# Nirma University
# Institute of Technology

## Computer Science & Engineering Department

## Course Policy

**B. Tech Semester - IV Academic Year:** 2020-21

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| **Course Code & Name** | **:** | 2CS405 Web Technologies |
| **Credit Details** | **:** | Lecture-0, Tutorial-0, Practicals-4 **Credits-2** |
| **Course Co ordinator** | **:** | Dr Smita Darandale |
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| **Office** | **:** | N-f3 |
| **Course Faculty** | **:** | **1. Dr Smita Darandale**<br>**Visiting Hours**: Monday – 11:00 a.m. to 1:00 p.m.<br>Tuesday - 02:00 p.m. to 04:00 pm |

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| **Dr Ankit Thakkar** Email: ankit.thakkar@nirmauni.ac.in ContactNo.: 07971652526 Office:PG-312 **Visiting Hours: Monday 2:00 pm to 4:00 pm** | **Prof. Sapan Mankad** Email: sapanmankad@nirmauni.ac.in Contact No. : --- Office: D-306/4 **Visiting Hours:** Fridays 2 to 4 pm | **Prof. Malaram Kumhar** Email: malaram.kumhar@nirmauni.ac.in Contact No. : 8849226346 Office: D306 **Visiting Hours: Monday 1:00 to 2:00 pm** | **Dr Jigna Patel** Email: jignas.patel@nirmauni.ac.in Contact No. : 9898942993 Office: NF3 **Visiting Hours: Tuesday 1:00 to 2:00 pm** |

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| **Prof. Jitali Patel** Email: Jitali.patel@nirmaun i.ac.in Contact No. :8141918179 Office: NF3 **Visiting Hours: Wednesday 1:00 to 2:00 pm** | **Prof. Chandan Trivedi** Email: chandan.trivedi@nirmauni.ac.in Contact No. 9714786338: Office: D-307/6 **Visiting Hours: Thursday 9:00 to 4:00** | **Prof. Umesh Bodkhe** Email: umesh.bodkhe@nirmauni.ac.in Contact No.:8888123279 Office: N5/F6 **Visiting Hours: 9:00 am to 4:00 pm** | **Riddhi Thakkar** Email: 18ftphde29@nirmauni.ac.in Contact No.: Office: NF3 **Visiting Hours: Monday 1:00 to 2:00 pm** |

## 1. Introduction to Course

1.1 Importance of the course

Introducing this course, students are able to learn basic concepts of website development using various technologies like HTML, CSS and JavaScript and they can design the website on their own.

1.2 Objective of the Course

- ✔ The main focus of offering this course is to teach fundamentals for web designing using HTML, CSS & Java Script and to make them aware of various web technologies.
- ✔ This course will provide a platform for students to design static as well as interactive web pages incorporating validation techniques.

1.3 Pre-requisite:

No prior knowledge required.

## 2. Course Learning Outcomes (CLO)

CLOs are clear statements of the expectations for student achievements in the course.

At the end of the course, students will be able to –

1. explain tagging techniques for web development
2. apply the concepts of web technology in designing static and dynamic web pages
3. design interactive web pages incorporating validation techniques

## 3. Syllabus

Practical sessions will be conducted based on following topics:

**HTML**: HTML Documents, HTML Structure tags, HTML Block level tags, HTML Text level tags, Different types of Lists, Nesting of lists, Linking HTML Documents, Frames, tables and forms

**Cascaded Style Sheets:** Different approaches to style sheets, using multiple approaches, linking to style information in separate file, setting up style information using inline, internal and external style sheet

**JavaScript:** JavaScript syntax, variables and their types, JavaScript operators, arrays and array methods, control statements, built-in objects in JavaScript, Array, String, validation using JavaScript

**AngularJS and AJAX:** expressions and data binding, working with directives, controllers, filters, forms

## 3.1. Self-Study

Not Applicable

## 3.2. References

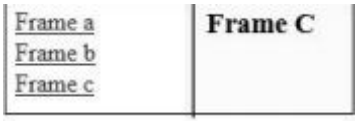

1. Deitel Deitel Nieto, Internet and World Wide Web: How To Program, Pearson
2. Scott Parker, The Web Designer's 101 Most Important Decisions Professional Secrets for a Winning Website, Adams Media
3. Kogent Learning Solutions Inc., Html5 Black Book: Covers CSS3, Javascript, XML, XHTML, Ajax, Php and Jquery, Dreamtech Press
4. Jon Duckett, Beginning Web Programming with Html, XHTML and CSS, Wiley India Pvt Ltd.


Note: The latest edition of books should be referred.

## 4. Laboratory details

Laboratory experiments/ exercises should be completed as per the given schedule. It is expected that a student does the same with full understanding of the concept, procedure and application involved.

