BACHELOR OF TECHNOLOGY
CIVIL ENGINEERING
SECOND YEAR (FOURTH SEMESTER)

W.E.F. ADMISSION BATCH 2023-24

Sl. No.	Category	Course Code	Course	Contact Hrs. L-T-P	Credit	University Marks	Internal Evaluation
Subject (Theory)							
1	PC	CIPC2004	Structural Analysis	3-0-0	3	100	50
2	PC	CIPC2005	Fluid Dynamics	3-0-0	3	100	50
3	PC	CIPC2006	Geotechnical Engineering	3-0-0	3	100	50
4	PC	CIPC2007	Water Supply & Sanitary Engineering	3-0-0	3	100	50
5	PC(ACC)	PCAC2008	Machine Learning Techniques and Applications	3-0-0	2	100	50
		PCAC2009	Big Data Integration and Management				
		PCAC2010	Application Development – Tools & Technologies				
		PCAC2011	Cloud Infrastructure & Applications				
		PCAC2012	Internet of Things and Cloud				
		PCAC2013	Robotics : Mobility & Design				
		PCAC2014	IT Fundamentals for Cybersecurity – II				
6	HS	HSHS2002	Organizational Behaviour	3-0-0	2	100	50
		HSHS2001	Engineering Economics				
Subject (Sessional / Practical)							
7	PC	CIPC2204	Survey Field Work	0-0-3	1.5	–	100
8	PC	CIPC2205	Geotechnical Laboratory	0-0-3	1.5	–	100
9	PC	CIPC2206	Water Supply & Sanitary Engineering Lab.	0-0-3	1.5	–	100
10	PC	CIPC2207	Computer Aided Design	0-0-3	1.5	–	100
			Total	**18-0-12**	**22**	**600**	**700**

Note : Minimum four (04) weeks of Summer Course / Training / Internship / Skill Course / etc. after 4th Semester.

Click here to view/download the syllabus of the subjects.

CIPC2004 STRUCTURAL ANALYSIS (3-0-0)

Course Objectives:

The course in Structural Analysis aims to provide students with a comprehensive understanding of structural mechanics and analysis techniques. It seeks to develop advanced knowledge of determining structural stability, analyzing complex loading conditions, and applying sophisticated mathematical methods to evaluate structural performance. Students will learn to assess determinate and indeterminate structures, understand energy principles, and apply various analytical techniques for analyzing beams, trusses, and arches. The objective is to equip students with theoretical and practical skills in analyzing structural systems using advanced computational and graphical methods.

Module- I (8 hours)

Concept of determinate and indeterminate structures, determination of degree of static andkinematic indeterminacy in plane frame and continuous structures.

Methods of Analysis: Equilibrium equations, compatibility requirements, Introduction to force anddisplacement methods.

Analysis of propped cantilever by consistent deformation method, Analysis of fixed andcontinuous beams by Moment-Area method, Conjugate beam method and theorem of threemoments.

Module- II (8 hours)

Energy theorems and its application, Strain energy method, Virtual work method, unit loadmethod, Betti's and Maxwell's laws, Castigliano's theorem, concept of minimum potential energy.Theories of failure, Maximum normal stress theory, maximum normal strain theory, maximum shearing strain theory,maximum strain energy theory, maximum distortion energy theory, maximum octahedral shearingstress theory.

Module- III (8 hours)

Analysis of redundant plane trusses.Deflection of pin jointed plane trusses using strain energy method, unit load method. Analytical method and Williot –Mohr diagram.Introduction to space truss.

Arches: Introduction and classification of arches, Bending moment, shear and normal thrust of three hinged archesSuspension Cables: Three hinged stiffening girders

Module- IV (8 hours)

Rolling loads and influence lines for determinate structures, simply supported beams, cantilever, Influence Line Diagram for reaction, shear force and bending moment at a section, Influence Line Diagram for wheel loads, point loads and uniformly distributed loads, maximum bending moment envelope.Influence Line Diagram for Bending Moment, Shear Force, normal thrust and radial shear forthree hinged arches.

