Lingaya's Vidyapeeth

Deemed-to-be-University u/s 3 of UGC Act 1956, Government of India
NAAC ACCREDITED
Approved by MHRD / AICTE / PCI / BCI / COA / NCTE
Nachauli, Jasana Road, Faridabad- 121002 (Haryana)
Website: www.lingayasvidyapeeth.edu.in | Ph: 0129-2598200-05

COURSE PLAN & COURSE DATA SHEET

PROGRAM: MCA II Sem		DEGREE: MCA	
COURSE: ADVANCED WEB TECHNOLOGY		SEMESTER: II CREDITS: 4	
COURSE CODE: MCA-130 REGULATION:		COURSE TYPE: CORE	
COURSE AREA/DOMAIN:		CONTACT HOURS: 4 hours/week	
CORRESPONDING LAB COURSE CODE (IF ANY):		LAB COURSE NAME (IF ANY):	

PROGRAM EDUCATIONAL OBJECTIVES:

SYLLABUS:

UNIT	DETAILS	HOURS
I	Introduction to ADO.NET: Benefits of ADO.NET, ADD.NET compared to classic ADO, ADO.NET architecture (Connected and Disconnected), Shared and Database-Specific Classes, Using Database connection. Working with DataSets, Managed Providers, Data Binding, Typed DataSets, Working with Data Reader, Transactions	10
II	OOP C#: Classes and Objects Instance Variables, Methods, Constructors, Properties, Access Specifiers, Static members and methods Inheritance Levels of Inheritance, Constructor and Inheritance, Polymorphism, Interfaces, Abstract classes, Delegates, Indexers, Sealed Classes, Exception handling Collections and Generics Bounded and Unbounded Collections, Generic Programming Generic classes, Functions, Constraints on Generic Programming	12
III	DATABASES and C#: File Handling Text Files, Binary Files, String Processing, Serialization and Deserialization ADO.Net Connected and Disconnected, Architecture of ADO. Net, Commands, Datasets, Data Readers, Data Adapters, Working with Stored Procedures LINQ and the ADO.NET Entity Framework LINQ Introduction, Mapping Your Data Model to an Object Model, Introducing Query Syntax	12
IV	DATA & STATE MANAGEMENT IN ASP.NET: ASP.NET Websites with Themes and MasterPages, Data Source Controls, Data Bound Controls, ASP.NET State Management-Client Side and Server Side. ASP.NET and AJAX	10
V	WEB SERVICES: XML, Web Services Architecture, UDDI,SOAP and its Format, WSDL, Create and Consuming XML Web Service Simple and Databases, WCF- Architecture, End Points, Types of Contracts, Web Applications and Security	08
	TOTAL HOURS	52

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Teacher Centric Approach			
TC1: Chalk and Talk, Blended learning	**TC2: PPT,**	**TC3: Video Lectures**	**TC4:**
Learner Centric Approach:			
LC1: Assignment.	**LC2: Mini project.**	**LC3: Quiz/Class test.**	**LC 4: Seminar on recent trends.**
LC5: Group Task.	**LC6: Others**		

DETAILED SESSION PLAN

Lecture session/ Number	Topics to be covered	CO addressed	Teacher Centric Approach	Learner Centric Approach	References	Relevance with POs and PSOs
1	**UNIT-Introduction to ADO.NET:** Benefits of ADO.NET		TC1	LC1,LC3	T1	PO1,PO2,PO3,PSO1
2	ADD.NET compared to classic ADO		TC1	LC1,LC3	T1	PO1,PO2,PO3,PSO1
3	ADO.NET architecture (Connected and Disconnected)		TC1	LC1,LC3	T1	PO1,PO2,PO3,PSO1
4	Shared and Database-Specific Classes		TC1	LC1,LC3	T1	PO1,PO2,PO3,PSO1
5	Using Database connection		TC1	LC1,LC3	T1	PO1,PO2,PO3,PSO1
6	Working with DataSets		TC1	LC1,LC3	T1	PO1,PO2,PO3,PSO1
7	Managed Providers, Data Binding,		TC1	LC1,LC3	T1	PO1,PO2,PO3,PSO1
8	Typed DataSets		TC1	LC1,LC3	T1	PO1,PO2,PO3,PSO1
9	Working with Data Reader		TC1	LC1,LC3	T1	PO1,PO2,PO3,PSO1
10	Transactions		TC1	LC1,LC3	T1	PO1,PO2,PO3,PSO1
11	Doubt call		TC1	LC1,LC3	T1	PO1,PO2,PO3,PSO1

