



CCEK – NSQF ALIGNED PROGRAM

COURSE SYLLABUS

FOR

UI/UX Designing

CCEK - NATIONAL SKILL DEVELOPMENT TRAINING PROGRAM

UI/UX Designing

CCEK – NSDC course package covers the following Qualification Packs and leads to the following NSDC certifications. The students who successfully completed the course programs are entitled to get NSDC certification after undergoing the assessment process of NSDC as per the rules and regulations stipulated by NSDC from time to time.

SL. NO.	QUALIFICATIONS PACK	QUALIFICATIONS PACK CODE	NSQF LEVEL
1	<p><u>User Experience Designer</u></p> <p>Brief Job Description:</p> <p>This course prepares students to become User Experience (UX) Designers, professionals responsible for enhancing user satisfaction by improving the usability, accessibility, and interaction between users and digital products. Students will learn to conduct user research, create wireframes and prototypes, run usability tests, and collaborate with developers and stakeholders to design intuitive, user-centered experiences.</p>	SSC/Q8404	6

COURSE DETAILS

UI/UX Designing

EXAMINATION DETAILS

COURSE NAME	COURSE CODE	ELIGIBILITY	DURATION
UI/UX Designing	G22	Degree	240

SL. NO.	EXAM	EXAM CODE	MAXIMUM MARK	INTERNAL	TOTAL MARK
THEORY PAPERS					
1	Introduction to User Experience Design	T001	100	50	150
2	Interaction Design Principles	T002	100	50	150
PRACTICAL PAPERS					
1	Web UI Design and Responsive Layouts	L001	100	50	150
TOTAL MARKS					
1	Total Examination Marks (Theory Online + Practical Examination)				300
2	Total Internal Marks				150
3	Total Marks (Total Internal Marks + Total Examination Marks)				450

UI/UX Designing**INTERNAL MARK CRITERIA FOR EACH**

SL NO.	MODULE	MODULE CODE	MAXIMUM MARK	INTERNAL MARK	TOTAL MARK
1	Introduction to User Experience Design	T001	100	50	150
2	Interaction Design Principles	T002	100	50	150
3	Web UI Design and Responsive Layouts	L001	100	50	150
	TOTAL		300	150	450

ATTENDANCE	GENERAL PERFORMANCE	INTERNAL EXAMINATIONS/ PROJECTS/ ASSIGNMENTS	TOTAL MARKS
5	5	40	50

COURSE SYLLABUS

FOR

UI/UX Designing

COURSE	UI/UX Designing	
TOTAL MARKS	Mark: 450	Internal Mark: 150
TOTAL HOURS	240 Hrs	

DEFENITION OF CREDIT

1 Credit	15Hrs Theory/ 30Hrs Practical
Skill Components	60 – 70 % of Total Credit

MODULES INCLUDED IN THIS SUBJECT

SL NO	MODULE NAME	CREDIT BREAKUP
1	Module 1: IT-ITeS Industry– An Introduction	1
2	Module 2: Web Technology - Introduction	
3	Module 3: Mobile Development – An Introduction	
4	Module 4: Development Tools and Usage	
5	Module 5: User Experience Design Process	.5
6	Module 6: Style guide, design systems and specifications	.5
7	Module 7: Business requirements	.5
8	Module 8: Competitive Analysis	.5
9	Module 9: User persona and behaviour patterns	.5
10	Module 10: Site map and information architecture	.5
11	Module 11: User experience map, journey, and user flow	.5

12	Module 12: Wireframes and illustrations	.5
13	Module 13: Visual design	.5
14	Module 14: Design of UI elements	.5
15	Module 15: Usability tests	.5
16	Module 16: Inclusive and Environmentally Sustainable Workplace	.5
17	Module 17: Introduction to Employability Skills	1
18	Module 18: Constitutional values - Citizenship	
19	Module 19: Becoming a Professional in the 21st Century	
20	Module 20: Basic English Skills	
21	Module 21: Career Development and Goal Setting	
22	Module 22: Communication skills	
23	Module 23: Diversity and Inclusion	
24	Module 24: Financial and Digital Literacy	
25	Module 25: Essential Digital Skills	
26	Module 26: Entrepreneurship	
27	Module 27: Customer Service	
28	Module 28: Getting Ready for Apprenticeship and Jobs	
	Total	8

