1.3.2: Number of value-added courses for imparting transferable and life skills offered during last five years

Contents

1] Any additional information

B. Tech Computer Engineering
Faculty of Technology
Marwadi University

1.3.2 Approval/Sanction orders for implementing of following value-added courses

Marwadi UNIVERSITY

FACULTY OF TECHNOLOGY
Department of Computer Engineering

Date: 28/04/2017

Subject: Regarding Implementation of Value-Added courses

Regarding the aforementioned subject, I am informing to let you know that the Department of Computer Engineering has approved and will be implementing the syllabi for the following value-added courses from the academic year 2017-18 with reference to the meeting no. 2 of Board of Studies dated 28-04-2017.

Sr.	Value Added Course	Semester	Hrs
1.	Oracle: Database Design and Programming with SQL	3	180
2.	CCNA Routing and Switching: Introduction to Networks	4	30
3.	CCNA Routing and Switching: Routing and Switching Essentials	4	30

You are now required to bring this to the attention of all students and faculties in a coordinated manner.

Yours Faithfully,

Head of Department,
Computer Engineering

Enclosed: Syllabus of value-added courses

ORACLE ACADEMY

Marwadi University

AWARD *of* ACHIEVEMENT

PRESENTED TO

AADARSH RAJENDRA SINGHAI

FOR SUCCESSFULLY COMPLETING THE ORACLE ACADEMY

Database Design and Programming with SQL

FINAL EXAM

11/17/2021

Oracle Academy Instructor

ORACLE ACADEMY

Marwadi University

AWARD *of* ACHIEVEMENT

PRESENTED TO

AADITYA RASIKBHAI ROLA

FOR SUCCESSFULLY COMPLETING THE ORACLE ACADEMY

Database Design and Programming with SQL

FINAL EXAM

11/17/2021

Oracle Academy Instructor

ORACLE ACADEMY

Marwadi University

AWARD *of* ACHIEVEMENT

PRESENTED TO

AASTHA BHIKHUBHAI TANK

FOR SUCCESSFULLY COMPLETING THE ORACLE ACADEMY

Database Design and Programming with SQL

FINAL EXAM

11/17/2021

Oracle Academy Instructor

ORACLE ACADEMY

Marwadi University

AWARD *of* ACHIEVEMENT

PRESENTED TO

ABDEALI ALIASGAR KITABI

FOR SUCCESSFULLY COMPLETING THE ORACLE ACADEMY

Database Design and Programming with SQL

FINAL EXAM

11/17/2021

Oracle Academy Instructor

ORACLE ACADEMY

Marwadi University

AWARD *of* ACHIEVEMENT

PRESENTED TO

ABHI ARVINDBHAI DELAVADIYA

FOR SUCCESSFULLY COMPLETING THE ORACLE ACADEMY

Database Design and Programming with SQL

FINAL EXAM

11/17/2021

Oracle Academy Instructor

ORACLE ACADEMY

Marwadi University

AWARD *of* ACHIEVEMENT

PRESENTED TO

ABHISHEK KUMAR

FOR SUCCESSFULLY COMPLETING THE ORACLE ACADEMY

Database Design and Programming with SQL

FINAL EXAM

11/17/2021

Oracle Academy Instructor

ORACLE ACADEMY

Marwadi University

AWARD *of* ACHIEVEMENT

PRESENTED TO

ABHISHEK RAGUVIRSINH BHATTI

FOR SUCCESSFULLY COMPLETING THE ORACLE ACADEMY

Database Design and Programming with SQL

FINAL EXAM

11/17/2021

Oracle Academy Instructor

ORACLE ACADEMY

Marwadi University

AWARD *of* ACHIEVEMENT

PRESENTED TO

ACHYUT NILESHKUMAR PARSANIYA

FOR SUCCESSFULLY COMPLETING THE ORACLE ACADEMY

Database Design and Programming with SQL

FINAL EXAM

11/17/2021

Oracle Academy Instructor

ORACLE ACADEMY

Marwadi University

AWARD *of* ACHIEVEMENT

PRESENTED TO

ADITYAKUMAR KIRITBHAI VANSDADIYA

FOR SUCCESSFULLY COMPLETING THE ORACLE ACADEMY

Database Design and Programming with SQL

FINAL EXAM

11/17/2021

Oracle Academy Instructor

ORACLE ACADEMY

Marwadi University

AWARD *of* ACHIEVEMENT

PRESENTED TO

AHMADMUFIJ ISMAIL SHERASIYA

FOR SUCCESSFULLY COMPLETING THE ORACLE ACADEMY

Database Design and Programming with SQL

FINAL EXAM

11/17/2021

Oracle Academy Instructor

ORACLE ACADEMY

Marwadi University

AWARD *of* ACHIEVEMENT

PRESENTED TO

AKHILESH PARESHKUMAR GONDALIYA

FOR SUCCESSFULLY COMPLETING THE ORACLE ACADEMY

Database Design and Programming with SQL

FINAL EXAM

11/17/2021

Oracle Academy Instructor

Marwadi University

FACULTY OF TECHNOLOGY
Department of Computer Engineering

Date: 03/07/2021

Subject: Regarding Implementation of Value-Added courses

Regarding the aforementioned subject, I am informing to let you know that the Department of Computer Engineering has approved and will be implementing the syllabi for the following value-added courses from the academic year 2021-22 with reference to the meeting no. 6 of Board of Studies dated 03-07-2021.

Sr.	Value Added Course	Semester	Hrs
1.	CCNAv7: Introduction to Networks	3	70
2.	Networking Essentials	3	70
3.	Coursera: Linux Server Management and Security	4	30
4.	Coursera: HTML, CSS and Java-script for Web Devlopers	6	30
5.	Microsoft: Microsoft Azure AI Fundamentals	7	50
6.	Microsoft: Introduction to Programming using HTML and CSS	7	150
7.	Microsoft: Introduction to Programming using Java	5	150
8.	Microsoft: Software Development Fundamentals	6	40

You are now required to bring this to the attention of all students and faculties in a coordinated manner.

Yours Faithfully,

Head of Department,
Computer Engineering

Enclosed: Syllabus of value-added courses

University of Colorado

Boulder | Colorado Springs | Denver | Anschutz Medical Campus

COURSE CERTIFICATE

Feb 9, 2022

yash nareshbhai kheni

has successfully completed

Linux Server Management and Security

an online non-credit course authorized by University of Colorado System and offered through Coursera

Greg Williams
Lecturer
Department of Computer Science

Verify at:
coursera.org/verify/BQVZDYPYB3QV

Coursera has confirmed the identity of this individual and their participation in the course.

University of Colorado

Boulder | Colorado Springs | Denver | Anschutz Medical Campus

COURSE CERTIFICATE

Feb 2, 2022

Aastha Tank

has successfully completed

Linux Server Management and Security

an online non-credit course authorized by University of Colorado System and offered through Coursera

Greg Williams
Lecturer
Department of Computer Science

Verify at:
coursera.org/verify/M6QESU6VGRCS

Coursera has confirmed the identity of this individual and their participation in the course.

