



# **Indrashil University**

(Established by an Act under the Gujarat Private Universities Act, 2009)

*A Life Sciences University*

*Sustained Excellence with Relevance*

## **School of Engineering** **Post graduate diploma** **Proposed Course Curriculum** *w.e.f. Academic Year 2022-23*



# **Indrashil University**

(Established by an Act under the Gujarat Private Universities Act, 2009)

*A Life Sciences University*

*Sustained Excellence with Relevance*

## **School of Engineering**

### **PGD in Web Design & Development**

### **Proposed Course Curriculum**

### **w.e.f. Academic Year 2022-23**

**CURRICULUM FOR PGD in Web Design &  
Development  
(w.e.f. academic year 2022-23)**

<b>Trimester: 1</b>	<b>Minimum Trimester Credit Required: 8 Cumulative Trimester Credit Required: 8</b>		
<b>Course Code</b>	<b>Subject Name</b>	<b>L-T-P</b>	<b>Credits</b>
34101	Fundamentals of web designing	2-0-2	3
34102	Professional Website Designing	2-0-0	2
34103	Internet Business	2-0-2	3
	<b>Total</b>	<b>6-0-4</b>	<b>8</b>
<b>Trimester: 2</b>	<b>Minimum Trimester Credit Required: 8 Cumulative Trimester Credit Required:16</b>		
<b>Course Code</b>	<b>Subject Name</b>	<b>L-T-P</b>	<b>Credits</b>
34201	Introduction to Full Stack development	3-0-0	3
34202	Digital Marketing	2-0-0	2
34203	Devops Overview	2-0-2	3
	<b>Total</b>	<b>7-0-2</b>	<b>8</b>

Trimester: 3	<b>Minimum Trimester Credit Required: 8</b> <b>Cumulative Trimester Credit Required: 24</b>		
Course Code	Subject Name	L-T-P	Credits
34301	Web Development	2-0-2	3
34302	Web Animation	3-0-0	3
34303	Software Systems for e-Business and the www	2-0-0	2
34304	PROJECT/ RESEARCH PAPER	0-0-16	8
	*Choose 3 electives OR Live Project / Research Article in reputed Journal		
	<b>Total</b>	<b>7-0-2/0-0-16</b>	<b>8/8</b>



**Indrashil University**  
**School of Engineering**  
**First Trimester, 2022-23**

**Course Syllabus**

<b>Course Code:</b>	<b>34101</b>
<b>Course Title:</b>	<b>Fundamentals of web designing</b>
<b>Credit Structure (L-T-P-C):</b>	<b>2-0-2-3</b>
<b>Instructor in Charge:</b>	

**Learning Outcome of the Course:**

After learning the course, the students should be able:

1. Define the principle of Web page design
2. Define the basics in web design
3. Visualize the basic concept of HTML.
4. Recognize the elements of HTML.
5. Introduce basics concept of CSS.
6. Develop the concept of web publishing

**Syllabus:**

1. Basics of Web Designing,
2. Web Technologies,
3. HTML, CSS,
4. JavaScript,
5. Bootstrap,
6. Adobe Dreamweaver,
7. Adobe Flash

**REFERENCE BOOKS:**

1. Web Designing & Architecture-Educational Technology Centre University of Buffalo
2. Steven M. Schafer HTML, XHTML, and CSS Bible, 5ed Wiley India
3. John Duckett Beginning HTML, XHTML, CSS, and JavaScript Wiley India
4. Ian Pouncey, Richard York Beginning CSS: Cascading Style Sheets for Web Design Wiley India

**Evaluation Scheme:**

Continuous evaluation process comprising of components like attendance, assignment, class tests, practical, Comprehensive examinations, et



**Indrashil University**  
**School of Engineering**  
**First Trimester, 2022-23**

**Course Syllabus**

<b>Course Code:</b>	<b>34102</b>
<b>Course Title:</b>	<b>Professional Website Designing</b>
<b>Credit Structure (L-T-P-C):</b>	<b>2-0-0-2</b>
<b>Instructor in Charge:</b>	

## **Learning Outcome of the Course:**

After learning the course, the students should be able:

1. Basics of Web Designing
2. Multimedia and its Applications
3. Web Technologies
4. Introduction to Web Design & Applications
5. Computer Graphics

