Rajarshi Shahu Mahavidyalaya (Autonomous), Latur

Faculty of Information Technology

Structured Work Plan for Teaching

Academic Year (2020 - 2021)
TERM-I

1. Details of Classes to be taught

Sr. No.	Class	Name of Asst. Prof.	Course Title	Course Code	Practical course code	Teaching hours
1	B.Sc.C.S. TY (V Sem)	Prof. Jyoti V. Mashalkar	Digital Image Processing	U-DIP-602	U-LAC-608	TH-50 PR-15
2	B.Sc.C.S. TY (III Sem)		Operating System	U-OPS-385	U-LAC-389	TH-50 PR-15

2. Summary of Lesson Plan

Name of Teacher: Prof. Jyoti V. Mashalkar   **Class:** B.Sc.C.S. TY (V Sem)

(6.7.2020 TO 15.12.2020)

Sr. No.	Course Title and Course Code	Unit and Chapter to be covered	Date FROM	Date TO	No. of Lectures	Academic activities to be organized	No. of Test / Assignment with topic and date
1	Digital Image Processing (U-DIP-602)	**UNIT- I Introduction to DIP** • What is digital image processing? • Example fields of digital image processing • Fundamental steps in digital image processing • Components of image processing system • Elements of visual perception • Lights and electromagnetic spectrum	6/7/2020	24/8/2020	15	Assignment, group discussion on career opportunities in IT	Career guidance lecture (7/7/2020) Assignment based on Unit I (21/7/2020)

		• Image sensing and acquisition • Image sampling and quantization • Some basic relationship between pixels					
2		**Unit –II** **Digital image Representation using Matlab** • Digital Image Representation: Coordinate Conventions, Images as Matrices • Reading Images • Displaying Images • Writing Images • Data Classes • Image Types: Intensity Images, Binary Images • Converting between Data Classes and Image Types: Converting between Data Classes • Converting between Image Classes and Types • Array Indexing: Vector Indexing, Matrix Indexing • Selecting Array Dimensions • Some Important Standard Arrays. • Introduction to M-Function Programming: M-Files • Operators • Flow Control • Code Optimization	27/8/2020	22/10/2020	12	Assignment ,Practical session	Assignment (1/8/2020)

		• Interactive I/O				
3		**Unit- III Intensity transformation using Matlab** • Intensity Transformation Functions: Function imadjust, • Logarithmic and Contrast-Stretching Transformations • Some Utility M-Functions for Intensity Transformations • Histogram Processing and Function Plotting: Generating and Plotting Image Histograms • Histogram Equalization, Histogram Matching (Specification) • Spatial Filtering: Linear Spatial Filtering • Nonlinear Spatial Filtering	23/10/2020	9/11/2020	13	Assignment, discussion on resume writing	1.Assignment based on two units (10/9/2020) 2. Discussion on how to write Resume (24/9/2020) 3.Discussuin on MCA entrance lecture (30/9/2020)
4		**Unit –IV Frequency Domain Processing and Histogram Processing** • Frequency Domain Processing: The 2-D Discrete Fourier Transform • Computing and Visualizing the 2-D DFT in MATLAB	10/11/2020	15/12/2020	10	Group discussion , practical session	Group discussion on topics of Unit IV

		• Filtering in the Frequency Domain: • Fundamental Concepts, Basic Steps in DFT Filtering • A Model of the ImageDegradatio n/Restoration Process • Color Image Representation in MATLAB: RGB Images, Indexed Images • IPT Functions for Manipulating RGB and Indexed Images				

Structured Work Plan for Teaching

Academic Year (2020 - 2021)

(06.07.2020 TO 15.12.2020)

Summary of Lesson Plan

Name of Teacher: Prof. Jyoti V. Mashalkar   **Class:** B.Sc.C.S. S.Y. (Semester III)

Sr. No.	Course Title and Course Code	Unit and Chapter to be covered	Date FROM	Date TO	No. of Lectures	Academic activities to be organized	No. of Test / Assignment with topic and date
1	Operating System (U-OPS-385)	**UNIT –I Introduction to Operating System** 1.1 Definition of Operating System 1.2 Functions of Operating System 1.3 Types of Operating System 1.4 Operating System as resource manager 1.5 Hierarchical structure of Operating System	6/7/2020	20/8/2020	12	Assignment, career guidance lecture	1. Career guidance lecture (6/7/2020) 2. Assignment on comparison of various OS's (21/7/2020)
2		**UNIT –II Memory Management** 2.1 Single contiguous allocation 2.2 Partitioned allocation 2.3 Paged memory management 2.4 Introduction to demand paged & segmented memory management	21/8/2020	22/10/2020	15	Online quiz	Online quiz based on Unit I (1/8/2020)
3		**UNIT –III Process**	23/10/2020	11/11/2020	13	Online quiz, Assignment	Online quiz based on

		Management 3.1 What is process? 3.2 Process Control Block 3.3 Process states 3.4 Job Scheduling & Process Scheduling 3.5 Process Synchronization 3.6 Race Condition 3.7 Introduction to Deadlocks					Based on Unit I and II (10/9/2020)
4		**UNIT -IV** **Device Management** 4.1 Techniques of Device Management 4.2 Dedicated, Shared, Virtual Devices 4.3 Device Characteristics 4.4 Channels & Control Units	20/11/2020	2/12/2020	10	Group discussion	Discussion on device management (2/12/2020)
		File Systems 5.1 A Simple file system 5.2 General Model of file system 5.3 Symbolic file system	3/12/2020	15/12/2020		Group discussion	Group discussion on topics of Unit IV (15/12/2020)