University of Colorado

Boulder | Colorado Springs | Denver | Anschutz Medical Campus

COURSE CERTIFICATE

Jan 16, 2022

Tirth Patel

has successfully completed

Linux Server Management and Security

an online non-credit course authorized by University of Colorado System and offered through Coursera

Greg Williams
Lecturer
Department of Computer Science

EDUCATION FOR EVERYONE · coursera · COURSE CERTIFICATE

Verify at coursera.org/verify/CFGYKMQ6A3UJ

Coursera has confirmed the identity of this individual and their participation in the course.

University of Colorado

Boulder | Colorado Springs | Denver | Anschutz Medical Campus

COURSE CERTIFICATE

Feb 6, 2022

Ekta Varu

has successfully completed

Linux Server Management and Security

an online non-credit course authorized by University of Colorado System and offered through Coursera

Greg Williams
Lecturer
Department of Computer Science

Verify at:
coursera.org/verify/H735PYEXWNNU

Coursera has confirmed the identity of this individual and their participation in the course.

University of Colorado

Boulder | Colorado Springs | Denver | Anschutz Medical Campus

COURSE CERTIFICATE

Feb 4, 2022

Rishit Sunilbhai Detroja

has successfully completed

Linux Server Management and Security

an online non-credit course authorized by University of Colorado System and offered through Coursera

Greg Williams
Lecturer
Department of Computer Science

Verify at:
coursera.org/verify/TZ7U3N7NSFBR

Coursera has confirmed the identity of this individual and their participation in the course.

University of Colorado

Boulder | Colorado Springs | Denver | Anschutz Medical Campus

COURSE CERTIFICATE

Feb 5, 2022

Shyam Shashikantbhai Ratanpara

has successfully completed

Linux Server Management and Security

an online non-credit course authorized by University of Colorado System and offered through Coursera

Greg Williams
Lecturer
Department of Computer Science

EDUCATION FOR EVERYONE · COURSE CERTIFICATE · coursera

Verify at:
coursera.org/verify/JXXNA37LEBKL

Coursera has confirmed the identity of this individual and their participation in the course.

University of Colorado

Boulder | Colorado Springs | Denver | Anschutz Medical Campus

COURSE CERTIFICATE

Feb 3, 2022

Deep Faldu

has successfully completed

Linux Server Management and Security

an online non-credit course authorized by University of Colorado System and offered through Coursera

Greg Williams
Lecturer
Department of Computer Science

Verify at:
coursera.org/verify/PLGCSJ8UASCT

Coursera has confirmed the identity of this individual and their participation in the course.

University of Colorado

Boulder | Colorado Springs | Denver | Anschutz Medical Campus

COURSE CERTIFICATE

Feb 2, 2022

Meet Patel

has successfully completed

Linux Server Management and Security

an online non-credit course authorized by University of Colorado System and offered through Coursera

Greg Williams
Lecturer
Department of Computer Science

Verify at:
coursera.org/verify/BRCMLM2883T3

Coursera has confirmed the identity of this individual and their participation in the course.

University of Colorado

Boulder | Colorado Springs | Denver | Anschutz Medical Campus

COURSE CERTIFICATE

Feb 2, 2022

Raj Bhalani

has successfully completed

Linux Server Management and Security

an online non-credit course authorized by University of Colorado System and offered through Coursera

Greg Williams
Lecturer
Department of Computer Science

Verify at:
coursera.org/verify/NHGMBKFQFW9D

Coursera has confirmed the identity of this individual and their participation in the course.

University of Colorado

Boulder | Colorado Springs | Denver | Anschutz Medical Campus

COURSE CERTIFICATE

Feb 5, 2022

RISHHITA SINGH

has successfully completed

Linux Server Management and Security

an online non-credit course authorized by University of Colorado System and offered through Coursera

Greg Williams
Lecturer
Department of Computer Science

Verify at:
coursera.org/verify/WGAWRM8DWC4Z

Coursera has confirmed the identity of this individual and their participation in the course.

University of Colorado

Boulder | Colorado Springs | Denver | Anschutz Medical Campus

COURSE CERTIFICATE

13-Feb-2022

Prati sanghvi

has successfully completed

Linux Server Management and Security

an online non-credit course authorized by University of Colorado System and offered through Coursera

Greg Williams
Lecturer
Department of Computer Science

Verify at:
coursera.org/verify/HGK2D5PVQ3JF

Coursera has confirmed the identity of this individual and their participation in the course.

B. Tech Mechanical Engineering
Faculty of Technology
Marwadi University

1.3.2 Approval/Sanction orders for implementing of following value-added courses

Marwadi UNIVERSITY

Established Under Gujarat Private Universities Act No. 9 of 2016

Faculty of Technology
Mechanical Engineering

Date: 29.05.2018

Implementation of Value-Added courses.

With respect to the aforementioned subject, the following value-added courses are approved by Board of studies. (BOS meeting held on 29/05/2018)

Sr. No.	Value Added Course	Semester	Hrs
1	CAD Club – Solid Modelling	5	32
2	Basic & Electro Pneumatics	5	40
3	Basic & Electro Hydraulics	6	40
4	CNC Programming	7	40
5	VMC Programming	8	40
6	Basic & Interface of PLC to Pneumatics and Hydraulics	7	40
7	Basic & advance sensorics and mechatronics	8	32

These courses will be offered from the academic year 2018-19 onwards in the respective semesters as mentioned above.

The course coordinators and faculty members are suggested to circulate this sanction letter among the students.

Head of the Department,
Mechanical Engineering Department

Head of the Department
Mechanical Engineering
Marwadi University

Enclosed: Syllabus of value added courses

Copy to,

1. Registrar, Marwadi University.
2. Dean Engineering.
3. Course Coordinators
4. Faculty of Mechanical Engineering Dept.

Curriculum

- **Name of Course:** Solid Modelling
- **Software use:** Creo Parametric
- **Eligible branch:** Mechanical & Automobile Engineering
- **Teaching Scheme**
  - Course duration: 32 Hrs
  - Weekly hours: 4 hrs

Content:

Sr No	Content	Total Hrs
1	➢ Introduction & Understanding of Parametric Concepts: • Creo® Parametric Basic Modeling Process • Understanding of Parametric, Feature-based, and Associative Concepts	2
2	➢ Selecting and Editing of Geometry, Feature, and Models: • Understanding Creo® Parametric Basic Controls • Understanding of Creo® Interface • Define Sketcher for Feature	4
3	➢ Creating Extrude, Revolve, Rib, Blend, Sweep, and Datum Feature: • Extrude as Solid and Solid Cut • Extrude as Thicken Solid and Thicken Cut • Revolve as Solid & Solid Cut • Revolve as Thin Solid & Thin Solid Cut • Profile Rib • Trajectory Rib	6
4	➢ Creating Sweep Blend, Sweep, and Datum Feature: • Create Sweep as a Solid and Solid Cut • Create Sweep as a Thin Solid and Thin Solid Cut • Creating Sweep Blend as a Solid Feature and Solid Cut • Creating Sweep Blend as a Thin Solid Feature and Thin Solid Cut • Create a Datum Plane • Create Axis, Point, and Co-ordinate	6

5	➢ Creating Round, Chamfer, Hole, Shell, and Draft: • Hole • Shell • Draft • Round • Chamfer	2
6	➢ Creating Shape blend and Helical Sweep: • Creating Parallel Shape Blend as a Solid Feature and Solid Cut • Creating Parallel Shape Blend as a Thin Solid Feature and Thin Solid Cut • Creating Revolve Shape Blend as a Solid Feature and Revolve Shape Blend Solid Cut • Creating Thin Revolve Shape Blend as a Solid Feature and Thin Revolve Solid Cut • Creating Helical Solid Feature and Cut • Creating Thin Helical Solid Feature and Cut	4
7	➢ Assembly with Constraints: • Define Constrain on Planner and Circular Face • Define Constrain along Edge, Vertices, and Axis • Calculate Mass Properties and CG of Assembly • Creating Component in Assembly • Adding and Subtracting Volume in Assembly	6

Course approval authority

Head of the Department
Mechanical Engineering
Marwadi University

Head of Department,
Department of Mechanical Engineering,
Marwadi University, Rajkot.