Course Outcomes:

CO1: Analyze determinate and indeterminate structures, demonstrating proficiency in calculating degrees of static and kinematic indeterminacy for plane frames and continuous structures

CO2: Apply advanced energy methods and theorems, including strain energy, virtual work, and Castigliano's theorem, to solve complex structural engineering problems

CO3: Evaluate different theories of failure, critically understanding and comparing maximum stress, strain, and energy-based failure criteria for structural materials

CO4: Analyze redundant plane trusses and arches using advanced analytical techniques, including strain energy methods, Williot-Mohr diagrams, and graphical approaches

CO5: Develop and interpret influence line diagrams for various structural elements, demonstrating ability to assess loading conditions, reactions, shear forces, and bending moments in structural systems

Text Book &Reference Books:

1. R. C.Hibbeler,Structural analysis,Pearson Prentice Hall
2. K. Leet,C. M. Uang &A. M. Gilbert, Fundamentals of structural analysis. McGraw-Hill Higher Education.
3. Louis F. Geschwindner&Harry H.West, Fundamentals of Structural Analysis.Wiley publication
4. L. S. Negi, Theory and Problems in Structural Analysis, Tata-McGraw Hill.
5. C. S. Reddy. Basic structural analysis. McGraw Hill Education. S.S. Bhavikatti, Structural Analysis.Vikas Publishing House

CIPC2005 FLUID DYNAMICS (3-0-0)

Course Objectives:
The course in Fluid Dynamics aims to provide students with a comprehensive understanding of advanced fluid mechanics principles and their practical applications. It seeks to develop deep knowledge of boundary layer theory, momentum equations, fluid machinery, and complex flow systems. Students will explore theoretical concepts and real-world engineering applications, including analysis of pumps, turbines, open channel flows, and fluid dynamic phenomena. The objective is to equip students with sophisticated analytical skills to understand fluid behavior, computational techniques, and engineering design principles related to fluid systems and their dynamic interactions.

Module-I
Boundary Layer Theory: Introduction, thickness of boundary layer, boundary layer along a long thin plate and its characteristics, boundary layer equations, momentum integralequations of the boundary layer, laminar boundary layer, turbulent boundary layer, laminarsub-layer, boundary layer on rough surfaces, separation of boundary layer, methods ofcontrolling the boundary layer.
Drag and Lift: Introduction, Types of Drag, dimensional analysis of drag and lift, drag on a(sphere, cylinder, flat plate and air foil), effect of free surface on drag, effect ofcompressibility on drag, development of lift on immersed body, induced drag on an air foil,of finite length, polar diagram for lift and drag of an air foil.

Module-II
Momentum equation and its applications: Introduction, impulse momentum equation,momentum correction factor, application of impulse momentum equation, force on a pipebed, jet propulsion (orifice tank, ship), momentum theory of propellers, angular momentumprinciple
Impact of free jets: Introduction, force exerted by fluid jets on (stationary flat plate, movingflat plate, stationary curved vane, moving curved vane), Torque exerted on a wheel withradial curved vane

Module-III
Reciprocating Pump: Introduction, main components, types, work done (single acting anddouble acting),coefficient of discharge, slip, percentage slip and negative slip, effects ofacceleration of piston on velocity and pressure in suction and delivery pipes, indicatordiagram, operating characteristic curves
Centrifugal Pump: Introduction,advantages,component parts,working,types,work done by theimpeller,head,losses and efficiencies,minimum starting speed,loss of head due to reduced orincreased flow,diameter of impeller and pipes,specific speed, characteristic curves, cavitation,priming devices, troubles and remedies
Turbines: Introduction,elements of hydraulic power plant,head and efficiencies of hydraulic turbine, classification.
Pelton wheel: work done and efficiencies,working proportions,design of runner, multiple jetwheel.
Radial flow impulse turbine: reaction turbine, Francis turbine, work done and efficiencies, working proportions, design of runner, draft tube theory, Kaplan turbine, workingproportions. Expression for specific speed in terms of known coefficients for different turbines,performance characteristic curves.

Classification, reaction, impulse, outward flow, inward flow & mixed flow turbines, Francis& Kaplan turbines, Pelton Wheel, Physical description and principle of operation, Governingof turbine.

Module-IV

Uniform flow in open channels: Introduction, types, geometrical properties, velocitydistribution, uniform flow, most economical section, computation of uniform flow, specificenergy and critical depth, specific force, critical flow and its computation, application ofspecific energy to channel transitions

Non-uniform flow in open channel: Introduction, gradually varied flow, classification ofcannel bottom slopes, classification of surface profiles, characteristics of surface profiles,integration of varied flow equations, hydraulic jump, location of hydraulic jump, surges inopen channel

Flow over notches and weirs: Introduction, classification, sharp-crested weir, rectangularweir, triangular weir, trapezoidal weir, broad-crested weir.

