



KONGUNADU ARTS AND SCIENCE COLLEGE
(AUTONOMOUS)
Re-accredited by NAAC with A⁺ Grade - 4th Cycle, College of Excellence - UGC
Coimbatore - 641 029, Tamil Nadu, India



LESSON PLAN

ACADEMIC YEAR : 2023-2024
Faculty Name : GOMATHI S,
Year/Semester/Section : I/II/All
Degree & Branch : ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING
Subject Code & Name : 23UA1101 & CORE PAPER I- C AND C ++ PROGRAMMING

S.No	Date	Hours	Topic(s)	Delivery Methods	Links	Book Referred
Unit 1						
1	21/06/2023	3	Overview of C: History of C	VIDEOS,BOARD	https://www.youtube.com/watch?v=shmk7Q67Kw	
2	23/06/2023	2	Importance of C	VIDEOS,BOARD	https://www.youtube.com/watch?v=i3SWeOhjPCY	
3	23/06/2023	5	Sample program in C	VIDEOS,BOARD	https://www.youtube.com/watch?v=meHZU_16q3s	
4	26/06/2023	1	Basic Structure of C program	VIDEOS,BOARD	https://www.youtube.com/watch?v=meHZU_16q3s	
5	27/06/2023	4	Programming Style	VIDEOS,BOARD	https://www.youtube.com/watch?v=meHZU_16q3s	
6	30/06/2023	3	Character Set	VIDEOS,BOARD	https://www.youtube.com/watch?v=3coVFLnGXHk	
7	04/07/2023	2	C Tokens	BOARD	https://www.youtube.com/watch?v=theVEyT9xr3E	
8	04/07/2023	5	Keywords and Identifiers	VIDEOS,BOARD	https://www.youtube.com/watch?v=theVEyT9xr3E	
9	05/07/2023	1	Constants	VIDEOS,BOARD	https://www.youtube.com/watch?v=theVEyT9xr3E	
10	06/07/2023	4	Variables in C	VIDEOS,BOARD	https://www.youtube.com/watch?v=dh5lrXXXxw	
11	10/07/2023	3	Data types in C	VIDEOS,BOARD	https://www.youtube.com/watch?v=dh5lrXXXxw	

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12	12/07/2023	2	Operators in C	VIDEOS, BOARD	https://www.youtube.com/watch?v=dhb5tXXXXXw	
13	12/07/2023	5	Expression in C	BOARD	https://www.simplilearn.com/tutorials/c-tutorial/guide-to-n-expressions-in-c	
14	13/07/2023	1	Operators - Increment and Decrement, and Special operators	BOARD	https://www.youtube.com/watch?v=ZLwlnCojxYE	
15	14/07/2023	4	Type Conversion in C	VIDEOS, BOARD	https://www.youtube.com/watch?v=_WY-q2ZKv9Q	

Unit 2

16	18/07/2023	3	Decision making with If	BOARD	https://www.simplilearn.com/tutorials/c-tutorial/conditional-control-statements-in-c	
17	20/07/2023	2	Simple If, If else statement	BOARD	https://www.youtube.com/watch?v=0YurIXcwXqw	
18	20/07/2023	5	if else , else if ladder,, Nested if	BOARD	https://www.youtube.com/watch?v=0W7nLzWkF5w	
19	21/07/2023	1	Switch statement	BOARD	https://www.youtube.com/watch?v=BHS4iA7bsd4	
20	24/07/2023	4	Ternary operator	BOARD	https://www.youtube.com/watch?v=El_Gg6dURwk	
21	26/07/2023	3	Decision making and Looping - While statement	BOARD	https://www.youtube.com/watch?v=IGuoF98qEGo	
22	28/07/2023	2	While loop in C	BOARD	https://www.youtube.com/watch?v=ocX2FNlnguA	
23	28/07/2023	5	Do while loop statement	BOARD	https://www.youtube.com/watch?v=nohmBtdby_k	
24	31/07/2023	1	Nested While loop	BOARD	https://www.youtube.com/watch?v=Bpelfo3VBk	
25	01/08/2023	4	Nested do while statement	BOARD	https://www.youtube.com/watch?v=LSeY5qkveL	
26	08/08/2023	2	The For Statement	BOARD	https://www.youtube.com/watch?v=ag3vj2bG2o	
27	08/08/2023	5	Additional features of For loop	VIDEOS, BOARD	https://www.youtube.com/watch?v=Bpelfo3VBk	

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[S. Gopalakrishnan]

Coordinator

Head of the Department

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28	09/08/2023	1	Nesting of for loops	VIDEOS.BOARD	https://www.youtube.com/watch?v=agj3vjbG2o	
29	10/08/2023	4	Jumps in loops - break statement	VIDEOS.BOARD	https://www.youtube.com/watch?v=PlgjsMEPKec	
30	14/08/2023	3	Jumps in Loops - goto and continue statement	VIDEOS.BOARD	https://www.youtube.com/watch?v=P2Dofw2FQmU	
31	17/08/2023	2	Character Arrays - Declaring and Initializing String Variables, Reading Strings from Terminal	VIDEOS.BOARD	https://www.youtube.com/watch?v=x_3FKTDKGT8	

Unit 3

32	17/08/2023	5	Array - Introduction	VIDEOS.BOARD	https://www.youtube.com/watch?v=08LWyp6PNI	
33	18/08/2023	1	One-Dimensional Arrays - Declaration, Initialization	BOARD	https://www.youtube.com/watch?v=KMfwYD03kVR0	
34	19/08/2023	4	Array - Example Program	VIDEOS.BOARD	https://www.youtube.com/watch?v=Ev4w7CDNnWE	
35	22/08/2023	3	Array - Example	VIDEOS.BOARD	https://www.youtube.com/watch?v=Q8X0KEqXYts	
36	24/08/2023	2	Two-Dimensional Arrays - Introduction	VIDEOS.BOARD	https://www.youtube.com/watch?v=HMBYVWbp8i4	
37	24/08/2023	5	Two Dimensional arrays - Initialization	BOARD	https://www.youtube.com/watch?v=FMjWTPSZKA	
38	25/08/2023	1	Two Dimensional arrays - Example Program	VIDEOS.BOARD	https://www.youtube.com/watch?v=ga_SvTs1zulk	
39	28/08/2023	4	Multidimensional Arrays, 2D - Memory Layout	BOARD	https://www.youtube.com/watch?v=36z4qgN3GWw	
40	31/08/2023	3	Multidimensional Arrays	VIDEOS.BOARD	https://www.youtube.com/watch?v=cfqbzYyx-dM	
41	02/09/2023	2	Writing strings to screen	VIDEOS.BOARD	https://www.youtube.com/watch?v=HIDHDp1s4ps	
42	02/09/2023	5	String handling functions in C	VIDEOS.BOARD	https://www.youtube.com/watch?v=8uDImeg8ZG4Y	
43	04/09/2023	2	User defined Function in C	VIDEOS.BOARD	https://www.youtube.com/watch?v=NblKVOK0IQ	

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44	04/09/2023	5	User defined function	VIDEOS.BOARD	https://www.youtube.com/watch?v=y4a60wvYBYU	
45	05/09/2023	1	User Defined function	VIDEOS.BOARD	https://www.youtube.com/watch?v=szi6LgTP8jU	
46	07/09/2023	4	Basic concept of object oriented programming	BOARD	https://www.youtube.com/watch?v=wmb8vOTpomo	
47	11/09/2023	3	User defined function in C++ - Function with argument and return value in C++	VIDEOS.BOARD	https://www.youtube.com/watch?v=XCHt8R22k_8	

Unit 4

48	13/09/2023	2	Procedure oriented programming and Object oriented programming	BOARD	https://www.youtube.com/watch?v=5UYFrgKjsHQ	
49	13/09/2023	5	Beginning with C++	VIDEOS.BOARD	https://www.youtube.com/watch?v=yEpgPXdv3I	
50	14/09/2023	1	Classes and Objects	VIDEOS.BOARD	https://www.youtube.com/watch?v=unZ3YyvueA	
51	15/09/2023	4	User defined functions in C++	VIDEOS.BOARD	https://www.youtube.com/watch?v=FTJ5M-KSYLo	
52	19/09/2023	3	Function Prototypes in C++	BOARD	https://www.youtube.com/watch?v=RFLFXlboGwo	
53	21/09/2023	2	Call by reference in C++	VIDEOS.BOARD	https://www.simplilearn.com/tutorials/cpp-tutorial/call-by-value-and-call-by-reference-in-cpp	
54	21/09/2023	5	Call by Reference and Call by Value	VIDEOS.BOARD	https://www.youtube.com/watch?v=7kit9gIEDI	
55	22/09/2023	1	Return by Reference in C++	VIDEOS.BOARD	https://www.youtube.com/watch?v=NX-C7FSCwPc	
56	23/09/2023	1	Inline function in C++	VIDEOS.BOARD	https://www.youtube.com/watch?v=yQIFNSDIDww	
57	25/09/2023	4	Function Overloading in C++	VIDEOS.BOARD	https://www.youtube.com/watch?v=2DIYvq4qhbG	
58	27/09/2023	3	Friend function	VIDEOS.BOARD	https://www.youtube.com/watch?v=n_WE2o1B8hY	

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59	04/10/2023	2	Constructor in C++	VIDEOS, BOARD	https://www.youtube.com/watch?v=hAAsFBq2bA4	
60	04/10/2023	5	Destructors in C++	VIDEOS, BOARD	https://www.youtube.com/watch?v=hAAsFBq2bA4	

Unit 5

61	05/10/2023	1	Inheritance - Defining derived class	BOARD	https://www.youtube.com/watch?v=hAAsFBq2bA4	
62	06/10/2023	4	Types of inheritance	BOARD	https://www.youtube.com/watch?v=RO1ZVW9NAzg	
63	09/10/2023	3	Inheritance - Base class and Derived class in C++	BOARD	https://www.youtube.com/watch?v=YV44YBC2IP4	
64	11/10/2023	2	Types of inheritance	BOARD	https://www.youtube.com/watch?v=Y11wb62wyWI	
65	11/10/2023	5	Virtual Base class in C++	BOARD	https://tutorials.com/virtual-base-class-in-c-ooop/	
66	12/10/2023	1	Virtual Base class in C++	BOARD	https://www.youtube.com/watch?v=eJ1Zn_sxv-0	
67	13/10/2023	4	Pointers in C++	VIDEOS, BOARD	https://www.simplilearn.com/tutorials/cpp-tutorial/pointers-in-cpp	
68	17/10/2023	3	Pointers to object in C++	VIDEOS, BOARD	https://www.youtube.com/watch?v=o9TKjV5maIk	
69	19/10/2023	2	Pointers to object in C++ - Example	VIDEOS, BOARD	https://www.youtube.com/watch?v=aBQ-m7-1lyg	
70	19/10/2023	5	Virtual function in C++	VIDEOS, BOARD	https://www.youtube.com/watch?v=WdOelbPf_pg	
71	20/10/2023	1	Hackerrank Solutions - Virtual functions in C++	VIDEOS, BOARD	https://www.youtube.com/watch?v=CIPUScbhB4M	
72	21/10/2023	4	Polymorphism in C++	BOARD	https://www.youtube.com/watch?v=pcMSIWLKzOE	
73	26/10/2023	3	Compile time Vs Run time Polymorphism	VIDEOS, BOARD	https://www.youtube.com/watch?v=uc_Hr10cBBE	

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74	30/10/2023	2	Polymorphism in C++ - Static and Dynamic binding	BOARD	https://www.youtube.com/watch?v=mv5_14kuVho	
Unit						
75	30/10/2023	5				
76	31/10/2023	1				

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Head of the Department

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ACADEMIC YEAR

2023-2024

Faculty Name

P. ARUNA DEVI PONNUSAMY,

Year/Semester/Section

I/III/ALL

Degree & Branch

ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

Subject Code & Name

22UA13A3 & ALLIED PAPER 3 – FOUNDATIONS OF ROBOTICS

LESSON PLAN

S.No	Date	Hours	Topics	Delivery Methods	Links	Book Referred
Unit 1						
1	19/06/2023	3	Introduction to Robotics	CHALK AND TALK	https://www.jeelect.org/robotics-introduction/	
2	20/06/2023	4	Basic components of robot	CHALK AND TALK	https://www.javatpoint.com/components-of-robot	
3	21/06/2023	2	Laws of robotics	CHALK AND TALK	https://www.insiphonmedia.com/science-technology/robotics/laws-of-robotics/	
4	22/06/2023	5	classification of robot	CHALK AND TALK	https://tecmeech.com/robotics-introduction-and-classification/	
5	26/06/2023	3	work space and accuracy	CHALK AND TALK	https://moedartium.com/learning/lesson/task-space-and-workspace-for-robots-102	
6	27/06/2023	3	resolution	CHALK AND TALK		Carlisle Siegel, Markku Urtch, Christian Wiedemann, Machine Vision Algorithms and Applications, Second edition, Weinheim, WILEY-VCH, 2018.
7	28/06/2023	4	repeatability of robot.	CHALK AND TALK		Carsten Siegel, Markku Urtch, Christian Wiedemann, Machine Vision Algorithms and Applications, Second edition, Weinheim, WILEY-VCH, 2018.
8	30/06/2023	2	Power transmission system:	CHALK AND TALK		Carsten Siegel, Markku Urtch, Christian Wiedemann, Machine Vision Algorithms and Applications, Second edition, Weinheim, WILEY-VCH, 2018.
9	03/07/2023	5	Power transmission :Types	CHALK AND TALK	https://www.machinemfg.com/types-of-power-transmission/	
10	05/07/2023	3	Transmission systems	PPT	https://www.slideshare.net/ganeshnigv04-power-transmission-systems	
11	06/07/2023	3	Rotary to rotary motion,	CHALK AND TALK	https://www.wednetu.com/question-answer/what-are-the-two-kinds-of-rotary-motion-class-11-physics-the-0104250425eb59b7edec17	
12	07/07/2023	4	Rotary to linear motion,	CHALK AND TALK	https://esbook.com/physics/types-of-motion	
13	10/07/2023	4	Harmonic drives, Introduction	CHALK AND TALK	https://www.britannica.com/technology/Harmonic-Drive	
14	11/07/2023	5	Harmonic drives	CHALK AND TALK	https://www.artecdrive.com/news/the-main-disadvantages-of-the-harmonic-reducers.html and https://instrumentationtools.com/harmonics-disadvantages-power-system/	
15	13/07/2023	3	Drives:Applications	CHALK AND TALK	https://www.luftegroup.com/harmonic-drives-comprehensive-guide.html	
Unit 2						

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16	14/07/2023	3	Robot End effectors: Introduction	CHALK AND TALK	https://en.wikipedia.org/wiki/Robot_end_effector	
17	17/07/2023	4	Types of grippers	CHALK AND TALK	https://www.wevolver.com/article/what-are-end-effectors-in-robotics-types-of-end-effectors-applications-future	
18	18/07/2023	3	types of End effectors	PDF	https://www.hvrmag.net.com/blog/end-effector-for-robot-definition-types-applications/	
19	19/07/2023	5	Tools as end effectors	PDF	https://www.hvrmag.net.com/blog/end-effector-for-robot-definition-types-applications/	
20	21/07/2023	3	Tools as end effectors	CHALK AND TALK	https://www.wevolver.com/article/what-are-end-effectors-in-robotics-types-of-end-effectors-applications-future	
21	24/07/2023	3	Drive system for grippers :Introduction	CHALK AND TALK	https://www.universiti-robots.com/blog/types-of-grippers-used-in-manufacturing/	
22	25/07/2023	4	Drive system for grippers	PPT	https://www.slideshare.net/TAMILMECHKIT/robot-drive-systems-and-end-effectors	
23	26/07/2023	3	Drive system for Grippers: Direct drive motors	PDF-PPT	https://www.mn.uto.moff/studier/masterpaper/robot/robotics-grippers-using-direct-drive-motors.html	
24	27/07/2023	5	Mechanical gripper	CHALK AND TALK	https://www.kellerstechnology.com/blog/8-types-of-end-of-arm-tooling-devices-for-automation-on-project/	
25	31/07/2023	3	Mechanical Grippers: uses	CHALK AND TALK	https://www.kellerstechnology.com/blog/8-types-of-end-of-arm-tooling-devices-for-automation-on-project/	
26	01/08/2023	3	types of gripper mechanism	CHALK AND TALK	https://www.brainkart.com/article/Various-types-of-Gripper-mechanisms_5144/	
27	02/08/2023	4	gripper force analysis	PDF	https://www.youtube.com/watch?v=SD2vPSSG2lg	
28	07/08/2023	5	other types of gripper-	PDF	https://www.kellerstechnology.com/blog/8-types-of-end-of-arm-tooling-devices-for-automation-on-project/	
29	09/08/2023	3	other types of gripper	PDF	https://www.kellerstechnology.com/blog/8-types-of-end-of-arm-tooling-devices-for-automation-on-project/	
30	10/08/2023	3	special purpose grippers.	PDF	https://www.kellerstechnology.com/blog/8-types-of-end-of-arm-tooling-devices-for-automation-on-project/	
Unit 3						
31	11/08/2023	4	Robot kinematics:Introduction	CHALK AND TALK	http://motion.cs.illinois.edu/RoboticsSystems/Kinematics.html	
32	12/08/2023	4	Robot kinematics uses	PDF:CHALK AND TALK	http://motion.cs.illinois.edu/RoboticsSystems/Kinematics.html	
33	14/08/2023	2	Matrix representation	PDF	http://motion.cs.illinois.edu/RoboticsSystems/Kinematics.html	
34	16/08/2023	5	Matrix representation _Example	PDF	http://motion.cs.illinois.edu/RoboticsSystems/Kinematics.html	
35	18/08/2023	3	rigid motion	PDF	https://www.dictionary.com/browse/rigid-motion#google_vignette	
36	19/08/2023	3	homogeneous transformation	PDF	https://www.dictionary.com/browse/rigid-motion#google_vignette	
37	21/08/2023	4	forward Kinematics	PDF	https://finddynamics.com/articles/forward-and-inverse-kinematics	
38	22/08/2023	2	inverse kinematics	PDF	https://automaticaddison.com/difference-between-forward-kinematics-and-inverse-kinematics/	

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39	23/08/2023	5	trajectory planning.	CHALK AND TALK	https://logs.mallworks.com/student-founge/2019/11/06/robot-manipulator-tutorial/	
40	25/08/2023	3	Robot Dynamics: Introduction	PDF, CHALK AND TALK	https://www.mecanismo.complexo.org/en/robot-dynamics/	
41	28/08/2023	3	Manipulator dynamics	CHALK AND TALK	https://www.mecanismo.complexo.org/en/robot-dynamics/	
42	30/08/2023	4	Lagrange	PDF	https://modernrobotics.mechwestern.edu/ugm-book-resource/chapter-8-1-lagrangian-formulation-of-dynamics-part-1-of-2/	
43	31/08/2023	2	Euler formulation	CHALK AND TALK	https://modernrobotics.mechwestern.edu/ugm-book-resource/chapter-8-1-lagrangian-formulation-of-dynamics-part-1-of-2/	
44	01/09/2023	5	Newton formula	CHALK AND TALK	https://modernrobotics.mechwestern.edu/ugm-book-resource/chapter-8-1-lagrangian-formulation-of-dynamics-part-1-of-2/	
45	05/09/2023	3	Euler formulation.	CHALK AND TALK	https://modernrobotics.mechwestern.edu/ugm-book-resource/chapter-8-1-lagrangian-formulation-of-dynamics-part-1-of-2/	

Unit 4

46	07/09/2023	3	Machine vision	CHALK AND TALK		Carsten Siegel, Markus Ulrich, Christian Wiederemann, Machine Vision Algorithms and Applications, Second edition, Weinheim, WILEY-VCH, 2018.
47	08/09/2023	4	image acquisition,	CHALK AND TALK		Carsten Siegel, Markus Ulrich, Christian Wiederemann, Machine Vision Algorithms and Applications, Second edition, Weinheim, WILEY-VCH, 2018.
48	11/09/2023	2	digital images	CHALK AND TALK		Carsten Siegel, Markus Ulrich, Christian Wiederemann, Machine Vision Algorithms and Applications, Second edition, Weinheim, WILEY-VCH, 2018.
49	12/09/2023	5	sampling and quantization	CHALK AND TALK		Carsten Siegel, Markus Ulrich, Christian Wiederemann, Machine Vision Algorithms and Applications, Second edition, Weinheim, WILEY-VCH, 2018.
50	14/09/2023	3	levels of computation Feature extraction	CHALK AND TALK		Carsten Siegel, Markus Ulrich, Christian Wiederemann, Machine Vision Algorithms and Applications, Second edition, Weinheim, WILEY-VCH, 2018.
51	15/09/2023	3	windowing technique	PDF		Carsten Siegel, Markus Ulrich, Christian Wiederemann, Machine Vision Algorithms and Applications, Second edition, Weinheim, WILEY-VCH, 2018.
52	19/09/2023	2	segmentation	CHALK AND TALK		Carsten Siegel, Markus Ulrich, Christian Wiederemann, Machine Vision Algorithms and Applications, Second edition, Weinheim, WILEY-VCH, 2018.
53	20/09/2023	5	Thresholding	CHALK AND TALK		Carsten Siegel, Markus Ulrich, Christian Wiederemann, Machine Vision Algorithms and Applications, Second edition, Weinheim, WILEY-VCH, 2018.
54	22/09/2023	3	Thresholding: Example	CHALK AND TALK		Carsten Siegel, Markus Ulrich, Christian Wiederemann, Machine Vision Algorithms and Applications, Second edition, Weinheim, WILEY-VCH, 2018.
55	24/09/2023	3	edge detection	PDF		Carsten Siegel, Markus Ulrich, Christian Wiederemann, Machine Vision Algorithms and Applications, Second edition, Weinheim, WILEY-VCH, 2018.
56	25/09/2023	3	binary morphology	CHALK AND TALK		John J. Craig, Introduction to Robotics - Mechanics and Control, 3rd Edition, Pearson Education Inc, 2013.
57	26/09/2023	4	grey morphology	CHALK AND TALK		John J. Craig, Introduction to Robotics - Mechanics and Control, 3rd Edition, Pearson Education Inc, 2013.
58	27/09/2023	2	Camera calibration	CHALK AND TALK		John J. Craig, Introduction to Robotics - Mechanics and Control, 3rd Edition, Pearson Education Inc, 2013.
59	03/10/2023	5	Stereo Reconstruction	CHALK AND TALK		Carsten Siegel, Markus Ulrich, Christian Wiederemann, Machine Vision Algorithms and Applications, Second edition, Weinheim, WILEY-VCH, 2018.
60	05/10/2023	3	Stereo Reconstruction_uses	CHALK AND TALK		Carsten Siegel, Markus Ulrich, Christian Wiederemann, Machine Vision Algorithms and Applications, Second edition, Weinheim, WILEY-VCH, 2018.