Marwadi University

Value Added Courses

Basic & Electro Pneumatics

Duration: (40 hours)

For B.Tech Sem 5

- The participants should be able to understand the physical parameters, symbols, construction and functions of various Pneumatics components.
- Participants should be able to make simple Pneumatic circuit on the training rig.
- Participants should be able to read, analyse and understand fundamental of Pneumatic circuits.

Content
Introduction to Pneumatics, Its Knowledge and scope, What is Pneumatics?, Important basic terms Characteristics of Industrial Pneumatics, advantages and limitations, Comparisons of Pneumatics over other technology like Hydraulics, Electrical/ Electronic and Mechanical drives(Systems Comparison), Applications like Food and Packaging (Animated video), wood industry (Animated video), Paper industry (Animated video), Printing and processing Machines (Animated video), Automation technology, Automotive industry, Basic physical properties like force and weight, pressure, its definition, formula, Pascal's Law, absolute and relative pressure, Flow rate and Flow law, Gas law, compressed air , water content of air **Graphical Symbols and Pneumatic circuits** Basic elements, Commonly used symbols, Circuit symbols. **Compressed Air Preparation.** Compressors, Types of Compressors, Piston Compressor, Screw Compressor, Vane Compressor, Compressor Unit, Drying of Compressed Air, Distribution of Compressed air **Maintenance Unit.** Filter, Pressure control valve, lubricator, air dryer etc. **Direction Control Valve** Design Principle, Symbols, Operations 3/2 Directional control valve, Manual operated, 5/2 Directional control valve, Pneumatically operated, 5/3 Direction- al control valve, electrically operated **Pneumatic Drives**

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Introduction, Single acting cylinder Double acting cylinder, Cylinder types End position cushioning,

Isolation Flow and Pressure valves Check Valve, Shuttle and dual pressure valve, Quick exhaust valve Throttle and Throttle check valve

Pressure Valves.
Pressure regulating valve, Pressure relief valve, Pressure sequence valve

Flow Control Valves.
Throttle valve, Throttle check valve

Introduction to Electro – Pneumatics
Electro – mechanical Relays, Symbols of electrical components like switch, contacts, solenoid, relay, LED etc, NO and NC contacts, magnetic proximity switch working principle, cylinder switch Electrical signal storage, Electrical ladder diagram, How to construct electrical ladder diagram?, Logic flow diagram, Solenoid working principle, Solenoid operated valves. Advantages of solenoid operated valves over manual valves.

Evaluation Test at the end of the Module

PRACTICAL

Project 01 : Direct control of a single- acting cylinder, extending

Project 02 : Direct control of a single acting cylinder, retracting

Project 03 : Indirect control of a single acting cylinder

Project 04 : Regulating the speed of a single- acting cylinder

Project 05 : Slow-speed extension, rapid retraction of a single acting cylinder

Project 06 : Direct control of a double- acting cylinder with push button

Project 07 : Indirect control of a double- acting cylinder

Project 08 : Speed regulation of a double- acting cylinder

Project 09 : Controlling a double-acting cylinder, impulse valve, 2 push-buttons

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Project 10 : Displacement-dependent control of a double-acting cylinder, impulse valve

Project 11 : Stop control, double-acting cylinder, 5/3 directional control valve, tensile load

Project 12 : Pressure-dependent control of 1 double-acting cylinder

Project 13 : Time-dependent control of 1 double-acting cylinder

Project 14 : Logical control with shuttle and twin-pressure valves

Project 15 : Sequential control 2 double- acting cylinders w/o overlapping signals

Head of the Department
Mechanical Engineering
Marwadi University

Marwadi University

Value Added Courses

Basic & Electro Hydraulics

Duration: (40 hours)

For B.Tech Sem 6

Objectives:

- The participants should be able to understand the physical parameters, symbols, construction and functions of various Hydraulics components.
- Participants should be able to make simple Hydraulic circuit on the training rig.
- Participants should be able to read, analyse and understand fundamental of Hydraulic & Pneumatic circuits.

Module	Content
1	Introduction to Hydraulics, Its Knowledge and scope of employability, What is Hydraulics?, Important basic terms like Hydrostatics and Hydrodynamics, Characteristics of Industrial Hydraulics, advantages and limitations, Comparisons of Hydraulics over other technology like pneumatics, Electrical/ Electronic and Mechanical drives(Systems Comparison), Applications like Mobile Machines (Animated video), Ship Building, Metallurgical and Rolling Industry – Animated video, Plastic Machines (Animated video), Industrial trucks (Animated video), Basic physical properties like force and weight, pressure, its definition, formula, Pascal's Law, absolute and relative pressure, Flow rate and Flow law, Graphical Symbols and Hydraulic circuits. Functionality and Design of a Hydraulic System Hydraulic Fluids Hydraulic pumps Directional Control Valves. Pressure control valves Flow Control Valves. Accessories. Hydraulic Cylinder Hydraulic Motor

Marwadi University

	Introduction to Electro – Hydraulics Troubleshooting of Hydraulic systems. Evaluation Test at the end of the Module

PRACTICAL

Demonstration of a simple Hydraulic circuit (On Hydraulic Kit)

i. Hydraulic circuit with manual Directional control valve and a cylinder
ii. Hydraulic circuit with manual Directional control valve and a hydraulic motor

Project 01 : Hydraulic power unit

Project 02 : Hydraulic pump, characteristic Curve

Project 03 : Single-rod cylinder,

Project 04 : Single-rod cylinder, flow

Project 05 : Hydraulic motor

Project 06 : 4/3 directional valve

Project 07 : Check valve

Project 08 : Check valve, pilot operated

Project 09 : Throttle valve, adjustable

Project 10 : Throttle check valve

Project 11 : Flow control valve

Project 12 : Pressure reducing valve

Project 13 : Commissioning, inspection, maintenance, Observing regulations,

Electro Hydraulics
Project 14 : Extension of a cylinder upon the operation of a push button

Project 15 : Signal storage by means of electrical self locking

Head of the Department
Mechanical Engineering
Marwadi University

CNC Programing

Teaching Scheme:

Theory & Practical Hours	Examination Marks			Total Marks
	Theory	Practical	Viva	
40 Hours	50	25	25	100

Introduction

The course is about learning key aspects of preparing CNC Programs for various CNC & VMC Machines. The course includes understanding industrial drawing as well as creating that 2D/3D drawing using different CAD Tool. This course helps trainees to opt their career as CNC Programmer in the manufacturing industry.

