



Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore

Shri Vaishnav Institute of Computer Applications

Name of Program: BCA (AI & ML)

COURSE CODE	CATEGORY	COURSE NAME	L	T	P	CREDIT	TEACHING & EVALUATION SCHEME				
							THEORY			PRACTICAL	
							END SEM University Exam	Two Term Exam	Teachers Assessment *	END SEM University Exam	Teachers Assessment*
BCCA401	DCC	Computer Networks	3	0	0	3	60	20	20	0	0

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P – Practical; C - Credit;

Q/A – Quiz/Assignment/Attendance, MST - Mid Sem Test.

***Teacher Assessment** shall be based on following components: Quiz/Assignment/Project/Participation in class (Given that no component shall be exceed 10 Marks)

Course Educational Objectives (CEOs):

- To provide an introduction to the fundamental concepts on data communication and the design of computer networks.
- To get familiarized with the basic protocols of computer networks.

Course Outcomes (COs): After the successful completion of this course students will be able to

- Identify the different components in a Communication System and their respective roles.
- Describe the technical issues related to the local Area Networks
- Identify the common technologies available in establishing LAN infrastructure.

Chairperson
Board of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Chairperson
Faculty of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Controller of Examination
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Joint Registrar
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore



Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore

Shri Vaishnav Institute of Computer Applications

Name of Program: BCA (AI & ML)

2. Forouzan “Data Communication and Networking 3ed”, TMH
3. J.F.Hayes, “Moduling and Analysis of Computer Communication Networks”, Plenum Press
4. D.E.Comer, “Internetworking with TCP/IP”, Volume Ist&IInd, PHI
5. Willium Stalling, “Data & Computer communications”, Maxwell Macmillan International Ed.
6. D.Bertsekas and R.Gallager,”Data Networks”, 2ndEd. ,PHI.
7. G.E. Keiser,”Local Area Networks “, McGraw Hill, International Ed.

Chairperson
Board of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Chairperson
Faculty of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Controller of Examination
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Joint Registrar
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore



Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore

Shri Vaishnav Institute of Computer Applications

Name of Program: BCA (AI & ML)

CODE	CATEGORY	COURSE NAME	L	T	P	C R E D I T S	TEACHING & EVALUATION SCHEME				
							THEORY			PRACTICAL	
							E N D S E M U n i v e r s i t y E x a m	T w o T e r m E x a m	T e a c h e r s A s s e s s m e n t *	E N D S E M U n i v e r s i t y E x a m	T e a c h e r s A s s e s m e n t *
BCAAIML40 1	DC	Machine Learning Concepts	4	0	0	4	60	20	20	0	0

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P – Practical; C - Credit;

Q/A – Quiz/Assignment/Attendance, MST - Mid Sem Test.

***Teacher Assessment** shall be based on following components: Quiz/Assignment/Project/Participation in class (Given that no component shall be exceed 10 Marks)

Course Educational Objectives (CEOs):

- The student will have ability to:
- To understand the basic theory underlying machine learning.
- To be able to formulate machine learning problems corresponding to different applications.
- To understand a range of machine learning algorithms along with their strengths and weaknesses.
- To be able to apply machine learning algorithms to solve problems of moderate complexity.
- To apply the algorithms to a real-world problem, optimize the models learned and report on the

Chairperson
Board of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Chairperson
Faculty of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Controller of Examination
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Joint Registrar
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore



Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore

Shri Vaishnav Institute of Computer Applications

Name of Program: BCA (AI & ML)

expected accuracy that can be achieved by applying the models.

Course Outcomes (COs):

Upon completion of the subject, students will be able to:

- Understand the theory of Machine Learning.
- Understand and Develop model on Regression Algorithm.
- Understand and Develop model on Classification Algorithm.
- Understand and Develop model on Clustering Algorithm.

UNIT I

Machine Learning: Introduction, Model of Learning, Types of Learning, Types of ML: Regression and Classification, Supervised and Unsupervised learning, Terminology, Process in Machine Learning, Exploratory Data Analysis, Real time use of Machine Learning.