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Head of the Department

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Unit 5						
61	06/10/2023	3	Robot programming: Introduction	CHALK AND TALK	https://www.ipma.co.uk/hara/expert-advice/robots/robot-programming-methods.html#:~:ix=To%20programme%20a%20robot%2C%20the,ibei%20own%20approach%20o%20progrannig	John J. Craig, Introduction to Robotics - Mechanics and Control, 3 rd Edition, Pearson Education Inc, 2013.
62	07/10/2023	4	Robot Languages	CHALK AND TALK		John J. Craig, Introduction to Robotics - Mechanics and Control, 3 rd Edition, Pearson Education Inc, 2013
63	09/10/2023	2	Classification of robot language	CHALK AND TALK	https://www.ipma.co.uk/hara/expert-advice/robots/robot-programming-methods.html#:~:ix=To%20programme%20a%20robot%2C%20the,ibei%20own%20approach%20o%20progrannig	
64	10/10/2023	5	Computer control and robot software	CHALK AND TALK	https://www.ipma.co.uk/hara/expert-advice/robots/robot-programming-methods.html#:~:ix=To%20programme%20a%20robot%2C%20the,ibei%20own%20approach%20o%20progrannig	
65	12/10/2023	3	Val system and Languages	CHALK AND TALK	https://www.val-lang.dev/	
66	13/10/2023	3	VAL language commands	CHALK AND TALK	https://www.analyticinsight.net/different-types-of-robot-programming-languages/	
67	16/10/2023	4	motion control, hand control, program control,	CHALK AND TALK	https://www.analyticinsight.net/different-types-of-robot-programming-languages/	
68	17/10/2023	2	pick and place applications	CHALK AND TALK	https://www.pwpack.com/what-is-a-pick-and-place-robot/	
69	18/10/2023	5	palletizing applications using VAL	PDF,CHALK AND TALK	https://www.mhi.org/solutions-community/solutions-guide/robotics	
70	20/10/2023	3	Robot welding application using VAL program	CHALK AND TALK	https://blog.hirebotics.com/guide-to-welding-robots	
71	21/10/2023	4	Rapid Language	CHALK AND TALK	https://www.courtel.lay.ltu.se/student/graduate/robot/files/iahPqetAmlEa.pdf	
72	26/10/2023	2	basic commands Virtual robotics	CHALK AND TALK	https://www.control.lay.ltu.se/student/graduate/robot/files/iahPqetAmlEa.pdf	
73	27/10/2023	5	VAL-II and AML	PDF	https://www.sathyabama.ac.in/sites/default/files/course-material/2020-10/Unit5_5.pdf	
74	31/10/2023	3	AML Uses	CHALK AND TALK	https://www.sathyabama.ac.in/sites/default/files/course-material/2020-10/Unit5_5.pdf	

B. D. P.

Faculty Signature

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Head of the Department



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ACADEMIC YEAR : 2023-2024
Faculty Name : PAVITHRA R.
Year/Semester/Section : I/III/All
Degree & Branch : ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING
Subject Code & Name : 22UGC3S1 & SKILL BASED SUBJECT 1 - CYBER SECURITY

S.No	Date	Name	Topic	Delivery Method	Link	Book Referral
Unit 1						
1	19/09/2023		Definition of Cyber Security	CLASS AND TALK	https://www.brightsource.com/what-is-cyber-security/	
2	20/09/2023		Why is Cyber Security important?	CLASS AND TALK	https://allthingscyber.com/why-is-cyber-security-important/	
3	27/09/2023		EVOLUTION OF CYBER SECURITY	CLASS AND TALK	https://www.cisco.com/india/en/whitepapers/evolution-of-cybersecurity.html	
4	29/09/2023		CYBER HACKING AND CYBER FRAUD	CLASS AND TALK	https://www.sdu.edu/en/technology/technology-education/education/cyber-fraud/	
5	06/10/2023		DIFFERENT MODES OF CYBER FRAUD	CLASS AND TALK	https://www.gardensofed.org/what-is-cyber-fraud-types-of-cyber-fraud/	
6	07/10/2023		CYBER FRAUD IN INDIA CYBER PORNOGRAPHY	CLASS AND TALK	https://thepressphoto.com/cyber-pornography-the-sad/	
Unit 2						
7	14/10/2023		MODES OF CYBER TERRORISM	CLASS AND TALK	https://www.internationaljournalofcyberterrorism.com/what-is-cyber-terrorism/	
8	17/10/2023		CYBERCRIME PREVENTIVE METHODS	CLASS AND TALK	https://thepressphoto.com/cyber-crime-prevention/	
9	24/10/2023		PREVENTIVE STEPS FOR INDIVIDUALS AND ORGANIZATION	CLASS AND TALK	https://www.policyschool.com/cyber-security/individuals-to-prevent-cyber-crime/	
10	29/10/2023		KINDS OF CYBER CRIME	CLASS AND TALK	https://cybercrime.com/what-is-cyber-crime-types-of-cyber-crime/	
11	01/11/2023		Malware and its types	CLASS AND TALK	https://www.gardensofed.org/malware-and-its-types/	
12	02/11/2023		Types of Cyber Attacks	CLASS AND TALK	https://www.purpleteam.com/what-is-cyber-attack/	
Unit 3						
13	13/11/2023		DATA THEFT	CLASS AND TALK	https://www.virtus.com/blog/2020/04/data-theft/	
14	15/11/2023		PUNISHMENT OF DATA THEFT	CLASS AND TALK	https://www.informationweek.com/what-is-data-theft/	
15	16/11/2023		THEFT OF INTERNET HOUSES	CLASS AND TALK	https://www.purpleteam.com/2021/05/28/theft-of-internet-houses/	
16	21/11/2023		Internet safety tips for parents and students	CLASS AND TALK	https://www.united.com/parenting/child-safety-tips-for-parents/	
17	24/11/2023		mobile phone privacy and security issues	CLASS AND TALK	https://www.theinformationtechnology.com/what-is-mobile-phone-privacy-and-security/	
Unit 4						
18	30/11/2023		email and social media issues	CLASS AND TALK	https://www.industry.gov.uk/data-and-research/email-and-social-media	
19	01/12/2023		aspects of social media in cyber security	CLASS AND TALK	https://www.sdu.edu/en/technology/technology-education/education/cyber-security/	
20	07/12/2023		un healthy media use	CLASS AND TALK	https://thepressphoto.com/cyber-security-for-business/	
21	14/12/2023		social media use to improve mental health	CLASS AND TALK	https://www.mentalhealth.org.uk/improving-your-mental-health/	
22	19/12/2023		Computer Viruses	CLASS AND TALK	https://www.fortinet.com/resources/whitepapers/cyber-security/cyber-viruses.html	

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R.P.
[Mrs. R. Pavithra]

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Coordinator

[S. Gopalakrishnan]

Head of the Department



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23	12/09/2023	4	what is antivirus and firewalls	CHALK AND TALK	https://www.androidauthority.com/android-security-4240181/	
Unit 5						
24	12/09/2023	3	digital foot print	CHALK AND TALK	https://www.kongunaduartsandsciencecollege.edu.in/2023/09/12/digital-footprint/	
25	06/10/2023	4	browser extension and search engine deletion	CHALK AND TALK	https://www.kongunaduartsandsciencecollege.edu.in/2023/10/06/browser-extension-and-search-engine-deletion/	
26	06/10/2023	5	Cyber crime laws in india	CHALK AND TALK	https://www.kongunaduartsandsciencecollege.edu.in/2023/10/06/cyber-crime-laws-in-india/	
27	12/10/2023	4	the information technology act of 2000 in india	CHALK AND TALK	https://www.kongunaduartsandsciencecollege.edu.in/2023/10/12/the-information-technology-act-of-2000-in-india/	
28	12/10/2023	5	Cybercrime Punishment in INDIA	CHALK AND TALK	https://www.kongunaduartsandsciencecollege.edu.in/2023/10/12/cybercrime-punishment-in-india/	
29	20/10/2023	4	Cyber crime prevent guide to user	CHALK AND TALK	https://www.kongunaduartsandsciencecollege.edu.in/2023/10/20/cyber-crime-prevent-guide-to-user/	
30	21/10/2023	6	Regulatory Authorities	CHALK AND TALK	https://www.kongunaduartsandsciencecollege.edu.in/2023/10/21/regulatory-authorities/	

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Faculty Signature

[Mrs. R. Paulina]

Coordinator

[C. Sparshini Srinivas]
Head of the Department



ACADEMIC YEAR	:	2023-2024
Faculty Name	:	PAVITHRA R,
Year/Semester/Section	:	IV/III/All
Degree & Branch	:	ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING
Subject Code & Name	:	22UHR3N1 & NON MAJOR ELECTIVE PAPER - HUMAN RIGHTS

S.No	Date	Hours	Topic(s)	Delivery Methods	Links	Book Referred
Unit 1						
1	22/06/2023	3	DEFINITION OF HUMAN RIGHTS	CHALK AND TALK	https://www.britannica.com/topic/human-rights/Natural-law-theory-formed-into-reduced-rights	
2	23/06/2023	3	INTRODUCTION TO THEORIES	CHALK AND TALK	https://www.sfu.ca/~ahamid/rwto.html#:~:text=Theories%20of%20human%20rights%20based%20on%20%20%20continuing%20development,	
3	03/07/2023	3	KINDS OF HUMAN RIGHTS	CHALK AND TALK	https://www.humanrightscovers.com/Issues/what-kinds-of-human-rights-exist/	
4	04/07/2023	3	EVALUATION AND PROTECTION OF HUMAN RIGHTS	CHALK AND TALK	https://www.abhiut.org/en/about-us/evaluation-on-human-rights	
5	11/07/2023	3	HUMAN RIGHTS IN INDIA	CHALK AND TALK	https://en.wikipedia.org/wiki/Human_rights_in_India	
6	12/07/2023	3	DEVELOPMENT OF HUMAN RIGHTS UNDER THE UN	CHALK AND TALK	https://www.unicef.org/child-rights-convention/united-nations-human-rights	
Unit 2						
	19/07/2023	3	UNITED NATIONS CHARTER	CHALK AND TALK	https://treaties.un.org/doc/publication/cil/uncharter.pdf	
8	20/07/2023	3	U N AND HUMAN RIGHTS	CHALK AND TALK	https://www.un.org/en/about-us/issue/human-rights#:~:text=Human+rights%20human%20rights%20based%20on%20%20%20United+Nations%20has%20defined+it%20as%20the%20best%20protection%20for%20	
9	27/07/2023	3	UN COMMISSION ON HUMAN RIGHTS	CHALK AND TALK	https://en.wikipedia.org/wiki/United_Nations_Commission_on_Human_Rights	
10	28/07/2023	3	Universal Declaration of Human Rights	CHALK AND TALK	https://www.unhcr.org/refugees/why/how-does-it-revealing-work-in-and-out/	
11	08/08/2023	3	International Covenant on Civil and Political Rights	CHALK AND TALK	https://www.unhcr.org/refugees/mechanisms/instruments/international-covenant-civil-and-political-rights	
12	09/08/2023	3	Economic, social and cultural rights	CHALK AND TALK	https://www.unhcr.org/refugees/mechanisms/instruments/international-covenant-economic-social-cultural-rights#:~:text=Economic%20social%20and%20cultural%20sanitation%20%20and%20the%20right%20to%20work,	
Unit 3						
13	16/08/2023	3	human rights and fundamental rights	CHALK AND TALK	https://byjus.com/ncert/ncert-human-rights/	
14	17/08/2023	3	Features of Fundamental Rights	CHALK AND TALK	https://www.mortadapain.com/features-of-fundamental-rights#:~:text=The%20fundamental%20rights%20guarantee%20equality%20before%20the%20law%20and%20equality%20before%20the%20law,	
15	23/08/2023	3	Human rights in India	CHALK AND TALK	https://en.wikipedia.org/wiki/Human_rights_in_India	

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16	24/08/2023	3	National Human Rights Commission	CHALK AND TALK	https://en.wikipedia.org/wiki/National_Human_Rights_Commission_of_India	
17	01/09/2023	3	State Human Rights Commission	CHALK AND TALK	https://jsr.com/freesias-prep/state-human-rights-commission/	
18	02/09/2023	3	Functions of the Parliament - UPSC Polity	CHALK AND TALK	https://byjus.com/freesias-prep/functions-of-the-parliament/	
Unit 4						
19	11/09/2023	3	AGED PERSON AND THEIR HUMAN RIGHTS	CHALK AND TALK	https://nhrc.nic.in/files/default/files/9%20Right%20of%20Senior%20Citizen_compressed.pdf	
20	12/09/2023	3	Disability and human rights	CHALK AND TALK	https://www.hbrguide.org/2014/03/21/disability-and-human-rights/	
21	20/09/2023	3	tribal human rights in india	CHALK AND TALK	https://socialwastoday.com/rights-of-tribal-communities-in-india/	
22	21/09/2023	3	Three generations of human rights	CHALK AND TALK	https://en.wikipedia.org/wiki/Three_generations_of_human_rights	
23	27/09/2023	3	social awareness for human rights	CHALK AND TALK	https://greenheart.org/blog/greenheart-international-raising-awareness-for-human-rights/	
24	03/10/2023	3	responsibility of individuals	CHALK AND TALK	https://www.ohchr.org/en/instruments-mechanisms/instruments/declaration-right-and-responsible-individuals-groups-and	
Unit 5						
25	09/10/2023	3	rights of women	CHALK AND TALK	https://freemint.org/thematic-research-guides/women-human-rights/	
26	10/10/2023	3	Rights of the Child	CHALK AND TALK	https://www.humanium.org/en/child-rights/	
27	17/10/2023	3	refugees and minorities in rights	CHALK AND TALK	https://www.ohchr.org/sites/default/files/Documents/Publications/Guide%20Minorities%20en.pdf	
28	18/10/2023	3	social media and human rights	CHALK AND TALK	https://m.coe.int/t/1680644579	
29	27/10/2023	3	NGO 'S in protection of human rights	CHALK AND TALK	https://www.humanrightsscreens.com/issues/what-role-do-ngos-play-in-protecting-human-rights/	
30	30/10/2023	3	human rights to election	CHALK AND TALK	https://www.ohchr.org/sites/default/files/Documents/Publications/Human_Rights-and-Elections.pdf	

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Mrs. R. Pavithra

Coordinator

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Head of the Department
S. Ganeshkumar (Gohar)



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ACADEMIC YEAR

2023-2024

Faculty Name

P. ARUNA DEVI PONNUSAMY,

Year/Semester/Section

III/V/All

Degree & Branch

ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

Subject Code & Name

21UA508 & CORE PAPER 8 - MACHINE LEARNING TECHNIQUES

LESSON PLAN

S.No	Date	Hours	Topic	Delivery Method	Links	Book Refered
Unit 1						
1	20/06/2023	3	Introduction to Machine Learning	CE ALK AND TALK	https://www.gatepoint.com/linear-learning/	
2	21/06/2023	3	Types of Machine Learning	CE ALK AND TALK	https://www.gatepoint.com/linear-learning/	
3	21/06/2023	5	Supervised Learning	CE ALK AND TALK	https://www.gatepoint.com/linear-learning/	
4	23/06/2023	1	The Brain and the Neuron	CE ALK AND TALK	https://www.gatepoint.com/artificial-neural-network/	
5	23/06/2023	4	Design a Learning System : Introduction	CE ALK AND TALK	https://www.gatepoint.com/designing-a-learning-system-to-machine-learning/	
6	26/06/2023	4	Design System: Steps	CE ALK AND TALK	https://www.21worlds.com/machine-learning-world/machine-learning-designing-a-learning-system/	
7	26/06/2023	3	Perspectives and Issues in Machine Learning	CE ALK AND TALK	https://www.gatepoint.com/conference-in-machine-learning/	
8	30/06/2023	3	Concept Learning Task	CE ALK AND TALK	https://www.maths-illinois.edu/Mat219/03/ConceptLearning%20to%20learn%20and%20test%20a%20concept%20.html	
9	30/06/2023	5	Concept Learning as Search: Procedure	CE ALK AND TALK	https://www.gatepoint.com/concept-learning-through-hypothesis-space.html	
10	04/07/2023	1	Concept Learning as Search: Example	CE ALK AND TALK	https://www.gatepoint.com/concept-learning-through-hypothesis-space.html	
11	04/07/2023	4	Finding a Maximally Specific Hypothesis	CE ALK AND TALK	https://www.gatepoint.com/concept-learning-through-hypothesis-space.html	
12	05/07/2023	4	Version Spaces	CE ALK AND TALK	https://emmas.umd.edu/~wever/DMM/lectures/lec2.html	
13	07/07/2023	3	Candidate Elimination Algorithm	CE ALK AND TALK	https://www.gatepoint.com/candidate-elimination-algorithm/	
14	10/07/2023	3	Linear Discriminants	CE ALK AND TALK	https://www.gatepoint.com/linear-discriminants.html	
15	10/07/2023	5	Perceptron Introduction	CE ALK AND TALK	https://www.gatepoint.com/perceptron-basics-of-neural-networks-4k620k259.html	
16	12/07/2023	5	Perceptron Example	CE ALK AND TALK	https://www.gatepoint.com/perceptron-basics-of-neural-networks-4k620k259.html	
17	12/07/2023	4	Linear Separability	CE ALK AND TALK	https://www.gatepoint.com/perceptron-basics-of-neural-networks-4k620k259.html	
18	13/07/2023	4	Linear Regression	CE ALK AND TALK	https://www.gatepoint.com/perceptron-basics-of-neural-networks-4k620k259.html	
Unit 2						
19	17/07/2023	2	Linear Models	CE ALK AND TALK	https://www.gatepoint.com/perceptron-basics-of-neural-networks-4k620k259.html	
20	18/07/2023	4	Multi-Layer Perceptron	CE ALK AND TALK	https://www.gatepoint.com/perceptron-basics-of-neural-networks-4k620k259.html	

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Coordinator

Head of the Department

[E. Gopalakrishnan]



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21	18/07/2023	5	Going Forwards	CHALK AND TALK	https://www.analyticsvidhya.com/blog/2021/04/multilayer-perceptron-as-backprop.html	Eibem Alpaydm, Introduction to Machine Learning, 3e (Adaptive Computation and Machine Learning Series), Third Edition, MIT Press, 2014
22	30/07/2023	1	Going Backward propagation	CHALK AND TALK	https://www.analyticsvidhya.com/blog/2021/04/multilayer-perceptron-as-backprop.html	Eibem Alpaydm, Introduction to Machine Learning, 3e (Adaptive Computation and Machine Learning Series), Third Edition, MIT Press, 2014
23	30/07/2023	4	Multi-Layer Perceptron in Practice	CHALK AND TALK	https://www.analyticsvidhya.com/blog/2021/04/multilayer-perceptron-as-backprop.html	Eibem Alpaydm, Introduction to Machine Learning, 3e (Adaptive Computation and Machine Learning Series), Third Edition, MIT Press, 2014
24	31/07/2023	4	Examples of using the MLP	CHALK AND TALK	https://www.analyticsvidhya.com/blog/2021/04/multilayer-perceptron-as-backprop.html	Eibem Alpaydm, Introduction to Machine Learning, 3e (Adaptive Computation and Machine Learning Series), Third Edition, MIT Press, 2014
25	25/07/2023	2	MLP: Overview	CHALK AND TALK	https://www.analyticsvidhya.com/blog/2021/04/multilayer-perceptron-as-backprop.html	Eibem Alpaydm, Introduction to Machine Learning, 3e (Adaptive Computation and Machine Learning Series), Third Edition, MIT Press, 2014
26	26/07/2023	3	Deriving Back-Propagation	CHALK AND TALK	https://www.analyticsvidhya.com/blog/2021/04/multilayer-perceptron-as-backprop.html	Eibem Alpaydm, Introduction to Machine Learning, 3e (Adaptive Computation and Machine Learning Series), Third Edition, MIT Press, 2014
27	26/07/2023	3	Radial Basis Functions	CHALK AND TALK	https://www.analyticsvidhya.com/blog/2021/04/multilayer-perceptron-as-backprop.html	Eibem Alpaydm, Introduction to Machine Learning, 3e (Adaptive Computation and Machine Learning Series), Third Edition, MIT Press, 2014
28	26/07/2023	1	Spline Regression	CHALK AND TALK	https://www.analyticsvidhya.com/blog/2021/04/multilayer-perceptron-as-backprop.html	Eibem Alpaydm, Introduction to Machine Learning, 3e (Adaptive Computation and Machine Learning Series), Third Edition, MIT Press, 2014
29	26/07/2023	4	Concepts: Splines and RBF	CHALK AND TALK	https://www.analyticsvidhya.com/blog/2021/04/multilayer-perceptron-as-backprop.html	Eibem Alpaydm, Introduction to Machine Learning, 3e (Adaptive Computation and Machine Learning Series), Third Edition, MIT Press, 2014
30	31/07/2023	4	RBF Network	CHALK AND TALK	https://www.analyticsvidhya.com/blog/2021/04/multilayer-perceptron-as-backprop.html	Eibem Alpaydm, Introduction to Machine Learning, 3e (Adaptive Computation and Machine Learning Series), Third Edition, MIT Press, 2014
31	02/08/2023	2	Curse of Dimensionality	CHALK AND TALK	https://www.analyticsvidhya.com/blog/2021/04/multilayer-perceptron-as-backprop.html	Eibem Alpaydm, Introduction to Machine Learning, 3e (Adaptive Computation and Machine Learning Series), Third Edition, MIT Press, 2014
32	08/08/2023	1	Curse of Dimensionality : Example problem	CHALK AND TALK	https://www.analyticsvidhya.com/blog/2021/04/multilayer-perceptron-as-backprop.html	Eibem Alpaydm, Introduction to Machine Learning, 3e (Adaptive Computation and Machine Learning Series), Third Edition, MIT Press, 2014
33	08/08/2023	4	Interpolations and Basis Functions	CHALK AND TALK	https://www.analyticsvidhya.com/blog/2021/04/multilayer-perceptron-as-backprop.html	Eibem Alpaydm, Introduction to Machine Learning, 3e (Adaptive Computation and Machine Learning Series), Third Edition, MIT Press, 2014
34	09/08/2023	4	Support Vector Machines: Introduction	CHALK AND TALK	https://www.analyticsvidhya.com/blog/2021/04/multilayer-perceptron-as-backprop.html	Eibem Alpaydm, Introduction to Machine Learning, 3e (Adaptive Computation and Machine Learning Series), Third Edition, MIT Press, 2014
35	11/08/2023	2	Support Vector Machines: Types	CHALK AND TALK	https://www.analyticsvidhya.com/blog/2021/04/multilayer-perceptron-as-backprop.html	Eibem Alpaydm, Introduction to Machine Learning, 3e (Adaptive Computation and Machine Learning Series), Third Edition, MIT Press, 2014
Unit 3						
36	12/08/2023	2	Tree and Probabilistic Models : Introduction	CHALK AND TALK	https://www.analyticsvidhya.com/blog/2021/04/multilayer-perceptron-as-backprop.html	Eibem Alpaydm, Introduction to Machine Learning, 3e (Adaptive Computation and Machine Learning Series), Third Edition, MIT Press, 2014
37	14/08/2023	3	Probabilistic Models	CHALK AND TALK	https://www.analyticsvidhya.com/blog/2021/04/multilayer-perceptron-as-backprop.html	Eibem Alpaydm, Introduction to Machine Learning, 3e (Adaptive Computation and Machine Learning Series), Third Edition, MIT Press, 2014
38	14/08/2023	5	Learning with Trees	CHALK AND TALK	https://www.analyticsvidhya.com/blog/2021/04/multilayer-perceptron-as-backprop.html	Eibem Alpaydm, Introduction to Machine Learning, 3e (Adaptive Computation and Machine Learning Series), Third Edition, MIT Press, 2014
39	17/08/2023	1	Learning with Trees: Example	CHALK AND TALK	https://www.analyticsvidhya.com/blog/2021/04/multilayer-perceptron-as-backprop.html	Eibem Alpaydm, Introduction to Machine Learning, 3e (Adaptive Computation and Machine Learning Series), Third Edition, MIT Press, 2014
40	17/08/2023	4	Constructing Decision Trees	CHALK AND TALK	https://www.analyticsvidhya.com/blog/2021/04/multilayer-perceptron-as-backprop.html	Eibem Alpaydm, Introduction to Machine Learning, 3e (Adaptive Computation and Machine Learning Series), Third Edition, MIT Press, 2014
41	18/08/2023	4	Classification and Regression Trees	CHALK AND TALK	https://www.analyticsvidhya.com/blog/2021/04/multilayer-perceptron-as-backprop.html	Eibem Alpaydm, Introduction to Machine Learning, 3e (Adaptive Computation and Machine Learning Series), Third Edition, MIT Press, 2014
42	21/08/2023	2	Regression Trees	CHALK AND TALK	https://www.analyticsvidhya.com/blog/2021/04/multilayer-perceptron-as-backprop.html	Eibem Alpaydm, Introduction to Machine Learning, 3e (Adaptive Computation and Machine Learning Series), Third Edition, MIT Press, 2014
43	22/08/2023	3	Ensemble Learning	CHALK AND TALK	https://www.analyticsvidhya.com/blog/2021/04/multilayer-perceptron-as-backprop.html	Eibem Alpaydm, Introduction to Machine Learning, 3e (Adaptive Computation and Machine Learning Series), Third Edition, MIT Press, 2014
44	22/08/2023	5	Boosting	CHALK AND TALK	https://www.analyticsvidhya.com/blog/2021/04/multilayer-perceptron-as-backprop.html	Eibem Alpaydm, Introduction to Machine Learning, 3e (Adaptive Computation and Machine Learning Series), Third Edition, MIT Press, 2014
45	24/08/2023	1	Bagging	CHALK AND TALK	https://www.analyticsvidhya.com/blog/2021/04/multilayer-perceptron-as-backprop.html	Eibem Alpaydm, Introduction to Machine Learning, 3e (Adaptive Computation and Machine Learning Series), Third Edition, MIT Press, 2014
46	24/08/2023	4	Different ways to Combine Classifiers	CHALK AND TALK	https://www.analyticsvidhya.com/blog/2021/04/multilayer-perceptron-as-backprop.html	Eibem Alpaydm, Introduction to Machine Learning, 3e (Adaptive Computation and Machine Learning Series), Third Edition, MIT Press, 2014
47	25/08/2023	4	Probability and Learning	CHALK AND TALK	https://www.analyticsvidhya.com/blog/2021/04/multilayer-perceptron-as-backprop.html	Eibem Alpaydm, Introduction to Machine Learning, 3e (Adaptive Computation and Machine Learning Series), Third Edition, MIT Press, 2014
48	30/08/2023	2	Data into Probabilities	CHALK AND TALK	https://www.analyticsvidhya.com/blog/2021/04/multilayer-perceptron-as-backprop.html	Eibem Alpaydm, Introduction to Machine Learning, 3e (Adaptive Computation and Machine Learning Series), Third Edition, MIT Press, 2014

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49	31/08/2023	3	Basic Statistics	CHALK AND TALK	https://www.indeed.com/career-advice/career-development/basic-statistics	1. External Payudu, Introduction to Machine Learning, 3rd Edition, Computer Science Machine Learning Series, Third Edition, MIT Press, 2014.
50	31/08/2023	5	Gaussian Mixture Models	CHALK AND TALK	https://www.google.com/search?q=gaussian-mixture-model/	1. External Payudu, Introduction to Machine Learning, 3rd Edition, Computer Science Machine Learning Series, Third Edition, MIT Press, 2014.
51	02/09/2023	4	Nearest Neighbor Methods	CHALK AND TALK		External Payudu, Introduction to Machine Learning, 3rd Edition, Computer Science Machine Learning Series, Third Edition, MIT Press, 2014.
52	04/09/2023	1	Unsupervised Learning	CHALK AND TALK	https://www.kurupat.com/unsupervised-learning/	
53	04/09/2023	4	K means Algorithms	CHALK AND TALK	https://www.kurupat.com/k-means-clustering-algorithm-machine-learning/	
54	05/09/2023	4	Vector Quantization	CHALK AND TALK	https://www.google.com/search?q=vector-quantization	1. External Payudu, Introduction to Machine Learning, 3rd Edition, Computer Science Machine Learning Series, Third Edition, MIT Press, 2014.
55	06/09/2023	2	Self Organizing Feature Map	BOARD		1. External Payudu, Introduction to Machine Learning, 3rd Edition, Computer Science Machine Learning Series, Third Edition, MIT Press, 2014.