Training Outcomes

- Explain the nature of work across the IT-ITeS sector, the various sub-sectors under it and different types of occupations under the Future Skills sub-sector.
- Explain different types of web technologies, their evolution, their use cases and business applications.
- Leverage different types of mobile technologies, explain their use cases and demonstrate application of different types of tools, frameworks, platforms, libraries and software packages to test hardware and software systems.
- Define the user experience design process by explaining the user experience research process, empathy mapping process and user behaviour process.
- Explain how to develop a style guide, a design system and user interface specifications for developers and designers.
- Define business requirements to derive the user experience needs of the customer.
- Analyze different trends about products, customers, UI design etc. using standard methodologies.
- Define user persona and behaviour patterns by collecting user behaviour data, onboarding unbiased study groups, classifying users into groups and defining specific user persona.
- Structure the information taxonomy and establish the hierarchy of connections.
- Develop information architecture, site map and navigation system.
- Develop a user experience map to define the user experience journey and user flow using standard practices and templates.
- Develop wireframes and illustrations of the product using standard tools and methodologies.
- Apply principles of visual design to develop the visual design of the product and different modes of interaction on different devices while ensuring consistent user experience across devices.
- Design the user interface elements for the product using standard tools and templates.

MODULES

Module 1: IT-ITeS/BPM Industry – An Introduction

THEORY

- Explain the relevance of the IT-ITeS sector.
- State the various sub- sectors in the IT-ITeS sector.
- Detail the nature of work performed across the sub- sectors.
- List organizations in the sector.
- Discuss the evolution of the sub sectors and the way forward.
- Explain the disruptions happening across the IT- ITeS sector.
- Provide an overview of the Future Skills sub- sector.
- Explain the various occupations under this sub-sector.
- List key trends across the occupations in this sub-sector.
- List various roles in the Future Skills sub- sector.

PRACTICAL

- Develop a presentation on present the evolution of the understanding on IT-ITeS Sector and sub sectors.

Module 2: Web Technology – Introduction

THEORY

- Define the terms “Internet” and “Web technology”.
- Provide an overview of different components of the internet.
- Discuss the evolving information technology landscape and the importance and relevance of Web technologies.
- State the key business drivers for adoption of web technologies.
- Discuss the different types of web technologies.
- List prospective use cases and applications of different types of web technologies

PRACTICAL

- Analyze different use cases and applications of web technologies and their applications across industries.

Module 3: Mobile Development – An Introduction

THEORY

- Define “Mobile technology” and its different components.
- Discuss the commonly used Mobile development platforms (such as iOS, Android etc.)
- Discuss the evolving information technology landscape and the importance and relevance of Mobile technologies,
- State the key business drivers for adoption of Mobile technologies.

PRACTICAL

- Analyze different use cases and applications of Mobile technologies and their applications across industries.
- List prospective use cases and applications of different Mobile technologies.

Module 4: Development Tools and Usage

THEORY

- Examine good programming styles and documentation habits
- Use scripting languages to automate tasks and write simple programs
- Use appropriate tools for building, debugging, testing, tuning, and maintaining programs
- Identify software development needs and changes
- Use various cloud computing platforms and services
- Apply principles of code and design quality

PRACTICAL

- Configure operating system components

Module 5: User Experience Design Process

THEORY

- Discuss about the user experience design process.
- Examine different types of user experience research (such as qualitative research, quantitative research etc.) and their methodologies (such as interviews, surveys, questionnaires, observations etc.)
- Explain the empathy mapping process.
- Work on standard processes to understand user behaviour.
- Define personas of users
- Explain the process of mapping user journey and user flow

PRACTICAL

- Demonstrate how to develop frameworks to support user experience design process.
- Build prototypes through sketching, visualization etc.

Module 6: Style guide, design systems and specifications

THEORY

- Explain how to assess the business of the client.
- State the principles of typography.
- Examine different types of design elements in a user interface (such as button, scroll bar, text box etc.)
- Discuss principles of spacing, padding and placement of design elements for an aesthetically pleasing user interface
- Discuss principles of colour combination, shades, and specification.
- Document the design guidelines and the rationale for the proposed design system.

PRACTICAL

- Develop typography for different text elements (such as titles, subtitle, heading, etc.)
- Create samples to showcase proposed typography, colour palette and placement of design elements.
- Design guidelines for developing different user interface elements (such as Icons, toolbars, dialog box etc.)

Module 7: Business requirements

THEORY

- Explain how to identify business problems/opportunities for a business case.
- Map the capabilities of the organisation for solving a business problem.
- Discuss best practices to communicate findings and recommendations with relevant stakeholders.
- Explain how to obtain support from relevant stakeholders for any business initiative.
- Examine best practices for collaborating with cross-functional teams in the organisation (such as design team, business managers, etc.)
- Discuss how to drive the processes for user behaviour research, user persona development, user journeys, and user flows.