COURSE CODE	CATEGORY	COURSE NAME	L	T	P	C R E D I T S	TEACHING & EVALUATION SCHEME				
							THEORY			PRACTICAL	
							E N D S E M U n i v e r s i t y E x a m	T e a c h e r s A s s e s m e n t *	E N D S E M U n i v e r s i t y E x a m	E N D S E M U n i v e r s i t y E x a m	Teac hers Asses smen t*
BCAAIML40 1	DC	Machine Learning Concepts	4	0	0	4	60	20	20	0	0

UNIT II

Regression: Simple Linear Regression, Linear Equation, slope, intercept, Multi-Regression, Polynomial regression, Error: MAE, MSE, RMSE, R2 Score.

Chairperson
Board of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Chairperson
Faculty of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Controller of Examination
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Joint Registrar
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore



Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore

Shri Vaishnav Institute of Computer Applications

Name of Program: BCA (AI & ML)

UNIT III

Classification: Classification, Logistic Regression, Sigmoid function, Confusion matrix, accuracy score, Precision, Recall. Data Preprocessing: Label Encoder, Standard Scalar. k-Nearest Neighbor's, Support Vector Machine, Decision Tree, Hyper Parameter Tuning.

UNIT IV

Clustering: Unsupervised Learning, Clustering, Type of Clustering: Hierarchical Clustering, Density-Based Clustering, K-MEAN Clustering, Choosing number of clusters, Elbow Method.

UNIT V

Recommender System, what is Recommender System? Why the Recommendation system? What can be Recommended? Types of Recommender System.

TEXTBOOKS:

1. The Hundred-Page Machine Learning Book by Andriy Burkov.

REFERENCES:

1. <https://learn.microsoft.com/en-us/training/modules/introduction-to-machine-learning/>
2. <https://learn.microsoft.com/en-us/training/modules/introduction-to-classical-machine-learning/>
3. <https://learn.microsoft.com/en-us/training/modules/introduction-to-data-for-machine-learning/>
4. <https://learn.microsoft.com/en-us/training/modules/explore-analyze-data-with-python/>
5. <https://learn.microsoft.com/en-us/training/modules/understand-regression-machine-learning/>
6. Machine Learning for Absolute Beginners by Oliver Theobald
7. Hands-On Machine Learning with Scikit-Learn, Keras, and TensorFlow by Geron Aurelien

Chairperson
Board of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Chairperson
Faculty of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Controller of Examination
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Joint Registrar
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore



Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore

Shri Vaishnav Institute of Computer Applications

Name of Program: BCA (AI & ML)

COURSE CODE	CATEGORY	COURSE NAME	L	T	P	CREDIT	TEACHING & EVALUATION SCHEME				
							THEORY			PRACTICAL	
							END SEMESTER	TERM	EXAM	TEACHING	ASSESSMENT
BCCA403	SEC	Basics of Computer Graphics and Multimedia Concepts	3	0	0	3	60	20	20	0	0

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P – Practical; C - Credit;

Q/A – Quiz/Assignment/Attendance, MST - Mid Sem Test.

***Teacher Assessment** shall be based on following components: Quiz/Assignment/Project/Participation in class (Given that no component shall be exceed 10 Marks)

Course Educational Objectives (CEOs):

- To provide knowledge about hardware and software used in computer Graphics.
- To impart knowledge about drawing algorithms.
- To provide detailed knowledge about color and intensity levels.
- To acquaint students with windowing and clipping.
- To make the student understanding about Multimedia tools used in graphics.

Course Outcomes (Cos):

- An ability to understand basic knowledge of Computer Graphics.
- An ability to apply knowledge of Computer Graphics.
- An ability to understand the color and intensity levels.
- An ability to identify visible area of any surface.
- An ability to understand Multimedia.

Chairperson
Board of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Chairperson
Faculty of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Controller of Examination
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Joint Registrar
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore



Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore

Shri Vaishnav Institute of Computer Applications

Name of Program: BCA (AI & ML)

UNIT - I

Devices: Display devices: Random scan and raster scan monitors. Color CRT monitor, Plasma panel, Hard copy devices: Printers and Plotter: Input devices Joysticks, Mouse, Digitizer, Scanner, Camera.

UNIT - II

Introduction to Computer Graphics, Pixel, color and intensity, Types of refresh graphics displays, CRT Raster Scan Basics, Video Basics, Interactive input and output Devices, Raster scan graphics, Line drawing algorithms, Bresenham's algorithm, Scan Conversion.

