ML Dahanukar College

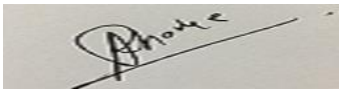
Teaching Plan: 2021 - 22

Department: I.T. **Class: *M*Sc.(I.T.) Part-II** **Semester: III**

Subject: Technical Writing and Entrepreneurship Development

Name of the Faculty: Mr Arvind Khadye

Month	Topics to be Covered	Internal Assessment	Number of Lectures
August	**Unit I** Introduction to Technical Communication: Understanding Ethical and Legal Considerations: Writing Technical Documents: Writing Collaboratively		12
September	**Unit II** Introduction to Content Writing Blog Creation Organizing Your Information Emphasizing Important Information **Unit III:** Creating Graphics Researching Your Subject Research and Documentation Report Components		16
October	**Unit IV:** Writing Proposals Writing Informational Reports Writing Recommendation Reports Reviewing, Evaluating, and Testing Documents and Websites Market adoption and technology diffusion		16



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M.L. Dahanukar College of Commerce

Teaching Plan: 2021 - 22

Department: I.T. **Class: M.Sc.(I.T.)** **Semester:III**

Subject: Applied Artificial Intelligence

Name of the Faculty: Srushty Padte

Month	Topics to be Covered	Internal Assessment	Number of Lectures
August	**Unit I- Review of AI** **Expert System and Applications:** Phases in building expert system, Architecture, Expert system vs traditional system, Rule based expert system, Blackboard system, Truth maintenance, Shells and tools. **Unit II-Probability Theory** : Joint probability, Conditional probability, bayes theorem, rules and facts , cumulative probability, Bayesian method.		14
September	**Unit II: Fuzzy sets:** Fuzzy set, operations, Types of membership functions, Multivalued logic, Fuzzy logic Linguistic variable and hedges, Fuzzy propositions, Inference rules, Fuzzy systems, Possibility theory. **Unit III: Machine learning:** Machine learning systems, supervised and unsupervised learning, inductive learning, deductive learning, clustering, vector machines, reasoning and learning. .		18
October	**Artificial neural network:** Definition, Single layer and multilayer feedforward network, radial basis function, design issues of artificial neural network and recurrent network. **Unit IV: Evolutionary Computations:** Soft Computing, GA, Genetic programming concepts, evolutionary programming, swarm intelligence, colony paradigm **Unit IV: Intelligent agents:** Agent vs software program, classification of agents,		16

	working, Single and multiagent system, performance evaluation, architecture, applications.		
November	**Unit V:Advance Knowledge representation techniques:** Conceptual dependency theory, script structures, CYC, case grammars, semantic web. **Natural language processing:** Sentence analysis, grammar and parsers, types of parsers, universal networking language,dictionary		12

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M.L. Dahanukar College of Commerce

Teaching Plan: 2021 - 2022

Department: I.T. **Class: M.Sc.(I.T.)** **Semester:III**

Subject: Machine Learning

Name of the Faculty:LARISSA PEGADO

Month	Topics to be Covered	Internal Assessment	Number of Lectures
August	**Machine Learning**:Examples Of Machine Learning Problems, Structure of Learning, learning versus Designing, Training versus Testing, Characteristics of Machine learning tasks, Predictive and descriptive tasks, Machine learning Models: Geometric Models, Logical Models, Probabilistic Models. Features: Feature types, Feature Construction and Transformation, Feature Selection. **Classification:** Binary Classification- Assessing Classification performance, Class probability Estimation Assessing class probability Estimates, Multiclass Classification.		12
September	**Regression**: Assessing performance of Regression- Error measures, Overfitting- Catalysts for Overfitting, Case study of Polynomial Regression. **Theory of Generalization**: Effective number of hypothesis, Bounding the Growth function, VC Dimensions, Regularization theory. **Linear models:** Least Squares method, Multivariate Linear Regression, Regularized Regression, Using Least Square regression for Classification. Perceptron, Support Vector Machines, Soft Margin SVM, Obtaining probabilities from Linear classifiers, Kernel methods for non-Linearity.		18
October	**Distance Based Models:** Neighbours and Examples,NearestNeighboursClassification, Distance based clustering-K means Algorithm, Hierarchical		18

	clustering. **Rule Based Models:** Rule learning for subgroup discovery, Association rule mining. **Tree Based Models:** Decision Trees, Ranking and Probability estimation Trees, Regression trees, Clustering Trees.		
November	**Probabilistic Model**s: Normal Distribution and Its Geometric Interpretations, Naïve Bayes Classifier, Discriminative learning with Maximum likelihood, Probabilistic Models with Hidden Variables: Estimation-Maximization Methods, Gaussian Mixtures, and Compression based Models. Trends In Machine Learning : Model and Symbols-Bagging and Boosting, Multitask learning, Online learning and Sequence Prediction, Data Streams and Active Learning, Deep Learning, Reinforcement Learning.		12

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ML Dahanukar College

Teaching Plan: 2021 - 22

Department: I.T. **Class: *M*Sc.(I.T.) Part-II** **Semester: III**

Subject: Robotic Process Automation

Name of the Faculty: Mr Dhanraj Jadhav

Month	Topics to be Covered	Internal Assessment	Number of Lectures
August	**Unit I:** Robotic Process Automation Record and Play **Unit II:** Sequence, Flowchart, and Control Flow Data Manipulation		15
September	**Unit III:** Taking Control of the Controls Tame that Application with Plugins and Extensions		15
October	**Unit IV:** Handling User Events and Assistant Bots Exception Handling, Debugging, and Logging		15
November	**Unit V:** Managing and Maintaining the Code: Deploying and Maintaining the Bot		15

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