Unit 4

56	11/09/2023	3	Dimensionality Reduction and Evolutionary	CHALK AND TALK		1. External Payudu, Introduction to Machine Learning, 3rd Edition, Computer Science Machine Learning Series, Third Edition, MIT Press, 2014.
57	11/09/2023	5	Dimensionality Reduction	PPT		1. External Payudu, Introduction to Machine Learning, 3rd Edition, Computer Science Machine Learning Series, Third Edition, MIT Press, 2014.
58	13/09/2023	1	Linear Discriminant Analysis	PDF	https://www.kurupat.com/linear-discriminant-analysis-in-machine-learning/	1. External Payudu, Introduction to Machine Learning, 3rd Edition, Computer Science Machine Learning Series, Third Edition, MIT Press, 2014.
59	13/09/2023	4	Locally Linear Embedding	CHALK AND TALK	https://analyticsindiamag.com/a-guide-to-locally-linear-embedding-for-dimensionality-reduction/	1. External Payudu, Introduction to Machine Learning, 3rd Edition, Computer Science Machine Learning Series, Third Edition, MIT Press, 2014.
60	14/09/2023	4	Isomap	CHALK AND TALK	https://bigpicturetype.com/dimension-reduction-with-isomap/	
61	19/09/2023	3	Least Squares Optimization	PDF	https://www.kurupat.com/least-squares-optimization-in-machine-learning/	
62	19/09/2023	5	Evolutionary Learning	PPT	https://www.scip.org/book/1730101_47412.htm	
63	21/09/2023	1	Genetic Algorithms	PPT	https://www.google.com/search?q=genetic-algorithms	
64	21/09/2023	4	Genetic Offspring	CHALK AND TALK	https://www.kurupat.com/genetic-offspring-in-machine-learning/	1. External Payudu, Introduction to Machine Learning, 3rd Edition, Computer Science Machine Learning Series, Third Edition, MIT Press, 2014.
65	23/09/2023	4	Genetic Operators	CHALK AND TALK	https://www.kurupat.com/genetic-operators-in-machine-learning/	External Payudu, Introduction to Machine Learning, 3rd Edition, Computer Science Machine Learning Series, Third Edition, MIT Press, 2014.
66	23/09/2023	4	using Genetic Algorithms	CHALK AND TALK	https://www.kurupat.com/using-genetic-algorithms-in-machine-learning/	
67	26/09/2023	2	Reinforcement Learning : Introduction	CHALK AND TALK	https://www.kurupat.com/reinforcement-learning-in-machine-learning/	
68	27/09/2023	3	Reinforcement learning : examples	CHALK AND TALK	https://www.kurupat.com/reinforcement-learning-examples/	
69	27/09/2023	8	Getting Lost Example1	PDF	https://ml.in.com/machine-learning/curriculum-loss-functions	1. External Payudu, Introduction to Machine Learning, 3rd Edition, Computer Science Machine Learning Series, Third Edition, MIT Press, 2014.
70	04/10/2023	4	Markov Decision Process: Introduction	CHALK AND TALK	https://www.google.com/search?q=markov-decision-process/	
71	04/10/2023	4	Markov Decision Process: Example	CHALK AND TALK	https://www.spryworks.com/ai/machine-learning/articles/markov-decision-process/	

Unit 5

72	05/10/2023	4	LOSS LESS example2	CHALK AND TALK		1. External Payudu, Introduction to Machine Learning, 3rd Edition, Computer Science Machine Learning Series, Third Edition, MIT Press, 2014.
73	07/10/2023	2	Graphical Models	PDF CHALK AND TALK	https://medium.com/machine-learning/graphical-models-98b0a2747949	
74	08/10/2023	3	Markov Chain Monte Carlo Methods	CHALK AND TALK	https://www.spryworks.com/ai/machine-learning/articles/markov-chain-monte-carlo	
75	09/10/2023	3	Markov Chain Monte Carlo Methods: Working principle	CHALK AND TALK	https://www.spryworks.com/ai/machine-learning/articles/markov-chain-monte-carlo	

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76	11/10/2023	1	Sampling	CHALK AND TALK	https://www.geogebra.org/m/sampling-theory/	
77	11/10/2023	4	Sampling Methods	CHALK AND TALK	https://www.ml-science.com/sampling/	
78	12/10/2023	4	Proposal Distribution	CHALK AND TALK	https://www.sciencedirect.com/topics/computer-science/proposal-distribution#:~:text=The%20proposal%20distribution%20deep%20value%20of%20the%20pre%20process%20are	
79	16/10/2023	3	Proposal distribution Methods and uses	CHALK AND TALK	https://www.sciencedirect.com/topics/computer-science/proposal-distribution#:~:text=The%20proposal%20distribution%20deep%20value%20of%20the%20pre%20process%20are	
80	17/10/2023	3	Markov Chain Monte Carlo	CHALK AND TALK	https://mml-science.com/mcmc-chain-monte-carlo-for-probability/	
81	17/10/2023	5	Markov Chain Monte Carlo: uses and example	CHALK AND TALK	https://mml-science.com/mcmc-chain-monte-carlo-uses-and-example/	
82	19/10/2023	1	Graphical Models	CHALK AND TALK	https://www.geogebra.org/m/graphical-models	
83	19/10/2023	4	Graphical Models: Example	CHALK AND TALK	https://www.geogebra.org/m/graphical-models	
84	20/10/2023	4	Bayesian Networks	CHALK AND TALK	https://www.javapoint.com/bayesian-belief-network-to-artificial-intelligence	
85	26/10/2023	3	Bayesian Networks: Types	CHALK AND TALK	https://www.javapoint.com/bayesian-belief-network-to-artificial-intelligence	
86	26/10/2023	5	Markov Random Fields	CHALK AND TALK	https://mml-science.com/mcmc-chain-monte-carlo-for-probability/	
87	30/10/2023	1	Hidden Markov Models	CHALK AND TALK	https://mml-science.com/mcmc-chain-monte-carlo-for-probability/	
88	30/10/2023	4	Hidden Markov Models	CHALK AND TALK	https://mml-science.com/mcmc-chain-monte-carlo-for-probability/	
89	31/10/2023	4	Tracking Methods*	CHALK AND TALK	https://medium.com/emergent-matters/5-object-tracking-techniques-971643f84355	

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ACADEMIC YEAR

2023-2024

Faculty Name

PAVITHRA R.

Year/Semester/Section

III/V/All

Degree & Branch

ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

Subject Code & Name

21UA1510 & CORE PAPER 10 - FOUNDATIONS OF ROBOTICS

Sl. No.	Topic	Unit	Sub-Topic	Unit	Sub-Topic
1	Introduction	Unit 1	Introduction	Unit 1	Introduction
2	Basic components of robot	Unit 1	Basic components of robot	Unit 1	Basic components of robot
3	Law of robotics	Unit 1	Law of robotics	Unit 1	Law of robotics
4	Classification of robot	Unit 1	Classification of robot	Unit 1	Classification of robot
5	robot anatomy	Unit 1	robot anatomy	Unit 1	robot anatomy
6	explain the concept of joints and links	Unit 1	explain the concept of joints and links	Unit 1	explain the concept of joints and links
7	different types of robot	Unit 1	different types of robot	Unit 1	different types of robot
8	workspace of robotics	Unit 1	workspace of robotics	Unit 1	workspace of robotics
9	accuracy and resolution	Unit 1	accuracy and resolution	Unit 1	accuracy and resolution
10	repeatability and robot	Unit 1	repeatability and robot	Unit 1	repeatability and robot
11	robot to linear motion	Unit 1	robot to linear motion	Unit 1	robot to linear motion
12	POWER TRANSMISSION	Unit 1	POWER TRANSMISSION	Unit 1	POWER TRANSMISSION
13	classification of gears	Unit 1	classification of gears	Unit 1	classification of gears
14	ROTARY TO ROTARY MOTION	Unit 1	ROTARY TO ROTARY MOTION	Unit 1	ROTARY TO ROTARY MOTION
15	HARMONIC DRIVES	Unit 1	HARMONIC DRIVES	Unit 1	HARMONIC DRIVES
16	GEAR TRAINS	Unit 1	GEAR TRAINS	Unit 1	GEAR TRAINS
17	EXPLAIN THE DIAGRAM OF GEAR TRAINS	Unit 1	EXPLAIN THE DIAGRAM OF GEAR TRAINS	Unit 1	EXPLAIN THE DIAGRAM OF GEAR TRAINS
18	ROBOT END EFFECTORS	Unit 2	ROBOT END EFFECTORS	Unit 2	ROBOT END EFFECTORS
19	PRACTICAL USAGES OF THE END EFFECTORS	Unit 2	PRACTICAL USAGES OF THE END EFFECTORS	Unit 2	PRACTICAL USAGES OF THE END EFFECTORS
20	TYPES OF END EFFECTORS	Unit 2	TYPES OF END EFFECTORS	Unit 2	TYPES OF END EFFECTORS
21	ROBOTIC PROCESS TOOLS OF APPLICATION	Unit 2	ROBOTIC PROCESS TOOLS OF APPLICATION	Unit 2	ROBOTIC PROCESS TOOLS OF APPLICATION
22	APPLICATION FOR END EFFECTORS	Unit 2	APPLICATION FOR END EFFECTORS	Unit 2	APPLICATION FOR END EFFECTORS
23	DRIVE SYSTEM IN ROBOTS	Unit 2	DRIVE SYSTEM IN ROBOTS	Unit 2	DRIVE SYSTEM IN ROBOTS
24	DRIVE SYSTEM FOR GRIPPERS	Unit 2	DRIVE SYSTEM FOR GRIPPERS	Unit 2	DRIVE SYSTEM FOR GRIPPERS
25	APPLICATION FOR DRIVE SYSTEM	Unit 2	APPLICATION FOR DRIVE SYSTEM	Unit 2	APPLICATION FOR DRIVE SYSTEM
26	ADVANTAGES AND DIS ADVANTAGES OF ELECTRIC DRIVE SYSTEM	Unit 2	ADVANTAGES AND DIS ADVANTAGES OF ELECTRIC DRIVE SYSTEM	Unit 2	ADVANTAGES AND DIS ADVANTAGES OF ELECTRIC DRIVE SYSTEM
27	MECHANICAL GRIPPERS IN ROBOTICS	Unit 2	MECHANICAL GRIPPERS IN ROBOTICS	Unit 2	MECHANICAL GRIPPERS IN ROBOTICS
28	TYPES OF MECHANICAL GRIPPERS IN ROBOTICS	Unit 2	TYPES OF MECHANICAL GRIPPERS IN ROBOTICS	Unit 2	TYPES OF MECHANICAL GRIPPERS IN ROBOTICS
29	WHAT IS GRIPPERS FORCE	Unit 2	WHAT IS GRIPPERS FORCE	Unit 2	WHAT IS GRIPPERS FORCE
30	ANALYSIS AND GRIPPER DESIGN IN ROBOTICS	Unit 2	ANALYSIS AND GRIPPER DESIGN IN ROBOTICS	Unit 2	ANALYSIS AND GRIPPER DESIGN IN ROBOTICS
31	GRIPPER AND DESIGN	Unit 2	GRIPPER AND DESIGN	Unit 2	GRIPPER AND DESIGN

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16	16K02013	1	SPECIAL PURPOSE OF GRIPPERS	CHALK 4.07 YAL	https://www.researchgate.net/publication/310707939/pdf	
17	16K02014	1	SPECIAL GRIPPERS	CHALK 4.07 YAL	https://www.researchgate.net/publication/310707939/pdf	
18	16K02015	1	OTHER TYPES OF GRIPPERS	CHALK 4.07 YAL	https://www.researchgate.net/publication/310707939/pdf	
Unit 3						
19	16K02016	1	INTRODUCTION TO KINEMATICS	CHALK 4.07 YAL	https://www.researchgate.net/publication/310707939/pdf	
20	16K02017	1	Kinematic equations	CHALK 4.07 YAL	https://www.researchgate.net/publication/310707939/pdf	
21	16K02018	1	Velocity and speed in kinematics	CHALK 4.07 YAL	https://www.researchgate.net/publication/310707939/pdf	
22	16K02019	1	acceleration formula kinematics	CHALK 4.07 YAL	https://www.researchgate.net/publication/310707939/pdf	
23	16K02020	1	Matrix representation IN KINEMATICS	CHALK 4.07 YAL	https://www.researchgate.net/publication/310707939/pdf	
24	16K02021	1	Representation of a frame at the origin of a fixed reference frame	CHALK 4.07 YAL	https://www.researchgate.net/publication/310707939/pdf	
25	16K02022	1	representation of a rigid body in kinematics	CHALK 4.07 YAL	https://www.researchgate.net/publication/310707939/pdf	
26	16K02023	1	homogeneous transformation matrix	CHALK 4.07 YAL	https://www.researchgate.net/publication/310707939/pdf	
27	16K02024	1	Representation of pure translation in kinematics	CHALK 4.07 YAL	https://www.researchgate.net/publication/310707939/pdf	
28	16K02025	1	KINEMATICS RIGID MOTION	CHALK 4.07 YAL	https://www.researchgate.net/publication/310707939/pdf	
29	16K02026	1	A contextual look in kinematics	CHALK 4.07 YAL	https://www.researchgate.net/publication/310707939/pdf	
30	16K02027	1	homogeneous transformation in robot kinematics	CHALK 4.07 YAL	https://www.researchgate.net/publication/310707939/pdf	
31	16K02028	1	forward in robot kinematics	CHALK 4.07 YAL	https://www.researchgate.net/publication/310707939/pdf	
32	16K02029	1	Inverse kinematics	CHALK 4.07 YAL	https://www.researchgate.net/publication/310707939/pdf	
33	16K02030	1	trajectory planning in robotics	CHALK 4.07 YAL	https://www.researchgate.net/publication/310707939/pdf	
34	16K02031	1	introduction of robot dynamics	CHALK 4.07 YAL	https://www.researchgate.net/publication/310707939/pdf	
35	16K02032	1	Manipulator dynamics	CHALK 4.07 YAL	https://www.researchgate.net/publication/310707939/pdf	
36	16K02033	1	clerk foundation	CHALK 4.07 YAL	https://www.researchgate.net/publication/310707939/pdf	
Unit 4						
37	16K02034	1	machine vision	CHALK 4.07 YAL	https://www.researchgate.net/publication/310707939/pdf	
38	16K02035	1	image acquisition in robotics	CHALK 4.07 YAL	https://www.researchgate.net/publication/310707939/pdf	
39	16K02036	1	Components of Image Acquisition	CHALK 4.07 YAL	https://www.researchgate.net/publication/310707939/pdf	
40	16K02037	1	digital images in robotics	CHALK 4.07 YAL	https://www.researchgate.net/publication/310707939/pdf	
41	16K02038	1	Applications of image processing	CHALK 4.07 YAL	https://www.researchgate.net/publication/310707939/pdf	
42	16K02039	1	Sampling & Quantization in Digital Image Processing	CHALK 4.07 YAL	https://www.researchgate.net/publication/310707939/pdf	
43	16K02040	1	Difference between Image Sampling and Quantization	CHALK 4.07 YAL	https://www.researchgate.net/publication/310707939/pdf	
44	16K02041	1	Feature Extraction in Image Processing	CHALK 4.07 YAL	https://www.researchgate.net/publication/310707939/pdf	
45	16K02042	1	Segmentation for Robots	CHALK 4.07 YAL	https://www.researchgate.net/publication/310707939/pdf	
46	16K02043	1	windowing technique	CHALK 4.07 YAL	https://www.researchgate.net/publication/310707939/pdf	
47	16K02044	1	segmentation techniques	CHALK 4.07 YAL	https://www.researchgate.net/publication/310707939/pdf	
48	16K02045	1	Thresholding Based Image Segmentation	CHALK 4.07 YAL	https://www.researchgate.net/publication/310707939/pdf	
49	16K02046	1	Edge detection robot	CHALK 4.07 YAL	https://www.researchgate.net/publication/310707939/pdf	
50	16K02047	1	https://www.researchgate.net/publication/310707939/pdf	CHALK 4.07 YAL	https://www.researchgate.net/publication/310707939/pdf	
51	16K02048	1	morphological development in a robot	CHALK 4.07 YAL	https://www.researchgate.net/publication/310707939/pdf	
52	16K02049	1	https://www.researchgate.net/publication/310707939/pdf	CHALK 4.07 YAL	https://www.researchgate.net/publication/310707939/pdf	
53	16K02050	1	Stereo Reconstruction	CHALK 4.07 YAL	https://www.researchgate.net/publication/310707939/pdf	
54	16K02051	1	alternative resolution of Stereo Reconstruction	CHALK 4.07 YAL	https://www.researchgate.net/publication/310707939/pdf	
Unit 5						
55	16K02052	1	Different Types of Robot Programming Languages	CHALK 4.07 YAL	https://www.researchgate.net/publication/310707939/pdf	
56	16K02053	1	Robotic Programming Languages	CHALK 4.07 YAL	https://www.researchgate.net/publication/310707939/pdf	
57	16K02054	1	HARDWARE DESCRIPTION LANGUAGES	CHALK 4.07 YAL	https://www.researchgate.net/publication/310707939/pdf	

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Head of the Department
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64	18/03/2023	4	classification of robot languages	CHAL AND TALE	https://www.youtube.com/watch?v=...	
65	18/03/2023	4	computer control and robot software	CHAL AND TALE	https://www.youtube.com/watch?v=...	
66	18/03/2023	4	val system and languages	CHAL AND TALE	https://www.youtube.com/watch?v=...	
67	18/03/2023	4	val system and languages commands	CHAL AND TALE	https://www.youtube.com/watch?v=...	
68	18/03/2023	4	Robotics Motion Control	CHAL AND TALE	https://www.youtube.com/watch?v=...	
69	18/03/2023	4	Hand Motion Controlled Robotic	CHAL AND TALE	https://www.youtube.com/watch?v=...	
70	18/03/2023	4	program control	CHAL AND TALE	https://www.youtube.com/watch?v=...	
71	18/03/2023	4	What is Pick and Place Robot	CHAL AND TALE	https://www.youtube.com/watch?v=...	
72	18/03/2023	4	pickelizing application using val	CHAL AND TALE	https://www.youtube.com/watch?v=...	
73	18/03/2023	4	robot welding application using val program	CHAL AND TALE	https://www.youtube.com/watch?v=...	
74	18/03/2023	4	rapid language	CHAL AND TALE	https://www.youtube.com/watch?v=...	
75	18/03/2023	4	RAPID instructions, Functions and Data types	CHAL AND TALE	https://www.youtube.com/watch?v=...	
76	18/03/2023	4	basic commands virtual robotics	CHAL AND TALE	https://www.youtube.com/watch?v=...	
77	18/03/2023	4	what is val in robotics	CHAL AND TALE	https://www.youtube.com/watch?v=...	
78	18/03/2023	4	IL AND AML in robotics	CHAL AND TALE	https://www.youtube.com/watch?v=...	
79	18/03/2023	4	application of robotics	CHAL AND TALE	https://www.youtube.com/watch?v=...	
Unit						
80	18/03/2023	4				
81	18/03/2023	4				

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LESSON PLAN

ACADEMIC YEAR : 2023-2024
Faculty Name : GOMATHI S,
Year/Semester/Section : III/V/All
Degree & Branch : ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING
Subject Code & Name : 21UAI5E1 & MAJOR ELECTIVE PAPER 1 - DATA ANALYTICS AND VISUALIZATION

S.No	Date	Hours	Topics	Delivery Methods	Links	Book Refered
Unit 1						
1	19/06/2023	2	Data Representation, Data Objects and Attribute Type - Nominal, Binary, Ordinal	CHALK AND TALK		
2	20/06/2023	1	Attribute Types - Numeric, Discrete, Continuous	CHALK AND TALK		
3	22/06/2023	3	Types of data - Record, Temporal	CHALK AND TALK		
4	22/06/2023	4	Types of data - Spatial Temporal - Examples	CHALK AND TALK		
5	23/06/2023	3	Types of data - Graph - Examples	CHALK AND TALK	https://classroom.google.com/NT12MTQwMDYwMTcy/czNT12MTQwMDY3S0TU1/details	
6	27/06/2023	2	Types of data - Structured - Examples	CHALK AND TALK	https://classroom.google.com/NT12MTQwMDYwMTcy/czNT12MTQwMDY3S0TU1/details	
7	28/06/2023	1	Types of data - UnStructured - Examples	CHALK AND TALK	https://classroom.google.com/NT12MTQwMDYwMTcy/czNT12MTQwMDY3S0TU1/details	
8	03/07/2023	3	Types of data - Semi Structured - Examples	CHALK AND TALK	https://classroom.google.com/NT12MTQwMDYwMTcy/czNT12MTQwMDY3S0TU1/details	
9	03/07/2023	4	Basic Statistical Descriptions of Data - Mean, Median	CHALK AND TALK	https://classroom.google.com/NT12MTQwMDYwMTcy/czNT12MTQwMDY3S0TU1/details	
10	04/07/2023	3	Basic Statistical Description - Mode, Midrange - Examples	CHALK AND TALK	https://classroom.google.com/NT12MTQwMDYwMTcy/czNT12MTQwMDY3S0TU1/details	
11	06/07/2023	2	Basic Statistical Description of Data - Variance, Standard Deviation	CHALK AND TALK	https://classroom.google.com/NT12MTQwMDYwMTcy/czNT12MTQwMDY3S0TU1/details	
12	07/07/2023	1	Basic Statistical Description of data - Range, Quartile	CHALK AND TALK	https://classroom.google.com/NT12MTQwMDYwMTcy/czNT12MTQwMDY3S0TU1/details	
13	11/07/2023	3	Basic Statistical Description of data - Inter Quartile Range	CHALK AND TALK	https://classroom.google.com/NT12MTQwMDYwMTcy/czNT12MTQwMDY3S0TU1/details	
14	11/07/2023	4	Basic Statistical Description of data - Five number summary, Boxplots	CHALK AND TALK	https://classroom.google.com/NT12MTQwMDYwMTcy/czNT12MTQwMDY3S0TU1/details	
15	12/07/2023	3	Basic Statistical Description of data - Outliers	CHALK AND TALK	https://classroom.google.com/NT12MTQwMDYwMTcy/czNT12MTQwMDY3S0TU1/details	
Unit 2						
16	14/07/2023	2	Introduction to data analysis - Probability and Random variables	PPT	https://www.slideshare.net/NishitGupta26/probability-14162361	
17	17/07/2023	1	Correlation Analysis - Types of Correlation	PPT	https://www.slideshare.net/ashmit2941799/correlation-ppt	



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18	19/07/2023	3	Correlation Analysis - Methods of Studying Correlation	PPT	https://www.slideshare.net/hnmt3904/1990/correlation-ppt	
19	19/07/2023	4	Regression Analysis - Definition, Types of Regression and Uses	PPT	https://www.slideshare.net/CEtknmt/regression-analysis-ppt	
20	20/07/2023	3	Data Preprocessing - Data Cleaning and Data Integration	PPT	https://www.slideshare.net/ankurh/dca-preprocessing-31623210	
21	24/07/2023	2	Data Preprocessing - Data Transformation	PPT	https://www.slideshare.net/ankurh/data-preprocessing-31623210	
22	25/07/2023	1	Data Preprocessing - Data Reduction	PPT	https://www.slideshare.net/ankurh/data-preprocessing-31623210	
23	27/07/2023	3	Dimensionality Reduction - Introduction	PPT	https://www.slideshare.net/nirxan969/dimensionality-reduction	
24	27/07/2023	4	Dimensionality Reduction - Wavelet Transforms	PPT	https://www.slideshare.net/nirxan969/dimensionality-reduction	
25	28/07/2023	3	Dimensionality Reduction - Principal Component Analysis	PPT	https://www.slideshare.net/nirxan969/dimensionality-reduction	
26	01/08/2023	2	Multidimensional Scaling	PPT	https://www.slideshare.net/crtimg/multidimensional-scaling1	
27	02/08/2023	1	Graph based Semi-supervised learning	VIDEOS	https://slidesplayer.com/slide/5201939/	
28	07/08/2023	3	Feature Subset Selection	PDF		
29	07/08/2023	4	Distance and Similarity Calculation	PPT	https://slidesplayer.com/slide/5993529/	
30	08/08/2023	3	Distance and Similarity calculation	PPT		
Unit 3						
31	10/08/2023	2	Data Mining for Analysis Classification - Decision Tree Induction	PPT		
32	11/08/2023	1	Decision tree induction - Simple Example	PPT		
33	12/08/2023	1	Bayes Classification	PPT	https://www.slideshare.net/subheshw/bayes-classification-83124063	
34	16/08/2023	3	Rule based Classification	PPT	https://www.slideshare.net/Krish_ver274/rule-based-classification	
35	16/08/2023	4	Support Vector Machines	PPT	https://www.eclutorio.edu/~hanton/csc251/5notes/lec1bsvm.ppt	
36	17/08/2023	3	Support Vector Machines	PPT	https://www.slideshare.net/JunaidKhan281/support-vector-machines-with-85590627	
37	19/08/2023	2	Classification using Frequent patterns	PPT	https://www.slideshare.net/pashon1435/mining-frequent-patterns	
38	21/08/2023	1	Classification using frequent patterns	PPT	https://www.slideshare.net/OSSR/a-classification-of-methods-for-frequent-pattern-mining	
39	23/08/2023	3	K Nearest Neighbor	PPT	https://www.slideshare.net/rlimgpratik/nearest-neighbor	
40	23/08/2023	4	Fuzzy Set Approach Classifier	PPT	https://www.slideshare.net/danurcel/fuzzy-set	
41	24/08/2023	3	K Means Clustering	PPT	https://www.slideshare.net/pauryprabhu/k-means-clustering-algorithm	
42	28/08/2023	2	K Medoid Clustering	PPT	https://www.slideshare.net/Rashan86572k-medoid-clustering-pptx	
43	30/08/2023	1	Agglomerative Clustering	PPT	http://www.slideshare.net/Chaitoxh/agglomerative-clustering-5654612	