Measurement of depth of flow: point gauge, hook gauge, float gauge

Course Outcomes:

1. To adopt the dimensional analysis and study of viscous incompressible flow
2. To understand the boundary layer growth and its application in drag and lift phenomena
3. To study momentum equation and its application in impact of jet
4. To analyse velocity triangles for different pumps and turbine
5. To understand the basics of open channel flow and detail flow profiles

Text and Reference Books:

1. S. K. Som and G. Biswas, Fluid Mechanics and Fluid Machines, Tata. McGraw Hill Publishing Company
2. P. N. Modi and S. M. Seth, Hydraulic and Fluid Mechanics, Standard Book House, New Delhi
3. JagdishLal, Hydraulics and Fluid Mechanics, Tata McGraw Hill
4. R. K. Bansal, Fluid Mechanics and Hyd. Machines, Laxmi publisher, New Delhi
5. K. Subramanya, Fluid Mechanics and Hydraulic Machines, McGraw Hill Education
6. A.K. Jain, Fluid Mechanics, Khanna Publishers
7. SukumarPati, Textbook of Fluid Mechanics and Hydraulic Machines,McGraw Hill Education

CIPC2006 GEOTECHNICAL ENGINEERING (3-0-0)

Course Objectives:
The course in Geotechnical Engineering aims to provide students with a comprehensive understanding of soil mechanics and its engineering applications. It seeks to develop advanced knowledge of soil formation, classification, and behavior under various stress conditions. Students will explore critical concepts including soil properties, permeability, seepage, compaction, consolidation, and shear strength. The objective is to equip students with theoretical and practical skills in analyzing soil systems, understanding complex geotechnical phenomena, and applying sophisticated techniques for soil characterization, testing, and stabilization in civil engineering and construction contexts.

Module-I
Introduction: Origin of soils, formation of soils, clay mineralogy and soil structure, basic terminology and their relations, index properties of soils. Soil classification: Particle size distribution, use of particle size distribution curve, Particle size classification, textural classification, HRB classification, Unified classification system, Indian standard soil classification system, Field identification of soils. Capillary tension, capillary siphoning. Stress conditions in soil: Total stress, pore pressure and effective stress

Module-II
Permeability: Darcy‘s law, permeability, factors affecting permeability, determination of permeability(laboratory and field methods), permeability of stratified soil deposits. Estimation of yield from wells.
Seepage analysis: Seepage pressure, quick condition, Laplace equation for two –dimensional flow, flow net, properties and methods of construction of flow net, application of flow net, seepage through anisotropic soil and non-homogenous soil, seepage through earth dam. Inverted filter and design of inverted filter.

Module-III
Soil compaction: Compaction mechanism, factors affecting compaction, effect of compaction on soil properties, density moisture content relationship in compaction test, standard and modified proctor compaction tests, field compaction methods, relative compaction, compaction control.
Soil consolidation: Introduction, spring analogy, one dimensional consolidation, Terzaghi‘s theory of one dimensional consolidation, consolidation test, determination of coefficient of consolidation

Module-IV
Shear strength of soils: Mohr‘s stress circle, theory of failure for soils, determination of shear strength(direct shear test, tri-axial compression test, unconfined compression test, van shear test), shear characteristics of cohesion less soils and cohesive soils.

Module-V
Stabilization of soil: Introduction, mechanical stabilization, cement stabilization, lime stabilization, bituminous stabilization, chemical stabilization, thermal stabilization, electrical stabilization, Introduction to modern methods of stabilization

Course Outcomes:

1. To Classify soil and solve three phase soil system
2. To Solve any practical problems related to soil stresses estimation, permeability and seepage including flow net diagram.
3. To Formulate practical problems related to consolidation settlement and time rate of settlement.
4. To Validate problem related to compaction in the field.
5. To Use stabilization techniques for soft and expansive soil by using various methods

Text and Reference Books:

1. S. K. Gulhati and M. Datta, Geotechnical Engineering, McGraw Hill Company
2. V. N. S. Murthy, Principles of Soil Mechanics and Foundation Engg, UBSPD.
3. I. H. Khan, A text book of Geo-technical Engg, Prentice Hall India.
4. B. C. Punmia, A text Book of Geo-technical Engg, Laxmi Publications.
5. G. Ranjan& A. S. R. Rao, Basic and Applied Soil Mechanics, Wiley Eastern Ltd.
6. K. R. Arora, Soil Mechanics and Foundation Engineering, Standard Publisher
7. Venkatramaiah, Geotechnical Engineering, New Age International publishers.