Laboratory work will be based on the above syllabus with the following 10 experiments to be performed.

| Sr. No. | Title of the Practical | Schedule | Mapping of CO |
|---|---|---|---|
| | **HTML:** | | |
| 1. | 1a. Design an HTML page using text level tags and block level tags.<br><br>1b. Design an HTML page using different types of lists to demonstrate nesting of the lists. | 7.1.2021 to 23.1.2021 | CO 1,2 |
| 2. | 2a. Design a home page to display your resume using the HTML table tag.<br><br>2b. Create an HTML page which contains the two frames using frameset tag. One frame contains navigation links for web pages and the second frame displays the information about the respective web page when the navigation link of a particular web page is clicked. Refer the following figure for more detail.<br><br>  | 25.1.2021 to 6.2.2021 | CO 1,2 |
| 3. | 3a. Demonstrate an image map in HTML.<br>3b. Create a webpage for on-line student registration form using HTML | 8.2.2021 to 20.2.2021 | CO 1,2 |
| | **Cascaded Style Sheets** | | |
| 4. | Design the Web Pages that demonstrate following<br>Cconcepts: • Inline styles<br>• Embedded Style Sheets<br>• Linking Style Sheets | 22.2.2021 to 06.3.2021 | CO 1,2 |
| 5. | a. Design the Web Pages that demonstrate following concepts:<br>• Text Flow<br>• Box Model<br>b. Apply cascading style sheet techniques on student registration form designed in practical 3b. | 8.3.2021 to 20.3.2021 | CO 1,2 |

| | | | |
|---|---|---|---|
| | **JavaScript:** | | |
| 6. | 6a. Write a JavaScript function that read an integer value and finds the factorial of the entered number.<br>6b. Create a JavaScript that merges two arrays without duplicating elements.<br>6c Apply following validation rules to the student registration form designed in practical 3b<br>• First Name and Last Name should not be empty.<br>• Name fields should accept letters only.<br>• Email should be in the form of DDCCCDDD@nirmauni.ac.in, where D and C represent any digit and letter, respectively.<br>• Password must be a minimum of eight characters long consisting of a combination of uppercase letter, lowercase letter, and digits. • Password and re-type password must be the same. | 22.3.2021 to 03.4.2021 | CO 1,3 |
| | **AngularJS and AJAX** | | |
| 7. | Use each of the following to bind and display your personal information. • expressions and data binding<br>• directives<br>• controller | 22.3.2021 to 03.4.2021 | CO 1,2 |
| 8. | Design a student registration form using AngularJS and apply number, uppercase, and lowercase filters to the appropriate fields. | 5.4.2021 to 17.4.2021 | CO 1,3 |
| 9. | Design a shopping website using CSS that provides information about various products to the visitor. A visitor can register to the shopping website if he wishes to purchase some item(s) now or in future. The registration form should collect necessary information of a visitor in order to deliver the product if order placed. Moreover, design a web page to place orders by the registered user. Validate all the fields of the registration form and order form. | 19.4.2021 to 25.4.2021 | CO 2,3 |
| 10. | Develop a project using various web technologies learned in this course. | 26.4.2021 to 5.4.2021 | CO 1,2,3 |
| | Total hours | | |

## 5. Assessment Policy

6.1 Component wise Continuous Evaluation (CE), Laboratory and Lab Practical Work (LPW) & Semester End Examination (SEE) weightage

| ***Assessment scheme*** | ***CE*** | ***LPW*** | | ***SEE*** |
|---|---|---|---|---|
| ***Component weightage*** | *0.0* | *1.0* | | *0.0* |
| | - | *Continuous Evaluation 75%* | *Viva Voce 25%* | - |

5.1 Assessment Policy for Laboratory and Project Work (LPW)

Assessment of Laboratory and Project Work comprises two components.

1. Continuous assessment for laboratory experiments will be conducted. There will be 10 experiments, each carrying a weightage of 10 marks. At the end of the course total marks obtained out of 100 will be converted according to weightage assigned. Assessment of Experiment will be carried out based on parameters various tags utilization, overall design of web page and logic (in case of JavaScript) and timely submission of practical.

2. A Viva voce examination for LPW component will be conducted as per academic calendar. It will carry a weightage of 25 marks.

## 6. Teaching-learning methodology

1. Laboratory: Explanation of relevant concepts required for the experimentation to be performed. Assessment will be carried out at the end of each experiment based on parameters such as various tags utilization, overall design of web page and logic (in case of JavaScript) and timely submission of practical.

## 7. Active learning techniques

Active learning is a method of learning in which students are actively or experientially involved in the learning process. Following active learning techniques will be adopted for the course.

1. Recall, Summarize, Question, Connect, and Comment: At the beginning of the experiment, students will be asked to recall and list the most important

points from the previous lab session. They then summarize these points in sentences. Next, students write one question from the previous material that they wanted answered. Fourth, they are instructed to make one connection between what they learned in the previous lab session and any of the classes before that. Finally, they are asked to comment on how confident they felt.

## 8. Course Material

Following course material is uploaded on Moodle:

https://lms.nirmauni.ac.in/course/view.php?id=3426#section-0/

- Course Policy
- Lecture Notes
- Books / Reference Books / NPTEL video lectures
- Assignments, Lab Manuals
- Web-links, Blogs, Video Lectures, Journals
- Softwares
- Advanced topics

## 9. Course Learning Outcome Attainment

Following means will be used to assess attainment of course learning outcomes. • Use of formal evaluation components of laboratory work, semester end LPW examination

• Informal feedback during course conduction

## 10. Academic Integrity Statement

Students are expected to carry out assigned work under the LPW component independently. Copying in any form is not acceptable and will invite strict disciplinary action. Evaluation of corresponding components will be affected proportionately in such cases. Turnitin software will be used to check plagiarism wherever applicable. Academic integrity is expected from students in all components of course assessment.