

Activities

- Quiz on accounting principles, concepts, and classification of accounts.
- Assignment on classification of accounts and journal entries.
- Group activity: calculation of problems on depreciation using different methods.
- Comparative presentation of Depreciation and Amortisation.
- Field-based report: Collect and analyse final accounts of a local business.

References:

1. Ranganatham, G., & Venkataramanaiah, M. (2019). *Financial accounting*. New Delhi: S. Chand Publications.
2. Jain, S. P., & Narang, K. L. (n.d.). *Accountancy*. Ludhiana: Kalyani Publishers.
3. Arulanandam, M. A. (n.d.). *Advanced accountancy*. Mumbai: Himalaya Publishing House.
4. Goyal, V. K. (n.d.). *Financial accounting*. New Delhi: Excel Books.
5. Tulsian, P. C. (n.d.). *Accountancy-I*. New Delhi: Tata McGraw Hill Publishing Co.

SEMESTER-II

COURSE 4: E-COMMERCE AND WEB APPLICATION DEVELOPMENT

Theory

Credits: 3

3 hrs/week

Course Objectives:

1. Understand the evolution, types, and models of e-commerce, including technical, legal, and ethical frameworks. Explore web design technologies and content management systems relevant to e-commerce platforms.

2. Apply online marketing principles, SEO techniques, and e-payment systems with attention to logistics and risk management.
3. Design interactive and responsive websites using HTML5, CSS3, and client-side scripting with JavaScript.
4. Develop and customize CMS-based interfaces using the Bootstrap framework and responsive design principles.

Course Outcomes:

Learners will be able to:

1. Describe e-commerce models, revenue strategies, and legal considerations including cyber laws and data privacy.
2. Implement basic web structures using HTML5 and apply web design principles suitable for digital commerce.
3. Create and style dynamic websites using CSS for layout, animation, and visual enhancements.
4. Write client-side scripts using JavaScript to enable interactivity, form validation, and event handling.
5. Build responsive e-commerce front-ends using the Bootstrap framework, incorporating reusable UI components and custom styling.

UNIT-I

Introduction to E-Commerce: Definition, scope, and evolution, Benefits and limitations

Types of E-Commerce: B2B, B2C, C2C, C2B, G2C models

E-Commerce Business Models: Revenue models (advertising, subscription, etc.)

Infrastructure for E-Commerce : Internet, intranet, Extranet

Payment gateways and digital wallets Legal and Ethical Issues: Cyber laws and data privacy, Intellectual property, taxation, and security.

Case study : Study of successful e-businesses

UNIT-II

Technology in E-Commerce: Essentials of web design for business - Content management systems (WordPress, Shopify, Bootstrap)

Online Marketing & SEO: Digital marketing channels, Search engine optimization basics.

Digital Payment Systems: Credit/Debit Cards, Net Banking, Mobile Wallets, UPI, Electronic Fund Transfer (EFT) , Payment Gateways – Blockchain and Cryptocurrencies, Artificial Intelligence and E-Commerce, Future of E-Commerce.

Web Designing: Web designing Principles, Introduction to HTML5, HTML Document Structure, Formatting Elements (text and block formatting), Lists, Images, Links and Navigation (External and internal links), Tables, Inlineframes, HTML Forms. Embedding multimedia objects.

UNIT III : Cascading Style Sheets

CSS Basics: CSS Rule, Applying CSS Rules (Selectors), Embedding CSS code in HTML page Inline, internal, external style sheets.

CSS Properties: Font, Color, Types of CSS Color values, Background, CSS Box Model, Display properties, Styling Pseudo Elements, Positioning properties, Layering, Styling Lists and tables.

UNIT IV: Client Side Scripting using JAVA SCRIPT

Javascript Basics: Datatypes, Variables, Operators, Control Statements, Functions.

Builtin Objects: Arrays, String, Date, Window, Document, RegExp.

Document Object Modelling: Introduction to DOM, Form Validation using Java Script, Event Handling: Mouse events, form submission events, load and unload events, keyboard events – focus and blur events.

UNIT V : BOOTSTRAP FRAMEWORK for designing CMS

Responsive Webdesign: Grid System, Breakpoints, Containers, Utilities.

Introduction to BOOT STRAP FRAME WORK: Benefits, Setup Bootstrap Project.

BootStrap Components: Navigation, Creating navigation bars (.navbar), Dropdowns, and Responsive togglers. Buttons-Styling buttons with various classes for size, color, and state. Forms-Styling form elements like inputs, labels, and client side validation. Carousels-Creating image sliders. Alerts: Displaying informative messages

Customization: Overriding Bootstrap's default styles using custom CSS

TEXT BOOKS & REFERENCE BOOKS

1. Whiteley, D., 2000. *E-commerce: Strategy, technologies and applications*. McGraw-Hill Education.
2. Turban, Efraim, David King, Jae Kyu Lee, Ting-Peng Liang, and Deborrah Turban. *Electronic Commerce: Concepts, Models, Strategies*. Pearson Education, 2002.
3. Robbins, Jennifer Niederst. *Learning Web Design: A Beginner's Guide to HTML, CSS, JavaScript, and Web Graphics*. 5th ed., O'Reilly Media, 2018.
4. Kogent Learning Solutions Inc. *Web Technologies Black Book*. Dreamtech Press, 2009.
5. Diwan, Amit. *Ultimate Bootstrap for Responsive Web Design*. Orange Education Pvt. Ltd., 2024. ISBN: 9789348107251.
6. Hussain, Frahaan, and Kameron Hussain. *Mastering Bootstrap 5: From Basics to Expert Projects*. Sonar Publishing, 2023. ISBN: B0CPW9PRVT.