Module-1

Introduction to Computer Numerical Control (CNC), Definition, Classification of CNC, Advantages, Limitations, functions, features of CNC Machine Tools.

Module-2 Siemens CNC Control – Turning (Sinumerik – 828D)

Study of CNC machine, keyboard & specifications, Machine starting &operating in reference point, jog & incremental modes, coordinate system points, assignments absolute & incremental co-ordinate. Identification of machines over travel limits & emergency stop, machine parts, mode practice (Jog, MDI, Edit, Auto, Single Block, etc.) Work & Tool setting CNC m/c part program preparation.

Module-3 CNC Turning.

Fundamentals of CNC Turning, Familiarization of control panel, Work offset & tool offset measurement, Work piece setting methods, Introduction to Various types of tools, Fundamentals of CNC programming, Part programming techniques with Simulation

- Part program preparation by absolute & incremental programming.
- Subroutine, Macro Programming
- Stock Removal Cycle
- Turning Cycles (Stock Removal, Groove, Undercut, Thread-OD, Cut off)
- Drilling (Centering, Drilling/ Reaming, Deep Hole Drilling, Boring, Thread - ID)
- Contour Turning (Contour, Stock Removal, Grooving, Plunge Turning)

Practice on CNC Simulator, Machining practice on CNC Turning, Practice sessions.

Head of the Department
Mechanical Engineering
Marwadi University

VMC Programing

Teaching Scheme:

Theory & Practical Hours	Examination Marks			Total Marks
	Theory	Practical	Viva	
40 Hours	50	25	25	100

Module-1 Siemens CNC Control – Milling (Sinumerik – 802D)

Study of CNC machine, keyboard & specifications, Machine starting &operating in reference point, jog & incremental modes, coordinate system points, assignments absolute & incremental co-ordinate. Identification of machines over travel limits & emergency stop, machine parts, mode practice (Jog, MDI, Edit, Auto, Single Block, etc.) Work & Tool setting CNC m/c part program preparation.

Module-2 CNC Milling

Fundamentals of CNC milling, Familiarization of control panel, Work offset & tool offset measurement, Work piece setting methods, Introduction to Various types of tools, Fundamentals of CNC programming, Part programming techniques with Simulation

- Part program preparation by absolute & incremental programming.
- Sub Programming
- Milling (Face Milling, Pocket, Multi-edge spigot, slot, Thread Milling, Engraving)
- Drilling (Centering, Drilling/Reaming, Deep Hole Drilling, Boring, Thread)
- Contour (Contour, Path Milling, Rough Drill, Pocket, Spigot)

Part programming using CAM Tools and Simulation, Machining practice on CNC Milling, Practice sessions.

Module-3

Measuring Instruments, Tolerance, Fitness & Allowances

Head of the Department
Mechanical Engineering
Marwadi University

Marwadi University

Value Added Courses

Basics & interface of PLC to Pneumatics and Hydraulics

Duration: (40 hours)

For B.Tech Sem 7

Objectives:

- To understand the generic architecture and constituent components of a Programmable Logic Controller.
- To develop a software program using modern engineering tools and technique for PLC and SCADA.
- To apply knowledge gained about PLCs and SCADA systems to real-life industrial applications.

THEORY
What is PLC? Basic concepts of PLC Working of PLC & General Applications Indra control PLC's – Technical Details Hardware Details of L10/L20 Documentation provided in CD Related Soft wares for PLC Detailed presentation on Inline Products Technical & Hardware details on : - Digital I/O's - Analog I/O's - Bus-couplers Function Modules Indraworks Software Installation Indraworks Software features explanation in detail. Indralogic standard settings Project development in Indraworks Hardware Configuration Project Development in Indralogic Logic Development - Ladder Diagram - Addressing of Digital I/O's - Creating Parallel Paths (Net- work) - Programming Language Selection/Conversion Logic Development - Variable Declaration (Local/Global) - Declaration in Tabular Format - Function Blocks (Timers, Counters etc.) - Exercises Logic Development - Segregation of programs based - on functionality or application Mathematical Functions (Add, Sub, Div etc.) - Exercises Logic Development

Marwadi University

- Data type Conversion Operators
- Inserting Blocks or inputs Exercises

Logic Development

- Addressing Analog I/O's
- Working with Analog I/O's
- Configuring Analog I/O's Exercises

PLC Configuration Task Configuration
Watch & Recipe Manager Target Settings Project/Data Backup

- Export/Import
- Source Code Download Archive/Restore

Overview of different types of HMI

Interface of PLC to PNEUMATICS

Comparison of PLC logic vs Relay logic PLC logic in controlling Pneumatics drive
Advantages of PLC logic Limitations of Relay logic

Interface of PLC to HYDRAULICS

Comparison of PLC logic vs Relay logic
PLC logic in controlling Hydraulic drive
Advantages of PLC logic Limitations of Relay logic

Evaluation Test at the end of the Module

PRACTICAL

Exercise 01 Tank filling device simulator
Exercise 02 Supervise equipment
Exercise 03 Pump control 1
Exercise 04 Gate control system
Exercise 05 Starter control
Exercise 06 Furnace door control
Exercise 07 Reaction vessel
Exercise 08 Pump control 2
Exercise 09 Road works traffic lights
Exercise 10 Cleaning system

Interface of PLC to PNEUMATICS

PLC AND & OR function in pneumatic drive control
PLC signal storage function in pneumatic drive control
PLC "Switch ON delay function in pneumatic drive control"
PLC "Switch OFF delay function in pneumatic drive control
PLC "Raising and Falling edge" function in controlling pneumatic drive control
PLC logic to "Displacement control of pneumatic cylinder"

Marwadi University

PLC logic to controlling sequence of two pneumatic cylinders
PLC logic to controlling sequence of three pneumatic cylinders

Interface of PLC to HYDRAULICS

PLC AND & OR function in Hydraulic drive control
PLC signal storage function in Hydraulic drive control
PLC "Switch ON delay function in Hydraulic drive control"
PLC "Switch OFF delay function in Hydraulic drive control
PLC "Raising and Falling edge" function in controlling Hydraulic drive control
PLC logic to "Displacement control of Hydraulic cylinder"
PLC logic to controlling sequence of two Hydraulic cylinders
PLC logic to controlling sequence of three Hydraulic cylinders

Head of the Department
Mechanical Engineering
Marwadi University

Marwadi University

Value Added Course

Basic & Advance Sensorics and Mechatronics

Duration: (32 hours)

For B.Tech Sem 8

Objectives:

- Understand key elements of Mechatronics system, representation into block diagram.
- Understand concept of transfer function, reduction and analysis.
- Understand principles of sensors, its characteristics, interfacing with DAQ microcontroller

THEORY
Introduction to Sensorics: Its Knowledge and scope of employability, What is Sensorics?, different sensor types, classification of sensors, Types of proximity sensors, contact type, non contact type **Inductive Sensors** Fundamental Principles, Types, Interfaces for Inductive Proximity Switches **Capacitive Sensors** Fundamental Principles Practical Model **Ultrasonic Sensors** Fundamental Principles, Distance Measuring Ultrasonic Sensors Possible Errors in distance measurements with Ultrasonic Sensors Operating Conditions **Photoelectric Sensors** Fundamental Principles Methods of Operation of Photoelectric Sensors Signal Processing in Photoelectric Sensors