CIPC2007 WATER SUPPLY & SANITARY ENGINEERING (3-0-0)

Course Objectives:

The course in Water Supply & Sanitary Engineering aims to provide students with a comprehensive understanding of water resource management, treatment technologies, and environmental engineering principles. It seeks to develop advanced knowledge of water supply systems, wastewater treatment, and solid waste management. Students will explore critical concepts including water quality, treatment processes, effluent management, and sustainable environmental solutions. The objective is to equip students with theoretical and practical skills in analyzing water systems, understanding complex treatment technologies, and applying sophisticated techniques for ensuring public health, environmental protection, and sustainable water resource management.

Module-I

Quantity of water: Sources of water, Per capita demand, design period, population forecast, fluctuation in demand.

General requirement for water supply: Types of intakes, Pumping and Transportation of water.

Quality of water: Physical, chemical and biological characteristics of water and their significance, necessity of treatment, Drinking water standards

Module-II

Basic unit operations and unit processes for surface water treatment: Screening, Plain Sedimentation, Sedimentation aided with Coagulation, Filtration, Disinfection, Softening Miscellaneous treatments (principles only): Removal of colours, tastes and odours, removal of iron and manganese, fluoridation and defloridation, Ion exchange, electro-dialysis, RO

Module-III

Quantity and characteristics of wastewater, effluent discharge standards.

Domestic wastewater treatment: Primary treatment, Screening, Grit removal, Sedimentation, Sedimentation aided with coagulation. Secondary treatment: Basis of microbiology, Growth and food utilization, Suspended-culture systems, Attached-culture systems, Secondary clarification, Disinfections of effluents. Sludge treatment and disposal: Sludge characteristics, thickening, disposal

Module-IV

Solid waste management: Source, classification, characteristics, generation, collection, Storage and transport of MSW, MSW management, Waste minimization of MSW, Reuse and recycling, Biological & thermal treatment (principles only), land fill

Course Outcomes:

1. To explore the sources of water, general requirement for water supply and characterize water.
2. To study the principles of water treatment and design treatment units.
3. To understand the principles of waste water treatment and design treatment units.
4. To Explain components of solid waste management and evaluate recovery, treatment and disposal alternatives.

Text and Reference Books:

1. Environmental Engineering (Volume I & II) by S. K. Garg-Khanna Publishers
2. Environmental Engineering (Volume I &II) by B. C. Punmia-Khanna Publishers
3. Environmental Engineering by H. S. Peavy, D.R. Rowe and G. Tchobanoglous, MGH.

CIPC2204 SURVEY FIELD WORK (0-0-3)

1. Testing of chain and measurement of correct length of the line and chain traversing.
2. Traversing by Compass
3. Horizontal and vertical angle measurement by theodolite
4. Traversing by theodolite
5. Use of dumpy level and automatic level for fly levelling.
6. Contouring of an area
7. Measurement of distance, horizontal and vertical angle by Total Station
8. Contouring by Total Station

Course Outcomes:

1. To prepare a layout of certain area using different techniques.
2. To study the Total Station and its use for measurement of angle and distance
3. To prepare a contour map using Total Station

CIPC2205 GEOTECHNICAL LABORATORY (0-0-3)

Course Content

1. Determination of specific gravity of soil grains
2. Determination of grain size distribution of soil: (a) sieve analysis; (b) Hydrometer/pipette test
3. Determination of Atterberg limits of soil: (a) liquid limit, (b) plastic limit, (c) shrinkage limit
4. Measurement of unit weight of soil in the field: (a) Core cutter method, (b) Sand replacement method
5. Determination of Density-water content relationship of soil: Proctor compaction tests.
6. Determination of relative density of granular soil
7. Determination of shear strength of soil: (a) Direct shear test (b) Tri-axial shear test, (c)
   Unconfined compression test (d) Vane shear test
8. Determination of consolidation characteristics of soil using fixed ring Oedometer
9. Determination of California Bearing Ratio (CBR) of soaked and un-soaked soil samples
10. Determination of coefficient of permeability of soil: (a) Constant head Permeameter (b) Falling Head Permeameter

Course Outcomes:

1. To classify soil by physical observation of the soils.
2. To observe soil based on estimated index and engineering characteristics of soil
3. To Examine soil properties in field
4. To estimate density water content relationship
5. Measure consolidation and shear parameter to design foundation

