File Structures 17IS62	Case Study: Think and Write	Case based learning
15	Operating Systems 17CS64	Case Study: Smart Phone OS's	Case based learning
16	Operation Research 17CS653	CROSSWORD PUZZLE	Activity based Learning
17	Operation Research 17CS653	CROSSWORD PUZZLE	Activity based Learning
18	Python Application Programming 17CS664	Web Scraping using Python	Activity based Learning
19	Internet of Things & Applications 15CS81	Analysis of different sensors available in a Smartphone and IoT Environment	Experimental Learning Activity based Learning
20	Big Data Analytics 15CS82	Study of BIG Vs of BIG DATA	Case based Learning
21	System Modeling and Simulation 15CS834	Case Study: Analyze and Implement	Case based Learning
22	System Modeling& Simulation 15CS834	Modeling of simulation problems	Experimental Learning

➢   Total Innovations:22 in even semester

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AY: 2019-20 Odd Semester

Sl. No.	Subject & Code	Innovative / Novel Approach Practiced	Learning Style
1	Data Structures and Applications 18CS32	Mini Project on data structures	Activity based learning
2	Data Structures and Applications 18CS32	Video Lecture to demonstrate data structure concepts	Case based learning
3	Data Structures and Applications 18CS32	Rejoinder using Moodle platform	Activity based Learning
4	Data Structure and Applications 18CS32	Tower of Hanoi - Manual Playing.(Student Centric)	Activity based Learning
5	Data Structure and Applications 18CS32	Hand in Pass Out on Programming Concepts	Activity based Learning
6	Analog & Digital Electronics 18CS33	Rain water detector using 555 Timer	Experimental Learning
7	Analog & Digital Electronics 18CS33	Unbiased Electronic Dice using LEDs	Experimental Learning
8	Analog & Digital Electronics 18CS33	Infrared Security Alarm System	Experimental Learning

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9	Analog & Digital Electronics 18CS33	Design and Verify	Experimental Learning
10	Computer Organization 18CS34	Analogy based Study on Stacks, Subroutine nesting and Interrupts	Active Learning
11	Computer Organization 18CS34	Participative/visual - LEARNING	Active Learning
12	Computer Organization 18CS34	Case study of Relevant Hardware	Active / Collaborative Learning
13	Computer Organization 18CS34	Analysis of user manuals of smartphones/laptops/computer system	Case based Learning
14	Software Engineering 18CS35	Demonstration on Modern SE Tools	Active Learning
15	Software Engineering 18CS35	Technical Paper Presentation on software engineering concepts	Case based Learning
16	Software Engineering 18CS35	Demonstration on SE methods and tools	Active Learning
17	Software Engineering 18CS35	Seminar/workshop	Active /Collaborative Learning
18	Software Engineering 18CS35	Technical Presentation by Students	Active /Collaborative Learning
19	Discrete Mathematical Structures 18CS36	Case study on A Mathematical definition of a problem statement	Case based Learning

20	Discrete Mathematical Structures 18CS36	Implementation of 0-1 matrices	Experimental Learning
21	Discrete Mathematical Structures (18CS36)	Crossword Puzzle	Active Learning
22	Management and Entrepreneurship for IT Industry 17CS51	Debate - Employee V/S Employer	Activity based Learning
23	Management and Entrepreneurship for IT Industry 17CS51	Hand In Pass Out	Activity based Learning
24	Computer Networks 17CS52	Dream project drive	Collaborative Active Learning
25	Data Base Management Systems 15CS53	Think Pair- Share	Activity based Learning
26	Automata Theory and Computability 17CS54	Train your Brain	Case Based Learning
27	Object Oriented Modeling and Design 15CS551	Open Debate	Activity based Learning

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28	Object Oriented Modeling and Design 15CS551	Case study on Real time Application through Class	Activity based Learning
29	Object Oriented Modeling and Design 15CS551	Pick and Speak	Activity / Collaborative Learning
30	Object Oriented Modeling and Design 15CS551	Case study on Real time Application through USE CASE	Case based learning
31	Advanced Java and J2EE 17IS553	Case Study: Explain, Think and Write	Case based learning
32	Advanced Java and J2EE 17IS553	Context Based Learning	Case based learning
33	Dotnet framework for Application Development 15CS564	Mini Project in dotnet environment	Collaborative Learning Experimental Learning
34	Dotnet framework for Application Development 15CS564	Code on Fly	Experimental Learning
35	Artificial Intelligence 15CS565	A discussion on Chat Bot Systems	Collaborative Learning
36	Artificial Intelligence 15CS565	Literature Survey on Google Assistants	Case based learning
37	Web Technology and its Application	Group Discussion on Web technologies used in popular web sites	Activity based Learning

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	15CS71		
38	Web Technology and its Application 15CS71	Profile Making	Experimental Learning
39	Web Technology and its Application 15CS71	Computational Learning	Activity based Learning
40	Web Technology and its Application 15CS71	Case Study web technologies used in chat apps	Activity based Learning
41	Software Architecture and Design Patterns 15IS72	Crossword Puzzle	Activity based Learning
42	Software architecture & Design Patterns 15IS72	Case study on software patterns	Case based Learning
43	Machine Learning 15CS73	NPTEL Video Lecture	Case based Learning
44	Machine Learning 15CS73	Case Study on a Machine Learning Tool	Case based learning
45	Cloud Computing & its Applications 15CS742	Observe & Write HPC Twitter Geo Processing	Case based learning
46	Cloud Computing & its Applications 15CS742	Case Study: Think & Write	Case based learning

47	Information & Network Security 15CS743	Case study on "Online Bidding"	Case based Learning
48	Information & Network Security 15CS743	Role Play on "Online Bidding"	Activity based Learning
49	Information & Network Security 15CS743	Pick and Speak on cryptography based Applications	Activity based Learning
50	Information Management System 15IS753	Pick and Speak: Case study on SCM & CRM	Activity based Learning Collaborative Learning
51	Storage Area Networks 15CS754	Case Study/ Group discussion on ERP deployment	Case based Learning

➢ Total Innovations:51 in even semester