Marwadi University

Types

Magnetic Sensors

Fundamental Principles

Principle of Operation

Application

Modular Mechatronic System

Introduction and study of mMS

Troubleshooting of mMS

PRACTICAL

Project 01 :Behaviour of inductive sensor NJ

Project 02 : Behaviour of the capacitive sensor CJ

Project 03 : Behaviour of magnetic sensors MJ

Project 04 : Behaviour of the direct detection sensor OJ

Project 05 :Behaviour of through beam sensors

Project 06 : Behaviour of the reflex photoelectric sensor OBS

Project 07 :Behaviour of an ultrasonic sensor

Project 08 : Operating range and hysteresis of the inductive sensor NJ

Project 09 : Switching frequency of the inductive sensor NJ

Project 10 : Operating range and hysteresis of the capacitive sensor CJ

Project 11 : Response curve of the capacitive sensor CJ

Project 12 : Switching frequency of the capacitive sensor CJ

Project 13 : Operating range and hysteresis of the magnetic sensor MJ

Project 14 : Detection range and hysteresis of the direct detection sensor OJ

Project 15 : Reduction factor of the direct detection sensor OJ

Project 16 : Switching frequency of the direct detection sensors OJ

Head of the Department
Mechanical Engineering
Marwadi University

Marwadi University

Syllabus
Design Integrated Course

Mechanical Engineering Department,
Marwadi University.

NEED

The design of engineering systems is based on scientific and engineering ideologies. The engineering systems are designed to have maximum efficiency and on the other hand they are designed based on optimization of resources. The design of any system includes definition of requirements, synthesis of mechanisms, engineering analysis, preparation of models, performance of testing and assessment.

The main objective of engineering design is to provide solution of problems of mankind by applying principles of science and technology. The role of designer is to ensure that the product designed are providing solution of problems at the same time the products are economical as well as esthetic in appearance. The challenges faced by world regarding environmental, social and technological issues can be overcome by integrating design and engineering. The integrated approach will lead to innovative design cycles which will be helpful to industry and society as a whole.

OBJECTIVES

- To provide experiential learning so that students can apply their technical knowledge in developing innovative solutions.
- The design integrated course is aimed to develop their creativity of students.
- To develop technological skills required for solution of engineering problems.
- To develop social responsibility and professional skills.
- To develop critical thinking and analytical skills for solving complex problems.
- To understand the concepts of user's need based optimum design.
- To help students in understanding sustainability, human centric and system design approach.

COURSE DURATION: 29TH JULY 2019 TO 30TH SEPTEMBER 2019

TOTAL CONTACT: 100 HOURS

COURSE STRUCTURE

1. Introduction to Ergonomics
2. **(a)** Visualization Tools & Techniques **(b)** Visualization Process
3. Techno-Aesthetic Detailing (Optimization Processes)
4. User- Centric Thinking and Building
5. Design and Systems Thinking
6. Techno-Aesthetic Detailing
    i. Understanding Materials and Properties for Design
    ii. Technical Detailing
    iii. Functional Detailing
    iv. Structural Detailing
    v. Value Engineering and Design
    vi. Optimization Principles and Techniques in Design
7. User- Centric Thinking and Building
    i. Understanding User and Context
    ii. User-centric Design
    iii. Building Design Features
    iv. User Experience Design
8. Design and Systems Thinking
    i. Design Process
    ii. System Thinking

METHODOLOGY: DELIVERY OF PROGRAMME

1. Workshops
2. Expert sessions
3. Project

Head of the Department
Mechanical Engineering
Marwadi University

Marwadi University

Certificate of Successfully Completing of Course

This is to certify that

Mr/Ms NANDINI KISHORBHAI KANSAGARA

Successfully Completing of Training on Solid Modelling Under CAD Club, Faculty Of Technology, Mechanical Engineering Department, Marwadi University, Rajkot.

November - 2021

Mr. C J Vyas & Mr. J D Jani
Course Coordinator

Head of Department,
Mechanical Engineereing

Marwadi University

Certificate of Successfully Completing of Course

This is to certify that

Mr/Ms NARESH SUKHARAM SOLANKI

Successfully Completing of Training on Solid Modelling Under CAD Club, Faculty Of Technology, Mechanical Engineering Department, Marwadi University, Rajkot.

November - 2021

Mr. C J Vyas & Mr. J D Jani
Course Coordinator

Head of Department,
Mechanical Engineereing

Marwadi University

Certificate of Successfully Completing of Course

This is to certify that

Mr/Ms PIYUSH RAJESHBHAI PARMAR

Successfully Completing of Training on Solid Modelling Under CAD Club, Faculty Of Technology, Mechanical Engineering Department, Marwadi University, Rajkot.

November - 2021

Mr. C J Vyas & Mr. J D Jani
Course Coordinator

Head of Department,
Mechanical Engineereing

Marwadi University

Certificate of Successfully Completing of Course

This is to certify that

Mr/Ms SHIVAMKUMAR RAJDHARKUMAR SINGH

Successfully Completing of Training on Solid Modelling Under CAD Club, Faculty Of Technology, Mechanical Engineering Department, Marwadi University, Rajkot.

November - 2021

Mr. C J Vyas & Mr. J D Jani
Course Coordinator

Head of Department,
Mechanical Engineereing

Marwadi University

Certificate of Successfully Completing of Course

This is to certify that

Mr/Ms YASH VIPULBHAI BASIDA

Successfully Completing of Training on Solid Modelling Under CAD Club, Faculty Of Technology, Mechanical Engineering Department, Marwadi University, Rajkot.

November - 2021

Mr. C J Vyas & Mr. J D Jani
Course Coordinator

Head of Department,
Mechanical Engineereing

Marwadi University

Certificate of Successfully Completing of Course

This is to certify that

Mr/Ms DEVARSHI RUSHI DAFTARY

Successfully Completing of Training on Solid Modelling Under CAD Club, Faculty Of Technology, Mechanical Engineering Department, Marwadi University, Rajkot.

November - 2021

Mr. C J Vyas & Mr. J D Jani
Course Coordinator

Head of Department,
Mechanical Engineereing

Marwadi University

Certificate of Successfully Completing of Course

This is to certify that

Mr/Ms ANAND JAGADISHBHAI HAPALIYA

Successfully Completing of Training on Solid Modelling Under CAD Club, Faculty Of Technology, Mechanical Engineering Department, Marwadi University, Rajkot.

November - 2021

Mr. C J Vyas & Mr. J D Jani
Course Coordinator

Head of Department,
Mechanical Engineereing

Marwadi University

Certificate of Successfully Completing of Course

This is to certify that

Mr/Ms RONAK RAJESHBHAI PATOLIYA

Successfully Completing of Training on Solid Modelling Under CAD Club, Faculty Of Technology, Mechanical Engineering Department, Marwadi University, Rajkot.

November - 2021

Mr. C J Vyas & Mr. J D Jani
Course Coordinator

Head of Department,
Mechanical Engineereing

Marwadi University

Certificate of Successfully Completing of Course

This is to certify that

Mr/Ms DHARMIL JAGDISHBHAI PAMBHAR

Successfully Completing of Training on Solid Modelling Under CAD Club, Faculty Of Technology, Mechanical Engineering Department, Marwadi University, Rajkot.