PRACTICAL

- Develop new use cases for identified business solutions.
- Develop business goals and technical specifications for a business solution.
- Demonstrate the processes of user research, user persona development, user journeys, and user flows.

Module 8: Competitive Analysis

THEORY

- Define competitive analysis.
- Discuss standard methodologies to conduct a competitive analysis about products, customers, UI design etc.
- Discuss the latest trends in user experience design in the industry.
- Explain how to track and stay updated with the latest solutions in the market.
- Discuss different parameters for conducting a competitive analysis of the user experience design (such as tone, features, user reviews, etc.)
- Discuss how to identify and list the strengths and weaknesses of various user experience solutions.

PRACTICAL

- Conduct competitive analysis for use cases related to user experience solutions

Module 9: User persona and behaviour patterns

THEORY

- Collect data on user behaviour.
- Discuss how to identify and recruit an unbiased study group based on both demographic and psychographic factors.
- Explain different methodologies to gather user data (such as questionnaires, face-to-face interviews, group discussions etc.)
- Discuss how to ensure the integrity of the user data collected.
- Evaluate and interpret the gathered user behaviour data.
- Explain how to identify patterns and repeatable metrics to tag important insights and problems.
- Discuss how to classify users based on the user behaviour data collected.
- Explain how to define a suitable identity, name and persona for a user based on different parameters (age, education, income, likes, etc.)
- Discuss how to ensure that the user persona appropriately represents a larger set of users.
- Explain how to optimize function design by leveraging the developed user persona.

PRACTICAL

- Demonstrate how the user persona can be suitably leveraged to develop a user experience solution.

Module 10: Site map and information architecture

THEORY

- Discuss common information elements in different software solutions.
- Discuss the types of information to be collected (such as headings, sub-headings, texts, media etc.)

PRACTICAL

- Develop an information taxonomy to group unstructured data.
- Show different navigation styles and demonstrate their usage (such as hierarchical, global, local etc.)
- Demonstrate how to develop a navigation system using UI elements (such as menu, button, etc.)
- Demonstrate how to define a hierarchy of connect.
- Exhibit standard site map patterns (such as single page model, flat etc.)
- Present ways to collaborate with cross-functional teams to gather feedback on the sitemap and information architecture.
- Demonstrate how to create a sitemap to illustrate the navigation.

Module 11: User experience map, journey, and user flow

THEORY

- Define the scope of the user experience map.
- Outline the requirements of different user persona for the software solution.
- Discuss standard practices and templates to map and sketch a user journey.

PRACTICAL

- Exhibit ways to achieve multiple goals of a user while effectively capturing different complexities (such as multiple users, media etc.)
- Demonstrate how to identify user touch points and stages of engagement.

Module 12: Wireframes and illustrations

THEORY

- Explain wireframes and their requirement.
- Discuss the methodology to develop clear and logical wireframes for any software solution.
- Describe elements illustrated in a wireframe (such as user flow, interactions, screen size etc.)
- Explain how to identify the intentions of the customer.
- Discuss how to evaluate the customer's goals against a smoother user experience.
- Discuss how to continuously incorporate feedback from the customer.
- Leverage analytics and other standard tools to refine customer journey.

PRACTICAL

- Demonstrate ways to gather user feedback.
- Demonstrate the methodologies for developing a wireframe prototype.
- Evaluate a wireframe prototype to demonstrate a clean and smooth user experience journey.
- Demonstrate a usability test.

Module 13: Visual design

THEORY

- Discuss fundamental principles of visual design.
- Identify common tasks performed by users which are essential for them.
- Discuss how to plan visual design based on the type of device (such as mobile, tablet, desktop etc.)
- Exhibit different modes of interaction for different types of devices and how to adapt the user experience accordingly.
- Show the different types of image sizes, format and resolution fit for different screen sizes
- Explain how to provide consistent and seamless user experience across multiple devices.
- Define a usability test.
- Define important issues with the user experience.

PRACTICAL

- Demonstrate how to design user interfaces for the smallest screen sizes and then gradually redesign them for larger screens.
- Demonstrate a usability test on multiple devices and users.

Module 14: Design of UI elements

THEORY

- Discuss different types of UI (user interface) design elements (such as imagery, graphics, animation etc.)
- Discuss design specifications and guidelines
- Examine best practices and templates for documenting and sharing design specifications.