CIPC2207 COMPUTER AIDED DESIGN (0-0-3)

Course Content

1. Introduction to MATLAB and Excel
2. Plotting of Shear force and bending moment diagram of beam using MATLAB
3. Drawing of Shear force and bending moment diagram of frames using MATLAB
4. Plotting of Shear force and bending moment diagram of arches using MATLAB
5. Calculation and plotting of ILDsof beam using MATLAB
6. Calculation and plotting of ILDs of frames using MATLAB
7. Calculation and plotting of ILDs of arches using MATLAB
8. Plotting of stress contours using MATLAB
9. Introduction to Graphic Software: Basic commands, plotting of graphs and data analysis.

Course Outcomes:

1. Use Plotting of SFD and BMD for beam and frame structures.
2. Explain Plotting of graphs, contours and calculation of statistical information for data.

HSHS2002 ORGANISATIONAL BEHAVIOUR (3-0-0)

Objectives:
The objective is to develop an understanding of the behavior of individuals and groups inside organizations and to enhance skills in understanding and appreciating individuals, interpersonal, and group process for increased effectiveness both within and outside of organizations. Further, it is to develop theoretical and practical insights and problem-solving capabilities for effectively managing the organizational processes.

Module-I: (06 Hrs.)
Fundamentals of OB: Definition, scope and importance of OB, Relationship between OB and the individual, Evolution of OB, Theoretical framework (cognitive), behavioristic and social cognitive), Limitations of OB.

Module-II: (12 Hrs.)
Attitude: Importance of attitude in an organization, Right Attitude, Components of attitude, Relationship between behavior and attitude, Developing Emotional intelligence at the workplace, Job attitude, Barriers to changing attitudes.
Personality and values: Definition and importance of Personality for performance, The Myers-Briggs Type Indicator and The Big Five personality model, Significant personality traits suitable to the workplace (personality and job — fit theory), Personality Tests and their practical applications.
Perception: Meaning and concept of perception, Factors influencing perception, Selective perception, Attribution theory, Perceptual process, Social perception (stereotyping and halo effect). Motivation: Definition & Concept of Motive & Motivation, The Content Theories of Motivation (Maslow's Need Hierarchy & Herzberg's Two Factor model Theory), The Process Theories (Vroom's expectancy Theory & Porter Lawler model), Contemporary Theories — Equity Theory of Work Motivation.

Module-III: (10 Hrs.)
Foundations of Group Behavior: The Meaning of Group & Group behavior & Group Dynamics, Types of Groups, The Five — Stage Model of Group Development.
Managing Teams: Why Work Teams, Work Teams in Organization, Developing Work Teams, Team Effectiveness & Team Building.
Leadership: Concept of Leadership, Styles of Leadership, Trait Approach Contingency Leadership Approach, Contemporary leadership, Meaning and significance of contemporary leadership, Concept of transformations leadership, Contemporary theories of leadership, Success stories of today's Global and Indian leaders.

Module-IV: (08 Hrs.)
Organizational Culture : Meaning & Definition of Organizational Culture, creating & Sustaining Organizational Culture, Types of Culture (Strong vs. Weak Culture, Soft Vs. Hard Culture & Formal vs. Informal Culture), Creating Positive Organizational Culture, Concept of Workplace Spirituality.

Module-V: (09 Hrs.)
Organizational Change: Meaning, Definition & Nature of Organizational Change, Types of Organizational Change, Forces that acts as stimulants to change.
Implementing Organizational Change : How to overcome theResistance to Change,
Approaches to managing Organizational Change, Kurt Lewin's-Three step model, Seven Stage model of Change & Kotter's Eight-Step plan for Implementing Change, Leading the Change Process, Facilitating Change, Dealing with Individual & Group Resistance, Intervention Strategies for Facilitating Organizational Change, Methods of Implementing Organizational Change, Developing a Learning Organization.

Course Outcomes:
At the end of the course, students will be able to:
1. Understand the basic concepts of OB, change management, organizational culture and their implementation in organizations.
2. Identify and examine team characteristics for improved organizational performance.
3. Apply theories and frameworks to solve problems and take effective decisions for organizational success.

4. Analyze group behavior and leadership styles for effective people management.
5. Evaluate individual personality types and group behaviours for improving organizational processes and practices.
6. Develop leadership competency to manage organizational situations.