November - 2021

Mr. C J Vyas & Mr. J D Jani
Course Coordinator

Head of Department,
Mechanical Engineereing

Marwadi University

Certificate of Successfully Completing of Course

This is to certify that

Mr/Ms PREM PIYUSH CHAUHAN

Successfully Completing of Training on Solid Modelling Under CAD Club, Faculty Of Technology, Mechanical Engineering Department, Marwadi University, Rajkot.

November - 2021

Mr. C J Vyas & Mr. J D Jani
Course Coordinator

Head of Department,
Mechanical Engineereing

Marwadi University

Certificate of Successfully Completing of Course

This is to certify that

Mr/Ms VIRENDRA JAYANTILAL KERAI

Successfully Completing of Training on Solid Modelling Under CAD Club, Faculty Of Technology, Mechanical Engineering Department, Marwadi University, Rajkot.

November - 2021

Mr. C J Vyas & Mr. J D Jani
Course Coordinator

Head of Department,
Mechanical Engineereing

Marwadi University

CERTIFICATE OF ACHIEVEMENT

MU CAM CLUB

THIS CERTIFIES THAT

RUSHI NILESHKUMAR VAKANI

has successfully completed Value-added course “CNC Programming” organized by Mechanical Engineering Department, Marwadi University.

DATE OF ISSUANCE: 10/10/2021

Prashant Ujeniya, Trainer

Dr. N.V.Rachchh, HOD

Marwadi University

CERTIFICATE
OF ACHIEVEMENT

MU CAM CLUB

THIS CERTIFIES THAT

NIKUNJ DHARMESHBHAI VADGAMA

has successfully completed Value-added course “CNC Programming” organized by Mechanical Engineering Department, Marwadi University.

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THIS CERTIFIES THAT

YASH MAHENDRABHAI DAVRA

has successfully completed Value-added course “CNC Programming” organized by Mechanical Engineering Department, Marwadi University.

DATE OF ISSUANCE: 10/10/2021

Prashant Ujeniya, Trainer

Dr. N.V.Rachchh, HOD

Marwadi University

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MU CAM CLUB

THIS CERTIFIES THAT

GAUTAM KETANBHAI PATEL

has successfully completed Value-added course “CNC Programming” organized by Mechanical Engineering Department, Marwadi University.

DATE OF ISSUANCE: 10/10/2021

Prashant Ujeniya, Trainer

Dr. N.V.Rachchh, HOD

Marwadi University

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OF ACHIEVEMENT

MU CAM CLUB

THIS CERTIFIES THAT

DHRUV HASMUKHBHAI KOTADIYA

has successfully completed Value-added course “CNC Programming” organized by Mechanical Engineering Department, Marwadi University.

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Dr. N.V.Rachchh, HOD

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KHUSH RAKESHBHAI LADANI

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Prashant Ujeniya, Trainer

Dr. N.V.Rachchh, HOD

Marwadi University

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MU CAM CLUB

THIS CERTIFIES THAT

RUCHIT ARVINDBHAI NONGHANVADARA

has successfully completed Value-added course “CNC Programming” organized by Mechanical Engineering Department, Marwadi University.

DATE OF ISSUANCE: 10/10/2021

Prashant Ujeniya, Trainer

Dr. N.V.Rachchh, HOD

Marwadi University

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THIS CERTIFIES THAT

UMANG DINESHBHAI NONGHANVADARA

has successfully completed Value-added course “CNC Programming” organized by Mechanical Engineering Department, Marwadi University.

DATE OF ISSUANCE: 10/10/2021

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Dr. N.V.Rachchh, HOD

Marwadi University

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THIS CERTIFIES THAT

SMIT YOGESH BHALODIA

has successfully completed Value-added course “CNC Programming” organized by Mechanical Engineering Department, Marwadi University.

DATE OF ISSUANCE: 10/10/2021

Prashant Ujeniya, Trainer

Dr. N.V.Rachchh, HOD

Marwadi University

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THIS CERTIFIES THAT

AKSHATA RAMESH PADWAL

has successfully completed Value-added course “CNC Programming” organized by Mechanical Engineering Department, Marwadi University.

DATE OF ISSUANCE: 10/10/2021

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Dr. N.V.Rachchh, HOD

Marwadi University

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THIS CERTIFIES THAT

TYSON T MATHEW

has successfully completed Value-added course “CNC Programming” organized by Mechanical Engineering Department, Marwadi University.

DATE OF ISSUANCE: 10/10/2021

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Dr. N.V.Rachchh, HOD

Marwadi University

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THIS CERTIFIES THAT

RUSHI NILESHKUMAR VAKANI

has successfully completed Value-added course “VMC Programming” organized by Mechanical Engineering Department, Marwadi University.

DATE OF ISSUANCE: 15/02/2022

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Dr. N.V.Rachchh, HOD

Marwadi University

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THIS CERTIFIES THAT

NIKUNJ DHARMESHBHAI VADGAMA

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B. Tech Information Technology
Faculty of Technology
Marwadi University

1.3.2 Approval/Sanction orders for implementing of following value-added courses

Marwadi University
Marwadi Chandarana Group

Date: 05.07.2021

Implementation of Value-Added Courses

With respect to the aforementioned subject, In the department of Information Technology the following value-added courses are approved by Board of studies. BOS meeting held on 03/07/2021. We will be implementing syllabus for the aforementioned value-added courses starting with the academic year 2021-22.

Sr. No.	Value Added Courses	Semester	Duration
1	Oracle: Database Programming with SQL	3	180 Hrs.
2	CCNA: Switching, Routing, and Wireless Essentials	4	70 Hrs.
3	CCNA: Introduction to Networks	4	70 Hrs.
4	Coursera: Linux Server Management and Security	4	30 Hrs.
5	Introduction to Java Programming	5	36 Hrs.
6	Coursera: HTML, CSS and JavaScript for Web Developers	6	40 Hrs.
7	Software Development Fundamentals	6	36 Hrs.
8	AWS Academy Cloud Foundation	7	30 Hrs.

You need to coordinate and bring this approval order to the faculty and students' attention.

Yours Faithfully,

Head of Department,
Information Technology

Enclosed: Syllabus of value-added courses

Rajkot -Morbi Highway Road, Rajkot, Gujarat, India 360003
info@marwadiuniversity.ac.in | www.marwadiuniversity.ac.in
+91 89800 30090 | +91 281 7123456