PRACTICAL

- Exhibit how to collaborate with cross- functional teams to implement design elements
- Design UI elements using standard tools and templates
- Demonstrate how to design a theme for the overall user interface and user experience

Module 15: Usability tests

THEORY

- Define usability test
- Discuss standard formats for usability tests (such as laboratory usability test, remote usability test etc.)
- Discuss common features, functionalities and tasks that are tested as part of usability testing
- Explain how to recruit and leverage unbiased users to test the usability of the solution
- Explain how to interpret test results and determine trends and potential solutions
- Discuss different types of quantitative information to be assessed for usability test (such as time on tasks, success and failure rates etc.)
- Discuss different types of qualitative information to be assessed for usability test (such as stress responses, user satisfaction etc.)
- Explain how to summarize a test session (including session duration, test methodology, description etc.)
- Explain how to summarize the outcomes of a test result and share with relevant stakeholders

PRACTICAL

- Demonstrate the methodology of usability test
- Demonstrate and explain a limited functionality prototype
- Develop limited functionality prototypes using standard tools
- Develop KPIs (Key Performance Indicators) to measure the performance of the limited functionality prototype
- Create a non-biased and realistic test environment
- Demonstrate how to configure the network bandwidth as per the test requirements
- Demonstrate how to document test results using appropriate medium (such as spreadsheets, survey etc.)

Module 16: Inclusive and Environmentally Sustainable Workplace

THEORY

- Describe different approaches for resourceful energy utilisation and waste management.
- Describe the importance of following the diversity policies.
- Identify stereotypes and prejudices associated with differently abled people and its negative consequences.
- Discuss the importance of promoting, sharing and implementing gender equality and PwD sensitivity guidelines at organization level.

PRACTICAL

- Practice the segregation of recyclable, non-recyclable and hazardous waste generated.
- Demonstrate different methods of energy resource optimization and conservation.
- Demonstrate essential communication methods in line with gender inclusiveness and PwD sensitivity.

Module 17: Introduction to Employability Skills

THEORY

- Discuss the Employability Skills required for jobs in various industries
- List different learning and employability related GOI and private portals and their usage

Module 18: Constitutional values - Citizenship

THEORY

- Explain the constitutional values, including civic rights and duties, citizenship, responsibility towards society and personal values and ethics such as honesty, integrity, caring and respecting others that are required to become a responsible citizen
- Show how to practice different environmentally sustainable practices

Module 19: Becoming a Professional in the 21st Century

THEORY

- Discuss importance of relevant 21st century skills.
- Exhibit 21st century skills like Self-Awareness, Behaviour Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn etc. in personal or professional life.
- Describe the benefits of continuous learning

Module 20: Basic English Skills

THEORY

- Show how to use basic English sentences for everyday conversation in different contexts, in person and over the telephone
- Read and interpret text written in basic English
- Write a short note/paragraph / letter/e -mail using basic English

Module 21: Career Development and Goal Setting

THEORY

- Create a career development plan with well-defined short- and long-term goals

Module 22: Communication skills

THEORY

- Demonstrate how to communicate effectively using verbal and nonverbal communication etiquette.
- Explain the importance of active listening for effective communication
- Discuss the significance of working collaboratively with others in a team

Module 23: Diversity and Inclusion

THEORY

- Demonstrate how to behave, communicate, and conduct oneself appropriately with all genders and PwD
- Discuss the significance of escalating sexual harassment issues as per POSH

Module 24: Financial and Digital Literacy

THEORY

- Outline the importance of selecting the right financial institution, product, and service
- Demonstrate how to carry out offline and online financial transactions, safely and securely

Module 25: Essential Digital Skills

THEORY

- Describe the role of digital technology in today's life
- Demonstrate how to operate digital devices and use the associated applications and features, safely and securely
- Discuss the significance of displaying responsible online behaviour while browsing, using various social media platforms, e-mails, etc., safely and securely
- Create sample word documents, excel sheets and presentations using basic features
- utilize virtual collaboration tools to work effectively

Module 26: Entrepreneurship

THEORY

- Explain the types of entrepreneurship and enterprises
- Discuss how to identify opportunities for potential business, sources of funding and associated financial and legal risks with its mitigation plan
- Describe the 4Ps of Marketing-Product, Price, Place and Promotion and apply them as per requirement
- Create a sample business plan, for the selected business opportunity

Module 27: Customer Service

THEORY

- Describe the significance of analysing different types and needs of customers
- Explain the significance of identifying customer needs and responding to them in a professional manner.
- Discuss the significance of maintaining hygiene and dressing appropriately

Module 28: Getting Ready for Apprenticeship and Jobs

THEORY

- Create a professional Curriculum Vitae (CV)
- Use various offline and online job search sources such as employment exchanges, recruitment agencies, and job portals respectively
- Discuss the significance of maintaining hygiene and confidence during an interview
- Perform a mock interview
- List the steps for searching and registering for apprenticeship opportunities