Books:

1. Understanding Organizational Behaviour, Parek, Oxford
2. Organizational Behaviour, Robbins, Judge, Sanghi, Pearson.
3. Organizational Behaviour, K. Awathappa,HPH.
4. Organizational Behaviour, VSP Rao, Excel
5. Introduction to Organizational Behaviour, Moorhead, Griffin, Cengage.
6. Organizational Behaviour, Hitt, Miller, Colella, Wiley.

PCAC2012 INTERNET OF THINGS AND CLOUD (3-0-0)

OVERALL COURSE OBJECTIVES: To provide learners with an in-depth understanding of the evolution of Internet of Things and related technologies, equip them with the skills to utilize advanced technology platforms like DragonBoard™ and AWS, and allow them to apply these skills in developing innovative IoT-enabled applications and systems.

LEARNING OUTCOMES: On successful completion of the course the students shall be able to:

1. Understand, compare, and explain how telephony and media delivery networks operate.
2. Understand circuit switched networks and packet switched networks and their trade-offs.
3. Comprehend key innovations that have transformed the communication, entertainment, and consumer electronics industry.
4. Describe the DragonBoard™ 410c peripherals, I/O expansion capabilities, computing capabilities, and connectivity capabilities.
5. Use Linux terminal for embedded purposes and configure integrated development environment (IDE) for software development.
6. Understand and utilize various AWS cloud services such as EC2, IoT and more, to build and integrate projects that leverage the cloud.

COURSE CONTENT:

Module 1: Internet of Things: How did we get here? [21 Hours]

This course explores the convergence of multiple disciplines that have led to the advent of present-day smartphones and the Internet of Things. The lessons explore the evolution of telephony networks, broadcast networks, and consumer electronics, along with the impact of the internet, multimedia content, smartphones, and apps. It also covers the emerging, interconnected platform: the Internet of Things. Upon completion, learners will understand how peer-to-peer networks differ from broadcast networks, the tradeoffs between circuit-switched and packet-switched networks, and the workings of several key innovations and digital services. The course provides an important grounding for anyone interested in the technological development of the Internet of Things, and further resources for a more in-depth exploration of the topics.

Sub-Topics
Circuit Switched Networks
Computer Telephony
Features and Apps
Future Outlook
Packet Switched Networks
Wireless Technologies

Formative Assessments:
16 quizzes.

Module 2: Internet of Things V2: DragonBoard™ bring up and community ecosystem [21 Hours]

This course is designed for individuals seeking to develop the skills needed to prototype embedded products using advanced technologies. The course utilizes the DragonBoard™ 410c single board

computer (SBC) to provide a hardware and software development environment for Internet of Things specialization courses. Ideal for learners interested in using Linux for embedded purposes, pursuing a career in the design and development of Internet of Things products, or those involved in entrepreneurial, innovative, or DIY communities, this course offers both theoretical knowledge and hands-on development practice. Key learning outcomes include understanding the DragonBoard™ 410c peripherals, navigating a Linux terminal, configuring an integrated development environment (IDE) for software development, utilizing Git and GitHub for version control, and creating projects that interface with sensors and actuators through GPIO and Arduino.

Sub-Topics
Advanced Projects and Code
Changing your Operating System (Supplemental / Optional)
DragonBoard Bringup and Ecosystem
Mezzanines and Sensors (Canned Demos w/ software)
Rescuing your Bricked Board (Supplemental / Optional)

Formative Assessments:

5 quizzes and 1 peer-review assignment.

Module 3: Internet of Things V2: Setting up and Using Cloud Services [10 Hours]

This course provides an introduction to Amazon Web Services (AWS) and its significance, enabling learners to make informed design decisions about which services to use. The course covers interfacing with the AWS cloud, developing software for data sending and receiving, and how to structure projects with diverse services. Upon completion, learners will have a clear understanding of the cloud, be able to install and configure the AWS CLI and SDK on a Linux system, utilize various AWS services such as EC2, IoT, etc., build projects heavily leveraging the cloud, and integrate the cloud into embedded systems.

Sub-Topics
Advanced Projects and Code - Deep dive
Systems Architecture

Cloud 101 for Dragonboard 410c
Real projects using AWS Cloud services

Formative Assessments:

3 quizzes and 1 peer-review assignment.

ASSESSMENT:

For summative assessments, Coursera will provide question banks for which exams can be conducted on the Coursera platform or the faculty will create their own assessments.

Note: If a Course or Specialization becomes unavailable prior to the end of the Term, Coursera may replace such Course or Specialization with a reasonable alternative Course or Specialization.