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12	**UNIT-2 OOP C#:** Classes and Objects Instance Variables	TC1	LC1,LC3	T1	PO1,PO2,PO8,PS01,PSO2
13	Methods, Constructors	TC1	LC1,LC3	T1	PO1,PO2,PO8,PS01,PSO2
14	Properties, Access Specifiers	TC1	LC1,LC3	T1	
15	Static members and methods Inheritance Levels of Inheritance	TC1	LC1,LC3	T1	PO1,PO2,PO8,PS01,PSO2
16	Constructor and Inheritance	TC1	LC1,LC3	T1	
17	Polymorphism	TC1	LC1,LC3	T1	
18	Interfaces, Abstract classes	TC1	LC1,LC3	T1	
19	Delegates, Indexers	TC1	LC1,LC3	T1	
20	Sealed Classes	TC1	LC1,LC3	T1	
21	Exception handling Collections and Generics Bounded and Unbounded Collections	TC1	LC1,LC3	T1	PO1,PO2,PO8,PS01,PSO2
22	Generic Programming Generic classes	TC1	LC1,LC3	T1	
23	Functions, Constraints on Generic Programming	TC1	LC1,LC3	T1	
24	**Doubt class**	-	-	-	-
25	**UNIT-3 DATABASES and C#:** File Handling Text Files, Binary Files	TC1	LC1,LC3	T1	PO2,PO8,PSO1, PSO2
26	String Processing, Serialization and Deserialization	TC1	LC1,LC3	T1	PO2,PO3,PSO2, PSO3
27	ADO.Net Connected and Disconnected	TC1	LC1,LC3	T1	PO2,PO3,PSO2, PSO3
28	Architecture of ADO. Net	TC1	LC1,LC3	T1	PO2,PO3,PSO2, PSO3
29	Commands, Datasets	TC1	LC1,LC3	T1	PO2,PO3,PSO2, PSO3
30	Data Readers, Data Adapters	TC1	LC1,LC3	T1	PO2,PO3,PSO2, PSO3
31	Working with Stored Procedures LINQ and the ADO.NET Entity Framework LINQ Introduction	TC1	LC1,LC3	T1	PO2,PO3,PSO2, PSO3

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32	Mapping Your Data Model to an Object Model	TC1	LC1,LC3	T1	PO2,PO3,PSO2, PSO3
33	Introducing Query Syntax	TC1	LC1,LC3	T1	PO2,PO3,PSO2, PSO3
34	**Doubt class**	-	-	-	-
35	**UNIT-4 DATA & STATE MANAGEMENT IN ASP.NET:** ASP.NET Websites with Themes and MasterPages	TC1	LC1,LC3	T1	PO1,PO6,PO9,PO12,PSO1,PSO2
36	Data Source Controls	TC1	LC1,LC3	T1	PO1,PO6,PO9,PO12,PSO1,PSO2
37	Data Bound Controls	TC1	LC1,LC3	T1	PO1,PO6,PO9,PO12,PSO1,PSO2
38	ASP.NET State Management-Client Side and Server Side	TC1	LC1,LC3	T1	PO1,PO6,PO9,PO12,PSO1,PSO2
39	ASP.NET and AJAX 10	TC1	LC1,LC3	T1	PO1,PO6,PO9,PO12,PSO1,PSO2
40	**Doubt class**	-	-	-	-
41	**UNIT-5 WEB SERVICES:** XML, Web Services Architecture	TC1	LC1,LC3	T1	PO1,PO6,PO11, PSO1,PSO2
42	UDDI,SOAP and its Format	TC1	LC1,LC3	T1	PO1,PO6,PO11, PSO1,PSO2
43	WSDL	TC1	LC1,LC3	T1	PO1,PO6,PO11, PSO1,PSO2
44	Create and Consuming XML Web Service Simple and Databases	TC1	LC1,LC3	T1	PO1,PO6,PO11, PSO1,PSO2
45	WCF- Architecture	TC1	LC1,LC3	T1	PO1,PO6,PO11, PSO1,PSO2
46	End Points, Types of Contracts	TC1	LC1,LC3	T1	PO1,PO6,PO11, PSO1,PSO2
47	Web Applications and Security	TC1	LC1,LC3	T1	PO1,PO6,PO11, PSO1,PSO2

TEXT/REFERENCE BOOKS:

T/R	BOOK TITLE/AUTHORS/PUBLICATION
1	Uttam K. Roy, "Web Technology", Oxford Publication
2	Musciano Chuck, "HTML & XHTML: The Definitive Guide", Bill Kennedy, 4th Edition, 2000

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3	Holzner Steven, "XHTML Black Book", Paraglyph Press, 2000
4	Guy W.Lecky-Thompson, "Web Programmin", Cengage Learning, 2008
5	Kamal Raj, "Internet and Web Technologies", Tata McGraw Hill, 2002

WEB SOURCE REFERENCES (W):

1	http://W3schools.com
2	http://www.uniweb.be/
3	http://www.sagaciousindia.com/
4	MSDN: Learn to Develop with Microsoft Developer Network: https://msdn.microsoft.com/

COURSE PRE-REQUISITES:

C.CODE	COURSE NAME	DESCRIPTION	SEM
	Basics of programming, Structure and HTML Tags, Images, List, Tables, Anchors and Form Elements		

COURSE OBJECTIVES:

1	It aims to provide the information to students to study the architecture of Dot Net framework.
2	It helps them to understand the basic principles of C# development.
3	Students will learn advanced windows and web development techniques using dotNET.