COURSE CODE	CATEGORY	COURSE NAME	L	T	P	C R E D I T S	TEACHING & EVALUATION SCHEME				
							THEORY		PRACTICAL		
							E N D S E M U n i v e r s i t y E x a m	T e c h n i c s o f T e r m E x a m	E N D S E M U n i v e r s i t y E x a m	Teach ers Assess ment*	
BCCA403	SEC	Basics of Computer Graphics and Multimedia Concepts	3	0	0	3	60	20	20	0	0

UNIT - III

Clipping- 2D clipping, line clipping algorithms, Cyrus-Beck algorithm, convex polygon & inward normal, concave clipping, Introduction of 3D clipping, character clipping.
Hidden line and Hidden surface algorithms- Floating horizon, Roberts algorithm, Warnock algorithm, Weiler-Atherton Subdivision algorithm.

Chairperson
Board of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Chairperson
Faculty of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Controller of Examination
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Joint Registrar
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore



Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore

Shri Vaishnav Institute of Computer Applications

Name of Program: BCA (AI & ML)

COURSE CODE	CATEGORY	COURSE NAME	L	T	P	C R E D I T S	TEACHING & EVALUATION SCHEME				
							THEORY			PRACTICAL	
							EN D S E M U n i v e r s i t y E x a m	T w o T e r m E x a m	Tea che rs Ass ess me nt*	EN D S E M U n i v e r s i t y E x a m	Tea che rs Ass ess me nt*
BCCA503	AEC	Web Designing	3	0	0	3	60	20	20	0	0

UNIT - IV

Rendering, Illumination model, surface normal, reflection vector, shading, transparency, shadows, texture, colour.

UNIT - V

Introduction to multimedia, multimedia components, multimedia hardware, SCSI, IDE, MCI, Multimedia data and file formats, RTF, TIFF, MIDI, JPEG, DIB, MPEG.

Text Books:

1. D.Hearn and M.P. Baker "Computer Graphics" (2nd ed), PHI.
2. S. Harrington – "Computer Graphics - a Programming approach" (2nd ed). McGrawhill.
3. New Mann & Sprovl- "Principles of interactive computer graphics" (2nd ed). McGrawhill.
4. Roger S. David "Procedural Elements for Computer Graphics", McGraw Hill.
5. Roger S David "Mathematical Elements for Computer Graphics", McGraw Hill.
6. Foley & Vandan "Computer Graphics Principles & Practice in "C" "Addision Wesly.
7. Tay Vaughan, "Multimedia Making it Work" 5th Ed. 2001, Tata McGraw Hill.
8. Prabhat K. Andleigh & Kiran Thakur "Multimedia System Design", PHI
9. Drew, "Fundamentals of Multimedia", Pearsons.

Chairperson
Board of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Chairperson
Faculty of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Controller of Examination
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Joint Registrar
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore



Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore

Shri Vaishnav Institute of Computer Applications

Name of Program: BCA (AI & ML)

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P – Practical; C - Credit;

Q/A – Quiz/Assignment/Attendance, MST - Mid Sem Test.

***Teacher Assessment** shall be based on following components: Quiz/Assignment/Project/Participation in class (Given that no component shall exceed 10 Marks)

Course Educational Objectives (CEOs):

- To provide an introduction to the fundamental concepts of HTML and CSS.
- To familiarize with XML and web designing.

Course Outcomes (COs): The student will be able to:

- Learn about basics of Web Designing.
- Understand how to develop static webpage.
- Learn to develop a static Website using HTML and CSS.
- Understand the concepts of XML.

Syllabus:

UNIT-I

Web Essentials: Clients, Servers and Communication, The Internet, Basic Internet protocols, World wide web, HTTP Request Message, HTTP Response Message, Web Clients, Web Servers, Types of Websites (Static and Dynamic Websites)

UNIT-II

Introduction to HTML

History of HTML, HTML Attributes, HTML Basic Tags, HTML Formatting Tags, Head Tags, Title Tags, Body Tags, Horizontal Lines, Page Formatting Div, Headings, Comments, Anchor tag, List tag: Ordered List, Unordered List, Adding images

UNIT-III

Advanced HTML

Tables: Inserting a Table, Table Borders, Table Headers, Frames: Inserting frames, Setting Height and Width, Forms: Text Boxes, Text Areas, Check Boxes, Menu Lists, Radio Buttons, Submit Button, Video and Audio tags.