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44	01/09/2023	3	Divisive Clustering	PPT	https://www.slideserve.com/alyse/cue-head-amp-divisive-clustering-ppt-zipoint-ppt-presentation	
45	01/09/2023	4	Mean Shift Clustering	PPT	https://www.slideshare.net/xyxyngb/mean-shift-and-hierarchical-clustering	

Unit 4

46	04/09/2023	3	Traditional Data Visualization	CHALK AND TALK	https://www.bahau.com/en/articles/data-visualization	
47	07/09/2023	2	Multivariate Data Visualization	PPT	https://www.slideshare.net/valish/multivariate-data-visualization	
48	08/09/2023	1	Principles of Perception Color	PPT	https://www.slideshare.net/linquay/perception-principle-and-application	
49	12/09/2023	3	Principles of Perception Color	VIDEOS	https://bitplayer.com/slides/4178928/	
50	12/09/2023	4	Design and Evaluation	PPT	https://bitplayer.com/slides/4178928/	
51	13/09/2023	3	Text Data Visualization	PPT	https://www.slideshare.net/linquay/pm/text-visualization	
52	15/09/2023	2	Text Data Visualization	PPT	https://www.slideshare.net/SeonGrines/text-mining-and-visualization-4327750	
53	20/09/2023	3	Text Data Visualization	PDF	https://imgprovala.github.io/cv448b-f20/notes/slides/Lect16-text%20V2.pdf	
54	20/09/2023	4	Network Data Visualization	PPT	https://www.slideshare.net/dmuc201707-network-visualization	
55	21/09/2023	3	Network Data Visualization	PPT	https://www.cs.ubc.ca/~immo/courses/eps533c-04-spr/slides/0331/amlsh.ppt	
56	25/09/2023	2	Network data Visualization	PPT	https://www.slideshare.com/valish/introduction-to-network-analysis-ppt-presentation	
57	26/09/2023	1	Temporal Data Visualization	PPT	http://www.slideshare.net/whines/ocelly-webcast-about-temporal-data-visualization-44418266	
58	03/10/2023	3	Temporal Data Visualization	PPT	http://www.slideshare.net/UltimeeMedicineCofdata-visualizationppt	
59	03/10/2023	4	Temporal Data Visualization	ONLINE LINK	https://www.kaggle.com/valish/ppt-to-data-visualization	
60	04/10/2023	3	Visualization - Case Studies	LINK	https://medium.com/globish/data-visualization-studies-b7a1	
61	06/10/2023	2	Visualization - Case Studies	ONLINE LINK	https://www.datacamp.com/courses/analysis	
62	07/10/2023	1	Visualization - Case Studies	ONLINE LINK	https://www.opul.com/designer/data-visualization/guide-data-visualization-case-study	
63	10/10/2023	3	Visualization - Case Studies	ONLINE LINK	https://www.lumenview.com/case-studies/data-visualization/	
64	10/10/2023	4	Network Data Visualization - Case Study	PDF	https://www.jsape.jsape.jp/article/data/23/4/22_99.pdf	
65	11/10/2023	3	Text data Visualization	LINK	https://doi.org/10.1016/j.chaos.2019.109720	

Unit 5

66	13/11/2023	2	Implementation of data analytics techniques - Introduction	ONLINE LINK	https://www.simplilearn.com/data-analysis-methods-process-types-article	
67	16/10/2023	1	Implementation of data analytics - Classification in R	ONLINE LINK	https://activdynam.com/tutorial/classification-in-r/	



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68	18/10/2023	3	Classification model in R	ONLINE LINK	https://www.pluralsight.com/guides/building-classification-models-in-r	
69	18/10/2023	4	Classification in R	ONLINE LINK	https://datatopics.github.io/rd4u/classification.html	
70	19/10/2023	3	Clustering model using R	ONLINE LINK	https://www.kdnuggets.com/2018/05/clustering.html	
71	21/10/2023	2	How to perform clustering in R with K Means algorithm	ONLINE LINK	https://www.youtube.com/watch?v=5mthjyM2NE	
72	27/10/2023	3	K Means clustering With Example	ONLINE LINK	https://www.guru99.com/k-means-clustering.html	
73	27/10/2023	4	How to perform hierarchical clustering with R	VIDEOS	https://www.youtube.com/watch?v=6y8Xtbt0SVM	
74	30/10/2023	3	Hierarchical Clustering Using R	VIDEOS	https://www.youtube.com/watch?v=jnDvH0YpK	



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LESSON PLAN

ACADEMIC YEAR : 2023-2024
Faculty Name : PAVITHRA R.
Year/Semester/Section : III/V/All
Degree & Branch : ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING
Subject Code & Name : 21UA15X1 & EDC PAPER - MOBILE APPLICATION DEVELOPMENT

S.No	Date	Hours	Topic(s)	Delivery Methods	Links	Book Refered
Unit 1						
1	19/06/2023	3	what is android	CHALK AND TALK	https://www.techtarget.com/searchmobilecomputing/definition/Android-OS	
2	20/06/2023	3	Obtaining the required tools	CHALK AND TALK	https://www.litortalspoint.com/android/android_developer_tools.htm	
3	27/06/2023	3	creating your first android application	CHALK AND TALK	https://developer.android.com/code-labs/basic-android-kotlin-compose-first-app#1	
4	28/06/2023	3	exploring IDE using code completion	CHALK AND TALK	https://www.reddit.com/r/androiddev/comments/proqf7/how_to_implement_code_completion_for_android/?t=53609	
5	06/07/2023	3	debugging your application	CHALK AND TALK	https://medium.com/android-developers/debugging-in-android-studio-dfb3a8d03c	
6	07/07/2023	3	Generating a signed APK	CHALK AND TALK	https://www.geeksforgeeks.org/how-to-generate-signed-apk-in-android-studio/	
Unit 2						
7	14/07/2023	3	ANDROID USER INTERFACE COMPONENTS OF A SCREEN	CHALK AND TALK	https://developer.android.com/guide/topics/media/expressyour/ui-components	
8	17/07/2023	3	ADAPTING TO DISPLAY ORIENTATION	CHALK AND TALK	https://www.geeksforgeeks.org/screen-orientations-in-android-with-examples/	
9	24/07/2023	3	MANAGING CHANGES TO SCREEN ORIENTATION	CHALK AND TALK	https://developer.mozilla.org/en-US/docs/Web/API/CSS_Object_Model/Managing_screen_orientation	
10	25/07/2023	3	UTILIZING THE ACTION BAR	CHALK AND TALK	https://www.c-sharpcorner.com/article/creating-the-action-bar-in-android-application/	
11	01/08/2023	3	CREATING THE USER INTERFACE PROGRAMMATICALLY	CHALK AND TALK	https://www.c-sharpcorner.com/article/create-user-interface-programmatically-in-android-application/	
12	02/08/2023	3	LISTENING FOR UI NOTIFICATION	CHALK AND TALK	https://www.wideklips.com/android/building-user-interface/listening-to-ui-notifications-in-android/	
Unit 3						
13	10/08/2023	3	user interface with views	CHALK AND TALK	https://www.c-sharpcorner.com/article/designing-user-interface-with-views-in-android-application/	

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Faculty Signature

R. R.
[Mrs. R. Pavithra]

Coordinator

S. G.
[S. Gnanapriya]

Head of the Department



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14	11/08/2023	3	BASIC VIEWS IN ANDROID	CHALK AND TALK	https://www.bornotech.com/android-audio-basics-views/	
15	12/08/2023	3	using picker views in android	CHALK AND TALK	https://developer.android.com/develop/ui/views/components/pickers	
16	19/08/2023	3	USING LIST VIEWS TO DISPLAY LONG LIST IN ANDROID	CHALK AND TALK	https://www.vogella.com/tutorials/AndroidListView/article.html	
17	21/08/2023	3	Android - Fragments	CHALK AND TALK	https://www.tutorialspoint.com/android/android_fragments.htm	
18	28/08/2023	3	PICTURES AND MENUS WITH VIEWS IN ANDROID	CHALK AND TALK	https://www.uobabylon.edu.iq/eprints/publication_1_4572_670.pdf	

Unit 4

19	30/08/2023	3	Content providers	CHALK AND TALK	https://developer.android.com/guide/topics/providers/content-providers#content=Content%20providers%20are%20the%20standard%20interface%20for%20figure%201	
20	07/09/2023	3	using content provider in android	CHALK AND TALK	https://www.geeksforgeeks.org/content-providers-in-android-with-example	
21	08/09/2023	3	Create Your Own Content Provider in Android	CHALK AND TALK	https://www.sitepoint.com/create-your-own-content-provider-in-android/	
22	15/09/2023	3	messaging in android	CHALK AND TALK	https://www.tutorialspoint.com/android/android_sending_sms.htm	
23	25/09/2023	3	sms messaging in android	CHALK AND TALK	https://www.javatpoint.com/how-to-send-sms-in-android	
24	26/09/2023	3	Android - Sending Email	CHALK AND TALK	https://www.tutorialspoint.com/android/android_sending_email.htm	

Unit 5

25	06/10/2023	3	developing android service in android	CHALK AND TALK	https://www.javatpoint.com/android-service-tutorial	
26	07/10/2023	3	Creating a Service in Android	CHALK AND TALK	https://stackoverflow.com/questions/4360074/creating-a-service-in-android	
27	13/10/2023	3	establishing communication between a service and an activity	CHALK AND TALK	https://stackoverflow.com/android-service-activity-communication	
28	16/10/2023	3	Different Ways of Communicating between Activity and Service	CHALK AND TALK	https://medium.com/the-six-india-blog/ways-to-communicate-between-activity-and-service-6a8107252927	
29	21/10/2023	3	binding activities to service	CHALK AND TALK	https://stackoverflow.com/questions/1916253/bind-service-to-activity-in-android	

Faculty Signature
[Mrs. K. Pavithra]

Coordinator

Head of the Department
[S. Ganesh & G. G. G. G. G.]



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LESSON PLAN

ACADEMIC YEAR : 2023-2024
Faculty Name : DR. GOMATHI ALIAS ROHINI MOHANAVEL,
Year/Semester/Section : I/II/All
Degree & Branch : ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING
Subject Code & Name : 23UA1202 & CORE PAPER 2 - JAVA PROGRAMMING

S.No	Date	Topics	Delivery Methods	Links	Book Referred
Unit 1					
1	05/12/2023	Fundamentals of Object-Oriented Programming: Object-Oriented Paradigm	CHALK AND TALK LINK	https://www.adobe.com/jp/java/jitroapp	
2	06/12/2023	Basic Concepts of Object Oriented Programming	CHALK AND TALK LINK	https://www.tutorialspoint.com/java/oo-concepts	
3	07/12/2023	Benefits of Object-Oriented Programming	CHALK AND TALK LINK	https://codingo.in/learn/java/benefits-of-oo-programming/	
4	08/12/2023	Application of Object-Oriented Programming	CHALK AND TALK LINK	https://www.softgigs.in/online/tutorial/application-of-oo-programming/	
5	10/12/2023	Java Evolution: History	CHALK AND TALK LINK	https://www.javatips.com/evolution-of-java/	
6	13/12/2023	Java Features	CHALK AND TALK LINK	https://www.javatips.com/evolution-of-java/	
7	14/12/2023	How Java differs from C and C++	CHALK AND TALK LINK	https://www.javatips.com/evolution-of-java/	
8	15/12/2023	Java and Internet	CHALK AND TALK LINK	https://www.javatips.com/evolution-of-java/	
9	18/12/2023	Java and WWW	CHALK AND TALK LINK	https://www.javatips.com/evolution-of-java/	
10	19/12/2023	Web Browsers	CHALK AND TALK LINK	https://www.javatips.com/evolution-of-java/	
11	20/12/2023	Overview of Java: Simple Java program	CHALK AND TALK LINK	https://www.javatips.com/evolution-of-java/	
12	22/12/2023	Java Structure	CHALK AND TALK LINK	https://www.javatips.com/evolution-of-java/	
13	26/12/2023	Java Tokens	CHALK AND TALK LINK	https://www.javatips.com/evolution-of-java/	
14	27/12/2023	Statements	CHALK AND TALK LINK	https://www.javatips.com/evolution-of-java/	
15	02/01/2024	Java Virtual Machine	CHALK AND TALK LINK	https://www.javatips.com/evolution-of-java/	
16	03/01/2024	Decision Making and Branching: if...else	CHALK AND TALK LINK	https://www.javatips.com/evolution-of-java/	
Unit 2					
17	04/01/2024	Constants, Variables, Data Types	CHALK AND TALK LINK	https://www.javatips.com/evolution-of-java/	
18	08/01/2024	Constants, Variables, Data Types	CHALK AND TALK LINK	https://www.javatips.com/evolution-of-java/	
19	09/01/2024	Operators and Expressions	CHALK AND TALK LINK	https://www.javatips.com/evolution-of-java/	



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20	10/01/2024	4	Operators and Expressions	CHALK AND TALK LINK	https://docs.oracle.com/javase/tutorial/java/nutsandbolts/expressions.html#--text=And%20expression%20is%20the%20normal%20way%20to%20write%20an%20if%20statement
21	11/01/2024	2	Operators and Expressions	PPT LINK	
22	12/01/2024	3	Decision Making and Branching: if,	CHALK AND TALK	https://www.w3schools.com/js/conddecision-making
23	23/01/2024	2	Decision Making and Branching: nested if,	CHALK AND TALK LINK	https://www.javapoint.com/code-decision-making
24	24/01/2024	2	switch? : Operator	CHALK AND TALK LINK	https://www.w3schools.com/js/psw_switch.asp
25	27/01/2024	3	Decision Making and Looping: while	CHALK AND TALK LINK	https://www.w3schools.com/js/psw_while_loop.asp
26	29/01/2024	4	Decision Making and Looping: do	CHALK AND TALK LINK	https://www.javapoint.com/jsw-do-while-loop
27	30/01/2024	1	for – Jumps in Loops - Labeled Loops	CHALK AND TALK LINK	https://www.javapoint.com/labeled-loop-in-java
28	31/01/2024	4	Classes, Objects and Methods.	CHALK AND TALK LINK	https://www.w3schools.com/js/swf_java_classes.asp
29	01/02/2024	2	Classes, Objects and Methods.	CHALK AND TALK LINK	https://www.javapoint.com/object-and-class-in-java
30	02/02/2024	3	Classes, Objects and Methods.	CHALK AND TALK LINK	https://www.w3schools.com/js/swf_java_class_methods.asp

Unit 3

31	03/02/2024	1	Arrays, Strings and Vectors	CHALK AND TALK	https://www.javapoint.com/javas-string	
32	05/02/2024	2	Arrays, Strings and Vectors	CHALK AND TALK LINK	https://www.javapoint.com/javas-vector	
33	06/02/2024	4	Interfaces: Multiple Inheritance	CHALK AND TALK	https://www.javapoint.com/multiple-inheritance-in-java	
34	07/02/2024	1	Interfaces: Multiple Inheritance	PPT	https://www.scribd.com/pdfs/multiple-inheritance-in-java?ref=print&from_view=viewer&from_embed=1&from_open_with=1	
35	09/02/2024	4	Interfaces: Multiple Inheritance	PPT	https://www.scribd.com/document/79161616/multiple-inheritance-in-java	
36	12/02/2024	3	Interfaces: Multiple Inheritance	PPT	https://www.javapoint.com/interface-in-java	
37	13/02/2024	4	Interfaces: Multiple Inheritance	PPT	https://www.w3schools.com/java/java_interface.asp	
38	14/02/2024	4	Packages: Putting Classes together	CHALK AND TALK LINK	https://www.javapoint.com/packages	
39	16/02/2024	4	Packages: Putting Classes together	CHALK AND TALK	https://www.w3schools.com/java/java_packages.asp	
40	19/02/2024	2	Packages: Putting Classes together	CHALK AND TALK	https://www.scribd.com/pdfs/java/packages-in-java/	
41	20/02/2024	3	Packages: Putting Classes together	CHALK AND TALK	https://www.btechmenthas.com/java/java-defining-packages.html	
42	21/02/2024	4	Multithreaded Programming	CHALK AND TALK	https://www.simplilearn.com/multithreading-in-java?ref=article&utm_source=simplilearn&utm_medium=article&utm_campaign=simplilearn	
43	22/02/2024	1	Multithreaded Programming	CHALK AND TALK	https://www.javapoint.com/multithreading-in-java	
44	26/02/2024	4	Multithreaded Programming	CHALK AND TALK LINK	https://www.javapoint.com/community/tutorials/creating-multithreading-in-java	
45	27/02/2024	2	Multithreaded Programming	CHALK AND TALK	https://www.scribd.com/document/79161616/multithreading-in-java	
Unit 4						
46	28/02/2024	3	Managing Errors and Exceptions	CHALK AND TALK LINK	https://www.javapoint.com/exception-handling-in-java	

Unit 4

46	2500/2/124	8	Managing Errors and Exceptions	CHAIKIN AND FALK, JON	https://www.pdf-sitemap.com/collections/programming-the-jvm
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27-02-2024 07:44 PM 2 / 4

[Signature]
Faculty Signature

[S. Gromaling Pohna]

Coordinator

Bejale
Head of the Department
[E. Gornath@foh.no]



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47	29/02/2024	4	Managing Errors and Exceptions	CHALK AND TALK LINK	https://www.w3schools.com/java/java_catch.asp	
48	01/03/2024	4	Managing Errors and Exceptions	CHALK AND TALK	https://www.flightradar.com/en/news/your-airline-is-handling-it-wrong	
49	02/03/2024	4	Managing Errors and Exceptions	CHALK AND TALK	https://docs.oracle.com/javase/10/docs/technotes/guides/exceptions/checked.html	
50	03/03/2024	4	Managing Errors and Exceptions	CHALK AND TALK	https://www.programiz.com/java-programming/exceptions-handling	
51	04/03/2024	4	Managing Errors and Exceptions	CHALK AND TALK LINK	https://www.javapoint.com/java-applet	
52	05/03/2024	4	Managing Errors and Exceptions	CHALK AND TALK	https://www.javapoint.com/applet-in-java-write	
53	06/03/2024	4	Managing Errors and Exceptions	CHALK AND TALK	https://www.knowledgehut.com/tutorial/java-swing/java-applet	
54	07/03/2024	4	Managing Errors and Exceptions	CHALK AND TALK	https://www.geogebra.org/m/8v3v3	
55	08/03/2024	4	Managing Errors and Exceptions	CHALK AND TALK LINK	https://docs.oracle.com/javase/10/docs/technotes/guides/exceptions/checked.html	
56	09/03/2024	4	Managing Errors and Exceptions	CHALK AND TALK LINK	https://www.w3schools.com/java/java_applets	
57	10/03/2024	4	Managing Errors and Exceptions	CHALK AND TALK	https://www.javapoint.com/Graphics-in-applet	
58	11/03/2024	4	Managing Errors and Exceptions	CHALK AND TALK	https://www.geogebra.org/m/8v3v3	
59	12/03/2024	4	Managing Errors and Exceptions	CHALK AND TALK	https://www.javapoint.com/2D-1403/your-graphics-programming.html	
60	13/03/2024	4	Managing Errors and Exceptions	CHALK AND TALK	https://www.youtube.com/watch?v=cCTMh1h-iQ	

Unit 5

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Coordinator

Head of the Department

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Unit				
76	15/04/2024			



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LESSON PLAN

ACADEMIC YEAR : 2023-2024
Faculty Name : Dr. GOMATHI ALIAS ROHINI MOHANAVEL,
Year/Semester/Section : I/II/All
Degree & Branch : ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING
Subject Code & Name : 23UA12CM & CORE PRACTICAL 2 - JAVA PROGRAMMING LAB

S.No	Date	Hours	Topic(s)	Delivery Methods	Links	Book Referred
Unit 1						
1	04/12/2023	5	Java Program to perform various Arithmetic Operations on two Integer given by the User	LAB LINK	https://w3codeworld.com/article/11/write-a-program-to-enter-two-numbers-and-perform-all-arithmetic-operations-in-java	
2	05/12/2023	2	Java Program to perform various Arithmetic Operations on two Integer given by the User	LAB LINK	https://codeforwin.org/java/java-program-to-perform-all-arithmetic-operations	
3	06/12/2023	5	Java Program to perform various Arithmetic Operations on two Integer given by the User	LAB LINK	https://www.sanfoundry.com/java-program-illustrate-use-arithmetic-operators/	
4	07/12/2023	2	Java Program to perform various Arithmetic Operations on two Integer given by the User	LAB	https://www.theknowledgeacademy.com/blog/java-program-to-perform-arithmetic-operations/	
5	11/12/2023	4	Java Program to perform various Arithmetic Operations on two Integer given by the User	LAB LINK	https://www.w3schools.in/java/examples/addition-subtraction-multiplication-division	
6	12/12/2023	5	Java Program to perform various Arithmetic Operations on two Integer given by the User	LAB	https://www.geeksforgeeks.org/java-arithmetic-operators-with-examples/	
7	13/12/2023	2	Java Program to Calculate Average Using Arrays	LAB LINK	https://www.programiz.com/java-programming/examp1es/average-arrays	
8	14/12/2023	5	2. Java Program to Calculate Average Using Arrays	LAB	https://www.javacodegeeks.com/2020/10/java-program-to-calculate-average-using-arrays.html	
9	15/12/2023	2	Java Program to Calculate Average Using Arrays	LAB LINK	https://prepinia.com/java/java-program-to-calc-jlate-average-using-arrays/	

[S. Gomathineelakshmi]

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10	19/12/2023	4	Java Program to Calculate Average Using Arrays	LAB	https://beginnersbook.com/2017/09/java-program-to-calculate-average-using-array/	
11	20/12/2023	5	Java Program to Calculate Average Using Arrays	LAB	https://www.w3resource.com/java-exercises/array/java-array-exercise-4.php	
12	21/12/2023	2	Java Program to Calculate Average Using Arrays	LAB	https://javacodepoin.com/logical-programs/java-program-to-calculate-average-using-array/	
13	22/12/2023	5	Write a Java program to implement the concepts of classes and objects.	LAB	https://donetutorials.net/lesson/class-and-objects-in-java/	
14	26/12/2023	2	Write a Java program to implement the concepts of classes and objects.	VIDEOS.LAB	https://www.youtube.com/watch?v=LMCf04m5WE	
15	02/01/2024	2	Write a Java program to implement the concepts of classes and objects.	LAB	https://www.w3schools.com/java/java_classes.asp	
16	03/01/2024	5	Write a Java program to implement the concepts of classes and objects.	LAB	https://www.javatpoint.com/object-and-class-in-java	
17	04/01/2024	2	Write a Java program to implement the concepts of classes and objects.	VIDEOS.LAB	https://www.youtube.com/watch?v=xmJSKR05ec	
18	08/01/2024	4	Write a Java program to implement the concepts of classes and objects.	LAB	https://www.w3schools.com/java/java_classes.asp	
19	09/01/2024	5	Write a Java program to implement the concepts of inheritance.	LAB.ONLINE-LINK	https://www.programiz.com/java-programming/inheritance	
20	10/01/2024	2	Write a Java program to implement the concepts of inheritance.	LAB.ONLINE-LINK	https://www.w3schools.com/java/java_inheritance.asp	
21	11/01/2024	5	Write a Java program to implement the concepts of inheritance.	LAB.ONLINE-LINK	https://www.educative.io/blog/java-inheritance-tutorial	
22	12/01/2024	2	Write a Java program to implement the concepts of inheritance.	LAB.ONLINE-LINK	https://www.digitalocean.com/community/tutorials/inheritance-java-example	
23	22/01/2024	5	Write a Java program to implement the concepts of inheritance.	LAB	https://www.programiz.com/java-programming/examples/implement-multiple-inheritance	
24	23/01/2024	5	Write a Java program to implement the concepts of inheritance.	LAB.ONLINE-LINK	https://programerboy.com/java-inheritance-with-program-example/	

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Coordinator

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Head of the Department

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[S. Gopaline Gophee]