COURSE OUTCOMES:

S.NO	DESCRIPTION	PO(1..12) MAPPING	PSO(1..3) MAPPING
Cxxx.1	To Study the architecture of Dot Net framework	PO1,PO2,PO3	PSO1
Cxxx.2	To Understand the basic principles of C# development	PO1,PO2,PO8	PSO1, PSO2
Cxxx.3	To Create UI applications using C#	PO2,PO8	PSO1, PSO2
Cxxx.4	To Design and develop secure web applications using asp.net according to industry Standards	PO1,PO6,PO9,PO12	PSO1, PSO2
Cxxx.5	To Define and create custom web services	PO1,PO6,PO11	PSO1, PSO2
COURSE OVERALL PO/PSO MAPPING:			

COURSE OUTCOMES VS POs MAPPING (DETAILED; HIGH:3; MEDIUM:2; LOW:1):

S.NO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Cxxx.1	2	2	1											1	
Cxxx.2	2	1						3						2	1
Cxxx.3		2						3						1	1
Cxxx.4	1					2			2	3				1	1
Cxxx.5	1					2							1	1	2

POs & PSO REFERENCE:

PO1	Engineering Knowledge	PO7	Environment & Sustainability	PSO1	To equip the students with theoretical and implementation knowledge in all the latest area of

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						Computer Science and Engineering for successful career in software industry, pursuing higher studies, or entrepreneurial establishment.
PO2	Problem Analysis	PO8	Ethics	PSO2		To nurture the students with the critical thinking abilities for better decision making by offering them a socially acceptable solutions to real life problem through computing paradigm.
PO3	Design & Development	PO9	Individual & Team Work	PSO3		To nurture the students with the comprehensive analytical and design by offering them techno-commercial feasible solutions of real business problem through computing.
PO4	Investigations	PO10	Communication Skills			
PO5	Modern Tools	PO11	Project Mgt. & Finance			
PO6	Engineer & Society	PO12	Life Long Learning			

COs VS POs MAPPING JUSTIFICATION:

S.NO	PO/PSO MAPPED	LEVEL OF MAPPING	JUSTIFICATION
Cxxx.1			
Cxxx.2			
Cxxx.3			
Cxxx.4			
Cxxx.5			
Cxxx*			

GAPS IN THE SYLLABUS - TO MEET INDUSTRY/PROFESSION REQUIREMENTS, POs & PSOs:

SNO	DESCRIPTION	PROPOSED ACTIONS
1		
2		
3		
4		
5		

PROPOSED ACTIONS: TOPICS BEYOND SYLLABUS/ASSIGNMENT/INDUSTRY VISIT/GUEST LECTURER/NPTEL ETC

TOPICS BEYOND SYLLABUS/ADVANCED TOPICS/DESIGN:

1	
2	
3	
4	
5	
6	
7	

DELIVERY/INSTRUCTIONAL METHODOLOGIES:

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☐ CHALK & TALK	☐ STUD. ASSIGNMENT	☐ WEB RESOURCES	☐ NPTEL/OTHERS
☐ LCD/SMART BOARDS	☐ STUD. SEMINARS	☐ ADD-ON COURSES	☐ WEBNIARS

ASSESSMENT METHODOLOGIES-DIRECT

☐ ASSIGNMENTS	☐ STUD. SEMINARS	☐ TESTS/MODEL EXAMS	☐ UNIV. EXAMINATION
☐ STUD. LAB PRACTICES	☐ STUD. VIVA	☐ MINI/MAJOR PROJECTS	☐ CERTIFICATIONS
☐ ADD-ON COURSES	☐ OTHERS		

ASSESSMENT METHODOLOGIES-INDIRECT

☐ ASSESSMENT OF COURSE OUTCOMES (BY FEEDBACK, ONCE)	☐ STUDENT FEEDBACK ON FACULTY (TWICE)
☐ ASSESSMENT OF MINI/MAJOR PROJECTS BY EXT. EXPERTS	☐ OTHERS

INNOVATIONS IN TEACHING/LEARNING/EVALUATION PROCESSES:

1.
2.
3.
4.
5.

Prepared by   **Approved by**
Ms. Varsha Bansal   **Dr. Ritu Sindhu**

 # Additionally, the details to be compiled separately by the Departmental Coordinator for the entire Department.