Chairperson

Board of Studies

**Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore**

Chairperson

Faculty of Studies

**Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore**

Controller of Examination

Shri Vaishnav Vidyapeeth

Vishwavidyalaya, Indore

Joint Registrar

Shri Vaishnav Vidyapeeth

Vishwavidyalaya, Indore



Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore

Shri Vaishnav Institute of Computer Applications

Name of Program: BCA (AI & ML)

COURSE CODE	CATEGORY	COURSE NAME	L	T	P	C R E D I T S	TEACHING & EVALUATION SCHEME				
							THEORY			PRACTICAL	
							EN D S E M U n i v e r s i t y E x a m	T w o T e r m E x a m	Tea che rs Ass ess me nt*	EN D S E M U n i v e r s i t y E x a m	Tea che rs Ass ess me nt*
BCCA503	AEC	Web Designing	3	0	0	3	60	20	20	0	0

UNIT-IV

CSS (Cascading Style Sheet)

CSS Introduction: CSS Syntax, Tag structure, CSS Selectors (ID, Class, Tags, Attributes), CSS Styling, Styling Backgrounds, Styling Text, Styling Fonts, Styling Links, Styling Lists, Styling Tables, CSS Box Model, CSS Border, CSS Outline, CSS Margin, CSS Positioning, CSS Image Gallery, Borders, Border Images, Backgrounds, Text, Fonts.

UNIT-V

XML: Basic XML, Objectives of XML, Advantages of XML, Well-formed and valid XML Documents, Document Type Definition- Presenting XML, XML Schema, DOM Document Object Model), DTD (Document Type Definitions), XML Namespaces, XSLT (Extensible Stylesheet Language Transformation)

Reference Books:

1. HTML & CSS Design and Build Websites -Jon Duckett,18 November 2011
2. The Essential Guide to CSS and HTML Web Design-Craig Grannell, Apress,Third Edition,9 March 2008
3. HTML & CSS: The Complete Reference-Thomas A Powell, Mcgraw Hill, Fifth Edition.
4. HTML 5 Black Book-DT Editorial Services, Second Edition, 2016.

Chairperson
Board of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Chairperson
Faculty of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Controller of Examination
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Joint Registrar
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore



Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore

Shri Vaishnav Institute of Computer Applications

Name of Program: BCA (AI & ML)

COURSE CODE	CATEGORY	COURSE NAME	L	T	P	CREDIT	TEACHING & EVALUATION SCHEME				
							THEORY			PRACTICAL	
							END SEM University Exam	Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*
BCA AIM L401 (P)	DC	Machine Learning Lab	0	0	4	2	0	0	0	30	20

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P – Practical; C - Credit;

Q/A – Quiz/Assignment/Attendance, MST - Mid Sem Test.

***Teacher Assessment** shall be based on following components: Quiz/Assignment/Project/Participation in class (Given that no component shall be exceed 10 Marks)

Course Educational Objectives (CEOs):

- The student will have ability to:
- To understand the basic theory underlying machine learning.
- To be able to formulate machine learning problems corresponding to different applications.
- To understand a range of machine learning algorithms along with their strengths and weaknesses.
- To be able to apply machine learning algorithms to solve problems of moderate complexity.
- To apply the algorithms to a real-world problem, optimize the models learned and report on the

Chairperson
Board of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Chairperson
Faculty of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Controller of Examination
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Joint Registrar
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore



Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore

Shri Vaishnav Institute of Computer Applications

Name of Program: BCA (AI & ML)

expected accuracy that can be achieved by applying the models.

Course Outcomes (COs):

Upon completion of the subject, students will be able to:

- Understand the theory of Machine Learning.
- Understand and Develop model on Regression Algorithm.
- Understand and Develop model on Classification Algorithm.
- Understand and Develop model on Clustering Algorithm.

LIST OF PRACTICALS:

Chairperson
Board of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Chairperson
Faculty of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Controller of Examination
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Joint Registrar
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore



Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore

Shri Vaishnav Institute of Computer Applications

Name of Program: BCA (AI & ML)

1. Medical data classification model using Support Vector Machines.
2. Emission prediction in automobiles using Regression.