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25	24/01/2024	2	Write a Java program to implement the concepts of Polymorphism.	LAB ONLINE-LINK	https://www.programiz.com/java-programming/polymorphism	
26	27/01/2024	2	Write a Java program to implement the concepts of Polymorphism.	LAB ONLINE-LINK	https://www.mygreatlearning.com/blog/polymorphism-in-java/	
27	30/01/2024	4	Write a Java program to implement the concepts of Polymorphism.	VIDEOS LAB	https://www.youtube.com/watch?v=gICODm84R0	
28	31/01/2024	2	Write a Java program to implement the concepts of Polymorphism.	VIDEOS LAB	https://www.youtube.com/watch?v=0TUB3B5tEQ	
29	01/02/2024	5	Write a Java program to implement the concepts of Polymorphism.	LAB	https://www.w3resource.com/java-exercises/index-polymorphism.php	
30	02/02/2024	2	Write a Java program to implement the concepts of Polymorphism.	LAB ONLINE-LINK	https://www.w3resource.com/java-exercises/index-polymorphism.php	
31	03/02/2024	4	Write a Java program to implement the concept of Interface and Package.	LAB	https://www.programiz.com/java-programming/interfaces	
32	05/02/2024	2	Write a Java program to implement the concept of Interface and Package.	VIDEOS LAB	https://www.youtube.com/watch?v=34KMrUcU4	
33	07/02/2024	4	Write a Java program to implement the concept of Interface and Package.	LAB	https://www.sanfoundry.com/java-program-show-implementation-interface/	
34	08/02/2024	5	Write a Java program to implement the concept of Interface and Package.	VIDEOS LAB	https://www.youtube.com/watch?v=9ALGd6EGvIE	
35	09/02/2024	2	Write a Java program to implement the concept of Interface and Package.	LAB	https://copyprogramming.com/howto/java-packages-and-interfaces	
36	12/02/2024	2	Write a Java program to implement the concept of Interface and Package.	VIDEOS LAB	https://www.youtube.com/watch?v=34KMrUcU4	
37	14/02/2024	4	Write a Java program to implement Flow, Border, Grid Layouts.	LAB	https://www.tutorialspoint.com/program-to-combine-borderlayout-gridlayout-and-flowlayout-in-java-swing	

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[S. Gopaline Gopal]

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38	15/02/2024	5	Write a Java program to implement Flow, Border, Grid Layouts.	LAB	https://www.javatpoint.com/java-layout-manager	
39	16/02/2024	2	Write a Java program to implement Flow, Border, Grid Layouts.	LAB	https://www.studocu.com/in/document/himvilluvar-university/bachelor-computer-science/java-ex-4-9-algorithm-java-lab/39046713	
40	17/02/2024	5	Write a Java program to implement Flow, Border, Grid Layouts.	LAB	https://www.studentcpu.com/2009/07/border-grid-bag-flow-ca-3-and-grid.html	
41	19/02/2024	5	Write a Java program to implement Flow, Border, Grid Layouts.	LAB	https://doctornutorials.net/lesson/layout-manager-in-java/	
42	20/02/2024	2	Write a Java program to implement Flow, Border, Grid Layouts.	LAB ONLINE LINK	https://www.codingninjas.com/studio/library/borderlayout-in-java	
43	22/02/2024	4	Write a Java program to implement the concept of Frames, Menus, Dialog.	LAB	https://coding-examples.com/java/awt/java-awt-dialog-examples/	
44	23/02/2024	5	Write a Java program to implement the concept of Frames, Menus, Dialog.	LAB	https://www.javatpoint.com/java-awt-menitem-and-menu	
45	26/02/2024	2	Write a Java program to implement the concept of Frames, Menus, Dialog.	LAB	https://www.sanfoundry.com/java-program-create-color-dialog-box-change-background-color-frame/	
46	27/02/2024	5	Write a Java program to implement the concept of Frames, Menus, Dialog.	LAB	https://www.geeksforgeeks.org/java-swing-jdialog-examples	
47	28/02/2024	2	Write a Java program to implement the concept of Frames, Menus, Dialog.	LAB	https://docs.oracle.com/javase/2/tutorial/2Fuiswing/2F52F/components/frame.html	
48	01/03/2024	4	Write a Java program to implement the concept of Frames, Menus, Dialog.	LAB	https://www.javatpoint.com/java-awt-dialog	
49	04/03/2024	5	Develop a java program with swing concepts.	LAB	https://www.javatpoint.com/java-swing	
50	05/03/2024	2	Develop a java program with swing concepts.	LAB	https://www.edureka.co/blog/java-swing/	
51	06/03/2024	5	Develop a java program with swing concepts.	VIDEOS LAB	https://www.youtube.com/watch?v=6zm8c6QFmjo	
52	07/03/2024	2	Develop a java program with swing concepts.	VIDEOS LAB	https://www.youtube.com/watch?v=GLSGv0tEL8	
53	11/03/2024	4	Develop a java program with swing concepts.	VIDEOS LAB	https://www.youtube.com/watch?v=gl4AYeqV3Xk	

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Faculty Signature

[E. Gomaline Gohacee]

Coordinator

Head of the Department

[E. Gomaline Gohacee]



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54	12/03/2024	5	Develop a java program with swing concepts.	LAB	https://doctrutorials.net/lesson/swings-in-java/	
55	13/03/2024	2	Develop a java program with swing concepts.	LAB	https://www.educba.com/swing-program-in-java/	
56	14/03/2024	5	Develop a java program with swing concepts.	LAB	https://www.codingninjas.com/studyt/library/swing-components-in-java	
57	15/03/2024	2	Develop a java program with exception handling concept.	LAB	https://www.programiz.com/java-programming/exception-handling	
58	16/03/2024	4	Develop a java program with exception handling concept.	LAB	https://www.mygreatlearning.com/blog/exception-handling-in-java/	
59	19/03/2024	4	Develop a java program with exception handling concept.	VIDEOS LAB	https://www.youtube.com/watch?v=W-N2lgU-X4	
60	20/03/2024	5	Develop a java program with exception handling concept.	VIDEOS LAB	https://www.youtube.com/watch?v=W-N2lgU-X4	
61	21/03/2024	2	Develop a java program with exception handling concept.	VIDEOS LAB	https://www.youtube.com/watch?v=FGAXbQP6I_Q	
62	22/03/2024	5	Develop a java program with exception handling concept.	LAB	https://blog.sentry.io/exception-handling-in-java-with-real-examples/	
63	25/03/2024	2	Develop a java program with exception handling concept.	LAB	https://www.scholarhat.com/tutorial/java/exception-handling-in-java	
64	27/03/2024	4	Develop a java program with exception handling concept.	LAB	https://www.w3schools.com/java/java_try_catch.asp	
65	28/03/2024	5	Develop a java program with exception handling concept.	LAB ONLINE LINK	https://www.w3resource.com/java-exercises/exception/index.php	
66	30/03/2024	5	Develop a java program with exception handling concept.	LAB	https://www.w3resource.com/java-exercises/exception/index.php	
67	01/04/2024	2	Write a java program to implement the concept of multithreading.	LAB	https://www.prephysics.com/blog/java-multithreading-program-in-java/	
68	02/04/2024	5	Write a java program to implement the concept of multithreading.	LAB	https://www.programming9.com/programs/java/41-program-to-demonstrate-multi-threading-in-java	
69	03/04/2024	2	Write a java program to implement the concept of multithreading.	LAB	https://www.guru99.com/multithreading-java.html	
70	05/04/2024	4	Write a java program to implement the concept of multithreading.	LAB	https://www.simplilearn.com/tutorial/java-tutorial/multithreading-in-java	

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Faculty Signature

[E. Gopalini Gopalini]

Coordinator

Head of the Department

[E. Gopalini Gopalini]



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71	06/04/2024	5	Write a java program to implement the concept of multithreading.	LAB	https://www.geeksforgeeks.org/java-multithreading-program-with-example/	
72	08/04/2024	2	Develop a java program with I/O streams.	LAB	https://www.geeksforgeeks.org/java-io-input-output-in-java-with-examples/	
73	10/04/2024	5	Develop a java program with I/O streams.	LAB ONLINE LINK	https://www.programiz.com/java-programming/io-streams	
74	12/04/2024	2	Develop a java program with I/O streams.	LAB	https://www.scaler.com/topics/java/java-io-streams/	
75	13/04/2024	4	Develop a java program with I/O streams.	VIDEOS LAB	https://www.youtube.com/watch?v=gIMbAExY128	

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Faculty Signature

[S. Somalini Gohar]

Coordinator

Head of the Department

[S. Somalini Gohar]



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LESSON PLAN

ACADEMIC YEAR : 2023-2024
Faculty Name : Mrs. VANITHA R,
Year/Semester/Section : I/II/All
Degree & Branch : ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING
Subject Code & Name : 23VED201 & VALUE EDUCATION - MORAL AND ETHICS

S.No	Date	Hours	Topic(s)	Delivery Methods	Links	Book Referred
Unit 1						
1	04/12/2023	3	Moral and Ethics: Introduction	CHALK AND TALK, LINK	https://www.ioppr.com/guides/fundamentals-of-laws-and-ethics/ethics-and-business/ethics-and-morals/	Moral and ethics : Kongunadu college of Arts and Science
2	12/12/2023	3	Meaning of moral and ethics	CHALK AND TALK, LINK	https://www.ioppr.com/guides/fundamentals-of-laws-and-ethics/ethics-and-business/ethics-and-morals/	Moral and ethics : Kongunadu college of Arts and Science
3	20/12/2023	3	Social Ethics ,Ethics and Culture	CHALK AND TALK, LINK	https://www.sciencedirect.com/topics/social-sciences/social-ethics	Moral and ethics : Kongunadu college of Arts and Science
4	09/01/2024	3	Aim of Education	CHALK AND TALK, LINK	https://www.whnson.ac.in/online_services/LMBDP/EED%20P-1%20Gr-A%20CB.pdf	Moral and ethics : Kongunadu college of Arts and Science
Unit 2						
5	22/01/2024	3	Life and Teachings of swami vivekananda: Birth	CHALK AND TALK, ONLINE-LINK	https://www.britannica.com/biography/Vivekananda	Moral and Ethics : Kongunadu Arts and Science
6	31/01/2024	3	Life and Teachings of Swami Vivekananda: Childhood days	CHALK AND TALK, ONLINE-LINK	https://www.britannica.com/biography/Vivekananda	Moral and Ethics: Kongunadu Arts and Science
7	08/02/2024	3	Life and Teachings of Swami Vivekananda: At Parliaments and Religions	CHALK AND TALK, ONLINE-LINK	https://www.britannica.com/biography/Vivekananda	Moral and Ethics: kongunadu College of Arts and Science
8	15/02/2024	3	A Parliaments of Religions	CHALK AND TALK, ONLINE-LINK	https://www.britannica.com/biography/Vivekananda	Moral And Science: Kongunadu Arts and Science

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Vanitha
Faculty Signature

Coordinator

S. Gopal
Head of the Department
[S. Gopal in Charge]



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9	17/02/2024	3	Teachings of Swami Vivekananda	CHALK AND TALK, ONLINE-LINK	https://www.briannica.com/biography/Vivekananda	Moral and Ethics : Kongunadu Arts and Science
10	23/02/2024	3	Teaching of Swami Vivekananda: principals of Life	CHALK AND TALK, ONLINE-LINK	https://www.briannica.com/biography/Vivekananda	Moral and Ethics:Kongunadu College of Arts And Science

Unit 3

11	04/03/2024	3	Warriors of our Nation: Subhas Chandra Bose	CHALK AND TALK, ONLINE-LINK	https://en.wikipedia.org/wiki/Subhas_Chandra_Bose	
12	12/03/2024	3	Sardar Vallabhbhai Patel	CHALK AND TALK, LINK	https://en.wikipedia.org/wiki/Vallabhbhai_Patel	
13	20/03/2024	3	Udham Singh	CHALK AND TALK, LINK	https://en.wikipedia.org/wiki/Udham_Singh	
14	28/03/2024	3	V.O.Chidambaram Pillai	CHALK AND TALK, ONLINE-LINK	https://en.wikipedia.org/wiki/V._O._Chidambaram_Pillai	
15	06/04/2024	3	Bhagat Singh	CHALK AND TALK, ONLINE-LINK	https://en.wikipedia.org/wiki/Bhagat_Singh	

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Coordinator

Head of the Department

[S. Gopalini Gopal]



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LESSON PLAN

ACADEMIC YEAR : 2023-2024
Faculty Name : Dr. ARUNA DEVI PONNUSAMY ..
Year/Semester/Section : II/IV/All
Degree & Branch : ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING
Subject Code & Name : 22UAI404 & CORE PAPER 4 - R PROGRAMMING

S.No	Date	Hours	Topics(s)	Delivery Methods	Links	Book Refered
Unit 1						
1	04/12/2023	1	Introducing to R	CHALK AND TALK	https://www.geeksforgeeks.org/r-programming-language-introduction/	
2	04/12/2023	4	R Data Structures	CHALK AND TALK	https://www.geeksforgeeks.org/data-structures-in-r-programming/	
3	05/12/2023	5	Help Functions in R	PDF:CHALK AND TALK	https://www.educative.io/answers/what-is-the-help-function-in-r	
4	06/12/2023	3	Vectors	PDF:CHALK AND TALK	https://www.3stackbooks.com/r/r_vectors.asp	
5	11/12/2023	2	Scalars	CHALK AND TALK	https://bookdown.org/rdhills/Valer/scalars.html	
6	12/12/2023	1	Declarations	PDF:CHALK AND TALK	https://www.geeksforgeeks.org/r-variables/	
7	12/12/2023	4	Recycling	PDF:CHALK AND TALK	https://www.geeksforgeeks.org/vector-recycling-in-r/	
8	13/12/2023	5	Common Vector Operations	PDF:CHALK AND TALK LAB	https://www.geeksforgeeks.org/operations-on-vectors-in-r/	
9	14/12/2023	3	sample Examples	LAB	https://www.programiz.com/r/examples	
10	19/12/2023	2	Vectorized operations	PDF:CHALK AND TALK	https://bookdown.org/dperg/progdasr/vectored/vectorized-operations.html	
11	20/12/2023	1	NA and NULL values	PDF:CHALK AND TALK	https://r12pro.github.io/null.html	
12	20/12/2023	4	Filtering	CHALK AND TALK LAB	https://www.geeksforgeeks.org/filter-data-by-multiple-conditions-in-r-using-dply/	
13	21/12/2023	5	Vectorized if-then else	PDF:CHALK AND TALK	https://makemeanalytics.com/r-programming/control-structure/if-else-condition	
14	22/12/2023	3	Vector Element names	CHALK AND TALK LAB	https://www.geeksforgeeks.org/assigning-vectors-in-r-programming/	
Unit 2						
15	02/01/2024	5	Creating matrices	CHALK AND TALK LAB	https://www.geeksforgeeks.org/r-matrices/	

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Faculty Signature *Aruna D. P.*

Coordinator

Head of the Department *Dr. Aruna Devi Ponnusamy*

[S. Gomathinathan]



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16	03/01/2024	3	Matrix Operations	CHALK AND TALK LAB	https://www.geeksforgeeks.org/r-matrices/	
17	08/01/2024	2	Applying Functions to Matrix Rows and Columns	CHALK AND TALK LAB	https://www.statology.org/r-apply-function-to-each-row/	
18	09/01/2024	1	Adding and deleting rows and columns	CHALK AND TALK LAB	https://www.tutorialspoint.com/r/how-to-delete-different-rows-and-columns-of-a-matrix-using-a-single-line-code-in-r	
19	09/01/2024	4	Vector / Matrix Distinction	CHALK AND TALK LAB	https://www.geeksforgeeks.org/create-matrix-from-vectors-in-r/	
20	10/01/2024	5	Avoiding Dimension Reduction	CHALK AND TALK LAB	https://www.geeksforgeeks.org/dimensionality-reduction/	
21	11/01/2024	3	Higher Dimensional arrays	CHALK AND TALK LAB	https://www.geeksforgeeks.org/multidimensional-array-in-r/	
22	22/01/2024	1	lists, Creating lists	CHALK AND TALK LAB	https://www.javatpoint.com/r-lists#~:text=Lists%20creation&text=The%20process%20of%20creating%20a,vector%20which%20is%20data%20type.	
23	22/01/2024	4	General list operations	PDF CHALK AND TALK	https://www.geeksforgeeks.org/operations-on-lists-in-r-programming/	
24	23/01/2024	5	Accessing list components and values	CHALK AND TALK LAB	https://www.tutorialkart.com/r-tutorial/r-list-access-elements/#gsc.tab=0	
25	24/01/2024	3	applying functions to lists and recursive lists	CHALK AND TALK LAB	https://www.geeksforgeeks.org/apply-a-function-over-a-list-of-elements-in-r-programming-apply-function/	
Unit 3						
26	30/01/2024	2	Creating Data Frames	CHALK AND TALK	https://www.tutorialspoint.com/r/r_data_frames.htm	
27	31/01/2024	1	Matrix-like operations in frame	CHALK AND TALK	https://www.geeksforgeeks.org/dataframe-operations-in-r/	
28	31/01/2024	4	merging Data frames and Applying functions	CHALK AND TALK LAB	https://www.geeksforgeeks.org/how-to-merge-two-dataframes-in-r/	
29	01/02/2024	5	Factors and Tables and levels	FLIPPED CLASS LAB	https://www.tutorialspoint.com/r/r_factors.htm	
30	02/02/2024	3	Common Functions used with factors	CHALK AND TALK LAB	https://www.programiz.com/r/factors	
31	03/02/2024	2	Working with tables	CHALK AND TALK LAB	https://www.geeksforgeeks.org/how-to-create-tables-in-r/	
32	07/02/2024	2	Other factors and table related functions	CHALK AND TALK LAB	https://www.statology.org/table-function-in-r/	
33	08/02/2024	1	Control statements	CHALK AND TALK LAB	https://www.geeksforgeeks.org/control-statements-in-r-programming/	
34	08/02/2024	4	Arithmetic and Boolean operators and values	CHALK AND TALK	https://www.geeksforgeeks.org/r-operators/	
35	09/02/2024	5	Default Values for arguments –Returning Boolean Values	CHALK AND TALK	https://www.javatpoint.com/r-function-default-arguments	
36	14/02/2024	2	Functions are objects and Environment and scope issues	CHALK AND TALK LAB	https://www.datamentor.io/r-programming/environment-scope	
37	15/02/2024	1	Writing Upstairs and Recursion	CHALK AND TALK LAB	https://www.geeksforgeeks.org/recursive-functions-in-r-programming/	



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38	15/02/2024	4	Replacement functions and Tools for Composing function code	CHALK AND TALK	https://adv-r-hedley.nz/functions.html	
39	16/02/2024	5	Math and Simulation in R	CHALK AND TALK, LAB	https://rpubs.com/hamirell3kswa312_mod3_les11	

Unit 4

40	17/02/2024	1	S3 Classes	CHALK AND TALK	https://www.programiz.com/r/s3-class	
41	17/02/2024	4	S4 Classes	CHALK AND TALK, LAB	https://www.geeksforgeeks.org/r-s4-class/	
42	19/02/2024	3	Managing your objects	PDF, CHALK AND TALK	https://www.geeksforgeeks.org/r-objects/	
43	22/02/2024	2	Input/output- accessing keyboard and monitor and reading and writing files	CHALK AND TALK	https://www.geeksforgeeks.org/aking-input-from-user-in-r-programming/	
44	23/02/2024	1	accessing the internet	PDF, CHALK AND TALK	https://www.tutorialspoint.com/r/r_web_data.htm	
45	23/02/2024	4	String Manipulation	PDF, CHALK AND TALK	https://www.geeksforgeeks.org/string-manipulation-in-r/	
46	26/02/2024	5	Graphics and Creating Graphs	PDF, CHALK AND TALK	https://www.w3schools.com/r/r_graph_plot.asp	
47	27/02/2024	3	Creating Graphs	PDF, LAB	https://www.w3schools.com/r/r_graph_plot.asp	
48	01/03/2024	2	Customizing Graphs	CHALK AND TALK	https://r4labcoff.github.io/davies/Customizing.html	
49	04/03/2024	1	Customizing Graphs : categorical axis	PDF, LAB	https://r4labcoff.github.io/davies/Customizing.html	
50	04/03/2024	4	Saving Graphs to files	PPT, LAB	https://www.geeksforgeeks.org/saving-graphs-as-files-in-r/	
51	05/03/2024	5	Saving graphics to file: jpeg	PDF, LAB	https://www.geeksforgeeks.org/saving-graphs-as-files-in-r/	
52	06/03/2024	3	Creating Three - Dimensional Plots	CHALK AND TALK, LAB	https://swcarpentry.github.io/r-voice-inflammation02-func-R.html	
53	11/03/2024	2	Creating Three - Dimensional Plots	LAB	https://www.w3resource.com/r-programming-exercises/basics/r-programming-basics-exercise-12.php	
54	12/03/2024	1	Creating Three - Dimensional plots	PDF, LAB		https://swcarpentry.github.io/r-voice-inflammation02-func-R.html
55	12/03/2024	4	plots	PDF, CHALK AND TALK	https://www.statmethods.net/advgraphs/layou.html	
56	13/03/2024	5	Multiple plots	CHALK AND TALK	https://www.datacamp.io/r-programming/subplot	
57	14/03/2024	3	Example programs for plots	CHALK AND TALK, LAB	https://www.geeksforgeeks.org/combining-plots-in-r-2/	

Unit 5

58	16/03/2024	2	Interfacing R	PPT, CHALK AND TALK	https://markestephian.com/tutorial/r/how-to-integrate-r-with-other-programming-languages/	
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Faculty Signature *Amir P*

Coordinator

Head of the Department *Shobal*

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59	19/03/2024	2	Interfacing R to other languages	CHALK AND TALK LAB	https://www.geeksforgeeks.org/r-programming-language-introduction/	
60	20/03/2024	1	Parallel R	PDF-CHALK AND TALK	https://www.geeksforgeeks.org/parallel-programming-in-r/	
61	20/03/2024	4	Parallel R: Packages	PDF LAB	https://www.geeksforgeeks.org/parallel-programming-in-r/	
62	21/03/2024	5	Basic Statistics	CHALK AND TALK	https://www.w3schools.com/r/r_stat_intro.asp	
63	22/03/2024	3	Basic Statistics: examples	CHALK AND TALK	https://www.geeksforgeeks.org/r-statistics/	
64	27/03/2024	2	Basic Statistics: Plotting graphs in Statistics	CHALK AND TALK	https://www.geeksforgeeks.org/r-statistics/	
65	28/03/2024	1	Basic Statistics: Bar charts	CHALK AND TALK LAB	https://www.geeksforgeeks.org/r-statistics/	
66	28/03/2024	4	Linear Model : Regression	CHALK AND TALK	https://www.datacamp.com/tutorial/linear-regression-R	
67	30/03/2024	3	Linear Model :Linear Regression Line	CHALK AND TALK LAB	https://www.geeksforgeeks.org/simple-linear-regression-using-r/	
68	01/04/2024	5	Linear Model : Example	CHALK AND TALK LAB	https://www.geeksforgeeks.org/simple-linear-regression-using-r/	
69	02/04/2024	3	Generalized Linear models	CHALK AND TALK	https://www.geeksforgeeks.org/simple-linear-regression-using-r/	
70	05/04/2024	2	Generalized Linear models: example	CHALK AND TALK	https://www.geeksforgeeks.org/generalized-linear-models-using-r/	
71	06/04/2024	1	Non-linear Models	CHALK AND TALK LAB	https://www.geeksforgeeks.org/non-linear-regression-in-r/	
72	06/04/2024	4	Non-linear Models	CHALK AND TALK LAB	https://www.geeksforgeeks.org/non-linear-regression-in-r/	
73	08/04/2024	5	Time Series	PDF CHALK AND TALK	https://www.geeksforgeeks.org/time-series-analysis-in-r/	
74	10/04/2024	3	Auto Correlation	CHALK AND TALK	https://www.geeksforgeeks.org/how-to-calculate-autocorrelation-in-r/	
75	15/04/2024	2	Clustering.	CHALK AND TALK LAB	https://www.geeksforgeeks.org/clustering-in-r-programming/	

Shruti P

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LESSON PLAN

ACADEMIC YEAR : 2023-2024
Faculty Name : Dr. ARUNA DEVI PONNUSAMY ..
Year/Semester/Section : II/IV/All
Degree & Branch : ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING
Subject Code & Name : 22UA4CO & CORE PRACTICAL 4 - R PROGRAMMING LAB

S.No	Date	Hours	Topic(s)	Delivery Methods	Links	Book Referred
Unit 1						
1	06/12/2023	1	Sample Programs: Creating 2 variables	LAB	https://www.w3schools.com/r/r_examples.asp	
2	07/12/2023	4	Example: Combining both text and variable	LAB	https://www.w3schools.com/r/r_examples.asp	
3	08/12/2023	5	Example: Display Sum of Two Variables	LAB	https://www.w3schools.com/r/r_examples.asp	
4	11/12/2023	1	Example : Assign Same value to Multiple variable	LAB	https://www.w3schools.com/r/r_examples.asp	
5	14/12/2023	1	Lab: 1 : Write a program to print the "Hello World"	LAB	https://www.geeksforgeeks.org/hello-world-in-r-programming/	
6	15/12/2023	4	Example: using Data types	LAB	https://www.w3schools.com/r/r_examples.asp	
7	18/12/2023	5	Example: Creating Numeric types using math functions	LAB	https://www.w3schools.com/r/r_examples.asp	
8	19/12/2023	1	Example: Assigning a string to a variable	LAB	https://www.w3schools.com/r/r_examples.asp	
9	22/12/2023	1	Example: using operators	LAB	https://www.w3schools.com/r/r_examples.asp	