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Structured Work Plan for Teaching

Academic Year (2020 - 2021)
TERM - II

1. Details of Classes to be taught

Sr. No.	Class	Name of Asst. Prof.	Course Title	Course Code	Practical course code	Teaching hours
1	B.Sc.C.S. TY (VI Sem)	Prof. Jyoti V. Mashalkar	Principles of Compiler Design	U-PCD-702	U-LAC-708	TH-50 PR-15
2	B.Sc.C.S. TY (IV Sem)		C#.Net	U-CNT-483	U-LAC-487	TH-50 PR-15

2. Summary of Lesson Plan

Name of Teacher: Prof. Jyoti V. Mashalkar   **Class:** B.Sc.C.S. T.Y. (Semester VI)
(24.02.2021 TO 15.05.2021)

Sr. No.	Course Title and Course Code	Unit and Chapter to be covered	Date FROM	Date TO	No. of Lectures	Academic activities to be organized	No. of Test / Assignment with topic and date
1	**Principles of Compiler Design (U-PCD-702)**	**UNIT – I Programming Languages and Compilers** • Introduction to Compilers • Compilers and translators • the structure of compiler, • Compiler writing tools, • High level programming languages	24/2/2021	19/3/2021	10	Online quiz, Assignment, Career guidance lecture	1. Online quiz based on Unit-I (24/3/2021) 2. Assignment based on Unit-I (25/3/2021)

		• Definitions of programming languages, • A lexical and syntactic structure of a language • Data structures, • Operators • Statements					
2		**UNIT – II** **Lexical Analysis** • Lexical analysis, • Role of a Lexical analyzer, • A simple approach to the design of lexical analyzer, • Regularexpressions, • Finite automata, • Minimizing number of states of a DFA, • Implementation of a lexical analyzer	19/3/2021	10/4/2021	14	Online quiz, Assignment	1. Online quiz based on Unit -II (13/4/2021) 2. Assignment (14/4/2021)
3		**UNIT – III** **Basic Parsing Techniques and Syntax Directed Translation** • Context free grammars, • Introduction to parsers, • Shift reduce parsing, • Top-down parsing, • Operator Precedence parsing, • Predictive parsers, • Introduction	15/4/2021	6/5/2021	13	Online quiz, Assignment	1. Online quiz based on Unit III (1/5/2021) 2. Assignment (5/5/2021)

		Syntax Directed Translation, • Syntax directed Schemes, • Implementation of Syntax directed translators • Intermediate code, • Postfix notation and evaluation of postfix expressions, • Parse trees and syntax trees					
4		**UNIT – IV** **Symbol Tables, Errors and Code Optimization** • The contents of a symbol table, • Data structures for a symbol table, • Errors: Lexical phase errors, Syntactic phase errors,Semanticerrors • Introduction Code Optimization, • Sources of optimization	7/5/2021	15/5/2021	13	Online quiz, Assignment	1. Online quiz based on Unit-IV (15/5/2021) 2. Assignment (13/5/2021)

Structured Work Plan for Teaching

Academic Year (2020 - 2021)

(24.02.2021 TO 13.05.2021)

Summary of Lesson Plan

Name of Teacher: Prof. Jyoti V. Mashalkar

Sr. No.	Course Title and Course Code	Unit and Chapter to be covered	Date FROM	Date TO	No. of Lectures	Academic activities to be organized	No. of Test / Assignment with topic and date
1	C#.Net (U-CNT-483)	**UNIT I Introduction to .net, Arrays and operators** • What is .net?, • .Net Framework, • CLR, • Visual Studio.net • .net Languages, • Integrated Development Environment, • Project types, • c#.net History & design Goals, • How C# differs from C++, • Characterstics of c#.net, • I/O Statement with C#.net • Boxing & Unboxing • Short Circuiting Operators • Array &ArrayList class • Jagged Array • String Class	1/3/2021	17/3/2021	10	Online quiz , guidance lecture on project development	1. Guidance lecture on project development (1/3/2021 to 3/3/2021) 2. Program assignment (20/3/2021) 3.Online test based on Unit –I (25/3/2021)

2		**UNIT II** **Properties, Events, Delegatesand C# namespaces** • Properties & its type, • Event, • Delegate & Multicast Delegate, • Creating & Starting thread, • Exception handling, • Usingkeyword, • creating and using namespaces, • interface, • Method overloading & method overriding, • Partial Class	22/3/ 2021	12/4/ 2021	13	Online quiz, Program assignment, discussion on MCA/MBA entrance examinatio n	1. Program assignment (13/4/2021) 2. Online quiz based on unit 2 (14/4/2021)
3		**UNIT III** **Windows Application** • Event Driven Programming, • Building windows application with visual studio, • TextBox, Label & Button Control, • ComboBox, ListBox , • CheckBox&Gro upBoxControl, • DateTimePicke r , • Timer control, • Building Menu, • MDI Form, • PictureBox ,	19/4/ 2021	5/5/2 021	16	Program assignment, online quiz	1. Program assignment based on Unit III (23/4/2021) 2. Online quiz based on Unit III (24/4/2021)

		ProgressBarControl, • Common Dialog boxes, • Introduction to WPF					
4		**UNIT IV** **Ado.Net and Database Oriented Applications** • How Ado.net differs from Ado, • Advantages of Ado.net, • Connected& Disconnected Architecture, • Dataset, DataReader&DataAdapter, • Managed Data Providers, • DataGridViewControl • Developing Ado.net Based Application, • Insert, Update & Delete operation on table, • Filling the Dataset	10/5/2021	15/5/2021	11	Program assignment	Program assignment based on unit IV (1/5/2021)