E-Resources

1. NPTEL / SWAYAM Online Lectures ::Course: E-Business (NPTEL)
2. https://www.tutorialspoint.com/e_commerce/index.htm
3. <https://www.w3schools.com/bootstrap5/>
4. <https://www.w3schools.com/> (HTML-CSS- JAVASCRIPT)
5. <https://developer.mozilla.org/en-US/docs/Learn/CSS>
6. <https://www.freecodecamp.org/learn/2022/responsive-web-design/>
7. <https://developer.mozilla.org/en-US/docs/Learn/HTML>
8. <https://www.freecodecamp.org/learn/2022/responsive-web-design/>

ACTIVITIES

UNIT 1 – Introduction to E-Commerce

Activity 1: Case Study – Amazon's Growth Story

Scenario:

Students analyze how Amazon evolved from an online bookstore to a global e-commerce leader.

Task: Identify Amazon's e-commerce model (B2C) and revenue models, List benefits and limitations faced during its evolution.

Expected Outcome: Students will understand the evolution of e-commerce and business

models.

Evaluation: Accuracy of model identification, Depth of analysis, Quality of presentation.

Activity 2: Case Study – Paytm and Digital Payments in India

Scenario:

Examine Paytm's role in enabling digital wallets and online transactions in India.

Task: Explain how Paytm works as a payment gateway, Discuss challenges faced related to cyber laws, taxation, and data privacy.

Expected Outcome: Students will relate theory with Indian e-payment ecosystems.

Evaluation: Correct explanation of payment gateway functions, Identification of legal/ethical issues.

UNIT 2 – Technology in E-Commerce

Activity 1: Case Study – Shopify Websites

Scenario:

Students explore Shopify-based small business sites.

Task: Analyze features of a Shopify store (design, responsiveness, content), Suggest 3 improvements for better customer experience.

Expected Outcome:

Students will understand CMS tools and good design practices.

Evaluation: Relevance of suggested improvements, Clarity of analysis.

UNIT 3 – CSS

Activity 1: Case Study – Homepage Redesign (FLIPKART)

Scenario:

Flipkart wants to revamp its homepage with modern CSS techniques.

Task: Suggest CSS improvements (color scheme, box model usage), Implement one of these changes in a sample HTML page.

Expected Outcome: Students will apply CSS properties for real-world UI improvement.

Evaluation: Creativity of suggestions, Correctness of CSS code.

Activity 2: Case Study – Netflix Interface Styling

Scenario: Analyze Netflix's web interface for user experience.

Task: Identify 5 CSS techniques used (hover effects, transitions, grids). Replicate one effect in a simple web page.

Expected Outcome: Students will recognize modern CSS practices.

Evaluation: Correct identification of techniques, Working replication of an effect.

Unit 4 – Client-Side Scripting

Case Study 1: Form Validation in IRCTC Booking Portal

Scenario: IRCTC uses JavaScript to validate passenger details (e.g., correct email format, age range, date picker) before allowing ticket booking.

Activity: Study how form validation prevents incorrect inputs during online train booking, Implement a simple form (name, email, age, travel date) and add JavaScript validation for each field.

Outcome: Students will be able to write JavaScript for real-world form validation.

Evaluation: Accuracy of validation logic, Correct handling of invalid inputs, Code structure and usability.

Case Study 2: Client-Side Cart Updates in BigBasket

Scenario: BigBasket updates cart totals instantly when the user changes product quantity without reloading the page.

Activity: Discuss how JavaScript DOM manipulation is used for updating totals. Create a simple product list with quantities and update total cost dynamically using JavaScript.

Outcome: Students will understand how JavaScript modifies the DOM in real-time.

Evaluation: Functionality of dynamic updates, Correctness of calculations, Neat interface

UNIT 5 – Bootstrap

Activity 1:

Case Study: Responsive Website for a Start-up

Scenario: A local bakery wants a responsive site using Bootstrap.

Task: Design a layout using Bootstrap grid, navbar, and carousel, Ensure the design adjusts for mobile and desktop.

Expected Outcome: Students will learn to create responsive layouts.

Evaluation: Correct application of Bootstrap components, Responsiveness.

Activity 2:

Case Study: Zomato UI Components

Scenario: Study Zomato's website UI elements.

Task: Identify Bootstrap-like components (cards, modals, navigation), Recreate one of these components using Bootstrap in a sample page.

Expected Outcome: Students will apply Bootstrap UI concepts.

Evaluation: Correct recreation of components, Visual similarity and functionality.

SEMESTER-II

COURSE 4: E-COMMERCE AND WEB APPLICATION DEVELOPMENT

Practical

Credits: 1

2 hrs/week

List of Experiments:

1. Create a simple HTML page with:Headings, paragraphs, bold/italic text
2. Create a music promotion webpage (include audio and video files in your html page)
3. Create an online registration form