## **Syllabus:**

- Fundamentals of Web
- HTML5 Form elements
- HTML5 Audio & Video
- HTML5 Canvas
- HTML5 3D Context
- CSS2 & CSS3

## **REFERENCE BOOKS:**

1. Web Designing & Architecture-Educational Technology Centre University of Buffalo
2. Steven M. Schafer HTML, XHTML, and CSS Bible, 5ed Wiley India
3. John Duckett Beginning HTML, XHTML, CSS, and JavaScript Wiley India
4. Ian Pouncey, Richard York Beginning CSS: Cascading Style Sheets for Web Design Wiley India
5. Learning Web Design: A Beginner's Guide to HTML, CSS, JavaScript, and Web Graphics, 4th edLinks to an external site.. O'Reilly Media. 500 p. ISBN 978-1-4493-3753-8

## **Evaluation Scheme:**

Continuous evaluation process comprising of components like attendance, assignment, class tests, practical, Comprehensive examinations, etc.





**Indrashil University**  
**School of Engineering**  
**First Trimester, 2022-23**

**Course Syllabus**

<b>Course Code:</b>	<b>34103</b>
<b>Course Title:</b>	<b>Internet Business</b>
<b>Credit Structure (L-T-P-C):</b>	<b>2-0-2-3</b>
<b>Instructor in Charge:</b>	

## **Learning Outcome of the Course:**

After learning the course, the students should be able:

1. Define E-Marketplaces and list their components.
2. List the Major types of Electronic Markets and describe their features.
3. Describe the types of Intermediaries in EC and their roles.
4. Describe electronic Catalogs, Shopping carts, and search Engines.
5. Describe the various types of Auctions and list their characteristics.

## **Syllabus:**

- Cloud computing and mobile devices
- Social networking - wikis, folks on omies, Webcasting, blogging and podcasting
- Web conferencing software
- SEO (Search Engine Optimization)
- FTP and Secure Shell
- Online security and safety practices
- Payment gateway
- Internet Metaphor

## **REFERENCE BOOKS:**

1. Electronic Commerce: A Managerial Perspective, Turban, E. et al., Prentice Hall-2008.
2. Frontiers of e-commerce, Ravi Kalakota, Pearson.
3. Electronic Business and Electronic Commerce Management, 2nd edition, Dave Chaffey, Prentice Hall, 2006
4. e-Learning Tools and Technologies, Horton and Horton, Wiley Publishing

## **Evaluation Scheme:**

Continuous evaluation process comprising of components like attendance, assignment, class tests, practical, Comprehensive examinations, etc.



**Indrashil University**  
**School of Engineering**  
**Second Trimester, 2022-23**

**Course Syllabus**

<b>Course Code:</b>	<b>34201</b>
<b>Course Title:</b>	<b>Introduction to Full Stack development</b>
<b>Credit Structure (L-T-P-C):</b>	<b>3-0-0-3</b>
<b>Instructor in Charge:</b>	

## **Learning Outcome of the Course:**

After learning the course, the students should be able:

1. develop a complete web application from the scratch that includes Front-end, Backend and Data-exchange technologies
2. Build strong foundations (ex: OOPS) in entry level engineers thereby making them job ready as per industry requirements.
3. Enable them to learn new technologies by applying foundation paradigms
4. By the end of the program participants will be become an industry-ready engineer who can be readily deployed in a project

## **Syllabus:**

- Programming with JavaScript
- ReactJS Development
- NodeJS Development
- MongoDB
- Python
- Version Control system
- Flutter
- 6 Mini Projects
- 1 Capstone Project

## **REFERENCE BOOKS:**

1. Full Stack Web Development for Beginners, Riaz Ahmed **ISBN-13:** 979-8738951268
2. Full-Stack React, TypeScript, and Node, David Choi, **ISBN-13:** 978-1839219931

## **Evaluation Scheme:**

Continuous evaluation process comprising of components like attendance, assignment, classtests, practical, Comprehensive examinations, etc



**Indrashil University**  
**School of Engineering**  
**Second Trimester, 2022-23**

**Course Syllabus**

<b>Course Code:</b>	<b>34202</b>
<b>Course Title:</b>	<b>Digital Marketing</b>
<b>Credit Structure (L-T-P-C):</b>	<b>2-0-0-2</b>
<b>Instructor in Charge:</b>	