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10	26/12/2023	4	Lab 2: Write a R program to make a simple calculator.	LAB	https://www.mycompiler.io/view/7rDg1R62yMI	
11	27/12/2023	5	Example: Find Sum, Mean and Product of Vector in R Programming	LAB	https://www.programiz.com/r/examples	
12	03/01/2024	1	Example: R Program to Take Input From User	LAB	https://www.programiz.com/r/examples	
13	04/01/2024	4	R Program to Check Prime Number	LAB	https://www.programiz.com/r/examples	
14	05/01/2024	5	Example: R Program to Concatenate Two Strings	LAB	https://www.programiz.com/r/examples	https://www.programiz.com/r/examples
15	08/01/2024	1	Lab: 3 : Write a program to find sum of natural numbers using recursion.	LAB	https://www.programiz.com/r/examples	
16	11/01/2024	1	Example: R Program to Find the Length of a String	LAB	https://www.programiz.com/r/examples	
17	12/01/2024	4	R Program to Check if Characters are Present in a String	LAB	https://www.programiz.com/r/examples	
18	24/01/2024	1	Example: https://www.programiz.com/r/examples	LAB	https://www.programiz.com/r/examples	
19	27/01/2024	4	Example: R Program to Replace Characters in a String	LAB	https://www.programiz.com/r/examples	
20	29/01/2024	5	Lab 4 : Write a program to find fibonacci sequence using recursion in R.	LAB	https://www.programiz.com/r/examples	
21	30/01/2024	1	Example: https://www.programiz.com/r/examples	LAB	https://www.programiz.com/r/examples	


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22	02/02/2024	1	Example: R Program to Convert Factors to Characters	LAB	https://www.programiz.com/r/examples	
23	03/02/2024	1	Example: R Program to Convert a List to a Dataframe	LAB	https://www.programiz.com/r/examples	
24	05/02/2024	4	Example: R Program to Create an Empty Dataframe	LAB	https://www.programiz.com/r/examples	
25	06/02/2024	5	Lab: 5 : Write a program to implement R program for the factors of a number.	LAB	https://www.programiz.com/r/examples	
26	07/02/2024	1	Example: R Program to Combine Two Dataframe into One	LAB	https://www.programiz.com/r/examples	
27	12/02/2024	4	Example: R Program to Change Column Name of a Dataframe	LAB	https://www.programiz.com/r/examples	
28	13/02/2024	5	Example: R Program to Extract Columns From a Dataframe	LAB	https://www.programiz.com/r/examples	
29	14/02/2024	1	Example: R Program to Drop Columns in a Dataframe	LAB	https://www.programiz.com/r/examples	
30	19/02/2024	1	Lab: 6 : Write a program to find the sum of natural numbers.	LAB	https://www.programiz.com/r/examples	
31	20/02/2024	4	Example: R Program to Split Dataframe	LAB	https://www.programiz.com/r/examples	
32	21/02/2024	5	Example: R Program to Merge Multiple Dataframes	LAB	https://www.programiz.com/r/examples	

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33	22/02/2024	1	Example: R Program to Delete Rows From Dataframe	LAB	https://www.programiz.com/r/examples	
34	27/02/2024	1	Example: R Program to Make a List of Dataframes	LAB	https://www.programiz.com/r/examples	
35	28/02/2024	4	Lab : 7 : Write a program to check if a number is positive, negative or zero.	LAB	https://www.programiz.com/r/examples	
36	29/02/2024	5	Example: R Program to Concatenate a Vector of Strings	LAB	https://www.programiz.com/r/examples	
37	01/03/2024	1	Example: R Program to Check if a Vector Contains the Given Element	LAB	https://www.programiz.com/r/examples	
38	02/03/2024	5	Example: R Program to Count the Number of Elements in a Vector	LAB	https://www.programiz.com/r/examples	
39	06/03/2024	1	Example: R Program to Access Values in a Vector	LAB	https://www.programiz.com/r/examples	
40	07/03/2024	4	Lab: 8: Write a program to add two vectors.	LAB	https://www.programiz.com/r/examples	
41	08/03/2024	5	Example: R Program to Find the Statistical Mode	LAB	https://www.programiz.com/r/examples	
42	11/03/2024	1	Example: R Program to Add Leading Zeros to Vector	LAB	https://www.programiz.com/r/examples	
43	14/03/2024	1	Example: R Program to Write to a File	LAB	https://www.programiz.com/r/examples	

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S. S. Sule
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44	15/03/2024	4	Example: R Program to list the distinct values from a given vector	LAB	https://learnetutorials.com/r-programming/programs	
45	16/03/2024	1	Lab : 9 : Write a function to find minimum and maximum.	LAB	https://learnetutorials.com/r-programming/programs	
46	18/03/2024	5	Example: R Program to convert given pH levels of soil to an ordered factor	LAB	https://learnetutorials.com/r-programming/programs	
47	19/03/2024	1	Example: R Program to select second element of a given nested list	LAB	https://learnetutorials.com/r-programming/programs	
48	22/03/2024	1	Lab: 10 : Write a program to sort a vector.	LAB	https://www.w3schools.com/r/r_examples.asp	
49	25/03/2024	4	Example: R Program to replace NA values with 5 in a given data frame	LAB	https://learnetutorials.com/r-programming/programs	
50	26/03/2024	5	Example: R Program to find the unique rows in r data frame	LAB	https://learnetutorials.com/r-programming/programs	
51	27/03/2024	1	Lab: 11: Write a R program to check for leap year.	LAB	https://www.w3schools.com/r/r_examples.asp	
52	30/03/2024	1	Example: Programs using IF statements	LAB	https://www.w3schools.com/r/r_examples.asp	
53	02/04/2024	1	Examples: Programs using While	LAB	https://www.w3schools.com/r/r_examples.asp	
54	03/04/2024	4	Examples: For Loop	LAB	https://www.w3schools.com/r/r_examples.asp	
55	04/04/2024	5	Lab: 12: Write a program to multiply two matrices.	LAB	https://www.w3schools.com/r/r_examples.asp	

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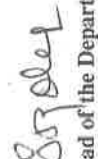
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56	05/04/2024	1	Example: Functions	LAB	https://www.w3schools.com/r/r_examples.asp	
57	10/04/2024	1	Example:	LAB	https://www.w3schools.com/r/r_examples.asp	
58	12/04/2024	4	Example: Using Global Variables	LAB	https://www.w3schools.com/r/r_examples.asp	
59	13/04/2024	5	Examples: Using Matrices	LAB	https://www.w3schools.com/r/r_examples.asp	
60	15/04/2024	1	Example: Sample Programs using matrices	LAB	https://www.w3schools.com/r/r_examples.asp	


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LESSON PLAN

ACADEMIC YEAR : 2023-2024
Faculty Name : Mrs. VANITHA R,
Year/Semester/Section : III/IV/All
Degree & Branch : ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING
Subject Code & Name : 22UAI4S2 & SKILL BASED SUBJECT 2 - ETHICAL HACKING

S.No	Date	Hours	Topic(s)	Delivery Methods	Links	Book Referred
Unit 1						
1	05/12/2023	4	Introduction to Hacking, Importance of security, Elements of security	CHALK AND TALK LINK	https://www.forint.com/resources/cybersecurity/what-is-hacking	Ethical Hacking and Countermeasures Attack Phases: EH - Council
2	07/12/2023	5	phases of attack, Types of hacker attack	CHALK AND TALK LINK	https://www.infosectrain.com/blog/phases-of-ethical-hacking/	Ethical Hacking and Countermeasures Attack Phases: EH - Council
3	13/12/2023	4	Hacktivism, vulnerability Research	CHALK AND TALK LINK	https://www.internethits.co.uk/vulnerability-research	Ethical Hacking and Countermeasures Attack Phases: EH - Council
4	15/12/2023	5	Introduction to footprinting, information gathering methodology	CHALK AND TALK LINK	https://www.geekstorgeeks.org/opencampus/ethical-hacking/footprinting-re methodology	Ethical Hacking and Countermeasures Attack Phases: EH - Council
5	21/12/2023	4	Footprinting tools, WHOIS tools	CHALK AND TALK LINK	https://www.geekstorgeeks.org/what-is-whois-footprinting/	Ethical Hacking and Countermeasures Attack Phases: EH - Council
6	26/12/2023	5	DNS information Tools, Locating the Network Range, Meta search engine	CHALK AND TALK LINK	https://www.geekstorgeeks.org/domain-name-system-dns-in-application-la yer/https://www.geekstorgeeks.org/what-is-metasearch-engine/	Ethical Hacking and Countermeasures Attack Phases: EH - Council
Unit 2						
7	02/01/2024	4	Scanning and enumeration: Introduction to Scanning	CHALK AND TALK LINK	https://tuekirevel.com/blog/scanning-and-enumeration-in-hacking	Ethical Hacking and Countermeasures Attack Phases: EH - Council
8	04/01/2024	5	Scanning and enumeration: Objectives	CHALK AND TALK LINK	https://www.coursesidekick.com/information-systems/4209738	Ethical Hacking and Countermeasures Attack Phases: EH - Council
9	10/01/2024	4	Scanning Methodologies, Scanning Tools	PDF CHALK AND TALK LINK	https://ceei.org.in/uploads/academics/whni_30818265952.pdf	Ethical Hacking and Countermeasures Attack Phases: EH - Council
10	12/01/2024	5	Introduction to Enumeration	CHALK AND TALK LINK	https://www.econounl.org/cybersecurity-exchange/ethical-hack-ig-enumerat alion-ethical-hacking/	Ethical Hacking and Countermeasures Attack Phases: EH - Council
11	23/01/2024	4	Enumeration Techniques	CHALK AND TALK LINK	https://gegetecsecu.com/enumeration-in-hacking/	Ethical Hacking and Countermeasures Attack Phases: EH - Council
12	27/01/2024	5	Enumeration procedure, Tools	CHALK AND TALK LINK	https://gegetecsecu.com/enumeration-in-hacking/	Ethical Hacking and Countermeasures Attack Phases: EH - Council



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Unit 3						
13	01/02/2024	4	System Hacking :Introduction	CHALK AND TALK LINK	https://www.eccouncil.org/cybersecurity-exchange/ethical-hacking/system-hacking-definition-types-process/	Ethical Hacking and Countermeasures Attack Phases: EH: Council
14	05/02/2024	5	Cracking passwords, Password Cracking Websites	CHALK AND TALK LINK	https://www.techtarget.com/searchsecurity/definition/password-cracker	Ethical Hacking and Countermeasures Attack Phases: EH: Council
15	09/02/2024	4	Password Guessing , Password cracking Tools	CHALK AND TALK LINK	https://www.techtarget.com/searchsecurity/definition/password-cracker	Ethical Hacking and Countermeasures Attack Phases: EH: Council
16	12/02/2024	5	Password Cracking Counter Measures, Escalating Privileges	CHALK AND TALK LINK	https://certifiedethicalhackerch.blogspot.com/2011/12/password-cracking-countermeasures.html	Ethical Hacking and Countermeasures Attack Phases: EH: Council
17	16/02/2024	4	Executing applications	CHALK AND TALK LINK	https://rflthsh.github.io/ceh_v9/content/53_executing_applications.html	Ethical Hacking and Countermeasures Attack Phases: EH: Council
18	20/02/2024	5	Keyloggers and Spyware	CHALK AND TALK LINK	https://rflthsh.github.io/ceh_v9/content/53_executing_applications.html	Ethical Hacking and Countermeasures Attack Phases: EH: Council
Unit 4						
19	26/02/2024	4	Programming For Security professionals: Programming Fundamentals	CHALK AND TALK LINK	https://medium.com/@eareviria/community/the-best-6-programming-languages-for-ethical-hacking-3fd59a104e4	Ethical Hacking and Countermeasures Attack Phases: EH: Council
20	28/02/2024	5	C Language, HTML	CHALK AND TALK LINK	https://www.geekstforgeeks.org/c-language-introduction/	Ethical Hacking and Countermeasures Attack Phases: EH: Council
21	05/03/2024	4	perl , Windows OS vulnerabilities	CHALK AND TALK LINK	https://www.geekstforgeeks.org/perl-programming-language/ https://www.cisofm.com/windows-10-most-critical-vulnerabilities-in-2022https://www.cisofm.com/windows-10-most-critical-vulnerabilities-in-2022	Ethical Hacking and Countermeasures Attack Phases: EH: Council
22	07/03/2024	5	Tools for identifying vulnerabilities, Countermeasures	CHALK AND TALK LINK	https://www.techtarget.com/searchsecurity/tip/Vulnerability-management-tools-to-consider	Ethical Hacking and Countermeasures Attack Phases: EH: Council
23	13/03/2024	4	Linux os	CHALK AND TALK LINK	https://www.linux.com/what-is-linux/	Ethical Hacking and Countermeasures Attack Phases: EH: Council
24	15/03/2024	5	Linux OS : Countermeasures	CHALK AND TALK LINK	https://jumpcloud.com/blog/linux-systems-best-practices	Ethical Hacking and Countermeasures Attack Phases: EH: Council
Unit 5						
25	21/03/2024	4	Penetration Testing: Introduction	CHALK AND TALK LINK	https://www.uofrtdspoint.com/penetration_testing/penetration_testing_vulnerability_assessment.htm	Ethical Hacking and Countermeasures Attack Phases: EH: Council
26	25/03/2024	5	Security Assessments	CHALK AND TALK LINK	https://content.kaspersky-hhs.com/etmed/etn/business-security-entrep/etkasper/sky_Security_Assessment_Services.pdf	Ethical Hacking and Countermeasures Attack Phases: EH: Council
27	01/04/2024	4	Types of penetrating testing	CHALK AND TALK LINK	https://www.redcan.com/news/types-of-pen-testing-while-box-black-box-and-everything-in-between/	Ethical Hacking and Countermeasures Attack Phases: EH: Council
28	03/04/2024	5	Phases of penetrating Testing	CHALK AND TALK LINK	https://www.geektara.com/blog/security-audit/penetration-testing-phases/	Ethical Hacking and Countermeasures Attack Phases: EH: Council
29	08/04/2024	4	Penetration Testing Tools	CHALK AND TALK LINK	https://www.hacktrone.com/knowledge-center/7-penetration-tools-you-must-know-about	Ethical Hacking and Countermeasures Attack Phases: EH: Council

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Faculty Signature

Coordinator

Head of the Department

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30	12/04/2024	5	Choosing different types of Pen-test tools	CHALK AND TALK LINK	https://www.indiaface.com/blog/pen-test-penetration-testing-tool/	Ethical Hacking and Countermeasures Attack Phases: BH- Council
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Faculty Signature

Coordinator


Head of the Department

[S. Ganesan Coimbatore]



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LESSON PLAN

ACADEMIC YEAR : 2023-2024
Faculty Name : Mrs. PAVITHRA R,
Year/Semester/Section : III/VI/ALL
Degree & Branch : ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING
Subject Code & Name : 21UAI611 & CORE PAPER 11 - NATURAL LANGUAGE PROCESSING

S.No	Date	Hours	Topic(s)	Teaching Methods	Links	Book Refered
Unit 1						
1	04/12/2023	1	Overview of NLP	CHALK AND TALK	https://www.litvin.com/topics/natural-language-processing/	
2	06/12/2023	3	Origin of NLP	CHALK AND TALK	https://www.litvin.com/topics/natural-language-processing/origin-of-nlp/	
3	06/12/2023	3	Challenges of NLP	CHALK AND TALK	https://www.litvin.com/topics/natural-language-processing/challenges-of-nlp/	
4	07/12/2023	4	NLP Language	CHALK AND TALK	https://www.litvin.com/topics/natural-language-processing/nlp-language/	
5	08/12/2023	1	Language and Grammar	CHALK AND TALK	https://www.litvin.com/topics/natural-language-processing/language-and-grammar/	
6	11/12/2023	1	Processing Indian Languages	CHALK AND TALK	https://www.litvin.com/topics/natural-language-processing/indian-languages/	
7	12/12/2023	1	NLP Applications	CHALK AND TALK	https://www.litvin.com/topics/natural-language-processing/nlp-applications/	
8	13/12/2023	3	Information Retrieval in NLP	CHALK AND TALK	https://www.litvin.com/topics/natural-language-processing/information-retrieval-in-nlp/	
9	14/12/2023	3	Types of Information Retrieval (IR) Model	CHALK AND TALK	https://www.litvin.com/topics/natural-language-processing/types-of-information-retrieval/	
10	15/12/2023	4	Language Modeling	CHALK AND TALK	https://www.litvin.com/topics/natural-language-processing/language-modeling/	
11	16/12/2023	1	Types of Language Models	CHALK AND TALK	https://www.litvin.com/topics/natural-language-processing/types-of-language-models/	
12	19/12/2023	1	Various Grammar in NLP	CHALK AND TALK	https://www.litvin.com/topics/natural-language-processing/various-grammar-in-nlp/	
13	20/12/2023	1	Types of Grammar in NLP	CHALK AND TALK	https://www.litvin.com/topics/natural-language-processing/types-of-grammar-in-nlp/	
14	21/12/2023	3	Language Models	CHALK AND TALK	https://www.litvin.com/topics/natural-language-processing/language-models/	
15	22/12/2023	3	Types of language Model	CHALK AND TALK	https://www.litvin.com/topics/natural-language-processing/types-of-language-models/	
16	26/12/2023	4	Statistical Language Models	CHALK AND TALK	https://www.litvin.com/topics/natural-language-processing/statistical-language-models/	
17	27/12/2023	1	Neural Language Models	CHALK AND TALK	https://www.litvin.com/topics/natural-language-processing/neural-language-models/	
18	28/12/2023	3	Statistical learning in language acquisition	CHALK AND TALK	https://www.litvin.com/topics/natural-language-processing/statistical-learning-in-language-acquisition/	
Unit 2						
19	03/01/2024	3	Word Level Analysis	CHALK AND TALK	https://www.litvin.com/topics/natural-language-processing/word-level-analysis/	
20	04/01/2024	4	Types of Finite State Automation	CHALK AND TALK	https://www.litvin.com/topics/natural-language-processing/types-of-finite-state-automation/	
21	05/01/2024	1	Types of Morphemes	CHALK AND TALK	https://www.litvin.com/topics/natural-language-processing/types-of-morphemes/	

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Head of the Department

[Mrs. R. Pavithra]

[S. Gopalan]



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22	08/01/2024	1	Regular Expressions	CHALK AND TALK	https://www.analyticsvidhya.com/blog/2021/03/regular-expressions-in-natural-language-processing/	
23	09/01/2024	1	Special Sequences in Regular Expressions	CHALK AND TALK	https://www.analyticsvidhya.com/blog/2021/03/regular-expressions-in-natural-language-processing/	
24	10/01/2024	3	Finite State Automata	CHALK AND TALK	https://www.geeksforgeeks.org/introduction-of-finite-automata/	
25	11/01/2024	3	Morphological Parsing	CHALK AND TALK	https://www.geeksforgeeks.org/morphological-parsing/	
26	12/01/2024	4	Morphological Models	CHALK AND TALK	https://www.geeksforgeeks.org/morphological-models/	
27	13/01/2024	1	Spelling Error Detection and Correction	CHALK AND TALK	https://www.geeksforgeeks.org/spelling-error-detection-and-correction-in-nlp/	
28	14/01/2024	3	Words and Word Classes	CHALK AND TALK	https://www.geeksforgeeks.org/words-and-word-classes-in-nlp/	
29	15/01/2024	3	Part of Speech Tagging	CHALK AND TALK	https://www.geeksforgeeks.org/part-of-speech-tagging-in-nlp/	
30	16/01/2024	4	Part-of-Speech Tagging in NLP	CHALK AND TALK	https://www.geeksforgeeks.org/part-of-speech-tagging-in-nlp/	
31	17/01/2024	1	Syntactic Analysis	CHALK AND TALK	https://www.analyticsvidhya.com/blog/2021/03/syntactic-analysis-in-natural-language-processing/	
32	18/01/2024	1	Types of Parsing	CHALK AND TALK	https://www.analyticsvidhya.com/blog/2021/03/syntactic-analysis-in-natural-language-processing/	
33	19/01/2024	1	Context-Free Grammar	CHALK AND TALK	https://www.geeksforgeeks.org/context-free-grammar/	
34	01/02/2024	3	Constituency	CHALK AND TALK	https://www.geeksforgeeks.org/constituency-parsing-and-dependency-parsing/	
35	02/02/2024	3	Parsing	CHALK AND TALK	https://www.geeksforgeeks.org/constituency-parsing-and-dependency-parsing/	
36	03/02/2024	1	Probabilistic Parsing	CHALK AND TALK	https://www.geeksforgeeks.org/probabilistic-parsing/	
Unit 3						
37	05/02/2024	4	Semantic Analysis	CHALK AND TALK	https://www.geeksforgeeks.org/semantic-analysis/	
38	06/02/2024	1	Significance of Semantics Analysis	CHALK AND TALK	https://www.geeksforgeeks.org/semantic-analysis/	
39	07/02/2024	1	Meaning Representation	CHALK AND TALK	https://www.geeksforgeeks.org/meaning-representation/	
40	08/02/2024	1	Lexical Semantics	CHALK AND TALK	https://www.geeksforgeeks.org/lexical-semantics/	
41	09/02/2024	3	Ambiguity	CHALK AND TALK	https://www.geeksforgeeks.org/ambiguity-in-natural-language-processing/	
42	10/02/2024	4	Word Sense	CHALK AND TALK	https://www.geeksforgeeks.org/word-sense/	
43	11/02/2024	1	Word Sense Disambiguation	CHALK AND TALK	https://www.geeksforgeeks.org/word-sense-disambiguation/	
44	12/02/2024	1	Difficulties in Word Sense Disambiguation	CHALK AND TALK	https://www.geeksforgeeks.org/word-sense-disambiguation/	
45	13/02/2024	1	Natural Language Discourse Processing	CHALK AND TALK	https://www.geeksforgeeks.org/natural-language-discourse-processing/	
46	14/02/2024	1	Discourse structure	CHALK AND TALK	https://www.geeksforgeeks.org/discourse-structure/	
47	15/02/2024	1	Cohesion	CHALK AND TALK	https://www.geeksforgeeks.org/cohesion-in-natural-language-processing/	
48	16/02/2024	1	Reference Resolution	CHALK AND TALK	https://www.geeksforgeeks.org/reference-resolution/	
49	17/02/2024	4	Types of Referring Expressions	CHALK AND TALK	https://www.geeksforgeeks.org/types-of-referring-expressions/	
50	18/02/2024	1	Reference Resolution Tasks	CHALK AND TALK	https://www.geeksforgeeks.org/reference-resolution-tasks/	
51	19/02/2024	1	Discourse Coherence	CHALK AND TALK	https://www.geeksforgeeks.org/discourse-coherence/	



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52	23/02/2024	1	Coherence Structure in NLP	CHALK AND TALK	https://www.mit.edu/~anlp/nlp/nlp-structure.html	
53	26/02/2024	3	Semantic Analysis Applications	CHALK AND TALK	https://www.gutenberg.org/files/69841/69841-h/69841-h.htm	
54	27/02/2024	3	Ambiguity Applications in NLP	CHALK AND TALK	https://www.dcc.ac.uk/resources/ambiguity-applications-for-ambiguity-resolution-19447	
55	28/02/2024	4	Part of Speech tagging	CHALK AND TALK	https://www.dcc.ac.uk/resources/ambiguity-applications-for-ambiguity-resolution-19447	
56	29/02/2024	4	Semantic tagging	CHALK AND TALK	https://www.dcc.ac.uk/resources/ambiguity-applications-for-ambiguity-resolution-19447	

Unit 4

57	01/03/2024	1	Natural Language Generation	CHALK AND TALK	https://www.dcc.ac.uk/resources/ambiguity-applications-for-ambiguity-resolution-19447	
58	02/03/2024	1	Generations of NLP	CHALK AND TALK	https://www.dcc.ac.uk/resources/ambiguity-applications-for-ambiguity-resolution-19447	
59	03/03/2024	1	Architecture of NLP	CHALK AND TALK	https://www.dcc.ac.uk/resources/ambiguity-applications-for-ambiguity-resolution-19447	
60	05/03/2024	2	How Does Natural Language Processing (NLP) Work?	CHALK AND TALK	https://www.dcc.ac.uk/resources/ambiguity-applications-for-ambiguity-resolution-19447	
61	06/03/2024	3	Generation Tasks and Representations	CHALK AND TALK	https://medium.com/nlp-ai/nlp-ai-for-natural-language-generation-8a2a1e4d1d4d	
62	07/03/2024	4	Application of NLG	CHALK AND TALK	https://medium.com/nlp-ai/nlp-ai-for-natural-language-generation-8a2a1e4d1d4d	
63	08/03/2024	1	Automatic report generation	CHALK AND TALK	https://medium.com/nlp-ai/nlp-ai-for-natural-language-generation-8a2a1e4d1d4d	
64	11/03/2024	1	Image captioning	CHALK AND TALK	https://medium.com/nlp-ai/nlp-ai-for-natural-language-generation-8a2a1e4d1d4d	
65	12/03/2024	1	Machine Translation	CHALK AND TALK	https://www.dcc.ac.uk/resources/ambiguity-applications-for-ambiguity-resolution-19447	
66	14/03/2024	1	Evolution of Machine Translation	CHALK AND TALK	https://www.dcc.ac.uk/resources/ambiguity-applications-for-ambiguity-resolution-19447	
67	14/03/2024	3	Problems in Machine Translation	CHALK AND TALK	https://medium.com/nlp-ai/nlp-ai-for-natural-language-generation-8a2a1e4d1d4d	
68	15/03/2024	1	Natural Language Processing (NLP) Challenges	CHALK AND TALK	https://medium.com/nlp-ai/nlp-ai-for-natural-language-generation-8a2a1e4d1d4d	
69	16/03/2024	1	Characteristics of Indian Language	CHALK AND TALK	https://medium.com/nlp-ai/nlp-ai-for-natural-language-generation-8a2a1e4d1d4d	
70	18/03/2024	1	NLP for Indian Languages The Challenges	CHALK AND TALK	https://medium.com/nlp-ai/nlp-ai-for-natural-language-generation-8a2a1e4d1d4d	
71	19/03/2024	1	Machine Translation Approaches	CHALK AND TALK	https://medium.com/nlp-ai/nlp-ai-for-natural-language-generation-8a2a1e4d1d4d	
72	20/03/2024	1	Evolution of Machine Translation	CHALK AND TALK	https://medium.com/nlp-ai/nlp-ai-for-natural-language-generation-8a2a1e4d1d4d	