Akash Thacker

Certificate of Completion for

AWS Academy Graduate - AWS Academy Cloud Foundations

Course hours completed

20 hours

Issued on

03/24/2022

Digital badge

https://www.credly.com/go/4jb1qhDG

aws academy

Parth shiroya

Certificate of Completion for

AWS Academy Graduate - AWS Academy Cloud Foundations

Course hours completed

20 hours

Issued on

02/15/2022

Digital badge

https://www.credly.com/go/nEmDMGYT

aws academy

SHUBHAM MOLIYA

Certificate of Completion for

AWS Academy Graduate - AWS Academy Cloud Foundations

Course hours completed

20 hours

Issued on

02/15/2022

Digital badge

https://www.credly.com/go/t6Juyxhz

aws academy

akash vaishnav

Certificate of Completion for

AWS Academy Graduate - AWS Academy Cloud Foundations

Course hours completed

20 hours

Issued on

04/01/2022

Digital badge

https://www.credly.com/go/xU29tRT0

aws academy

Salimbhai Jivani

Certificate of Completion for

AWS Academy Graduate - AWS Academy Cloud Foundations

Course hours completed

20 hours

Issued on

02/14/2022

Digital badge

https://www.credly.com/go/Qej6tX9J

aws academy

Bidhan Saha

Certificate of Completion for

AWS Academy Graduate - AWS Academy Cloud Foundations

Course hours completed

20 hours

Issued on

04/11/2022

Digital badge

https://www.credly.com/go/snXw9GhX

aws academy

Jayrajkumar Sarvaiya

Certificate of Completion for

AWS Academy Graduate - AWS Academy Cloud Foundations

Course hours completed

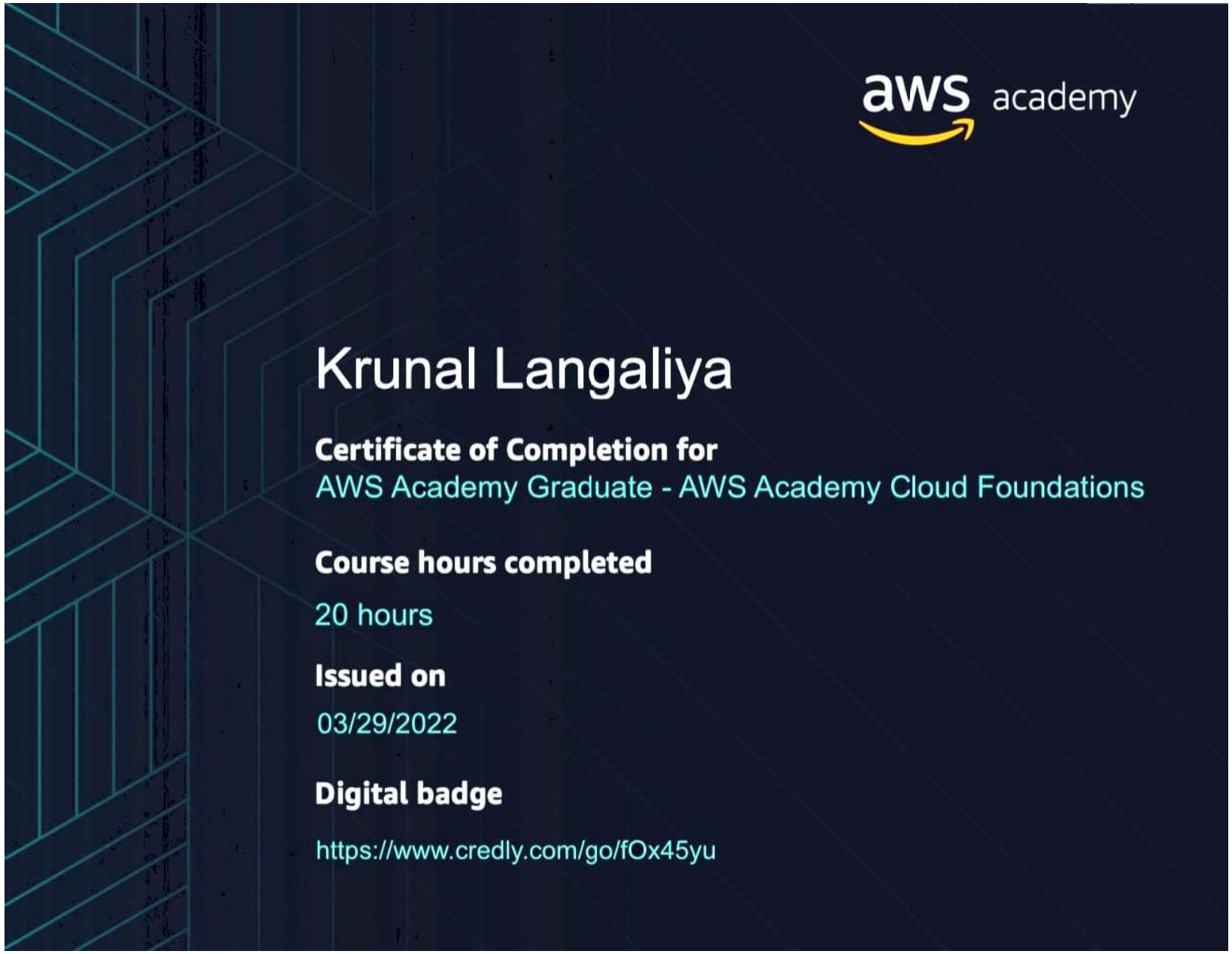
20 hours

Issued on

02/14/2022

Digital badge

https://www.credly.com/go/xP5PM7LC


aws academy
Krunal Langaliya
Certificate of Completion for
AWS Academy Graduate - AWS Academy Cloud Foundations
Course hours completed
20 hours
Issued on
03/29/2022
Digital badge
https://www.credly.com/go/fOx45yu

Luckyrajsinh Gohil

Certificate of Completion for

AWS Academy Graduate - AWS Academy Cloud Foundations

Course hours completed

20 hours

Issued on

03/11/2022

Digital badge

https://www.credly.com/go/CyBBOJKm

B. Tech Information and Communication Technology
Faculty of Technology
Marwadi University

1.3.2 Approval/Sanction orders for implementing of following value-added courses

Marwadi University

Marwadi University
Faculty of Technology
Department of Information and Communication Technology

Date: 24/5/2019

Regarding Implementation of Value-Added courses.

Respected Sir / Ma'am,

The following value-added courses related to the above mentioned subject have been approved by the Board of Studies. (The BoS held on 24/5/2019)

Sr. No	Value Added Courses	Hours
1	Mean Stack value added course for Node and Angular JS	30
2	Python Programming	30
3	Frolic	35

Mean Stack value added course for Node and Angular JS and Python Programming courses will be offered for the academic year 2019-20 and Frolic will be offered from the academic year 2019-20 onwards.

The course coordinators and faculty members are suggested to circulate this approval letter among the students.

Head of the Department
Department of ICT

Head of Department
Dept. of Information and Communication Technology
Marwadi University

Enclosed: Syllabus of value added courses.

Copy to:

1. Registrar, Marwadi University
2. Dean Engineering
3. Course Coordinator
4. Faculty of ICT Dept.

Marwadi University

ICT Information and Communication Technology

CERTIFICATE OF PARTICIPATION

FROLIC 2021

THIS IS TO CERTIFY THAT

MAYURDHVAJSINH BALDEVSINH JADEJA (92000133001)

OF SEM 4 HAS PARTICIPATED IN THE FROLIC 2021, ORAGANIZED BY INFORMATION AND COMMUNICATION TECHNOLOGY DEPARTMENT, MARWADI UNIVERSITY, RAJKOT FOR THE DURATION OF 14TH DECEMBER, 2021 TO 24TH DECEMBER, 2021.