## **Learning Outcome of the Course:**

After learning the course, the students should be able:

1. Gain an appreciation of the vast realm of the digital media environment
2. Identify the issues of convergence and emerging media technologies
3. Analyze the social and cultural effects of new media and communication
4. Apply the relevant research and theoretical implications of digital media

## **Syllabus:**

- Generating Quality Leads
- Knowing Your Target Audience
- Developing a Content Marketing Strategy
- Budgeting for PPC & What Ads to Run
- Creating Content People Want
- Going Multichannel or Omnichannel
- Creating Mobile First & Responsive Content
- Promoting Brand Awareness
- Measuring Data & Useful Analytics
- Staying Current on Changing Digital Marketing Trends

## **REFERENCE BOOKS:**

1. Introduction to Digital Media, Alessandro Delfanti, Adam Arvidsson, Wiley-Blackwell
2. Digital Media and Society FIRST EDITION, Simon Lindgren - Professor of Sociology at Umeå University, Sweden, SAGE Publications Ltd

## **Evaluation Scheme:**

Continuous evaluation process comprising of components like attendance, assignment, classtests, practical, Comprehensive examinations, etc



**Indrashil University**  
**School of Engineering**  
**Second Trimester, 2022-23**

**Course Syllabus**

<b>Course Code:</b>	<b>34203</b>
<b>Course Title:</b>	<b>Devops Overview</b>
<b>Credit Structure (L-T-P-C):</b>	<b>2-0-2-3</b>
<b>Instructor in Charge:</b>	

## **Learning Outcome of the Course:**

After learning the course, the students should be able:

1. Understand the traditional software development.
2. Learn the rise of agile methodologies.
3. Define and design purpose of DevOps.

## **Syllabus:**

### **TRADITIONAL SOFTWARE DEVELOPMENT**

The Advent of Software Engineering - Waterfall method - Developers vs IT Operations conflict

### **RISE OF AGILE METHODOLOGIES**

Agile movement in 2000 - Agile Vs Waterfall Method - Iterative Agile Software Development - Individual and team interactions over processes and tools - Working software over -comprehensive documentation - Customer collaboration over contract negotiation - Responding to change over following a plan

### **DEFINITION OF DEVOPS**

Introduction to DevOps - DevOps and Agile

### **PURPOSE OF DEVOPS**

Minimum Viable Product - Application Deployment - Continuous Integration - Continuous Delivery

### **CAMS (CULTURE, AUTOMATION, MEASUREMENT AND SHARING)**

CAMS – Culture - CAMS – Automation - CAMS – Measurement - CAMS – Sharing - Test-Driven Development - Configuration Management - Infrastructure Automation - Root Cause Analysis – Blamelessness - Organizational Learning

## **REFERENCE BOOKS:**

1. The DevOps Handbook - Book by Gene Kim, Jez Humble, Patrick Debois, and Willis Willis
2. What is DevOps? - by Mike Loukides

## **Evaluation Scheme:**

Continuous evaluation process comprising of components like attendance, assignment, classtests, practical, Comprehensive examinations, etc





**Indrashil University**  
**School of Engineering**  
**Third Trimester, 2022-23**

**Course Syllabus**

<b>Course Code:</b>	<b>34301</b>
<b>Course Title:</b>	<b>Web Development</b>
<b>Credit Structure (L-T-P-C):</b>	<b>2-0-2-3</b>
<b>Instructor in Charge:</b>	

## **Learning Outcome of the Course:**

After learning the course, the students should be able:

To understand the basic concepts of networks

1. Define the principle of Web page design
2. Define the basics in web design
3. Visualize the basic concept of HTML.
4. Recognize the elements of HTML.
5. Introduce basics concept of CSS.
6. Develop the concept of web publishing

## **Syllabus:**

- HTML & CSS – Content, layout, and styling of web page
- JavaScript Programming – Programming language of the web
- Dynamic Website Development – Make a web page interactive and do things
- ReactJS Development – Learn to develop components and single page apps inReact
- Ruby Programming – Programming language for Ruby on Rails
- Back-end Development – Storing and manipulating data permanently
- Full-stack Deployment – Get a full-stack web application up and running
- Capstone Portfolio Project – Build a full-stack application you are proud of