Unit 5

73	21/03/2024	1	Information Extraction	CHALK AND TALK	https://www.dcc.ac.uk/resources/ambiguity-applications-for-ambiguity-resolution-19447	
74	22/03/2024	1	Techniques used in information extraction	CHALK AND TALK	https://www.dcc.ac.uk/resources/ambiguity-applications-for-ambiguity-resolution-19447	
75	25/03/2024	1	Automatic Summarization	CHALK AND TALK	https://www.dcc.ac.uk/resources/ambiguity-applications-for-ambiguity-resolution-19447	
76	26/03/2024	1	Types of Text Summarization	CHALK AND TALK	https://www.dcc.ac.uk/resources/ambiguity-applications-for-ambiguity-resolution-19447	
77	27/03/2024	1	Information Retrieval and Question Answering	CHALK AND TALK	https://www.dcc.ac.uk/resources/ambiguity-applications-for-ambiguity-resolution-19447	
78	28/03/2024	1	Named Entity Recognition	CHALK AND TALK	https://www.dcc.ac.uk/resources/ambiguity-applications-for-ambiguity-resolution-19447	
79	01/04/2024	1	Relation Extracting	CHALK AND TALK	https://www.dcc.ac.uk/resources/ambiguity-applications-for-ambiguity-resolution-19447	
80	02/04/2024	1	Binary Relationship Extraction	CHALK AND TALK	https://www.dcc.ac.uk/resources/ambiguity-applications-for-ambiguity-resolution-19447	

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Mrs. R. Parthasarathy

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E. Gopalakrishnan



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81	02/01/2024	1	Termar Relationship Extraction	CHALK AND TALK	https://www.pdftek.org/tutorials/relationship-extraction-to-aly/	
82	03/04/2024	4	Termar Relationship Extraction	CHALK AND TALK	https://www.pdftek.org/tutorials/relationship-extraction-to-aly/	
83	04/04/2024	1	Nested Relationship Extraction	CHALK AND TALK	https://www.pdftek.org/tutorials/nested-relationship-extraction-to-aly/	
84	05/04/2024	1	IE using Sequence Labeling	CHALK AND TALK	https://medium.com/@hannan1988/sequence-labeling-the-way-of-409-452-0f7c5a7	
85	06/04/2024	1	Sequence tagging	CHALK AND TALK	https://www.oxfordjournals.org/advance-article/doi/10.1093/natlang/nzab017/6180172/1/017043_04_Final_ASB_cph.stm	
86	06/04/2024	3	machine translation	CHALK AND TALK	https://www.pdftek.org/tutorials/machine-translation-to-aly/	
87	10/04/2024	3	Statistical machine translation	CHALK AND TALK	https://www.pdftek.org/tutorials/statistical-machine-translation/	
88	12/04/2024	4	word alignment	CHALK AND TALK	https://www.pdftek.org/tutorials/word-alignment/	
89	13/04/2024	1	phrase based translation	CHALK AND TALK	https://www.pdftek.org/tutorials/phrase-based-translation/	
90	15/04/2024	1	synchronous grammars	CHALK AND TALK	http://nlp.cs.columbia.edu/~mcollins/ppl/	

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Faculty Signature

R. P.

[Mrs. R. Pavithra]

Coordinator

Head of the Department

[B. G. Gopalakrishnan]



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LESSON PLAN

ACADEMIC YEAR : 2023-2024
Faculty Name : Mrs. PAVITHRA R.
Year/Semester/Section : III/VI/All
Degree & Branch : ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING
Subject Code & Name : 21UA6CT & CORE PRACTICAL 9 - NATURAL LANGUAGE PROCESSING LAB

S.No	Date	Hours	Topics	Delivery Methods	Links	Book Refered
Unit 1						
1	04/12/2023	3	implementing word similarity	LAB	https://www.geogebra.org/m/pjdhaw/word-similarity-nltk-ipython	
2	05/12/2023	5	HOW TO IMPLEMENT TEXT SIMILARITY	LAB	https://medium.com/@pavithra_r/219/text-similarity-python	
3	06/12/2023	4	PHYTHON NLTK	CHALK AND TALK LAB	https://www.nltk.org/	
4	07/12/2023	1	Tokenization in nlp	LAB	https://www.geogebra.org/m/pjdhaw/word-similarity-nltk-ipython	
5	08/12/2023	3	Stopwords filtering	CHALK AND TALK LAB	https://www.geogebra.org/m/pjdhaw/word-similarity-nltk-ipython	
6	10/12/2023	3	introduction to stemming	CHALK AND TALK LAB	https://www.geogebra.org/m/pjdhaw/word-similarity-nltk-ipython	
7	12/12/2023	3	POS tagging	CHALK AND TALK LAB	https://medium.com/@pavithra_r/219/text-similarity-nltk-ipython	
8	13/12/2023	5	lemmatizing in NLP	CHALK AND TALK LAB	https://www.geogebra.org/m/pjdhaw/word-similarity-nltk-ipython	
9	14/12/2023	4	chunking identify phrases.	CHALK AND TALK LAB	https://www.geogebra.org/m/pjdhaw/word-similarity-nltk-ipython	
10	15/12/2023	1	named entity recognition	CHALK AND TALK LAB	https://medium.com/@pavithra_r/219/text-similarity-nltk-ipython	
11	16/12/2023	3	Text to Analyze	CHALK AND TALK LAB	https://medium.com/@pavithra_r/219/text-similarity-nltk-ipython	
12	19/12/2023	3	concordance in NLP	CHALK AND TALK LAB	https://medium.com/@pavithra_r/219/text-similarity-nltk-ipython	
13	20/12/2023	3	dispersion plot	CHALK AND TALK LAB	https://medium.com/@pavithra_r/219/text-similarity-nltk-ipython	
14	21/12/2023	3	frequency distribution	CHALK AND TALK LAB	https://medium.com/@pavithra_r/219/text-similarity-nltk-ipython	
15	22/12/2023	4	collocation	CHALK AND TALK LAB	https://medium.com/@pavithra_r/219/text-similarity-nltk-ipython	
16	24/12/2023	1	string similarity algorithms	CHALK AND TALK LAB	https://medium.com/@pavithra_r/219/text-similarity-nltk-ipython	
Unit 2						
17	27/12/2023	3	lask algorithm	CHALK AND TALK LAB	https://www.geogebra.org/m/pjdhaw/word-similarity-nltk-ipython	
18	02/01/2024	5	readability index 1	CHALK AND TALK LAB	https://www.geogebra.org/m/pjdhaw/word-similarity-nltk-ipython	
19	03/01/2024	4	LESK'S ALGORITHM	CHALK AND TALK LAB	https://medium.com/@pavithra_r/219/text-similarity-nltk-ipython	

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Faculty Signature

Coordinator

Head of the Department

[Mrs R. Pavithra]

[Dr. Somanthachandrasekar]



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20	06/01/2024	1	WORD SENSE DISAMBIGUATION	CHALK AND TALK LINK	https://subscription.packtpub.com/book/ai/9781802084211/12/01/1362046-word-sense-disambiguation	
21	05/01/2024	3	LESAK ALGORITHM IN NLP	CHALK AND TALK LAB	https://www.geckstorgeeks.org/lesak-algorithm-in-nlp-pptx/	
22	08/01/2024	3	INTRODUCTION TO WSD	CHALK AND TALK LINK	https://medium.com/@rebedictictor/introduction-to-word-sense-disambiguation-part-two-simple-implementation-of-lesak-algorithm-using-1664821fccc	
23	09/01/2024	3	IMPORTANCE OF WSD	CHALK AND TALK LINK	https://www.analyticsvidhya.com/blog/2021/06/word-sense-disambiguation-importance-in-natural-language-processing/	
24	10/01/2024	5	WSD USAGES EXAMPLES	CHALK AND TALK LAB	https://arxiv.org/pdf/1904.02356.pdf	
25	11/01/2024	4	MORPHOLOGICAL PARSING	CHALK AND TALK LAB	https://cs.unimelb.edu.au/~stephen/comp551p/with-prolog/tutorial21.html	
26	12/01/2024	1	Finite State Automation	LAB	https://www.autorialspoint.com/natural_language_processing/natural_language_processing_word_level_analysis.htm	
27	22/01/2024	3	Statistical learning in language acquisition	CHALK AND TALK LAB	https://en.wikipedia.org/wiki/Statistical_learning_in_language_acquisition	
28	23/01/2024	4	Word Level Analysis	LAB	https://www.autorialspoint.com/natural_language_processing/natural_language_processing_word_level_analysis.htm	
29	24/01/2024	4	Neural Language Models	CHALK AND TALK LAB	https://machinelearningmastery.com/statistical-language-modeling-and-neural-language-models/	
30	27/01/2024	1	Language Models	CHALK AND TALK LAB	https://nlpforai.github.io/nlp-for-ai/nlp-for-ai-language-models-in-nlp/	

Unit 3

31	29/01/2024	3	Regular Expressions	CHALK AND TALK	https://www.analyticsvidhya.com/blog/2021/03/beginners-guide-to-regular-expressions-in-natural-language-processing/	
32	30/01/2024	3	Special Sequences in Regular Expressions	LAB	https://www.analyticsvidhya.com/blog/2021/03/beginners-guide-to-regular-expressions-in-natural-language-processing/	
33	31/01/2024	3	Morphological Models	LAB	https://www.infoml.com/articles/article.aspx?pi=183732&eqNum=3	
34	01/02/2024	5	Semantic Analysis	CHALK AND TALK LAB	https://www.geckstorgeeks.org/understanding-semantic-analysis-nlp/	
35	02/02/2024	4	Significance of Semantics Analysis	LAB	https://www.geckstorgeeks.org/understanding-semantic-analysis-nlp/	
36	03/02/2024	3	Meaning Representation	LAB	https://www.geckstorgeeks.org/understanding-semantic-analysis-nlp/	
37	05/02/2024	1	Lexical Semantics	CHALK AND TALK LAB	https://www.geckstorgeeks.org/understanding-semantic-analysis-nlp/	
38	06/02/2024	3	Amiguity	CHALK AND TALK LAB	https://www.cypiredatabase.com/2020/06/ambiguity-in-natural-language-processing.html	
39	07/02/2024	3	Word Sense	CHALK AND TALK LAB	https://www.geckstorgeeks.org/word-sense-disambiguation-in-natural-language-processing/	
40	08/02/2024	3	Word Sense Disambiguation	LAB	https://www.geckstorgeeks.org/word-sense-disambiguation-in-natural-language-processing/	
41	09/02/2024	5	Difficulties in Word Sense Disambiguation	CHALK AND TALK LAB	https://www.geckstorgeeks.org/word-sense-disambiguation-in-natural-language-processing/	
42	12/02/2024	1	Natural Language Discourse Processing	CHALK AND TALK	https://www.autorialspoint.com/natural_language_processing/natural_language_discourse_processing.htm	
43	13/02/2024	3	Discourse structure	CHALK AND TALK LAB	https://www.autorialspoint.com/natural_language_processing/natural_language_discourse_processing.htm	
44	14/02/2024	3	Cohesion	CHALK AND TALK LAB	https://www.autorialspoint.com/natural_language_processing/natural_language_discourse_processing.htm	
45	15/02/2024	3	Reference Resolution	CHALK AND TALK LAB	https://www.autorialspoint.com/natural_language_processing/natural_language_discourse_processing.htm	

Unit 4

46	16/02/2024	5	Natural Language Generation	LAB	https://www.ibm.com/topics/natural-language-processing	
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Faculty Signature

Coordinator

Head of the Department

[Signature]
Mrs. R. Pavithra

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S. Sornalini Chokkase



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47	17/02/2024	3	Architecture of NLP	CHALK AND TALK LAB	https://www.arxivabs.net/abs/101.3.3.natural-architecture-for-nlp-71f11a27b189
48	19/02/2024	4	Generation Tasks and Representations	CHALK AND TALK LAB	https://medium.com/@sawadee65-9p-walks-for-natural-language-generation-8a2a10eaf1d1
49	20/02/2024	1	Automatic report generation	CHALK AND TALK LAB	https://arxiv.org/abs/2004.01804v1[Natural Language Generation]-title=Comment%20applications%20of%20NLG%20in%20the%20health%20care%20domain%20-%20Sawadee%20-%2020240406
50	21/02/2024	3	Image captioning	CHALK AND TALK LAB	https://en.wikipedia.org/wiki/Natural_language_generation?title=Comment%20applications%20of%20NLG%20in%20the%20health%20care%20domain%20-%20Sawadee%20-%2020240406
51	22/02/2024	3	Machine Translation	CHALK AND TALK LAB	https://www.upgrad.com/blog/machine-translation-in-ai/
52	23/02/2024	3	Evolution of Machine Translation	CHALK AND TALK LAB	https://www.upgrad.com/blog/machine-translation-in-ai/
53	24/02/2024	5	Problems in Machine Translation	CHALK AND TALK LAB	https://medium.com/@sawadee65-9p-walks-for-natural-language-processing-challenges/
54	27/02/2024	4	Natural Language Processing (NLP) Challenges	CHALK AND TALK LAB	https://medium.com/@sawadee65-9p-walks-for-natural-language-processing-challenges/
55	28/02/2024	1	Characteristics of Indian Language	CHALK AND TALK LAB	https://www.researchgate.net/publication/310641684_110641684
56	29/02/2024	3	Application of NLP	CHALK AND TALK LAB	https://en.wikipedia.org/wiki/Natural_language_processing?title=Comment%20applications%20of%20NLG%20in%20the%20health%20care%20domain%20-%20Sawadee%20-%2020240406
57	01/03/2024	3	NLP for Indian Languages The Challenges	CHALK AND TALK LAB	https://www.researchgate.net/publication/310641684_110641684
58	02/03/2024	3	Natural Language Generation	CHALK AND TALK LAB	https://www.ibm.com/blog/natural-language-generation
59	04/03/2024	3	Information Extraction	CHALK AND TALK LAB	https://www.ibm.com/blog/natural-language-generation
60	05/03/2024	5	Techniques used in information extraction	CHALK AND TALK ONLINE LINK	https://www.analyticsverse.com/blog/nlp-techniques-extract-information
61	06/03/2024	4	Automatic Summarization	CHALK AND TALK LAB	https://www.machinelearningpointsofview.com/nlp/ai-summarization-approaches-nlp-example/#google_vignette
62	07/03/2024	1	Information Extraction	CHALK AND TALK ONLINE LINK	https://www.analyticsverse.com/blog/nlp-techniques-extract-information
63	08/03/2024	3	Machine Translation Approaches	CHALK AND TALK LAB	https://www.scribd.com/document/723979169/machine-translation-in-ai-9p
64	11/03/2024	3	Generation Tasks and Representations	ONLINE LINK	https://medium.com/@sawadee65-9p-walks-for-natural-language-generation-8a2a10eaf1d1
65	12/03/2024	3	Evolution of Machine Translation	CHALK AND TALK LAB	https://www.upgrad.com/blog/machine-translation-in-ai/
66	14/03/2024	5	Problems in Machine Translation	CHALK AND TALK ONLINE LINK	https://medium.com/@sawadee65-9p-walks-for-natural-language-generation-8a2a10eaf1d1
67	14/03/2024	4	Characteristics of Indian Language	CHALK AND TALK ONLINE LINK	https://www.researchgate.net/publication/310641684_110641684
68	15/03/2024	1	Language Models	CHALK AND TALK LAB	https://insights.dellodyssey.com/blog/what-are-language-models-in-ai/
69	16/03/2024	4	Spelling Error Detection and Correction	CHALK AND TALK LAB	https://medium.com/@sawadee65-9p-walks-for-natural-language-generation-8a2a10eaf1d1
70	18/03/2024	3	Word Classes	CHALK AND TALK ONLINE LINK	https://www.scribd.com/document/723979169/machine-translation-in-ai-9p
71	19/03/2024	3	Machine Translation Approaches	LAB ONLINE LINK	https://www.upgrad.com/blog/nlp/machine-translation-in-ai/
72	20/03/2024	3	Evolution of Machine Translation	CHALK AND TALK LAB	https://www.upgrad.com/blog/nlp/machine-translation-in-ai/
73	21/03/2024	5	Information Extraction	LAB ONLINE LINK	https://www.analyticsverse.com/blog/nlp-techniques-extract-information
74	22/03/2024	4	Image captioning	CHALK AND TALK LAB	https://en.wikipedia.org/wiki/Natural_language_generation?title=Comment%20applications%20of%20NLG%20in%20the%20health%20care%20domain%20-%20Sawadee%20-%2020240406
75	24/03/2024	1	Machine Translation	CHALK AND TALK LAB	https://www.upgrad.com/blog/machine-translation-in-ai/

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Coordinator

Head of the Department

Ms. R. Pavithra

Head of the Department
[S. Goranline Johana]



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76	26/03/2024	3	Problems in Machine Translation	CHALK AND TALK LAB	https://monkeyteam.com/blog/natural-language-processing-challenges/
77	27/03/2024	3	Characteristics of Indian Language	CHALK AND TALK LAB	http://www.vidyadevance.com/wp-content/uploads/2016/06/1066
78	28/03/2024	3	Automatic Summarization	CHALK AND TALK LAB	https://www.mathworksheetsland.com/html5/automatic-summarization-approach-the-sample/people_viparitic
79	30/03/2024	4	Discourse structure	CHALK AND TALK ONLINE LINK	https://www.litmagazynet.com/natural_language_processing/natural_language_discourse_processing.htm

Unit 5

M0	01/04/2024	5	Information Retrieval and Question Answering	CHALK AND TALK LAB	https://pdfintelligence.com/2023/01/20/question-answering-qa-system-qlp/
M1	02/04/2024	4	Named Entity Recognition	LAB ONLINE L25K	https://www.ibm.com/cybersecurity/ai/ai-explain
M2	03/04/2024	1	Relation Extracting	CHALK AND TALK LAB	https://www.godskingtechs.org/relationshipextraction-in-qlp/
M3	04/04/2024	3	Nested Relationship Extraction	LAB	https://www.godskingtechs.org/relationship-extraction-in-qlp/
M4	05/04/2024	3	IE using Sequence Labeling	CHALK AND TALK LAB	https://medium.com/aiengineering-ai/sequence-labeling-the-basics-of-qlp-a52c8ff1a567
M5	06/04/2024	3	Sequence tagging	CHALK AND TALK LAB	https://www.revelry.com/qlpny/news/natural-language-processing/9781801072311/817043_04_Final_ASR_c9b0_xhtml
M6	08/04/2024	5	word alignment	CHALK AND TALK LAB	https://serp.id/werdt-alignment/
M7	10/04/2024	4	machine translation	CHALK AND TALK LAB	https://www.scler.com/qlpny/qlp/machine-translation-in-qlp/
M8	12/04/2024	1	Statistical machine translation	CHALK AND TALK LAB	https://en.wikipedia.org/wiki/Statistical_machine_translation
M9	13/04/2024	3	phrase based translation	CHALK AND TALK LAB	https://www.cs.columbia.edu/~mcollins/pb.pdf
M10	15/04/2024	3	synchronous grammars	CHALK AND TALK LAB	http://im-dao.org/papers/decv14-synchronous-context-free-grammars.pdf

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Head of the Department
[S. Gopalakrishnan]



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LESSON PLAN

ACADEMIC YEAR : 2023-2024
Faculty Name : Dr. ARUNA DEVI PONNUSAMY ..
Year/Semester/Section : III/VI/All
Degree & Branch : ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING
Subject Code & Name : 21UA1612 & CORE PAPER 12 - BLOCK CHAIN TECHNOLOGY

S.No	Date	Hours	Topic(s)	Delivery Methods	Links	Book Referred
Unit 1						
1	05/12/2023	2	Distributed Database	CHALK AND TALK	https://www.javapoint.com/blockchain-vs-database	
2	05/12/2023	4	Two General Problem	CHALK AND TALK	https://www.geeksforgeeks.org/byzantine-general-problem-in-blockchain/	
3	06/12/2023	5	Byzantine General problem	CHALK AND TALK	https://www.geeksforgeeks.org/byzantine-general-problem-in-blockchain/	
4	07/12/2023	3	Fault Tolerance	CHALK AND TALK	https://www.geeksforgeeks.org/hdfs-hadoop-distributed-file-system/	
5	08/12/2023	2	Hadoop Distributed File System	CHALK AND TALK	https://www.geeksforgeeks.org/hadoop-hdfs-hadoop-distributed-file-system/	
6	08/12/2023	4	Distributed Hash Table	CHALK AND TALK	https://www.tutorialspoint.com/distributed-hash-tables-dhts	
7	13/12/2023	2	ASIC resistance	CHALK AND TALK	https://cleartax.in/s/basic-resistant-cryptocurrencies	
8	13/12/2023	4	Turing Complete	CHALK AND TALK	https://www.geeksforgeeks.org/what-s-mean-by-turing-complete-in-ethereum/	
9	14/12/2023	5	Cryptography	CHALK AND TALK	https://www.geeksforgeeks.org/cryptography-in-blockchain/	
10	15/12/2023	3	Hash function	CHALK AND TALK	https://www.javaipoint.com/blockchain-hash-function	
11	18/12/2023	2	Digital Signature	CHALK AND TALK	https://mudrex.com/blog/digital-signature-blockchain-introduction	
12	18/12/2023	4	ECDSA	CHALK AND TALK	https://www.geeksforgeeks.org/blockchain-elliptic-curve-digital-signature-algorithm-ecdsa/	

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13	21/12/2023	2	Memory Hard Algorithm	CHALK AND TALK	https://medium.com/@Linzhil/what-is-memory-hard	
14	21/12/2023	4	Zero Knowledge Proof positions	CHALK AND TALK	https://www.leewayhertz.com/zero-knowledge-proof-and-bl	
15	22/12/2023	5	Zero Knowledge Proof positions: Types	CHALK AND TALK	https://www.leewayhertz.com/zero-knowledge-proof-and-bl	
16	26/12/2023	3	Zero Knowledge Proof positions : Applications and Usecases	CHALK AND TALK	https://chain.link/education-hub/zero-knowledge-proof-use-cases	
17	27/12/2023	2	Zero Knowledge Proof positions: Examples Use cases	CHALK AND TALK	https://www.coinbureau.com/adoption/applications-zero-knowledge-proofs/	
18	27/12/2023	4	Reward	CHALK AND TALK	https://www.geeksforgeeks.org/what-is-a-block-reward/	

Unit 2

19	02/01/2024	2	conventional distributed database : Introduction	CHALK AND TALK	https://www.geeksforgeeks.org/difference-between-blockchain-and-a-database/	
20	02/01/2024	4	Advantage over conventional distributed database	CHALK AND TALK	https://mctschool.so/articles/blockchain-distributed-database-system/	
21	03/01/2024	5	Block chain Network	CHALK AND TALK	https://www.gemini.com/cryptopedia/blockchain-technology-explained#section-blockchain-technology-explained	
22	04/01/2024	3	Block chain Network : Advantages and Limitations	CHALK AND TALK	https://www.investopedia.com/terms/b/blockchain.asp	
23	05/01/2024	2	Mining Mechanism	CHALK AND TALK	https://www.coinbase.com/learn/crypto-basics/what-is-mining	
24	05/01/2024	4	Mining Mechanism :How it works	CHALK AND TALK	https://www.investopedia.com/tech/how-does-bitcoin-mining-work/	
25	10/01/2024	2	Distributed Consensus : Example	CHALK AND TALK	https://www.geeksforgeeks.org/distributed-consensus-in-distributed-systems/	
26	10/01/2024	4	Distributed Consensus: Applications	CHALK AND TALK	https://www.geeksforgeeks.org/distributed-consensus-in-distributed-systems/	
27	11/01/2024	5	Merkle Patricia Tree : Benefits	CHALK AND TALK	https://www.javatpoint.com/blockchain-merkle-tree	

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28	12/01/2024	3	Merkle Patricia Tree: Structure	CHALK AND TALK	https://www.geeksforgeeks.org/blockchain-merkle-trees/	
29	23/01/2024	5	Gas Limit	PPT, CHALK AND TALK	https://www.investopedia.com/terms/g/gas-ethereum.asp	
30	24/01/2024	5	working of Gas Limit	CHALK AND TALK	https://shardeum.org/blog/what-is-gas-limit/	
31	27/01/2024	3	Transactions and Fee : example	CHALK AND TALK	https://www.linkedin.com/pulse/what-transaction-fee-blockchain-aman-singh	
32	29/01/2024	2	Anonymity	CHALK AND TALK	https://www.geeksforgeeks.org/public-blockchain/	
33	29/01/2024	4	Chain Policy	PPT, CHALK AND TALK	https://www.geeksforgeeks.org/blockchain-creating-blocks/	
34	01/02/2024	2	Life of Blockchain application	PPT, CHALK AND TALK	https://www.geeksforgeeks.org/real-world-applications-and-uses-of-blockchain/	
35	01/02/2024	4	Soft & Hard Fork	CHALK AND TALK	https://www.geeksforgeeks.org/blockchain-forks/	
36	02/02/2024	5	Private and Public block chain.	CHALK AND TALK	https://www.geeksforgeeks.org/private-blockchain/	

Unit 3

37	05/02/2024	3	Nakamoto consensus	PPT, CHALK AND TALK	https://www.geeksforgeeks.org/consensus-algorithms-in-blockchain/	
38	06/02/2024	2	Proof of Work	CHALK AND TALK	https://www.geeksforgeeks.org/proof-of-work-pow/	
39	06/02/2024	4	Proof of Stake	PPT, CHALK AND TALK	https://www.geeksforgeeks.org/proof-of-stake-pos-in-blockchain/	
40	09/02/2024	2	Proof of Burn	PPT, CHALK AND TALK	https://www.geeksforgeeks.org/proof-of-burn-consensus-algorithm-in-blockchain/	
41	09/02/2024	4	Difficulty Level	PPT, CHALK AND TALK	https://www.doubtlin.com/learn/difficulty-level-blockchain-bitcoin-mining	
42	12/02/2024	3	Sybil Attack	PPT, CHALK AND TALK	https://www.geeksforgeeks.org/sybil-attack/	
43	13/02/2024	2	Energy utilization and alternate	CHALK AND TALK	https://www.protocol.com/insights/top-5-blockchain-use-cases-in-energy-and-utilities	
44	13/02/2024	4	History, Distributed Ledger	PPT, CHALK AND TALK	https://www.investopedia.com/terms/d/distributed-ledger-technology-dlt.asp	

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M. S. P.