COURSE CODE	CATEGORY	COURSE NAME	L	T	P	C R E D I T S	TEACHING & EVALUATION SCHEME				
							THEORY			PRACTICAL	
							EN D S E M U n i v e r s i t y E x a m	T w o T e r m E x a m	Tea che rs Ass ess me nt*	EN D S E M U n i v e r s i t y E x a m	Tea che rs Ass ess me nt*
BCAAIM L401 (P)	DC	Machine Learning Lab	0	0	4	2	0	0	0	30	20

3. Customer retention prediction at a telecom company.
4. Determining credit worthiness of customers using Decision Trees.
5. Customer segmentation using K-means clustering.
6. Grouping news articles.
7. Content Based Recommender System figure out what are user's favourite items (music, video, movie etc) and then recommend similar items.

TEXTBOOKS:

1. The Hundred-Page Machine Learning Book by Andriy Burkov.

REFERENCES:

1. <https://learn.microsoft.com/en-us/training/modules/introduction-to-machine-learning/>
2. <https://learn.microsoft.com/en-us/training/modules/introduction-to-classical-machine-learning/>
3. <https://learn.microsoft.com/en-us/training/modules/introduction-to-data-for-machine-learning/>
4. <https://learn.microsoft.com/en-us/training/modules/explore-analyze-data-with-python/>
5. <https://learn.microsoft.com/en-us/training/modules/understand-regression-machine-learning/>
6. Machine Learning for Absolute Beginners by Oliver Theobald
7. Hands-On Machine Learning with Scikit-Learn, Keras, and TensorFlow by Geron Aurelien.

Chairperson
Board of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Chairperson
Faculty of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Controller of Examination
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Joint Registrar
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore



Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore

Shri Vaishnav Institute of Computer Applications

Name of Program: BCA (AI & ML)

COURSE CODE	CATEGORY	COURSE NAME	L	T	P	CREDIT	TEACHING & EVALUATION SCHEME				
							THEORY			PRACTICAL	
							END SEMESTER	Two Term Exam	Teacher's Assessment*	END SEMESTER	Teachers Assessment*
BCCA406	SEC	Computer Graphics and Multimedia Lab	0	0	4	2	0	0	0	30	20

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P – Practical; C - Credit;

Q/A – Quiz/Assignment/Attendance, MST - Mid Sem Test.

***Teacher Assessment** shall be based on following components: Quiz/Assignment/Project/Participation in class (Given that no component shall exceed 10 Marks)

Course Educational Objectives (CEOs):

- To provide knowledge about hardware and software used in computer Graphics.
- To impart knowledge about drawing algorithms.
- To provide detailed knowledge about color and intensity levels.
- To acquaint students with windowing and clipping.
- To make the student understanding about Multimedia tools used in graphics.

Course Outcomes (Cos):

- An ability to understand basic knowledge of Computer Graphics.
- An ability to apply knowledge of Computer Graphics.
- An ability to understand the color and intensity levels.
- An ability to identify visible area of any surface.

Chairperson
Board of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Chairperson
Faculty of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Controller of Examination
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Joint Registrar
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore



Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore

Shri Vaishnav Institute of Computer Applications

Name of Program: BCA (AI & ML)

- An ability to understand Multimedia.

List of Practical

1. Write a program for generating line using DDA algorithm.
2. Write a program for generating line using Bresenham's algorithm.
3. Write a program for generating circle using DDA algorithm.
4. Write a program for generating circle using Bresenham's algorithm.
5. Write a program for Cohen Sutherland line clipping algorithm.
6. Write a program for polygon clipping.

COURSE CODE	CATEGORY	COURSE NAME	L	T	P	CREDIT	TEACHING & EVALUATION SCHEME				
							THEORY			PRACTICAL	
							END SEMESTER EXAM	TERM EXAM	Teacher's Assessment*	END SEMESTER EXAM	Teachers Assessment*
BCCA406	SEC	Computer Graphics and Multimedia Lab	0	0	4	2	0	0	0	30	20

7. Write a program to draw mid-point circle algorithm.
8. Write a program to draw a Bezier curve.
9. Write a program to draw a Bezier surface.