## **REFERENCE BOOKS:**

1. Web Designing & Architecture-Educational Technology Centre University of Buffalo
2. Steven M. Schafer HTML, XHTML, and CSS Bible, 5ed Wiley India
3. John Duckett Beginning HTML, XHTML, CSS, and JavaScript Wiley India
4. Ian Pouncey, Richard York Beginning CSS: Cascading Style Sheets for Web Design Wiley India

## **Evaluation Scheme:**

Continuous evaluation process comprising of components like attendance, assignment, classtests, practical, Comprehensive examinations, etc



**Indrashil University**  
**School of Engineering**  
**Third Trimester, 2022-23**

**Course Syllabus**

**Course Code:** 34302

**Course Title:** Web Animation

**Credit Structure (L-T-P-C):** 3-0-0-3

**Instructor in Charge:**

## **Learning Outcome of the Course:**

After learning the course, the students should be able:

To understand the basic concepts of networks

1. Use the software workspace.
2. Explore drawing tools and objects.
3. Work with symbols, the library and interactivity.
4. Create Animations.
5. Optimize and publish movies.
6. Create buttons and use media.

## **Syllabus:**

- Basic Drawing
- Graphic Designing
- 2d Animation
- 3d Animation
- Visual effects
- Creating Animated Greetings
- Banners and Logos
- Building Web Intro
- Processing Video
- Use of Unity
- Project

## **REFERENCE BOOKS:**

1. Creating Web Animations by Kirupa Chinnathambi, Released March 2017, Publisher(s): O'Reilly Media, Inc. ISBN: 9781491957516
2. The Animators Survival Kit , Richard Williams, 2001

## **Evaluation Scheme:**

Continuous evaluation process comprising of components like attendance, assignment, classtests, practical, Comprehensive examinations, etc



**Indrashil University**  
**School of Engineering**  
**Third Trimester, 2022-23**

**Course Syllabus**

<b>Course Code:</b>	<b>34303</b>
<b>Course Title:</b>	<b>Software Systems for e-Business and the www</b>
<b>Credit Structure (L-T-P-C):</b>	<b>2-0-0-2</b>
<b>Instructor in Charge:</b>	

## **Learning Outcome of the Course:**

After learning the course, the students should be able:

To understand the basic concepts of networks

1. Understand the main technologies behind electronic systems and how these technologies interact;
2. Have an understanding of how e-commerce and web-based applications is designed, built and implemented.
3. Have knowledge of tools, technologies, concepts and processes that comprise the technical infrastructure of e-commerce sites and be able to solve problems about site design, hardware and software architecture, and document architecture.
4. Describe the major applications of business-to-consumer commerce including service industries, and the major issues faced by e-tailers.
5. Understand the importance and activities of online advertising

## **Syllabus:**

- Salesforce Commerce Cloud
- Wix
- BigCommerce
- Shopify
- Brightpearl
- 3dcart
- WooCommerce
- Volusion
- Yotpo
- Episerver Digital Commerce

## **REFERENCE BOOKS:**

1. E-Business & Ecommerce Management, Dave Chaffey, F-T press 2009
2. Creating A Winning E-Business, Albert Napier, Ollie N. Rivers, Stuart W.Wagner, and JB Napier, Course Technology / 2006

## **Evaluation Scheme:**

Continuous evaluation process comprising of components like attendance, assignment, classtests, practical, Comprehensive examinations, etc



**Indrashil University**  
**School of Engineering**  
**Third Trimester, 2022-23**

**Course Syllabus**

<b>Course Code:</b>	<b>34304</b>
<b>Course Title:</b>	<b>INDUSTRY PROJECT/ MAJOR PROJECT</b>
<b>Credit Structure (L-T-P-C):</b>	<b>0-0-16-8</b>
<b>Instructor in Charge:</b>	

## Evaluation Scheme:

1. Continuous evaluation components- 50%
  - Classroom participation and attendance
  - Presentation, role play, Quiz etc
  - Assignments, case study analysis.
2. Mid-Trimester exam- 20%
3. End Trimester examination- 30%
4. Project work –
  - Mid presentation: 40%
  - Final presentation cum viva-voce: 60%(it includes thesis evaluation)