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Head of the Department

S. S. S.

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45	16/02/2024	2	Bitcoin: protocols	PDF, CHALK AND TALK	https://www.geeksforgeeks.org/blockchain-protocols-and-their-working/	
46	16/02/2024	4	Bitcoin: protocols : Examples	CHALK AND TALK	https://www.geeksforgeeks.org/blockchain-protocols-and-their-working/	
47	19/02/2024	5	Mining strategy and rewards	PPT, CHALK AND TALK, VIDEOS	https://www.geeksforgeeks.org/blockchain-incentives-to-miners/	
48	20/02/2024	3	Ethereum	PPT, CHALK AND TALK	https://www.investopedia.com/terms/c/ethereum.asp	
49	21/02/2024	2	Construction	CHALK AND TALK	https://www.fourtechnolab.com/blog/blockchain-in-construction-how-will-it-change-the-industry-in-2022	
50	21/02/2024	4	DAO	CHALK AND TALK	https://www.geeksforgeeks.org/daodecentralized-autonomous-organization-in-blockchain/	
51	26/02/2024	2	Smart Contract	CHALK AND TALK	https://www.geeksforgeeks.org/smart-contracts-in-blockchain/	
52	26/02/2024	4	GHOST, Vulnerability	CHALK AND TALK	https://cybersecurity.att.com/blogs/security-essentials/8-blockchain-security-issues-you-are-likely-to-encounter	
53	27/02/2024	5	Attacks and side chain	PDF, CHALK AND TALK	https://www.spiceworks.com/it-security/vulnerability-management/articles/top-five-blockchain-attacks/	
54	28/02/2024	3	Namecoin	PDF, CHALK AND TALK	https://www.investopedia.com/terms/n/namecoin.asp	
55	29/02/2024	2	Roots of Bit coin	CHALK AND TALK	https://www.javatpoint.com/bitcoin	

Unit 4

56	29/02/2024	4	Stakeholders	CHALK AND TALK	https://medium.com/predict/stakeholders-in-a-blockchain-solution-d54591844c20	
57	02/03/2024	2	Legal Aspects	CHALK AND TALK	https://www.lexology.com/library/detail.aspx?g=c2cbe98-9306-454d-8687-f402db0296f5	
58	02/03/2024	4	Exchange	CHALK AND TALK	https://support.blockchain.com/hc/en-us/articles	
59	05/03/2024	2	Black Market and Global Economy	CHALK AND TALK, FLIPPED CLASS	https://sendpulse.com/support/glossary/black-market	
60	05/03/2024	2	Applications: Internet of Things	PDF, CHALK AND TALK	https://www.ibm.com/topics/blockchain-iot	
61	06/03/2024	5	Medical Record Management System	PPT, CHALK AND TALK	https://study.com/learn/lesson/black-market-impact-examples.html	

Anand P
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Coordinator

S. S. S. S.
Head of the Department



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62	07/03/2024	3	Domain Name Service :Uses	CHALK AND TALK	https://blog.roostock.io/notice/blockchain-domain-names-system-decentralizing-the-web/	
63	08/03/2024	2	DNS: Softwares	PPT,CHALK AND TALK	https://www.softwarerestinghelp.com/best-blockchain-dns-software/	
64	08/03/2024	4	DNS: Examples with Explanation	CHALK AND TALK	https://www.sidin.nl/en/news-and-blogs/domain-names-in-the-blockchain-type-of-innovation	
65	13/03/2024	2	future of block chain: Overview	PPT,CHALK AND TALK	https://bap-software.net/en/knowledge/future-of-blockchain	
66	13/03/2024	4	future of block chain: About Industries	CHALK AND TALK,VIDEOS	https://www.simplilearn.com/tutorials/blockchain-tutorial/blockchain-industries	
67	14/03/2024	5	future of block chain: Security aspects	VIDEOS	https://www.simplilearn.com/tutorials/blockchain-tutorial/blockchain-industries	
68	15/03/2024	3	future of block chain : Future Revolution	CHALK AND TALK	https://kripionat.io/blockchain/future-of-blockchain/	
69	16/03/2024	5	future of block chain: Crypto currencies	CHALK AND TALK, VIDEOS	https://online.stanford.edu/future-blockchain-and-cryptocurrencies	
70	18/03/2024	2	future of block chain: Applications	CHALK AND TALK	https://builtin.com/blockchain/blockchain-applications	
71	18/03/2024	4	Block chain facts	CHALK AND TALK,VIDEOS	https://www.investopedia.com/terms/b/blockchain.asp	
72	21/03/2024	2	Pros and Cons in block chain: conclusion	PPT,VIDEOS	https://www.investopedia.com/terms/b/blockchain.asp#toc-pros-and-cons-of-blockchain	
Unit 5						
73	21/03/2024	4	Case study on Naive Block chain construction : Example	PDF,CHALK AND TALK	https://www.accessofware.com/en/us/bin-blockchain?utm_source=google	
74	22/03/2024	5	Case study on Naive Block chain construction : Process	PPT,VIDEOS	https://github.com/contradog/naivecoin	
75	25/03/2024	3	Case study on Naive Block chain construction : sample	CHALK AND TALK	https://www.icuaw.com/technicaltechnology/blockchain-and-cryptosetw/blockchain-articles/blockchain-case-studies	
76	26/03/2024	2	Memory Hard algorithm : example	CHALK AND TALK	https://www.cs.utexas.edu/~dwu4/courses/sp22/static/projects/Komurup.pdf	

Ami D. P.

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77	26/03/2024	4	Memory Hard algorithm	CHALK AND TALK	https://www.geeksforgeeks.org/blockchain-hash-function/	
78	30/03/2024	5	Memory Hard algorithm : examples	PPT,CHALK AND TALK	https://www.geeksforgeeks.org/blockchain-transaction-life-cycle/	
79	01/04/2024	2	Hash cash implementation	PPT,CHALK AND TALK	https://github.com/catalinc/hashcash	
80	01/04/2024	4	Working of Hash cash	CHALK AND TALK	https://github.com/catalinc/hashcash	
81	02/04/2024	5	Hash cash: uses cases	PPT,CHALK AND TALK	https://academy.bit2me.com/en/quc-cs-hashcash/	
82	03/04/2024	3	Direct Acyclic Graph	CHALK AND TALK	https://www.geeksforgeeks.org/difference-between-dag-and-blockchain/	
83	04/04/2024	2	Direct Acyclic Graph	CHALK AND TALK	https://www.geeksforgeeks.org/difference-between-dag-and-blockchain/	
84	04/04/2024	4	Direct Acyclic Graph in crypto	CHALK AND TALK	https://cointelegraph.com/explained/what-is-a-directed-acyclic-graph-in-cryptocurrency-how-does-dag-work	
85	08/04/2024	2	Play with Go-ethereum	CHALK AND TALK	https://dev.to/yongchanghe/tutorial-play-with-geth-go-ethereum-4gic	
86	08/04/2024	4	Play with Go-ethereum	CHALK AND TALK	https://github.com/ethereum/go-ethereum	
87	10/04/2024	5	Smart Contract Construction	PDF,CHALK AND TALK	https://hedera.com/learning/smart-contracts/smart-contracts-construction	
88	12/04/2024	3	Smart Contract Construction: example	CHALK AND TALK	https://hedera.com/learning/smart-contracts/smart-contracts-construction	
89	13/04/2024	2	Toy application using Block chain	PPT,CHALK AND TALK	https://www.crowdbotics.com/blog/examples-of-blockchain-games-and-how-they-work	
90	13/04/2024	4	Mining puzzles	PDF,CHALK AND TALK	https://cryptotesters.com/blog/what-is-bitcoin-mining-and-how-does-it-actually-work	

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Coordinator

Sooley
Head of the Department



**KONGUNADU ARTS AND SCIENCE COLLEGE
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ACADEMIC YEAR

Faculty Name

Year/Semester/Section

Degree & Branch

Subject Code & Name

S.No	Date	Hours	Topics(s)	Delivery Methods	Links	Book Referred
Unit 1						
1	06/12/2023	1	Introduction to Open Sources	CHALK AND TALK	https://www.goteksforgeeks.org/introduction-to-open-source-and-its-benefits/	
2	07/12/2023	2	Benefits of Open-source contributions	CHALK AND TALK	https://www.goteksforgeeks.org/introduction-to-open-source-and-its-benefits/	
3	08/12/2023	5	Need of Open Sources	CHALK AND TALK	https://opensource.com/resources/what-open-source	
4	14/12/2023	1	What's the difference between open source software and other types of software?	CHALK AND TALK	https://opensource.com/resources/what-open-source	
5	15/12/2023	2	Advantages of Open Sources	CHALK AND TALK	https://www.rocket.chat/blog/open-source-software-advantages	
6	18/12/2023	5	Disadvantages to open-source software?	CHALK AND TALK	https://www.rocket.chat/blog/open-source-software-advantages	
7	22/12/2023	1	Application of Open Sources	CHALK AND TALK	https://www.techmint.com/post/free-open-source-software/	
8	26/12/2023	2	Open Source Operating Systems	CHALK AND TALK	https://www.zdnet.com/article/what-are-open-source-operating-systems-everything-you-need-to-know/	
9	27/12/2023	5	What distinguishes the different types of open source operating systems?	CHALK AND TALK	https://www.zdnet.com/article/what-are-open-source-operating-systems-everything-you-need-to-know/	
10	03/01/2024	1	What are the most popular open-source operating systems?	CHALK AND TALK	https://www.zdnet.com/article/what-are-open-source-operating-systems-everything-you-need-to-know/	
11	04/01/2024	2	Linux Introduction	CHALK AND TALK	https://www.goteksforgeeks.org/introduction-to-linux-operating-system/	
12	05/01/2024	5	Architecture of Linux	CHALK AND TALK	https://www.goteksforgeeks.org/introduction-to-linux-operating-system/	
13	11/01/2024	1	Advantages & Disadvantages of Linux	CHALK AND TALK	https://www.goteksforgeeks.org/introduction-to-linux-operating-system/	
14	12/01/2024	2	Overview of Linux	CHALK AND TALK	https://www.redhat.com/en/topics/linux/what-is-linux#:~:text=Linux%20is%20not%20just%20operating%20system%20,it%20powers%20about%20half%20of%20the%20world	
15	23/01/2024	1	User mode and kernel mode	CHALK AND TALK	https://learn.microsoft.com/en-us/windows-hardware/drivers/gettingstarted/user-mode-and-kernel-mode	
16	24/01/2024	1	Development with Linux	CHALK AND TALK	https://www.digitalocean.com/community/tutorials/a-brief-history-of-linux	
17	27/01/2024	2	Features of Linux	CHALK AND TALK	https://www.digitalocean.com/community/tutorials/a-brief-history-of-linux	
Unit 2						

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18	29/01/2024	5	MySQL Introduction	CHALK AND TALK	https://www.w3schools.com/mysql/mysql_intro.asp	
19	02/02/2024	1	MySQL Database	CHALK AND TALK	https://www.tutorialspoint.com/mysql/mysql-introduction.htm	
20	05/02/2024	2	Getting Started with MySQL	CHALK AND TALK	https://dev.mysql.com/doc/mysql-getting-started/cv	
21	06/02/2024	5	Installing and Starting MySQL	CHALK AND TALK	https://dev.mysql.com/doc/mysql-getting-started/cv	
22	12/02/2024	2	Record Selection Techniques	CHALK AND TALK	https://www.oreilly.com/library/view/mysql-cookbook/0596001452/ch03.html	
23	13/02/2024	5	Working with strings	CHALK AND TALK	https://learn.microsoft.com/en-us/dotnet/csharp/programming-guide/strings/	
24	19/02/2024	1	Immutability of strings	CHALK AND TALK	https://learn.microsoft.com/en-us/dotnet/csharp/programming-guide/strings/	
25	20/02/2024	2	Format strings	CHALK AND TALK	https://learn.microsoft.com/en-us/dotnet/csharp/programming-guide/strings/	
26	21/02/2024	5	Composite formatting	CHALK AND TALK	https://learn.microsoft.com/en-us/dotnet/csharp/programming-guide/strings/	
27	27/2/2024	1	Substrings	CHALK AND TALK	https://learn.microsoft.com/en-us/dotnet/csharp/programming-guide/strings/	
28	28/02/2024	2	Date and Time	CHALK AND TALK	https://medium.com/72-date-picker-and-calendar-libraries-for-react/	
29	29/02/2024	5	Sorting Query Results	CHALK AND TALK	https://learn.microsoft.com/en-us/dotnet/csharp/programming-guide/strings/	
30	02/03/2024	5	Sorting Results	CHALK AND TALK	https://www.gutenberg.org/ebooks/1186412/pg1-1	
31	06/03/2024	1	Generating Summary	CHALK AND TALK	https://www.machinelearningplus.com/ml/text-summarization-approaches-nlp-examples/#google_vignette	
32	07/03/2024	2	Types of Text Summarization	CHALK AND TALK	https://www.machinelearningplus.com/ml/text-summarization-approaches-nlp-examples/#google_vignette	
33	08/03/2024	5	Working with meta data	CHALK AND TALK	https://www.techurgat.com/whats-different-between-mysql-and-mariadb/	
34	14/03/2024	1	Sequences	CHALK AND TALK	https://mc.manuscriptcentral.com/1186412pg1-1	
Unit 5						
35	15/03/2024	2	Introduction to perl	CHALK AND TALK	https://www.geeksforgeeks.org/introduction-to-perl/	
36	16/03/2024	1	perl backgrounder	CHALK AND TALK	https://stackoverflow.com/questions/1330345/perl-background-process	
37	18/03/2024	5	perl overview	CHALK AND TALK	https://help.dreamhost.com/perlen/articles/216512598-Perl-overview	
38	22/03/2024	1	perl passing rules	CHALK AND TALK	https://www.geeksforgeeks.org/perl-passing-complex-parameters-to-a-subroutine/	
39	25/03/2024	2	variables and data	CHALK AND TALK	https://www.oreilly.com/library/view/perl-in-a-569228676/ch04.html#-ch04-20basics-20basics-20basics-20strings-2020basics-20reference	
40	26/03/2024	5	STATEMENTS AND CONTROL STRUCTURES	CHALK AND TALK	https://www.geeksforgeeks.org/control-structures-in-programming-languages/	
41	30/03/2024	1	control structure	CHALK AND TALK	https://github.com/Teja-P-04/Interactive-python-learning-website_with_compiler/blob/master/control%20structures.html	
42	02/04/2024	1	subroutines and functions	CHALK AND TALK	https://www.it-ebooks.info/docs/2.17%20types%20of%20functions%20and%20subroutines	
43	03/04/2024	2	difference between functions and subroutines	CHALK AND TALK	https://stackoverflow.com/questions/641834/what-is-the-difference-between-a-function-and-a-subroutine	

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[Mrs R. Pavithra]

Coordinator

[E. Sornalatha]



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44	04/04/2024	5	PACKAGES AND MODULES	CHALK AND TALK	https://www.austriapoint.com/pdf/perf_packages_modules.htm	
45	10/04/2024	1	PROCESS MANAGEMENT	CHALK AND TALK	https://www.austriapoint.com/pdf/perf_process_management.htm	
46	12/04/2024	2	WORKING WITH FILES	CHALK AND TALK	https://www.infomil.com/it3/article.aspx?i=29311	
47	13/04/2024	5	DATA MANIPULATION	CHALK AND TALK	https://www.godsforgodas.org/data-manipulation/	

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K.R.

[Mrs. R. Pavithra]

Coordinator

Head of the Department

S. Gopal

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LESSON PLAN

ACADEMIC YEAR : 2023-2024
Faculty Name : Dr. GOMATHI ALIAS ROHINI MOHANAVEL,
Year/Semester/Section : III/V/All
Degree & Branch : ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING
Subject Code & Name : 21UA6E2 & MAJOR ELECTIVE PAPER 2 - OPEN SOURCE SYSTEMS

S.No	Date	Hours	Topic(s)	Delivery Methods	Links	Book Referred
Unit 3						
1	04/12/2023	2	PHP: Introduction	CHALK AND TALK	https://classroom.google.com/NTLMTQwMDYwMTcy/m/NjUwODk0OTA0NjE1/details	
2	07/12/2023	5	Programming in Web Environment	CHALK AND TALK	https://classroom.google.com/NTLMTQwMDYwMTcy/m/NjUwODk0OTA0NjE1/details	
3	11/12/2023	2	Variables – Constants	CHALK AND TALK	https://classroom.google.com/NTLMTQwMDYwMTcy/m/NjUwODk0OTA0NjE1/details	
4	12/12/2023	2	Data Types	CHALK AND TALK	https://classroom.google.com/NTLMTQwMDYwMTcy/m/NjUwODk0OTA0NjE1/details	
5	15/12/2023	5	Operators	CHALK AND TALK	https://classroom.google.com/NTLMTQwMDYwMTcy/m/NjUwODk0OTA0NjE1/details	
6	19/12/2023	2	Statements	CHALK AND TALK	https://classroom.google.com/NTLMTQwMDYwMTcy/m/NjUwODk0OTA0NjE1/details	
7	20/12/2023	2	Functions	CHALK AND TALK	https://classroom.google.com/NTLMTQwMDYwMTcy/m/NjUwODk0OTA0NjE1/details	
8	26/12/2023	5	Arrays	CHALK AND TALK	https://classroom.google.com/NTLMTQwMDYwMTcy/m/NjUwODk0OTA0NjE1/details	
9	04/01/2024	5	OOP	CHALK AND TALK	https://www.w3schools.com/php/php_oop_welcome.asp	
10	08/01/2024	2	String Manipulation	CHALK AND TALK	https://classroom.google.com/NTLMTQwMDYwMTcy/m/NjUwODk0OTA0NjE1/details	
11	09/01/2024	2	Regular Expression	ONLINE LINK	https://www.w3schools.com/php/php_regex.asp	
12	12/01/2024	5	File Handling and Data Storage	CHALK AND TALK	<a href="https://www.w3schools.com/php/php_file_handling.php#<titleFile%20Handling%20in%20PHP%20in%20the%20form%20of%20a%20file">https://www.w3schools.com/php/php_file_handling.php#<titleFile%20Handling%20in%20PHP%20in%20the%20form%20of%20a%20file	
13	22/01/2024	2	File Handling and Data Storage	CHALK AND TALK	https://www.w3schools.com/php/php_mysql_intro.asp	
14	27/01/2024	5	PHP and SQL Database	CHALK AND TALK	https://www.w3schools.com/php/php_mysql_create.asp	
15	30/01/2024	2	PHP and LDAP	CHALK AND TALK	https://www.php.net/manual/en/ldap.php	
16	31/01/2024	2	PHP Connectivity	CHALK AND TALK	https://www.w3schools.com/php/php_mysql_connect.asp	

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[S. Gomaline Gohar]

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17	03/02/2024	2	Sending and Receiving E-mails*	CHALK AND TALK ONLINE LINK	https://www.javatpoint.com/php-mail	
Unit 4						
18	05/02/2024	5	Python Syntax and Style	CHALK AND TALK	https://www.w3schools.com/python/python_syntax.asp	
19	07/02/2024	2	Python Objects	CHALK AND TALK	https://www.w3schools.com/python/python_classes.asp	
20	08/02/2024	2	Numbers in python	CHALK AND TALK	https://www.simplilearn.com/tutorial/python-tutorial/python-numbers#:~:text=Numbers%20in%20Python%20is%20a%20Note%20on%20the%20code	
21	12/02/2024	5	Sequences in python	CHALK AND TALK	https://pythonguides.org/python-sequences-types-examples/	
22	14/02/2024	2	Sequences in python	CHALK AND TALK	https://www.pythontutorial.net/advanced-python/python-sequences/	
23	15/02/2024	2	Strings	CHALK AND TALK	https://www.w3schools.com/python/python_strings.asp	
24	17/02/2024	2	Lists and Tuples	CHALK AND TALK	https://www.simplilearn.com/difference-between-list-and-tuple-in-python-article	
25	20/02/2024	5	List and Tuples in python	CHALK AND TALK	https://realpython.com/python-lists-tuples/	
26	22/02/2024	2	Dictionaries	CHALK AND TALK	https://www.w3schools.com/python/python_dictionaries.asp	
27	23/02/2024	2	Dictionaries in python	CHALK AND TALK	https://realpython.com/python-dict/	
28	28/02/2024	5	Conditionals and Loops in python	CHALK AND TALK	https://www.puduhub.com/sites/default/files/content/uploads/files/2020/18/04/Lecture_11.pdf	
29	01/03/2024	2	Files – Input and Output	CHALK AND TALK ONLINE LINK	https://www.javatpoint.com/python-files-to	
30	04/03/2024	2	Errors and Exceptions	CHALK AND TALK ONLINE LINK	https://www.duicamp.com/tutorial/exception-handling-python#:~:text=An%20error%20is%20an%20issue%20that%20occurs%20when%20a%20program	
31	07/03/2024	5	Functions – Modules	CHALK AND TALK ONLINE LINK	https://www.w3schools.com/python/python_modules.asp	
32	11/03/2024	2	Classes and OOP – Execution Environment*	CHALK AND TALK ONLINE LINK	https://www.geeksforgeeks.org/understanding-the-execution-of-python-program/	
Unit 5						
33	12/03/2024	2	Perl Background	CHALK AND TALK ONLINE LINK	https://www.javatpoint.com/perl-introduction	
34	15/03/2024	5	perl background	CHALK AND TALK	https://help.dreamhost.com/help/en-us/articles/216512598-Perl-overview	
35	19/03/2024	2	perl passing rules	CHALK AND TALK	https://www.geeksforgeeks.org/perl-passing-complex-parameters-to-a-subroutine/	
36	20/03/2024	2	perl background	CHALK AND TALK	https://stackoverflow.com/questions/1330345/perl-background-process	
37	25/03/2024	5	perl overview	CHALK AND TALK	https://help.dreamhost.com/help/en-us/articles/216512598-Perl-overview	

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38	27/03/2024	2	pearl passing rules	CHALK AND TALK	https://www.geeksforgeeks.org/perl-passing-complex-parameters-to-a-subroutine/	
39	28/03/2024	2	control structure	CHALK AND TALK	https://github.com/Tyja-P-oss/interactive_python_learning_website_with_compiler/blob/main/control%20structures.html	
40	03/04/2024	5	difference between functions and subroutines	CHALK AND TALK	https://stackoverflow.com/questions/604834/what-is-the-difference-between-a-function-and-a-subroutine	
41	05/04/2024	2	PROCESS MANAGEMENT	CHALK AND TALK	https://www.tutorialspoint.com/perl/perl_process_management.htm	
42	06/04/2024	2	subroutines and functions	CHALK AND TALK	https://www.ibm.com/docs/en/zos/2.2.0?topic=functions-what-are-subroutines	
43	12/04/2024	5	WORKING WITH FILES	CHALK AND TALK	https://www.informit.com/articles/article.aspx?p=59311	
44	15/04/2024	2	DATA MANIPULATION	CHALK AND TALK	https://www.geeksforgeeks.org/data-manipulator/	

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Head of the Department
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