PROF D D ZALA
EVENT COORDINATOR
ICT DEPARTMENT
MARWADI UNIVERSITY

PROF C D PARMAR
HEAD OF DEPARTMENT
ICT DEPARTMENT
MARWADI UNIVERSITY

Marwadi University

ICT Information and Communication Technology

CERTIFICATE OF PARTICIPATION

FROLIC 2021

THIS IS TO CERTIFY THAT

VASU VIMALBHAI BHALODI (92000133002)

OF SEM 4 HAS PARTICIPATED IN THE FROLIC 2021, ORAGANIZED BY INFORMATION AND COMMUNICATION TECHNOLOGY DEPARTMENT, MARWADI UNIVERSITY, RAJKOT FOR THE DURATION OF 14TH DECEMBER, 2021 TO 24TH DECEMBER, 2021.

PROF D D ZALA
EVENT COORDINATOR
ICT DEPARTMENT
MARWADI UNIVERSITY

PROF C D PARMAR
HEAD OF DEPARTMENT
ICT DEPARTMENT
MARWADI UNIVERSITY

Marwadi University

ICT Information and Communication Technology

CERTIFICATE OF PARTICIPATION

FROLIC 2021

THIS IS TO CERTIFY THAT

CHARMI SALIMBHAI GANGANI (92000133003)

OF SEM 4 HAS PARTICIPATED IN THE FROLIC 2021, ORAGANIZED BY INFORMATION AND COMMUNICATION TECHNOLOGY DEPARTMENT, MARWADI UNIVERSITY, RAJKOT FOR THE DURATION OF 14TH DECEMBER, 2021 TO 24TH DECEMBER, 2021.

PROF D D ZALA
EVENT COORDINATOR
ICT DEPARTMENT
MARWADI UNIVERSITY

PROF C D PARMAR
HEAD OF DEPARTMENT
ICT DEPARTMENT
MARWADI UNIVERSITY

Marwadi University

ICT Information and Communication Technology

CERTIFICATE OF PARTICIPATION

FROLIC 2021

THIS IS TO CERTIFY THAT

KRISHA JASMINBHAI KHANDHEDIA (92000133004)

OF SEM 4 HAS PARTICIPATED IN THE FROLIC 2021,

ORAGANIZED BY INFORMATION AND COMMUNICATION TECHNOLOGY

DEPARTMENT, MARWADI UNIVERSITY, RAJKOT FOR THE DURATION

OF 14TH DECEMBER, 2021 TO 24TH DECEMBER, 2021.

PROF D D ZALA
EVENT COORDINATOR
ICT DEPARTMENT
MARWADI UNIVERSITY

PROF C D PARMAR
HEAD OF DEPARTMENT
ICT DEPARTMENT
MARWADI UNIVERSITY

Marwadi University

ICT Information and Communication Technology

CERTIFICATE OF PARTICIPATION

FROLIC 2021

THIS IS TO CERTIFY THAT

KAUSHAL ASHOKBHAI FALDU (92000133005)

OF SEM 4 HAS PARTICIPATED IN THE FROLIC 2021, ORAGANIZED BY INFORMATION AND COMMUNICATION TECHNOLOGY DEPARTMENT, MARWADI UNIVERSITY, RAJKOT FOR THE DURATION OF 14TH DECEMBER, 2021 TO 24TH DECEMBER, 2021.

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ICT DEPARTMENT
MARWADI UNIVERSITY

Marwadi University

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FROLIC 2021

THIS IS TO CERTIFY THAT

TAPAN VIPULBHAI KHOKHARIYA (92000133006)

OF SEM 4 HAS PARTICIPATED IN THE FROLIC 2021, ORAGANIZED BY INFORMATION AND COMMUNICATION TECHNOLOGY DEPARTMENT, MARWADI UNIVERSITY, RAJKOT FOR THE DURATION OF 14TH DECEMBER, 2021 TO 24TH DECEMBER, 2021.

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ICT DEPARTMENT
MARWADI UNIVERSITY

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MARWADI UNIVERSITY

Marwadi University

ICT Information and Communication Technology

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FROLIC 2021

THIS IS TO CERTIFY THAT

JILL PARESHBHAI PADARIYA (92000133007)

OF SEM 4 HAS PARTICIPATED IN THE FROLIC 2021, ORAGANIZED BY INFORMATION AND COMMUNICATION TECHNOLOGY DEPARTMENT, MARWADI UNIVERSITY, RAJKOT FOR THE DURATION OF 14TH DECEMBER, 2021 TO 24TH DECEMBER, 2021.

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ICT DEPARTMENT
MARWADI UNIVERSITY

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MARWADI UNIVERSITY

Marwadi University

ICT Information and Communication Technology

CERTIFICATE OF PARTICIPATION

FROLIC 2021

THIS IS TO CERTIFY THAT

RENISH VIMALBHAI SURANI (92000133009)

OF SEM 4 HAS PARTICIPATED IN THE FROLIC 2021, ORAGANIZED BY INFORMATION AND COMMUNICATION TECHNOLOGY DEPARTMENT, MARWADI UNIVERSITY, RAJKOT FOR THE DURATION OF 14TH DECEMBER, 2021 TO 24TH DECEMBER, 2021.

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ICT DEPARTMENT
MARWADI UNIVERSITY

PROF C D PARMAR
HEAD OF DEPARTMENT
ICT DEPARTMENT
MARWADI UNIVERSITY

Marwadi University

ICT Information and Communication Technology

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FROLIC 2021

THIS IS TO CERTIFY THAT

SUNIL GANPATBHAI BOLANIYA (92000133010)

OF SEM 4 HAS PARTICIPATED IN THE FROLIC 2021, ORAGANIZED BY INFORMATION AND COMMUNICATION TECHNOLOGY DEPARTMENT, MARWADI UNIVERSITY, RAJKOT FOR THE DURATION OF 14TH DECEMBER, 2021 TO 24TH DECEMBER, 2021.

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EVENT COORDINATOR
ICT DEPARTMENT
MARWADI UNIVERSITY

PROF C D PARMAR
HEAD OF DEPARTMENT
ICT DEPARTMENT
MARWADI UNIVERSITY

Marwadi University

ICT Information and Communication Technology

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FROLIC 2021

THIS IS TO CERTIFY THAT

KUSH JIGNESHKUMAR JADAV (92000133013)

OF SEM 4 HAS PARTICIPATED IN THE FROLIC 2021, ORAGANIZED BY INFORMATION AND COMMUNICATION TECHNOLOGY DEPARTMENT, MARWADI UNIVERSITY, RAJKOT FOR THE DURATION OF 14TH DECEMBER, 2021 TO 24TH DECEMBER, 2021.

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EVENT COORDINATOR
ICT DEPARTMENT
MARWADI UNIVERSITY

PROF C D PARMAR
HEAD OF DEPARTMENT
ICT DEPARTMENT
MARWADI UNIVERSITY

Marwadi University

ICT Information and Communication Technology

CERTIFICATE OF PARTICIPATION

FROLIC 2021

THIS IS TO CERTIFY THAT

BRIJESH VIJAYBHAI LIMBANI (92000133014)

OF SEM 4 HAS PARTICIPATED IN THE FROLIC 2021, ORAGANIZED BY INFORMATION AND COMMUNICATION TECHNOLOGY DEPARTMENT, MARWADI UNIVERSITY, RAJKOT FOR THE DURATION OF 14TH DECEMBER, 2021 TO 24TH DECEMBER, 2021.

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ICT DEPARTMENT
MARWADI UNIVERSITY

PROF C D PARMAR
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ICT DEPARTMENT
MARWADI UNIVERSITY