Text Books:

1. Rogers, D. F. "Procedural Elements for computer graphics". McGraw Hill.

Chairperson
Board of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Chairperson
Faculty of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Controller of Examination
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Joint Registrar
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore



Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore

Shri Vaishnav Institute of Computer Applications

Name of Program: BCA (AI & ML)

2. Hearn, D. and Baker, M. "Computer Graphics" PHI.
3. Asthana, R. G. S. and Sinha, N. K. "Computer Graphics", New Age International.

Reference Books:

1. Elias M. Awad, System Analysis and Design, GALGOTIA Publications.
2. Joseph S. Valacich, Joey F. Grogger & Jeffrey A. Hoffer, Essentials of Systems Analysis and Design, 2004.
3. V. Rajaraman, Analysis and Design of Information Systems, III Edition, 2014.

Chairperson
Board of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Chairperson
Faculty of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Controller of Examination
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Joint Registrar
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore



Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore

Shri Vaishnav Institute of Computer Applications

Name of Program: BCA (AI & ML)

COURSE CODE	CATEGORY	COURSE NAME	L	T	P	C R E D I T S	TEACHING & EVALUATION SCHEME				
							THEORY			PRACTICAL	
							EN D S E M U n i v e r s i t y E x a m	T w o T e r m E x a m	Tea che rs Ass ess me nt*	EN D S E M U n i v e r s i t y E x a m	Tea che rs Ass ess me nt*
BCCA507	AEC	Web Designing Lab	0	0	2	1	0	0	0	30	20

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P – Practical; C - Credit; Q/A – Quiz/Assignment/Attendance, MST - Mid Sem Test.

Chairperson
Board of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Chairperson
Faculty of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Controller of Examination
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Joint Registrar
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore



Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore

Shri Vaishnav Institute of Computer Applications

Name of Program: BCA (AI & ML)

***Teacher Assessment** shall be based on following components: Quiz/Assignment/Project/Participation in class
(Given that no component shall exceed 10 Marks)

Course Educational Objectives (CEOs):

8. To provide an introduction to the fundamental concepts of HTML and CSS.
9. To familiarize with XML and web designing.

Course Outcomes (COs): The student will be able to:

4. Learn about basics of Web Designing.
10. Understand how to develop static webpage.
11. Learn to develop a static Website using HTML and CSS.
12. Understand the concepts of XML.

List of Practical:

10. How to develop a simple webpage.
11. Develop a webpage using different HTML tags.
12. Develop a webpage using Table tag.
13. Develop a webpage using Frame tag.
14. Develop a webpage using Form tag
15. Develop a static website using HTML tags.
16. Create an HTML page, which has properly aligned paragraphs with image along with it.
17. Write a program to display list of items in different styles.
18. Create your own style sheets and use them in your web page.
19. Create a web page using XML.

Name of Program: BCA + MCA/ BCA+MCA (Banking Technology)

Chairperson
Board of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Chairperson
Faculty of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Controller of Examination
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Joint Registrar
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore



Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore

Shri Vaishnav Institute of Computer Applications

Name of Program: BCA (AI & ML)

Reference Books:

1. HTML & CSS Design and Build Websites -Jon Ducket,18 November 2011
2. The Essential Guide to CSS and HTML Web Design-Craig Grannell, Apress,Third Edition,9 March 2008
3. HTML & CSS: The Complete Reference-Thomas A Powell, Mcgraw Hill, Fifth Edition.
4. HTML 5 Black Book-DT Editorial Services, Second Edition,2016

COURSE CODE	CATEGORY	COURSE NAME	L	T	P	C R E D I T S	TEACHING & EVALUATION SCHEME				
							THEORY			PRACTICAL	
							EN D S E M U n i v e r s i t y E x a m	T w o T e r m E x a m	Tea che rs Ass ess me nt*	EN D S E M U n i v e r s i t y E x a m	Tea che rs Ass ess me nt*
BCCA507	AEC	Web Designing Lab	0	0	2	1	0	0	0	30	20

Chairperson
Board of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Chairperson
Faculty of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Controller of Examination
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Joint Registrar
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore



Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore

Shri Vaishnav Institute of Computer Applications

Name of Program: BCA (AI & ML)

Chairperson
Board of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Chairperson
Faculty of Studies
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Controller of Examination
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

Joint Registrar
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore