

Applied Technologies
APRN - Auto. Apprenticeship
CSLO APRND050A - Introduction to Automotive Principles • Answer correctly, selected questions on the final exam concerning engine theory, lubrication, and basic electrical fundamentals. APRND050B - Applied Automotive Principles • Answer correctly, selected questions on the final exam concerning engine service, cooling system maintenance and battery testing. APRND051A - Introduction to Automotive Principles - Chassis Systems • Answer correctly, selected questions on the final exam concerning drive line theory, clutch and transmission service and diagnosis. APRND051B - Applications of Automotive Principles - Chassis Systems • Answer correctly, selected questions on the final exam concerning tire service including balancing, disc and drum brake service, and front and rear suspension service. APRND053A - Automotive Mechanisms • Demonstrate the ability to diagram and construct compound mechanical and pneumatic machines, calculating the mechanical advantage for the individual components as well as the complete system. APRND060. - Automotive Electrical Systems • Demonstrate the ability to diagram and construct simple electrical circuits, calculating and measuring voltage, amperage, and resistance using Ohm's Law and a digital multimeter. • Develop a testing sequence to diagnose inoperative charging, cranking, and battery circuits. APRND060A - Electrical Schematic Diagnosis • Analyze an open circuit problem in which all or part of the circuit is inoperative. APRND060B - Automotive Electronics • Analyze the operation of engine control systems where computer management is prevalent. APRND060C - Automotive Ignition, Fuel and Emission Systems • Identify major ignition and fuel system components. APRND060D - Ignition Analysis and Oscilloscope Diagnosis • Identify the purpose of an automotive ignition system. APRND060E - Automotive Fuel Injection • Describe the principles of electronic fuel injection. APRND060F - No-Start Diagnosis • Identify basic internal combustion principles for the gasoline engine. APRND060G - Advanced Scan Tool Diagnosis • Identify the purpose of an automotive scan tool. APRND060H - Advanced Drivability and Onboard Diagnostics • Describe the onboard self-test and diagnostic capabilities of various manufacturers' vehicle control systems. APRND060J - Advanced Lab Scope and Waveform Diagnosis • Analyze the various designs and applications of the diagnostic oscilloscope and power graphing meter. APRND060K - Automotive Body Electrical Systems

- Demonstrate in a written essay an understanding of a resistive multiplexed switch circuits operation and diagnosis.

APRND060N - Hybrid Vehicle Safety and Maintenance

- Identify the function of an automotive hybrid propulsion system.

APRND061A - Automotive Brake Systems

- Explain proper brake inspection procedures

APRND061B - Electronically Controlled Brake Systems

- Describe the differences in the two major types of wheel speed sensors used on cars and light trucks as well as how they function, and how to diagnose a failure of the component.

APRND062A - Automotive Suspension, Steering and Alignment

- Perform proper under car inspection procedures.
- Demonstrate understanding of steering, suspension, and tire service.

APRND062B - Wheel Alignment, Chassis Dynamics, ADAS

- Explain proper wheel alignment procedures.
- Diagnose vehicle wander, drift, pull, hard steering, bump steer, memory steer, torque steer, and steering return concerns; determine necessary action.

APRND063. - Automatic Transmissions and Transaxles

- Show an understanding of how a torque converter works.
- Show an understanding of the inputs to transmission that create both up and downshifts.

APRND063A - Manual Drive Train Systems

- Explain the workings of a manual transmission clutch assembly.
- Calculate first and second order frequency vibrations for a rear wheel drive propeller shaft.
- Explain the operation of a manual transmission and its components for diagnosis and repair.
- Explain the operation and repair procedures of four wheel and all wheel drive components.

APRND063D - Transmission Diagnostic and Repair Techniques

- Show an understanding of the operation of transmission solenoids and the corresponding voltage values for diagnostic purposes.

APRND064. - Automotive Machining and Engine Repair

- Explain engine theory, valve events, engine diagnostics, and engine assembly.

APRND64HP - High Performance Engine Preparation

- Demonstrate understanding of blueprinting operations, four stroke cycle theory, parts reliability, and camshaft design.

APRND065P - Smog Inspector - Level 1 Training

- Answer correctly, selected questions on the final exam concerning Bureau of Automotive Repair rules, regulations, and proper procedures to perform a smog check in the state of CA

APRND065W - Smog Inspector - Level 2 Training

- Answer correctly, selected questions on the final exam concerning Bureau of Automotive Repair rules, regulations, and proper procedures to perform a smog check in the state of CA

APRND066. - Automotive Air Conditioning

- Explain proper refrigerant recovery, recycling, and handling procedures.

APRND067A - Hybrid Electric Vehicles

- Identify the function of an automotive hybrid propulsion system.

APRND067B - Plug-In Electric Vehicle Technology

- Demonstrates the ability to safely maintain and service a vehicle that uses a high voltage battery as a fuel source for the main propulsion.

APRND067G - Gaseous Fuels

- Interpret the environmental affects gaseous fuel produce and which fuel has the lowest effect on our world. This will be determined with a group of questions on the final exam.

APRND067J - Introduction to Automotive and Light Truck Diesel Systems

- Demonstrate the ability to understand diesel theory.
- Develop a testing system to systematically trouble shoot diesel fuel systems.

ATMG - Automotive Technology Management**CSLO****ATMGD601. - Automotive Management Principles**

- Determine the functions of running a business in the automotive repair industry, including inception, operations, management, marketing, accounting, and human resources.

ATMGD602. - Automotive Planning and Small Business Management

- Identify the main components of operating a successful automotive repair business

ATMGD603. - Automotive Service Management

- Determine the most effective practices in running a successful automotive service department

ATMGD604. - Automotive Parts Management

- Identify the strategies involved in running an efficient automotive parts department or parts store

ATMGD605. - Automotive Fleet Management

- Identify the functions of running an effective vehicle and equipment fleet management operation

ATMGD606. - Human Resources in the Automotive Industry

- Determine the functions of human resources in the automotive repair industry and how they affect employee performance, satisfaction, and ethics.

ATMGD607. - Automotive Sales, Finance, and Leasing

- Identify and describe the steps involved in managing the successful sales and financing of vehicles, accessories, and parts

ATMGD608. - Automotive Digital Marketing and E-Commerce

- Demonstrate the ability to analyze the internet and social media, and identify a well-established marketing and e-commerce business plan for selling vehicles and parts

ATMGD609. - Automotive Regulations and Law

- Describe the major components of a sales contract
- Explain the differences between law and ethics

AUTO - Automotive Technology**CSLO****AUTOD050A - Introduction to Automotive Principles**

- Answer correctly, selected questions on the final exam concerning engine theory, lubrication, and basic electrical fundamentals.

AUTOD050B - Applied Automotive Principles

- Answer correctly, selected questions on the final exam concerning engine service, cooling system maintenance and battery testing.

AUTOD051A - Introduction to Automotive Principles - Chassis Systems

- Answer correctly, selected questions on the final exam concerning drive line theory, clutch and transmission service and diagnosis.

AUTOD051B - Applications of Automotive Principles - Chassis Systems

- Answer correctly, selected questions on the final exam concerning tire service including balancing, disc and drum brake service, and front and rear suspension service.

AUTOD053A - Automotive Mechanisms

- Demonstrate the ability to diagram and construct compound mechanical and pneumatic machines, calculating the mechanical advantage for the individual components as well as the complete system.

AUTOD057A - Career Research and Employment in the Automotive Industry

- Participate in an 'in-class' job interview, after studying the various parts of the automotive industry and learning job interview skills.

AUTOD060. - Automotive Electrical Systems

- Demonstrate the ability to diagram and construct simple electrical circuits, calculating and measuring voltage, amperage, and resistance using Ohm's Law and a digital multimeter.
- Develop a testing sequence to diagnose inoperative charging, cranking, and battery circuits.

AUTOD060A - Electrical Schematic Diagnosis

- Analyze an open circuit problem in which all or part of the circuit is inoperative.

AUTOD060B - Automotive Electronics

- Analyze the operation of engine control systems where computer management is prevalent.

AUTOD060C - Automotive Ignition, Fuel and Emission Systems

- Identify major ignition and fuel system components.

AUTOD060D - Ignition Analysis and Oscilloscope Diagnosis

- Identify the purpose of an automotive ignition system.

AUTOD060E - Automotive Fuel Injection

- Describe the principles of electronic fuel injection.

AUTOD060F - No-Start Diagnosis

- Identify basic internal combustion principles for the gasoline engine.

AUTOD060G - Advanced Scan Tool Diagnosis

- Identify the purpose of an automotive scan tool.

AUTOD060H - Advanced Drivability and Onboard Diagnostics

- Describe the onboard self-test and diagnostic capabilities of various manufacturers' vehicle control systems.

AUTOD060J - Advanced Lab Scope and Waveform Diagnosis

- Analyze the various designs and applications of the diagnostic oscilloscope and power graphing meter.

AUTOD060K - Automotive Body Electrical Systems

- Demonstrate an understanding of a resistive multiplexed switch circuits operation and diagnosis through a written essay.

AUTOD060N - Hybrid Vehicle Safety and Maintenance

- Identify the function of an automotive hybrid propulsion system.

AUTOD061A - Automotive Brake Systems

- Explain proper brake inspection procedures.

AUTOD061B - Electronically Controlled Brake Systems

- Describe the differences in the two major types of wheel speed sensors used on cars and light trucks as well as how they function, and how to diagnose a failure of the component.

AUTOD062A - Automotive Suspension, Steering and Alignment

- Perform proper under car inspection procedures.
- Demonstrate understanding of steering, suspension, and tire service.

AUTOD062B - Wheel Alignment, Chassis Dynamics, ADAS

- Diagnose vehicle wander, drift, pull, hard steering, bump steer, memory steer, torque steer, and steering return concerns; determine necessary action.
- Explain proper wheel alignment procedures.

AUTOD063. - Automatic Transmissions and Transaxles

- Show an understanding of how a torque converter works.
- Show an understanding of the inputs to transmission that create both up and downshifts.

AUTOD063A - Manual Drive Train Systems

- Explain the workings of a manual transmission clutch assembly.

- Explain the operation of a manual transmission and its components for diagnosis and repair.
- Explain the operation and repair procedures of four wheel and all wheel drive components.
- Calculate first and second order frequency vibrations for a rear wheel drive propeller shaft.

AUTOD063D - Transmission Diagnostic and Repair Techniques

- Show an understanding of the operation of transmission solenoids and the corresponding voltage values for diagnostic purposes.

AUTOD064. - Automotive Machining and Engine Repair

- Demonstrate knowledge of engine theory, valve events, engine diagnostics, and engine assembly.

AUTOD64HP - High Performance Engine Preparation

- Demonstrate understanding of blueprinting operations, four stroke cycle theory, parts reliability, and camshaft design.

AUTOD065P - Smog Inspector - Level 1 Training

- Answer correctly, selected questions on the final exam concerning Bureau of Automotive Repair rules, regulations, and proper procedures to perform a smog check in the state of CA

AUTOD065W - Smog Inspector - Level 2 Training

- Answer correctly, selected questions on the final exam concerning repairs to lower Oxides of Nitrogen (Nox) failures and procedures to perform an acceleration simulation mode (ASM) smog inspection using a dynamometer.

AUTOD066. - Automotive Air Conditioning

- Explain proper refrigerant recovery, recycling, and handling procedures.

AUTOD067A - Hybrid Electric Vehicles

- Identify the function of an automotive hybrid propulsion system.

AUTOD067B - Plug-In Electric Vehicle Technology

- Demonstrates the ability to safely maintain and service a vehicle that uses a high voltage battery as a fuel source for the main propulsion.

AUTOD067G - Gaseous Fuels

- Interpret the environmental affects gaseous fuel produce and which fuel has the lowest effect on our world. This will be determined with a group of questions on the final exam.

AUTOD067J - Introduction to Automotive and Light Truck Diesel Systems

- Demonstrate the ability to understand diesel theory.
- Develop a testing system to systematically trouble shoot diesel fuel systems.

AUTOD069Y - Smog Check Update

- Answer correctly, selected questions on the final exam concerning CA Bureau of Automotive Repair smog inspection rules, regulations and procedures updates.

AUTOD091A - Automotive Brakes

- Remove one dual servo brake assembly from the vehicle, inspect and lubricate the brake assembly as needed, and reinstall the dual servo brake assembly in the vehicle, according to recognized industry standards in 30 minutes given a vehicle and tools.
- Remove one tire, wheel, and brake caliper assembly from the vehicle, turn one rotor on the car as needed, and reinstall the tire, wheel, and brake caliper assembly on the vehicle, according to recognized industry standards given a vehicle and tools.
- Use a bench lathe and appropriate tools to measure and resurface the brake drum as needed according to recognized industry standards in 30 minutes.
- Perform a complete brake inspection, according to recognized industry standards in 30 minutes given a vehicle and tools.

AUTOD092A - Automotive Steering and Suspension

- Remove the strut assembly from the vehicle, remove and Replace the strut from the coil spring, and reinstall the strut assembly in the vehicle, according to recognized industry standards in 30 minutes, given a vehicle and tools.
- Perform a chassis inspection on a front wheel drive vehicle according to recognized industry standards in 30 minutes given a vehicle and tools.
- Perform a chassis inspection on a rear wheel drive vehicle according to recognized industry standards in 30 minutes given a vehicle and tools.
- Remove, mount and balance, and reinstall two tire and wheel assemblies, according to recognized industry standards in 30 minutes.

AUTOD092B - Automotive Alignment

- Hook up the John Bean Alignment Machine to the vehicle, obtain alignment readings, determine corrective action, set front toe, and disconnect the alignment equipment, according to recognized industry standards in 30 minutes given a vehicle and tools.
- Hook up the Hunter Alignment Machine to the vehicle, obtain alignment readings, determine corrective action, set front toe, and disconnect the alignment equipment, according to recognized industry standards in 30 minutes given a vehicle and tools.

AUTOD092C - Automotive Electronic Chassis Controls

- Test and diagnose components of electronically controlled suspension systems using a scan tool; determine necessary action.

AUTOD093A - Automotive Final Drive Train

- Demonstrate the ability to measure the critical elements of a selected differential, analyze the readings, make the necessary adjustments as well as the skill to disassemble and reassemble the unit.

AUTOD093B - Standard Transaxles

- Show their understanding of the powerflow through a standard transaxle.

AUTOD093C - Automatic Transmissions

- Describe in an essay form, the function of an automatic transmission torque converter. They must show a knowledge of the components and their function as well as an understanding of the relationship between them. A description of what each component does during acceleration, cruise, and converter lock up must be included.
- Disassemble an automatic transmission and then reassemble the same unit replacing any needed parts.

AUTOD093D - Automatic Transaxles

- Show an understanding of how a torque converter works.
- Show an understanding of the inputs to transmission that create both up and downshifts.

AUTOD093E - Diagnostic Techniques

- Retrieve a transmission related fault code from the on board computer system and determine a course of action to institute a repair.

AUTOD093F - Automotive Transmission Service

- Perform a transmission service as required by factory maintenance schedule.

AUTOD094A - Automotive Machining and Engine Service

- After studying the theory of a 4-stroke cycle, internal combustion engine, the student will be able to explain in detail each of the four strokes, valve overlap, and blowdown. This will be done using a cut-away engine.

AUTOD094B - Mechanical Engine Diagnostics

- Demonstrate setting up and grinding a valve face with the proper surface finish, while maintaining a margin thickness of no less than 1/16".

AUTOD094C - Introductory Automotive Machining

- Student will set up and hone a cylinder to a specified size, with the proper surface finish depending on the type of piston rings being used.

AUTOD094D - Intermediate Automotive Machining

- Student will equalize the weight of the rotating ends and reciprocating ends of connecting rods within 1 gram of each other.

AUTOD094E - Advanced Automotive Machining

- Demonstrate the ability to equalize the weight of the rotating ends and reciprocating ends of connecting rods within 1 gram of each other.

AUTOD094F - Performance Engine Theory

- Prepare a detailed checklist for an engine being assembled, including assembly of all subsystems.

AUTOD099A - Automotive Electricity, Battery and Cranking Systems

- Perform a battery load test, a starter draw test, a charging system test and analyze the readings.

AUTOD099B - Automotive Charging, Ignition and Accessory Systems

- Demonstrate the ability to repair a copper strand wire, perform a parasitic draw test, and measure the resistance of various components.

AUTOD099C - Introduction to Engine Performance Systems

- Demonstrate the ability to properly install a distributor into an engine, install spark plug wires in the proper firing order and set ignition timing to specifications.

AUTOD099D - Intermediate Engine Performance Systems

- Examine a vehicle with a no-start condition, and using analytical skills learned in class, be able to deduce the malfunctioning component(s) within 15 minutes

AUTOD099E - Basic Engine Performance Diagnostic Procedures

- Demonstrate how to properly retrieve DTC's from a Powertrain Control Module (PCM), retrieve Freeze Frame Data from a PCM, and retrieve Inspection/Maintenance (I/M) Readiness Status from a PCM.

AUTOD099F - Intermediate Engine Performance Diagnostic Procedures

- Perform a Smog Inspection (Acceleration Simulation Mode), a visual inspection and functional inspection per CA State guidelines

AUTOD350A - Introduction to Automotive Principles

- Answer correctly, selected questions on the final exam concerning engine theory, lubrication, and basic electrical fundamentals.

AUTOD350B - Applied Automotive Principles

- Answer correctly, selected questions on the final exam concerning engine service, cooling system maintenance and battery testing.

AUTOD351A - Introduction to Automotive Principles - Chassis Systems

- Answer correctly, selected questions on the final exam concerning drive line theory, clutch and transmission service and diagnosis.

AUTOD351B - Applications of Automotive Principles - Chassis Systems

- Answer correctly, selected questions on the final exam concerning tire service including balancing, disc and drum brake service, and front and rear suspension service.

AUTOD353A - Automotive Mechanisms

- Demonstrate the ability to diagram and construct compound mechanical and pneumatic machines, calculating the mechanical advantage for the individual components as well as the complete system.

AUTOD360. - Automotive Electrical Systems

- Demonstrate the ability to diagram and construct simple electrical circuits, calculating and measuring voltage, amperage, and resistance using Ohm's Law and a digital multimeter.
- Develop a testing sequence to diagnose inoperative charging, cranking, and battery circuits.

AUTOD360A - Electrical Schematic Diagnosis

- Analyze an open circuit problem in which all or part of the circuit is inoperative.

AUTOD360B - Automotive Electronics

- Analyze the operation of engine control systems where computer management is prevalent.

AUTOD360C - Automotive Ignition, Fuel and Emission Systems

- Identify major ignition and fuel system components.

AUTOD360D - Ignition Analysis and Oscilloscope Diagnosis

- Identify the purpose of an automotive ignition system.

AUTOD360E - Automotive Fuel Injection

- Describe the principles of electronic fuel injection.

AUTOD360F - No-Start Diagnosis

- Identify basic internal combustion principles for the gasoline engine.

AUTOD360G - Advanced Scan Tool Diagnosis

- Identify the purpose of an automotive scan tool.

AUTOD360H - Advanced Drivability and Onboard Diagnostics

- Describe the onboard self-test and diagnostic capabilities of various manufacturers' vehicle control systems.

AUTOD360J - Advanced Lab Scope and Waveform Diagnosis

- Analyze the various designs and applications of the diagnostic oscilloscope and power graphing meter.

AUTOD360K - Automotive Body Electrical Systems

- Demonstrate an understanding of a resistive multiplexed switch circuits operation and diagnosis through a written essay.

AUTOD360N - Hybrid Vehicle Safety and Maintenance

- Identify the function of an automotive hybrid propulsion system.

AUTOD361A - Automotive Brake Systems

- Explain proper brake inspection procedures.

AUTOD361B - Electronically Controlled Brake Systems

- Describe the differences in the two major types of wheel speed sensors used on cars and light trucks as well as how they function, and how to diagnose a failure of the component.

AUTOD362A - Automotive Suspension, Steering and Alignment

- Perform proper under car inspection procedures.
- Demonstrate understanding of steering, suspension, and tire service.

AUTOD362B - Wheel Alignment, Chassis Dynamics, ADAS

- Diagnose vehicle wander, drift, pull, hard steering, bump steer, memory steer, torque steer, and steering return concerns; determine necessary action.

- Explain proper wheel alignment procedures.

AUTOD363. - Automatic Transmissions and Transaxles

- Show an understanding of how a torque converter works.
- Show an understanding of the inputs to transmission that create both up and downshifts.

AUTOD363A - Manual Drive Train Systems

- Explain the workings of a manual transmission clutch assembly.
- Explain the operation of a manual transmission and its components for diagnosis and repair.
- Explain the operation and repair procedures of four wheel and all wheel drive components.
- Calculate first and second order frequency vibrations for a rear wheel drive propeller shaft.

AUTOD363D - Transmission Diagnostic and Repair Techniques

- Show an understanding of the operation of transmission solenoids and the corresponding voltage values for diagnostic purposes.

AUTOD364. - Automotive Machining and Engine Repair

- Demonstrate knowledge of engine theory, valve events, engine diagnostics, and engine assembly.

AUTOD364H - High Performance Engine Preparation

- Demonstrate understanding of blueprinting operations, four stroke cycle theory, parts reliability, and camshaft design.

AUTOD365P - Smog Inspector - Level 1 Training

- Answer correctly, selected questions on the final exam concerning Bureau of Automotive Repair rules, regulations, and proper procedures to perform a smog check in the state of CA

AUTOD365W - Smog Inspector - Level 2 Training

- Answer correctly, selected questions on the final exam concerning repairs to lower Oxides of Nitrogen (Nox) failures and procedures to perform an acceleration simulation mode (ASM) smog inspection using a dynamometer.

AUTOD366. - Automotive Air Conditioning

- Explain proper refrigerant recovery, recycling, and handling procedures.

AUTOD367A - Hybrid Electric Vehicles

- Identify the function of an automotive hybrid propulsion system.

AUTOD367B - Plug-In Electric Vehicle Technology

- Demonstrates the ability to safely maintain and service a vehicle that uses a high voltage battery as a fuel source for the main propulsion.

AUTOD367G - Gaseous Fuels

- Interpret the environmental affects gaseous fuel produce and which fuel has the lowest effect on our world. This will be determined with a group of questions on the final exam.

AUTOD367J - Introduction to Automotive and Light Truck Diesel Systems

- Demonstrate the ability to understand diesel theory.
- Develop a testing system to systematically trouble shoot diesel fuel systems.

DMT - Design and Mfg. Tech.**CSLO****DMTD052. - Geometric Dimensioning and Tolerancing: CAD Applications**

- Create a document package containing components modeled using CAD design tools in accordance with ASME standards and engineering drawings compliant with ASME Y14.5.

DMTD053. - Introduction to 3D Printing/Additive Manufacturing

- Apply knowledge of 3D Printing (AM) to analyze, compare, explain and utilize the various processes to prototyping and fabricate new mechanical designs and tools for industry.

DMTD054. - 3D Printing/Additive Manufacturing: Applications and Practice

- Apply advanced additive manufacturing design considerations and production techniques to create functional prototypes, usable objects, and parts.

DMTD055. - Survey of Design and Manufacturing Processes/Modern Fabrication

- Demonstrate knowledge of manufacturing processes and the skills to develop and manipulate the operating parameters for a given design process.

DMTD056. - 3D Printing for AM Support Technicians and Operators

- Demonstrate the skills required for each of the different roles (manager, operator, technician) within an Additive Manufacturing facility.

DMTD057. - Design for Additive Manufacturing (DfAM)

- Apply the specific knowledge of 3D Printing (AM) to analyze, compare, explain and utilize various processes of prototyping and fabrication of mechanical designs to implement DfAM technology based on current industry processes.

DMTD060A - SolidWorks (Introduction)

- Create an entry-level Document Package which includes (as assigned) Solid Parts, Assemblies, and Basic Drawings for Parts and Assemblies, using SolidWorks.

DMTD060B - SolidWorks (Introduction)

- Create an entry-level Document Package which includes (as assigned) Solid Parts, Assemblies, and Basic Drawings for Parts and Assemblies, using SolidWorks.

DMTD060C - SolidWorks (Introduction)

- Create an entry-level Document Package which includes (as assigned) Solid Parts, Assemblies, and Basic Drawings for Parts and Assemblies, using SolidWorks.

DMTD060D - SolidWorks (Introduction)

- Create an entry-level Document Package which includes (as assigned) Solid Parts, Assemblies, and Basic Drawings for Parts and Assemblies, using SolidWorks.

DMTD060E - SolidWorks (Introduction)

- Create an entry-level Document Package which includes (as assigned) Solid Parts, Assemblies, and Basic Drawings for Parts and Assemblies, using SolidWorks.

DMTD061A - SolidWorks (Intermediate)

- Create & modify "Course-Supplied" intermediate-level Parts and Assemblies, using SolidWorks.

DMTD061B - SolidWorks (Intermediate)

- Create & modify "Course-Supplied" intermediate-level Parts and Assemblies, using SolidWorks.

DMTD061C - SolidWorks (Intermediate)

- Create & modify "Course-Supplied" intermediate-level Parts and Assemblies, using SolidWorks.

DMTD061D - SolidWorks (Intermediate)

- Create & modify "Course-Supplied" intermediate-level Parts and Assemblies, using SolidWorks.

DMTD061E - SolidWorks (Intermediate)

- Create & modify "Course-Supplied" intermediate-level Parts and Assemblies, using SolidWorks.

DMTD062A - SolidWorks: Top-Down Design and Advanced System Tools

- Create and edit/maintain large & complex SolidWorks Assemblies using Advanced 3D Solid Modeling techniques & methods.

DMTD062B - SolidWorks: Top-Down Design and Advanced System Tools

- Create and edit/maintain large & complex SolidWorks Assemblies using Advanced 3D Solid Modeling techniques & methods.

DMTD062C - SolidWorks: Top-Down Design and Advanced System Tools

- Create and edit/maintain large & complex SolidWorks Assemblies using Advanced 3D Solid Modeling techniques & methods.

DMTD062D - SolidWorks: Top-Down Design and Advanced System Tools

- Create and edit/maintain large & complex SolidWorks Assemblies using Advanced 3D Solid Modeling techniques & methods.

DMTD062E - SolidWorks: Top-Down Design and Advanced System Tools

- Create and edit/maintain large & complex SolidWorks Assemblies using Advanced 3D Solid Modeling techniques & methods.

DMTD063A - SolidWorks: Surface Modeling

- Create and edit/manipulate complex SolidWorks Surfacing design using Advanced 3D Surfacing Modeling techniques & methods.

DMTD063B - SolidWorks: Surface Modeling

- Create and edit/manipulate complex SolidWorks Surfacing design using Advanced 3D Surfacing Modeling techniques & methods.

DMTD063C - SolidWorks: Surface Modeling

- Create and edit/manipulate complex SolidWorks Surfacing design using Advanced 3D Surfacing Modeling techniques & methods.

DMTD063D - SolidWorks: Surface Modeling

- Create and edit/manipulate complex SolidWorks Surfacing design using Advanced 3D Surfacing Modeling techniques & methods.

DMTD063E - SolidWorks: Surface Modeling

- Create and edit/manipulate complex SolidWorks Surfacing design using Advanced 3D Surfacing Modeling techniques & methods.

DMTD064A - SolidWorks Simulation (Finite Element Analysis)

- Utilize and manipulate complex industry design analysis tools through simulating responses to structural and thermal loads using SolidWorks Simulation with Finite Element Analysis techniques & methodologies.

DMTD064B - SolidWorks Simulation (Finite Element Analysis)

- Utilize and manipulate complex industry design analysis tools through simulating responses to structural and thermal loads using SolidWorks Simulation with Finite Element Analysis techniques & methodologies.

DMTD064C - SolidWorks Simulation (Finite Element Analysis)

- Utilize and manipulate complex industry design analysis tools through simulating responses to structural and thermal loads using SolidWorks Simulation with Finite Element Analysis techniques & methodologies.

DMTD064D - SolidWorks Simulation (Finite Element Analysis)

- Utilize and manipulate complex industry design analysis tools through simulating responses to structural and thermal loads using SolidWorks Simulation with Finite Element Analysis techniques & methodologies.

DMTD064E - SolidWorks Simulation (Finite Element Analysis)

- Utilize and manipulate complex industry design analysis tools through simulating responses to structural and thermal loads using SolidWorks Simulation with Finite Element Analysis techniques & methodologies.

DMTD065A - Creo Parametric (Introduction)

- Create an entry-level Document Package which includes Solid Parts, Assemblies, and Basic Drawings for Parts and Assemblies, using Creo Parametric.

DMTD065B - Creo Parametric (Introduction)

- Create an entry-level Document Package which includes Solid Parts, Assemblies, and Basic Drawings for Parts and Assemblies, using Creo Parametric.

DMTD065C - Creo Parametric (Introduction)

- Create an entry-level Document Package which includes Solid Parts, Assemblies, and Basic Drawings for Parts and Assemblies, using Creo Parametric.

DMTD065D - Creo Parametric (Introduction)

- Create an entry-level Document Package which includes Solid Parts, Assemblies, and Basic Drawings for Parts and Assemblies, using Creo Parametric.

DMTD065E - Creo Parametric (Introduction)

- Create an entry-level Document Package which includes Solid Parts, Assemblies, and Basic Drawings for Parts and Assemblies, using Creo Parametric.

DMTD066A - Creo Parametric (Intermediate)

- Create an intermediate-level Document Package which includes Solid Parts, Assemblies, and Basic Drawings for Parts and Assemblies, using Creo Parametric.

DMTD066B - Creo Parametric (Intermediate)

- Create an intermediate-level Document Package which includes Solid Parts, Assemblies, and Basic Drawings for Parts and Assemblies, using Creo Parametric.

DMTD066C - Creo Parametric (Intermediate)

- Create an intermediate-level Document Package which includes Solid Parts, Assemblies, and Basic Drawings for Parts and Assemblies, using Creo Parametric.

DMTD066D - Creo Parametric (Intermediate)

- Create an intermediate-level Document Package which includes Solid Parts, Assemblies, and Basic Drawings for Parts and Assemblies, using Creo Parametric.

DMTD066E - Creo Parametric (Intermediate)

- Create an intermediate-level Document Package which includes Solid Parts, Assemblies, and Basic Drawings for Parts and Assemblies, using Creo Parametric.

DMTD067A - Creo Parametric: Top-Down Design and Advanced System Tools

- Functioning as a designer using Creo Parametric, the student will create an engineering document package which complies with industry-defined standards and shall include the following; components modeled using CAD design tools, assemblies generated from multiple components and engineering drawings for components and assemblies.

DMTD067B - Creo Parametric: Top-Down Design and Advanced System Tools

- Functioning as a designer using Creo Parametric, the student will create an engineering document package which complies with industry-defined standards and shall include the following; components modeled using CAD design tools, assemblies generated from multiple components and engineering drawings for components and assemblies.

DMTD067C - Creo Parametric: Top-Down Design and Advanced System Tools

- Functioning as a designer using Creo Parametric, the student will create an engineering document package which complies with industry-defined standards and shall include the following; components modeled using CAD design tools, assemblies generated from multiple components and engineering drawings for components and assemblies.

DMTD067D - Creo Parametric: Top-Down Design and Advanced System Tools

- Functioning as a designer using Creo Parametric, the student will create an engineering document package which complies with industry-defined standards and shall include the following; components modeled using CAD design tools, assemblies generated from multiple components and engineering drawings for components and assemblies.

DMTD067E - Creo Parametric: Top-Down Design and Advanced System Tools

- Functioning as a designer using Creo Parametric, the student will create an engineering document package which complies with industry-defined standards and shall include the following; components modeled using CAD design tools, assemblies generated from multiple components and engineering drawings for components and assemblies.

DMTD068A - Creo Parametric Surface Modeling

- Create and edit complex Creo Parametric Surfacing design using Advanced 3D Surfacing and Interactive Surface Design Extension (ISDX) Modeling techniques & methodologies.

DMTD068B - Creo Parametric Surface Modeling

- Create and edit complex Creo Parametric Surfacing design using Advanced 3D Surfacing and Interactive Surface Design Extension (ISDX) Modeling techniques & methodologies.

DMTD068C - Creo Parametric Surface Modeling

- Create and edit complex Creo Parametric Surfacing design using Advanced 3D Surfacing and Interactive Surface Design Extension (ISDX) Modeling techniques & methodologies.

DMTD068D - Creo Parametric Surface Modeling

- Create and edit complex Creo Parametric Surfacing design using Advanced 3D Surfacing and Interactive Surface Design Extension (ISDX) Modeling techniques & methodologies.

DMTD068E - Creo Parametric Surface Modeling

- Create and edit complex Creo Parametric Surfacing design using Advanced 3D Surfacing and Interactive Surface Design Extension (ISDX) Modeling techniques & methodologies.

DMTD073A - Introduction to Computer Aided Design Using Autodesk Inventor

- Create an entry-level Design Document Package which includes (as assigned) Solid Parts, Assemblies, and Basic Drawings for Parts and Assemblies, using AutoDesk Inventor.

DMTD073B - Introduction to Computer Aided Design Using Autodesk Inventor

- Create an entry-level Design Document Package which includes (as assigned) Solid Parts, Assemblies, and Basic Drawings for Parts and Assemblies, using AutoDesk Inventor.

DMTD073C - Introduction to Computer Aided Design Using Autodesk Inventor

- Create an entry-level Design Document Package which includes (as assigned) Solid Parts, Assemblies, and Basic Drawings for Parts and Assemblies, using AutoDesk Inventor.

DMTD073D - Introduction to Computer Aided Design Using Autodesk Inventor

- Create an entry-level Design Document Package which includes (as assigned) Solid Parts, Assemblies, and Basic Drawings for Parts and Assemblies, using AutoDesk Inventor.

DMTD073E - Introduction to Computer Aided Design Using Autodesk Inventor

- Create an entry-level Design Document Package which includes (as assigned) Solid Parts, Assemblies, and Basic Drawings for Parts and Assemblies, using AutoDesk Inventor.

DMTD075B - Introduction to Computer Aided Design Using Siemens NX

- Create an entry-level Design Document Package which includes (as assigned) Solid Parts, Assemblies, and Basic Drawings for Parts and Assemblies, using Siemens NX.

DMTD075C - Introduction to Computer Aided Design Using Siemens NX

- Create an entry-level Design Document Package which includes (as assigned) Solid Parts, Assemblies, and Basic Drawings for Parts and Assemblies, using Siemens NX.

DMTD075D - Introduction to Computer Aided Design Using Siemens NX

- Create an entry-level Design Document Package which includes (as assigned) Solid Parts, Assemblies, and Basic Drawings for Parts and Assemblies, using Siemens NX.

DMTD075E - Introduction to Computer Aided Design Using Siemens NX

- Create an entry-level Design Document Package which includes (as assigned) Solid Parts, Assemblies, and Basic Drawings for Parts and Assemblies, using Siemens NX.

DMTD077A - Special Projects in Manufacturing and CNC/Mastercam Certification Level 1

- Complete advanced project or projects utilizing skills learned in basic CAD/CAM programming.

DMTD077B - Special Projects in Manufacturing and CNC/Mastercam Certification Level 2

- Complete advanced project or projects utilizing skills learned in surface contouring CAD/CAM programming.

DMTD077C - Special Projects in Manufacturing and CNC/Mastercam Certification Level 3

- Complete advanced project or projects utilizing skills learned in Lathe and Multi Axis CAD/CAM programming.

DMTD077D - Special Projects in Manufacturing and CNC/NIMS Level 1

- Complete advanced project or projects utilizing skills learned in entry level DMT courses.

DMTD077E - Special Projects in Manufacturing and CNC/NIMS Level 2

- Complete advanced project or projects utilizing skills learned in intermediate DMT courses.

DMTD077F - Special Projects in Manufacturing and CNC/NIMS Level 3

- Complete advanced project or projects utilizing skills learned in advanced DMT courses.

DMTD077G - Special Projects in 3D Printing/Additive Manufacturing

- Complete advanced project or projects utilizing skills learned in advanced DMT courses.

DMTD077H - Special Projects for Additive Manufacturing in the Digital Factories

- Complete advanced project or projects utilizing skills learned in advanced DMT courses.

DMTD077J - Special Projects in Additive Manufacturing for Rapid Prototyping

- Complete advanced project or projects utilizing skills learned in advanced DMT courses.

DMTD077Y - Special Projects in CAD

- Create an engineering document package which complies with industry-defined standards and shall include the following; components modeled using CAD design tools, assemblies generated from multiple components and engineering drawings.

DMTD080. - Introduction to Machining and CNC Processes

- Analyze, construct, and inspect assigned machined projects using the introductory principles of machining.
- Operate machines and equipment safely.

DMTD082. - Advanced Conventional Machine Tools, Tool Design, Abrasive Machining

- Analyze, construct, and inspect assigned machined projects using advanced principles of machining.
- Demonstrate safe operation of specialized machining equipment to construct advanced assemblies.

DMTD084A - Introduction to CNC Programming and Operation; Mill

- Demonstrate the set up and basic operation of vertical machining centers.
- Create basic word-address programs to successfully construct projects using vertical machining centers.

DMTD084B - CNC Programming and Operation; Intermediate Mill

- Demonstrate the set up and advanced operation of vertical machining centers.
- Create advanced word-address programs to successfully construct projects using vertical machining centers.

DMTD084C - CNC Lathes-Horizontal Mill-4th Axis Rotary-Programming Operations

- Demonstrate the set up and operation of lathes, horizontal machining centers, and rotary axis.
- Create word-address programs to successfully construct projects using lathes, horizontal machining centers, and rotary axis.

DMTD087E - CAD/CAM Programming Using Mastercam

- Construct basic part geometry using Mastercam.
- Produce tool paths from basic part geometry to create word address programs.

DMTD087K - CAD/CAM Based CNC Surface Contouring Programming Using Mastercam

- Construct advanced surface geometry using Mastercam.
- Produce tool paths from advanced surface geometry to create word address programs.

DMTD087P - CAD/CAM Based CNC 4 and 5 Axis Mill/Lathe Programming Using Mastercam

- Construct and import advanced part geometry using Mastercam.
- Produce tool paths from advanced part geometry to create word address programs for lathes and multi-axis machining centers.

DMTD087Q - CAD/CAM Based CNC 4 and 5 Axis Mill/Lathe Programming Using Mastercam

- Construct and import advanced part geometry using Mastercam.
- Produce tool paths from advanced part geometry to create word address programs for lathes and multi-axis machining centers.

DMTD089A - CAM Based CNC Multi-Axis Programming Using NX

- Produce tool paths from advanced surface geometry to create word address programs.
- Produce tool paths from advanced part geometry to create word address programs for multi-axis machining centers.

DMTD089B - CAM Based CNC Multi-Axis Programming Using NX

- Produce tool paths from advanced surface geometry to create word address programs.
- Produce tool paths from advanced part geometry to create word address programs for multi-axis machining centers.

DMTD089C - CAM Based CNC Multi-Axis Programming Using NX

- Produce tool paths from advanced surface geometry to create word address programs.
- Produce tool paths from advanced part geometry to create word address programs for multi-axis machining centers.

DMTD089D - CAM Based CNC Multi-Axis Programming Using NX

- Produce tool paths from advanced surface geometry to create word address programs.

- Produce tool paths from advanced part geometry to create word address programs for multi-axis machining centers.

DMTD089E - CAM Based CNC Multi-Axis Programming Using NX

- Produce tool paths from advanced surface geometry to create word address programs.
- Produce tool paths from advanced part geometry to create word address programs for multi-axis machining centers.

DMTD090. - Print Reading and Machine Shop Calculations

- Demonstrate the ability to interpret multi-view drawings and prints.
- Demonstrate the ability to solve common calculations found in machine shop applications.

DMTD091. - Dimensional Metrology

- Demonstrate the ability to utilize common gauges, measurement instruments, and calibration tools.
- Demonstrate the applications of precision measurement instruments.

DMTD092. - Applied GD&T (ASME Y14.5m); Coordinate Measuring Machines (CMM)

- Apply geometric dimensioning and tolerancing standards to interpret drawings and inspect manufactured parts.
- Demonstrate basic operation of the coordinate measuring machine to inspect manufactured parts.

DMTD093. - Introduction to Quality Assurance

- Demonstrate an understanding of quality assurance objectives, methods, and processes.
- Demonstrate a working knowledge of calibration systems, inspection methodology, statistical process control indices, and quality sampling techniques.
- Explain quality improvement concepts and a working knowledge of continuous improvement programs.

DMTD095. - Manufacturing Materials and Processes

- Conduct material property analysis to determine appropriate material selection and use.
- Analyze, compare, and explain manufacturing processes such as molding, forming, forging and casting.

DMTD096. - Fundamentals of Industrial Automation

- Identify industry 4.0 concepts as it relates to industrial automation
- Analyze and construct a fundamental industrial automated system.

DMTD097. - Intermediate Industrial Automation

- Demonstrate ability to safely work in proximity to collaborative robot
- Test various electronic sensors and how they interact with different objects.

DMTD098. - Industrial Automation - Processing

- Explain procedures for installing components.
- Create advanced programs for industrial robots.

DMTD099. - Advanced Industrial Automation Process

- Demonstrate emergency standby systems.
- Explain procedures for installing and troubleshooting systems.

DMTD101. - CAD Technology Laboratory Creo Parametric (Beginning)

- Create an entry-level Document Package which includes (as assigned) Solid Parts, Assemblies, and Basic Drawings for Parts and Assemblies, using Creo.

DMTD102. - CAD Technology Laboratory SolidWorks (Beginning)

- Create an entry-level Document Package which includes (as assigned) Solid Parts, Assemblies, and Basic Drawings for Parts and Assemblies, using SolidWorks.

DMTD103. - CAD Technology Laboratory Creo Parametric (Intermediate)

- Create an intermediate-level Document Package which includes (as assigned) Solid Parts, Assemblies, and Drawings for Parts and Assemblies, using Creo.

DMTD104. - CAD Technology Laboratory SolidWorks (Intermediate)

- Create an intermediate Document Package which includes (as assigned) Solid Parts, Assemblies, and Drawings for Parts and Assemblies, using

SolidWorks.

DMTD105. - CAD Technology Laboratory Creo Parametric (Advanced)

- Create an advanced-level Document Package which includes (as assigned) Solid Parts, Assemblies, and Drawings for Parts and Assemblies, using SolidWorks.

DMTD106. - CAD Technology Laboratory SolidWorks (Advanced)

- Create an advanced-level Document Package which includes (as assigned) Solid Parts, Assemblies, and Drawings for Parts and Assemblies, using SolidWorks.

DMTD107. - CAD Technology Laboratory Creo Parametric (Surfaces)

- Create an engineering document package which complies with industry-defined standards and shall include the following: components modeled using CAD design tools; assemblies generated from multiple components; engineering drawings for components and assemblies.

DMTD108. - CAD Technology Laboratory SolidWorks (Surfaces)

- Create an engineering document package which complies with industry-defined standards and shall include the following: components modeled using CAD design tools; assemblies generated from multiple components; engineering drawings for components and assemblies.

DMTD109. - CAD Technology Laboratory Creo Parametric (Sheetmetal)

- Create an engineering document package which complies with industry-defined standards and shall include the following: components modeled using CAD design tools; assemblies generated from multiple components; engineering drawings for components and assemblies.

DMTD110. - CAD Technology Laboratory Geometric Dimensioning and Tolerancing

- Create an engineering document package which complies with industry-defined standards and shall include the following: components modeled using CAD design tools; assemblies generated from multiple components; engineering drawings for components and assemblies.

DMTD201. - Manufacturing and CNC Technology Laboratory/Conventional Machining 1

- Complete assignments and practice skills from co-requisite DMT class.

DMTD202. - Manufacturing and CNC Technology Laboratory/CNC Machining 1

- Complete assignments and practice skills from co-requisite DMT class.

DMTD203. - Manufacturing and CNC Technology Laboratory/CNC Machining 2

- Complete assignments and practice skills from co-requisite DMT class.

DMTD204. - Manufacturing and CNC Technology Laboratory/CNC Machining 3

- Complete assignments and practice skills from co-requisite DMT class.

DMTD205. - Manufacturing and CNC Technology Laboratory/CAD CAM Programming 1

- Complete assignments and practice skills from co-requisite DMT class.

DMTD396. - Fundamentals of Industrial Automation

- Identify industry 4.0 concepts as it relates to industrial automation
- Analyze and construct a fundamental industrial automated system.

DMTD397. - Intermediate Industrial Automation

- Demonstrate ability to safely work in proximity to collaborative robot
- Test various electronic sensors and how they interact with different objects.

DMTD398. - Industrial Automation - Processing

- Explain procedures for installing components.
- Create advanced programs for industrial robots.

DMTD399. - Advanced Industrial Automation Process

- Demonstrate emergency standby systems.
- Explain procedures for installing and troubleshooting systems.

Business/Computer Science

ACCT - Accounting

CSLO**ACCTD001A - Financial Accounting I**

- Demonstrate a knowledge of double entry accounting for business transactions and adjustments and prepare, explain and analyze financial statements using GAAP.
- Analyze fundamental business concepts, how businesses operate, how accounting serves them and identify ethical issues in an accounting context.

ACCTD01AH - Financial Accounting I - HONORS

- Demonstrate a knowledge of double entry accounting for business transactions and adjustments and prepare, explain and analyze financial statements using GAAP.
- Analyze fundamental business concepts, how businesses operate, how accounting serves them and identify ethical issues in an accounting context.

ACCTD001B - Financial Accounting II

- Demonstrate a knowledge of the users of accounting information and forms, risks and capitalization of business ownership.
- Prepare, analyze and evaluate the financial structure of a firm using corporate financial statements including the statement of cash flows.
- Analyze and evaluate the capitalization of a firm using debt and equity and apply net present value methodology to the analysis.

ACCTD01BH - Financial Accounting II - HONORS

- Demonstrate a knowledge of the users of accounting information and forms, risks and capitalization of business ownership.
- Prepare, analyze and evaluate the financial structure of a firm using corporate financial statements including the statement of cash flows.
- Analyze and evaluate the capitalization of a firm using debt and equity and apply net present value methodology to the analysis.

ACCTD001C - Managerial Accounting

- Identify elements of cost for a business and explain and analyze how costs are allocated and assessed for various users.
- Distinguish the differences and similarities between financial reporting and cost accounting and compare and contrast the cost accounting system for a manufacturer, a merchandiser and a service firm.
- Utilize NPV and IRR for evaluating the financial viability of a business decision.

ACCTD01CH - Managerial Accounting - HONORS

- Identify elements of cost for a business and explain and analyze how costs are allocated and assessed for various users.
- Distinguish the differences and similarities between financial reporting and cost accounting and compare and contrast the cost accounting system for a manufacturer, a merchandiser and a service firm.
- Utilize NPV and IRR for evaluating the financial viability of a business decision.

ACCTD051A - Intermediate Accounting I

- Assess in a comprehensive manner the conceptual foundations and rationale that underlie accounting applications and critique the effects of transactions and events on an entity's financial condition.

ACCTD051B - Intermediate Accounting II

- Demonstrate the ability to apply professional knowledge of the role of accountants in providing and ensuring the integrity of financial and other information relating to the equity and/or debt capitalization of a company.

ACCTD052. - Advanced Accounting

- Demonstrate knowledge of business combinations; prepare, explain and analyze consolidating workpapers and financial statements.
- Demonstrate knowledge of governmental, not-for-profit, and partnership accounting; and demonstrate an ability to properly record related transactions and prepare related financial statements.

ACCTD058. - Auditing

- List the 10 GAASs (Generally Accepted Auditing Standards) and explain how and why they are followed.
- Demonstrate knowledge of how GAAS are integrated throughout the financial audit examination process.
- Demonstrate knowledge of a systematic audit approach using the three major underlying and interlinked concepts: audit risk, audit materiality, and audit evidence.

ACCTD064. - Payroll and Business Tax Accounting

- Research payroll tax laws and evaluate accounting options to comply with these laws.
- Produce payroll tax reports and related journal entries.

ACCTD066. - Cost Accounting

- Identify, describe, and explain the way managers use cost accounting information to create value, to make decisions, and to evaluate performance in organizations and identify current trends in cost accounting and how they affect organizational decisions.
- Define basic cost behaviors and explain how material, labor, and overhead costs are applied to a product at each stage of the production process and explain the concept of activity-based cost management and demonstrate its use for operational decisions.

ACCTD067. - Individual Income Taxation

- Demonstrate knowledge of how to assess and evaluate information required to file a federal and state tax return and be able to prepare and analyze an individual income tax return from various income sources, adjustments to income, itemized deductions and tax credits.

ACCTD068. - Advanced Tax Accounting

- Explain, differentiate, analyze and evaluate the differences between the taxation of individuals, partnerships, corporations and trusts and prepare and analyze a corporate, partnership, trust and gift tax federal return.

ACCTD073. - Fraud Detection and Deterrence

- Demonstrate competency in critical thinking by deconstructing various frauds to determine how the frauds could be perpetrated, detected, and mitigated.

ACCTD074. - Accounting Ethics

- Demonstrate competency in identifying, assessing and interpreting ethical issues in accounting and explain the costs and risks of unethical practices in business from the point of view of all relevant stakeholders.

ACCTD87AI - Computerized Accounting Programs I (Quickbooks)

- Demonstrate an understanding of accounting and use an existing accounting software program to enter transactions and complete the accounting cycle.

ACCTD088. - Excel Spreadsheets for Accounting

- Evaluate accounting problems; then design and construct Excel spreadsheets to solve those problems.

ACCTD105. - Basic Financial Accounting Procedures

- Analyze basic business transactions and record them using double-entry accounting by journalizing, posting entries to the general ledger and preparing relevant internal and external financial statements to include the evaluation of merchandising transactions using perpetual and periodic inventory systems and incorporating various cost flow methods.

BUS - Business**CSLO****BUSD010. - Introduction to Business**

- Distinguish among the primary functions within a business, such as, marketing, operations, human resources, accounting and finance, and identify the interests and roles of key business stakeholders, such as employees, management, owners, and society.
- Demonstrate a working vocabulary of business terms.

BUSD011. - Introduction to Personal Finance

- Demonstrate a knowledge of opportunity costs and the time value of money.
- Prepare, explain and analyze personal financial statements including the balance sheet and cash flow statement.
- Analyze and evaluate various savings, investment, and insurance options.

BUSD018. - Business Law I

- Demonstrate a knowledge of basic legal terminology and basic tort, constitutional, criminal, administrative and contract law.
- Identify ethical issues in a business law context and evaluate factually simple contract issues using basic common law or UCC rules.

BUSD021. - Business and Society

- Recognize the essential vocabulary of business ethics, corporate social responsibility, and business lobbying, be able to match that vocabulary with its definitions, and be able to employ that vocabulary correctly in a written composition.
- Discuss and evaluate the meaning of business ethics, the major sources of ethical values in business, business ethics in other cultures, and factors that influence managerial ethics.

- Examine and assess the role of government in regulating business, the history of government regulation of business from the Industrial Revolution to the present, and the influence of business on the political process.

BUSD049. - Management

- Examine the functions of planning, organizing, leading, staffing and controlling.
- Evaluate and anticipate the potential effectiveness of various management styles, communications and decisions for a given situation.

BUSD050. - Nonprofit Corporations

- Examine the foundation, requirements, characteristics, and elements of effective functioning of nonprofit organizations.
- Distinguish the roles, interdependence, and impact of a nonprofit governing board as distinct from staff and volunteers.

BUSD054. - Business Mathematics

- Demonstrate an understanding of the "Time Value of Money" concept in business.
- Demonstrate a basic knowledge of the mathematics of pricing.
- Calculate performance measures for investments such as stocks, bonds or mutual funds.

BUSD055. - Introduction to Entrepreneurship

- Examine the steps required, the support available, and the tactics commonly employed by entrepreneurs starting a business.
- Evaluate business plans in terms of feasibility, investment potential, risk, and completeness.

BUSD056. - Human Relations in the Workplace

- Apply human relations theories to varied workplace situations and discuss the likely results.
- Describe the impact of employees' human relations skills, ethical choices, attitudes, and physical and mental wellbeing on the success of an organization.
- Make ethical decisions by demonstrating personal and organizational social responsibility.
- Describe the value of diversity in today's workplace.

BUSD057. - Human Resource Management

- Examine Human Resources (HR) practices and how they affect employee performance, motivation, and the firm.
- Appraise the impact of HR as a strategic partner with corporate executive leadership to achieve competitive advantage in the marketplace.
- Compare HR functions to formulate critical written and oral analysis of current global HR challenges.

BUSD058. - The Business Plan

- Develop and conduct a feasibility study analysis for a business plan.
- Write a business plan and deliver an effective presentation to potential investors.

BUSD060. - International Business Management

- Examine a country's economic, political, legal, social and cultural conditions and assess its business risks and opportunities.
- Explain the roles of international trade, foreign investment and the global monetary system.
- Evaluate a global business scenario and determine the best courses of action.

BUSD065. - Leadership

- Compare, contrast and demonstrate leadership behaviors.
- Distinguish the roles, interaction and impact of the leader, the follower and the situation in the leadership model.

BUSD070. - Principles of E-Commerce

- Analyze and evaluate e-commerce business models including B2C, B2B, P2P, and others.
- Compare and contrast e-commerce strategies, including social and mobile marketing, payment processing, and security.
- Identify and explain fundamental website tools, including design tools, programming tools, and data processing tools required for the implementation of a successful e-commerce business.

BUSD071. - Digital Marketing Strategies

- Examine major digital marketing media, delivery platforms, and analytic tools to maximize the effectiveness of digital marketing to target customer segments and deliver products and services.
- Develop an effective digital marketing strategy based on multiple digital marketing platforms and tools to meet an organization's goals.

BUSD085. - Business Communication

- Describe and apply the principles of written and verbal business communications.
- Develop and use a variety of communication strategies that are effective in different business situations.
- Identify the most effective written and oral communication skills that fit personal communication style and situation.

BUSD086. - Business Analytics

- Define business analytics and its role in organizational decision-making.
- Develop actionable business recommendations based on data analysis techniques.
- Present data findings and insights using visualizations and storytelling communication methods.

BUSD087. - Introduction to Selling

- Identify and describe each of the steps in the seven step selling process model, explain the purpose of each step, and describe the essential elements of successful execution of each step.

BUSD089. - Advertising

- Relate contemporary advertising to the classic human communication model.
- Distinguish advertising from other elements of integrated marketing communications (IMC) and explain its role in an organization's marketing strategy.
- Identify the major social and economic aspects of advertising in the U.S. and contrast those with the role of advertising in other countries.

BUSD090. - Principles of Marketing

- Analyze the effectiveness of the marketing mix (product, price, promotion and distribution) for a particular organization.
- Determine appropriate market segments and target markets and explain consumer behavior.
- Identify global forces external to the organization that affect marketing strategies.

BUSD094. - Social Media Marketing Strategies

- Analyze relationship building with target customers and diverse partners and design a social media plan likely to produce favorable outcomes.
- Examine a wide variety of cost-effective promotion tools.

BUSD350. - Nonprofit Corporations

- Examine the foundation, requirements, characteristics, and elements of effective functioning of nonprofit organizations.
- Distinguish the roles, interdependence, and impact of a nonprofit governing board as distinct from staff and volunteers.

BUSD366. - Fundraising for Nonprofits

- Examine how non-profits prepare for and implement the fundraising process successfully.
- Design an effective fundraising plan for a non-profit that targets promising donors and/or funding sources, considers organizational capabilities and strategic goals, and includes relevant tracking and performance measures.

BUSD615. - Ethics and Sustainability

- Define ethics, business ethics, and sustainability, explain the relationship between them, and describe the nature, scope, and purpose of business ethics.
- Describe and evaluate the principles, goals and methods of the global sustainability movement.
- Examine ethical decision-making, the ethical behavior model, and the systematic rational ethical decision-making process.

BUSD620. - Leadership and Team Dynamics

- Critically analyze a leader's behaviors and the likely impact on followers.
- Construct a Personal Development Plan containing specific actions associated with effective leaders.

CIS - Computer Sci and Info Systems**CSLO****CISD002. - Computers and the Internet in Society**

- Analyze effects of the Internet, computers, and cellular communications on individuals, culture, and society.

- Analyze effects of the Internet, computers, and cellular communications on institutions, including education, business, economics, and politics.
- Judge effects of the Internet and computers on law and ethics.

CISD003. - Business Information Systems

- Create and execute a plan to improve success factors in a business, using software and hardware.
- Produce a business document utilizing word processing tools to show use of various formatting, such as columns, outline, and numbering.
- Design a model for business decision making utilizing spreadsheet software and incorporating charts, formulas, and formatting.
- Create a presentation about a business technology implementation utilizing presentation software incorporating graphics, tables, process flow diagrams and text.
- Solve a business data problem by utilizing database technology.

CISD004. - Computer Literacy

- Manipulate data in a spreadsheet.
- Manage file and folder properties in the operating system.
- Extract information from a database program.

CISD005. - Swift Programming

- Design, code, document, analyze, debug, and test introductory level Swift programs that include Swift kits.
- Code and debug Swift programs using Xcode Playgrounds - Apple's IDE for Swift programming.

CISD006. - Introduction to Data Communication and Networking

- Describe the various components, protocols, architectures, and applications of current communication and networking technologies, which are used in LANs, WANs, and the Internet.
- Define the basic properties of the TCP/IP, local area, wide area, and fiber optic networks.

CISD009. - Introduction to Data Science for Programmers

- Collect, clean, analyze, and visualize data to meet and defend a measured objective.
- Gather data and choose a model to train and tune the machine learning tool and interpret the result.

CISD011. - Foundations of Data Science for All

- Write short programs to collect data, apply statistical concepts, visualize, and analyze data
- Calculate and interpret basic statistics in a dataset and apply basic regression and classification techniques for predictions

CISD014A - Visual Basic .NET Programming I

- Design a graphical user interface in Visual Basic .NET implementing basic controls including text boxes, labels, list boxes, buttons, radio buttons, and checkboxes.
- Design the algorithm, write, document, debug and test the code for event procedures and sub procedures of a Visual Basic application incorporating elementary coding constructs.
- Read, analyze and explain introductory level Visual Basic code.

CISD018A - Introduction to Unix/Linux

- Use the Unix/Linux Operating System utilities and shell features for basic file manipulation, networking, and communication.

CISD018B - Advanced UNIX/LINUX

- Use the Unix/Linux Operating System utilities, shell features, and regular expressions for advanced text file manipulation.

CISD018C - Bash Scripting

- Create bash scripts that interact with the Unix/Linux operating system.

CISD21JA - Introduction to x86 Processor Assembly Language and Computer Architecture

- Investigate architectural components and design of microprocessors as well as evaluate and formulate computer and numeric data representation.
- Design, code, document, analyze, debug, and test introductory level assembly programs for the x86 family of processors.

CISD022A - Beginning Programming Methodologies in C++

- Design solution, create algorithms, code in C++, document, debug, and test program for an introductory level program using appropriate design methodology incorporating elementary C++ programming constructs.

- Read, analyze and explain introductory level C++ programs.

CISD022B - Intermediate Programming Methodologies in C++

- Create algorithms, code, document, debug, and test intermediate level C++ programs.
- Read, analyze and explain intermediate level C++ programs and their efficiency.
- Design solutions for intermediate level problems using appropriate design methodology incorporating intermediate programming constructs including structures and objects.

CISD22BH - Intermediate Programming Methodologies in C++ - HONORS

- Read, analyze and explain intermediate level C++ programs and their efficiency.
- Design solutions for intermediate level problems using appropriate design methodology incorporating intermediate programming constructs including structures and objects.
- Create algorithms, code, document, debug, and test intermediate level C++ programs.

CISD022C - Data Abstraction and Structures

- Read, analyze and explain data structures programs.
- Create and analyze efficiency of data structures algorithms, code, document, debug, and test large data structures programs using appropriate design methodology incorporating advanced programming concepts.

CISD22CH - Data Abstraction and Structures - HONORS

- Read, analyze and explain data structures programs.
- Create and analyze efficiency of data structures algorithms, code, document, debug, and test large data structures programs using appropriate design methodology incorporating advanced programming concepts.

CISD026A - C as a Second Programming Language

- Read, analyze and explain introductory and intermediate level C programs.
- Design solutions, create algorithms, code, document, debug, and test introductory and intermediate level problems using appropriate design methodology incorporating elementary and intermediate programming constructs.

CISD026B - Advanced C Programming

- Read, analyze and explain advanced C programs.
- Design solutions, create algorithms, code in C, document, debug, and test advanced C programs using appropriate design methodology incorporating advanced C programming constructs
- Create algorithms, code, document, debug, and test advanced level C programs using multiple source and header files.

CISD26BH - Advanced C Programming - HONORS

- Read, analyze and explain advanced C programs.
- Design solutions, create algorithms, code in C, document, debug, and test advanced C programs using appropriate design methodology incorporating advanced C programming constructs.
- Create algorithms, code, document, debug, and test advanced level C programs using multiple source and header files.

CISD028. - Object Oriented Analysis and Design

- Design and develop complex software solution from raw requirements using Object Oriented Analysis and Design techniques.
- Synthesize major architectural patterns and frameworks and apply them to create software solutions.

CISD029. - Advanced C++ Programming

- Read, analyze and explain advanced C++ programs.
- Design solutions, create algorithms, code, document, debug, and test C++ programs using appropriate design methodology and incorporating advanced C++ programming constructs.

CISD030A - Introduction to C# Programming

- Create algorithms, code, document, debug, and test intermediate level C# programs.
- Read, analyze and explain intermediate level C# programs.

CISD030B - Advanced C# Programming

- Read, analyze and explain advanced C# programs.

- Create algorithms, code, document, debug, and test advanced problems using appropriate design methodology incorporating object oriented programming constructs and advanced C# concepts.

CISD031. - Operating System Concepts

- Analyze the functionality of a modern operating system in terms of different management functions.
- Describe the algorithms and basic data-structures being utilized in modern operating systems.

CISD035A - Java Programming

- Read, analyze and explain intermediate level Java programs.
- Create algorithms, code, document, debug, and test intermediate level Java programs.

CISD035B - Advanced Java Programming

- Read, analyze and explain advanced Java programs.
- Create algorithms, code, document, debug, and test advanced problems using appropriate design methodology incorporating object oriented programming constructs and advanced Java concepts.

CISD036A - Introduction to Computer Programming Using Java

- Create algorithms, code, document, debug, and test introductory level Java programs incorporating elementary programming constructs.
- Read, analyze and explain introductory level Java programs.

CISD036B - Intermediate Problem Solving in Java

- Read, analyze and explain intermediate level Java programs.
- Design solutions for intermediate level problems using appropriate design methodology incorporating intermediate programming constructs.
- Create algorithms, code, document, debug, and test intermediate level Java programs.

CISD037. - Java for Mobile Development

- Design mobile applications using object-oriented methodology and advanced Java concepts using Android Development Kit.
- Create algorithms, code, document, debug, and test mobile applications.

CISD038. - iOS Development

- Design mobile apps using object-oriented methodology and advanced Swift concepts using iOS Development Kit and APIs.
- Create algorithms, code, document, debug, and test mobile applications.

CISD040. - Introduction to Programming in Python

- Design, code, document, analyze, debug, and test introductory level Python programs.

CISD041A - Python Programming

- Design, code, document, analyze, debug, and test introductory level Python programs that include Python modules.

CISD041B - Advanced Python Programming

- Design, code, document, analyze, debug, and test advanced level Python programs that include Python modules for database, networking, graphics, and extensions.

CISD043. - Systems Design

- Describe and communicate system types and the systems development life cycle.
- Analyze system requirements and evaluate proposed solutions.

CISD044A - Database Management Systems

- Prepare database design using database normalization theory and appropriate database schema representation techniques.
- Code, document, debug, and test introductory level SQL programs.

CISD044F - Introduction to Big Data and Analytics

- Design, implement and debug a large scale database system using technology like Hadoop or Cassandra.
- Perform data analysis using a large-scale database systems given a set of user requirements.

CISD044H - R Programming

- Design, implement and debug R programs to process data from various sources for data analysis.

- Use R-graphics to display and visualize data.

CISD045A - Internet Concepts and TCP/IP Protocols

- Define fundamental concepts of TCP/IP architecture and protocols, with emphasis on the network layer, transport layer, and application layer of the suite.
- Describe the applications of TCP/IP to the Internet.

CISD046. - Fundamentals of Digital Security

- Determine methods to protect network against security vulnerabilities.

CISD057. - Website Administration

- Demonstrate how to install, configure and maintain a web server.
- Create and apply user security policies to web server configuration.

CISD064B - Introduction to SQL

- Design solutions for introductory level problems using appropriate design methodology incorporating interpreted database constructs.
- Create algorithms, code, document, debug, and test introductory level SQL programs.

CISD064C - Introduction to PL/SQL

- Design solutions for introductory level problems using appropriate design methodology incorporating procedural database constructs.
- Create algorithms, code, document, debug, and test introductory level PL/SQL programs.

CISD064E - Fundamentals of Large Scale Cloud Computing

- Design, implement and debug a distributed system using technology like Web Services.

CISD064G - Data Visualization Methodology and Tools

- Design and implement reports and dashboards for data and trends analysis using technologies like Tableau, PowerBI, BIRT or Pentaho.

CISD067A - Local Area Networks

- Define fundamental concepts of local area networks (LANs) architecture and protocols with emphasis on the first two layers, physical and data link layer, of the OSI model.
- Design a local-area network.

CISD067B - Introduction to Wide Area Networking

- Investigate fundamental concepts of TCP/IP protocol suite with emphasis on the network layer, transport layer, and application layer of the suite.
- Design a small wide-area network.

CISD069A - Technical Support Fundamentals

- Student Learning Outcome: Gather the basics of computer systems, assemble one and install an operating system.
- Student Learning Outcome: Identify how the Internet works and its impact in the modern world.
- Student Learning Outcome: Identify how applications are created, how their code executes on a computer and successfully apply problem-solving methodologies in an IT setting.

CISD069B - The Bits and Bytes of Computer Networking

- Describe computer networks in terms of a five-layer model and the standard protocols involved with TCP/IP communications.
- Associate powerful network troubleshooting tools and techniques and network services like DNS and DHCP.

CISD069C - Operating Systems and You: Becoming a Power User

- Configure disk partitions and filesystems and successfully leverage system logs and remote connection tools.
- Navigate the Windows and Linux filesystems using both a graphical user interface and a command line interpreter.
- Setup user security, and install and configure software on multiple common operating systems.

CISD069D - System Administration and IT Infrastructure Services

- Utilize best practices for choosing hardware, vendors, and services for your organization.
- Understand how the most common infrastructure services that keep an organization running work and how to manage infrastructure servers.
- Manage an organization's computers and users using the directory services, Active Directory, and OpenLDAP.

- Learn about disaster recovery and use system administration knowledge to improve IT processes.

CISD069E - IT Security: Defense Against the Digital Dark Arts

- Summarize how various encryption algorithms and techniques work and their benefits and limitations, various authentication systems and difference between authentication and authorization.
- Evaluate potential risks and recommend ways to reduce risk, make recommendations on how best to secure a network and help others to understand security concepts and protect themselves.

CISD075B - Internet Programming with TCP/IP

- Design and construct client and server applications using TCP/IP protocol suite and applying algorithms for enabling servers.
- Create algorithms, code, document, debug, and test client/server applications.

CISD077. - Special Projects in Computer Information Systems

- Explain the fundamental concepts of the Computer Information Systems topic.
- Apply the fundamental concepts of the Computer Information Systems topic.

CISD077X - Special Projects in Computer Information Systems

- Explain the fundamental concepts of the Computer Information Systems topic.
- Apply the fundamental concepts of the Computer Information Systems topic.

CISD077Y - Special Projects in Computer Information Systems

- Explain the fundamental concepts of the Computer Information Systems topic.
- Apply the fundamental concepts of the Computer Information Systems topic.

CISD079. - Managing Technology Projects

- Determine and match the expectations of the client and complete the steps of a technology project.
- Demonstrate the systematic approach to project design and management.

CISD082W - Current Topics in Computer Information Systems

- Explain the fundamental concepts of the Computer Information Systems topic.
- Apply the fundamental concepts of the Computer Information Systems topic.

CISD082X - Current Topics in Computer Information Systems

- Explain the fundamental concepts of the Computer Information Systems topic.
- Apply the fundamental concepts of the Computer Information Systems topic.

CISD082Y - Current Topics in Computer Information Systems

- Explain the fundamental concepts of the Computer Information Systems topic.
- Apply the fundamental concepts of the Computer Information Systems topic.

CISD082Z - Current Topics in Computer Information Systems

- Explain the fundamental concepts of the Computer Information Systems topic.
- Apply the fundamental concepts of the Computer Information Systems topic.

CISD089A - Web Page Development

- Create a web site using HTML and CSS and published to a web server.

CISD089C - Client-Side Programming with JavaScript

- Write functions and scripts using JavaScript.
- Create web pages using Hypertext Markup Language (HTML), Cascading Style Sheets (CSS), JavaScript, and the Document Object Model (DOM), and demonstrate how they interact together within a web document.

CISD089D - Data-Driven Web Application Development

- Create Web applications that deliver similar features and functions previously associated with desktop applications through the use of libraries or frameworks.
- Create web pages using Hypertext Markup Language (HTML), Cascading Style Sheets (CSS), JavaScript, and the Document Object Model (DOM), and demonstrate how they interact together within a web document using techniques that are responsive to differing screen sizes.

- Read, analyze and explain intermediate level Web Applications.
- Create data-driven web applications that work with client or server storage systems.

CISD095A - Project Management - A Practicum

- Manage projects using five bodies of knowledge including initiation, planning, control, execution and closing.
- Manage project risks by identifying them and mitigating them.

CISD095B - Project Planning and Control - A Practicum

- Create a detailed project plan complete with schedule, budget, risk mitigation plan, data and communication management plan for medium to large size projects.
- Create a detailed plan to control budget, scope, quality, schedule and team risks.

CISD095C - Risk Assessment and Mitigation - A Practicum

- Manage risks using tools and techniques learned in the course.
- Develop procedures and techniques to pro-actively reduce threats for project objectives.

CISD095D - Managing Outsourcing - A Practicum

- Create a RFP for a given set of requirements.
- Accept and analyze bids for an RFP.
- Manage the outsourced vendor inline to the contractual requirements.

CISD095E - CAPM and PMP Exam Preparation

- Complete a CAPM or PMP application.
- Prepare for CAPM and PMP exam by exploring Project Management Book of Knowledge (PMBOK).

CISD095F - Managing Cloud Projects

- Create cloud strategy within a business context being mindful of governance issues and business processes.

CISD095G - Agile Project Management - A Practicum

- Illustrate usage of Agile Software practices in product delivery, tracking and monitoring projects.
- Demonstrate creation of project plans with Agile Development methodology while understanding business value and planning feature iterations.

CISD095H - Business and Requirement Analysis

- Create business requirements being mindful of customer needs, objectives and change management.

CISD095J - Applying Emotional Intelligence for Effective Project Management

- Recognize emotions in the workplace and practice empathy and rapport to better manage project tensions due to emotions.

CISD095K - Program Management - A Practicum

- Manage programs by identifying strategic objectives, manage program life cycle, manage stakeholder expectations and governance.

CISD095L - Portfolio Management - A Practicum

- Manage portfolio by identifying strategic objectives, manage program life cycle, manage stakeholder expectations and governance.

CISD097. - ADOBE Animate

- Develop, with accuracy, use of Flash animation by using filters, tools, vectors, bitmaps, digital video and graphics within software to achieve clients' goals of dynamic, interactive website.
- Develop and program inverse Kinematics, build and program interactivity, program and use video, program and control playback sound
- Implement optimal program playback and publishing settings for major platforms.

CISD098. - Digital Image Editing Software (Photoshop)

- Demonstrate correct use of Photoshop tools to alter existing graphics for Internet, print applications, scientific research imaging, and medical imaging.
- Convert digital images and digital media into a movie format for interactive platforms of phone apps and web pages.

CISD099. - Office Software Applications

- Demonstrate correct format for creating letters using a word processing software.

- Create spreadsheets to solve business problems.
- Use of database software to create, search, modify and arrange information.
- Create a text/graphics presentation using presentation graphics software.

CISD102. - Ethical Hacking

- Demonstrate the ability to attack and defend a network.

CISD104. - Digital Forensics and Hacking Investigation

- Demonstrate data recovery and cybercrime forensics investigation techniques.

CISD105. - Cloud Security Fundamentals

- Identify the risks in utilizing cloud services.
- Identify the steps required to secure a cloud environment.

CISD108. - Personal Computer Security Basics

- Determine the best plan of action to stop malware based on security breach scenarios.

CISD111X - Support for Foundations of Data Science for All

- Develop skills to collect data, apply statistical concepts, visualize, and analyze data
- Develop skills to calculate and interpret basic statistics in a dataset and apply basic regression and classification techniques for predictions

CISD170F - Windows Administration

- Manage disks and file systems.
- Configure Windows security features, networking and application support, and troubleshoot system.

CISD308. - Personal Computer Security Basics

- Determine the best plan of action to stop malware based on security breach scenarios.

CISD311. - Foundations of Data Science for All

- Write short programs to collect data, apply statistical concepts, visualize, and analyze data
- Calculate and interpret basic statistics in a dataset and apply basic regression and classification techniques for predictions

CISD311X - Support for Foundations of Data Science for All

- Develop skills to collect data, apply statistical concepts, visualize, and analyze data
- Develop skills to calculate and interpret basic statistics in a dataset and apply basic regression and classification techniques for predictions

CISD318A - Introduction to Unix/Linux

- Use the Unix/Linux Operating System utilities and shell features for basic file manipulation, networking, and communication.

CISD340. - Introduction to Programming in Python

- Design, code, document, analyze, debug, and test introductory level Python programs.

CISD344A - Database Management Systems

- Code, document, debug, and test introductory level SQL programs
- Prepare database design using database normalization theory and appropriate database schema representation techniques.

CISD344F - Introduction to Big Data and Analytics

- Design, implement and debug a large scale database system using technology like Hadoop or Cassandra.
- Perform data analysis using a large-scale database systems given a set of user requirements.

CISD344H - R Programming

- Design, implement and debug R programs to process data from various sources for data analysis.
- Use R-graphics to display and visualize data.

CISD364B - Introduction to SQL

- Create algorithms, code, document, debug, and test introductory level SQL programs.
- Design solutions for introductory level problems using appropriate design methodology incorporating interpreted database constructs.

CISD364C - Introduction to PL/SQL

- Design solutions for introductory level problems using appropriate design methodology incorporating procedural database constructs.
- Create algorithms, code, document, debug, and test introductory level PL/SQL programs.

CISD364E - Fundamentals of Large Scale Cloud Computing

- Design, implement and debug a distributed system using technology like Web Services.

CISD364G - Data Visualization Methodology and Tools

- Design and implement reports and dashboards for data and trends analysis using technologies like Tableau, PowerBI, BIRT or Pentaho.

CISD369A - Technical Support Fundamentals

- Gather the basics of computer systems, assemble one and install an operating system.
- Identify how the Internet works and its impact in the modern world.
- Identify how applications are created, how their code executes on a computer and successfully apply problem-solving methodologies in an IT setting.

CISD369B - The Bits and Bytes of Computer Networking

- Describe computer networks in terms of a five-layer model and the standard protocols involved with TCP/IP communications.
- Associate powerful network troubleshooting tools and techniques and network services like DNS and DHCP.

CISD369C - Operating Systems and You: Becoming a Power User

- Configure disk partitions and filesystems and successfully leverage system logs and remote connection tools.
- Navigate the Windows and Linux filesystems using both a graphical user interface and a command line interpreter
- Setup user security, and install and configure software on multiple common operating systems.

CISD369D - System Administration and IT Infrastructure Services

- Utilize best practices for choosing hardware, vendors, and services for your organization.
- Understand how the most common infrastructure services that keep an organization running work and how to manage infrastructure servers.
- Manage an organization.
- Learn about disaster recovery and use system administration knowledge to improve IT processes.

CISD369E - IT Security: Defense Against the Digital Dark Arts

- Summarize how various encryption algorithms and techniques work and their benefits and limitations, various authentication systems and difference between authentication and authorization.
- Evaluate potential risks and recommend ways to reduce risk, make recommendations on how best to secure a network and help others to understand security concepts and protect themselves.

CISD395A - Project Management - A Practicum

- Manage projects using five bodies of knowledge including initiation, planning, control, execution and closing.
- Manage project risks by identifying them and mitigating them.

CISD395B - Project Planning and Control - A Practicum

- Create a detailed project plan complete with schedule, budget, risk mitigation plan, data and communication management plan for medium to large size projects.
- Create a detailed plan to control budget, scope, quality, schedule and team risks.

CISD395C - Risk Assessment and Mitigation - A Practicum

- Manage risks using tools and techniques learned in the course.
- Develop procedures and techniques to pro-actively reduce threats for project objectives.

CISD395D - Managing Outsourcing - A Practicum

- Create a RFP for a given set of requirements.
- Accept and analyze bids for an RFP.
- Manage the outsourced vendor inline to the contractual requirements.

CISD395E - CAPM and PMP Exam Preparation

- Complete a CAPM or PMP application.
- Prepare for CAPM and PMP exam by exploring Project Management Book of Knowledge (PMBOK).

CISD397. - ADOBE Animate

- Develop, with accuracy, use of Flash animation by using filters, tools, vectors, bitmaps, digital video and graphics within software to achieve clients' goals of dynamic, interactive website
- Develop and program inverse Kinematics, build and program interactivity, program and use video, program and control playback sound
- Implement optimal program playback and publishing settings for major platforms.

CISD398. - Digital Image Editing Software (Photoshop)

- Demonstrate the correct use of Photoshop tools to alter existing graphics for the Internet, print applications, scientific research imaging, and medical imaging.
- Convert digital images and digital media into a movie format for interactive platforms of phone apps and web pages.

CISD399. - Office Software Applications

- Demonstrate correct format for creating letters using a word processing software.
- Create spreadsheets to solve business problems.
- Use of database software to create, search, modify and arrange information.
- Create a text/graphics presentation using presentation graphics software.

REST - Real Estate

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RESTD050. - Real Estate Principles

- Demonstrate the knowledge of how real estate property is purchased and sold.
- Describe how title to real property is held in California.
- Identify the issues that can arise in real Estate contracts.

RESTD051. - Real Estate Practices

- Demonstrate an ability to handle offers, including negotiating and making counteroffers.
- Describe the events that take place after a purchase and sale agreement is signed.
- Describe the functions of a property manager and identify the types of documents commonly used by property managers.

RESTD052A - Legal Aspects of Real Estate

- Demonstrate a knowledge of the basic workings of the legal system in California and the United States as it applies to California real estate and demonstrate a knowledge of the various types of listing agreements.
- Explain and evaluate the real estate licensing process and the administrative agencies that regulate the California real estate industry.
- Explain and evaluate the different forms of holding title to real estate in California and risks/returns therein.

RESTD053. - Real Estate Finance

- Demonstrate knowledge of how real estate is financed in California from a lending, regulatory and borrowers perspective.
- Demonstrate knowledge as to the real estate lending/borrowing process from underwriting and qualifying through funding and loan retirement.

RESTD055. - Real Estate Property Management

- Create property management marketing plan.
- Identify essential lease provisions.
- Identify best practices to reduce property management risk.

RESTD061. - Real Estate Investments

- Identify, analyze and evaluate real estate investments and construct cash flow models utilizing discounted cash flows for analysis of economic viability of investment property.
- Evaluate the risks and returns of real estate investment in residential, commercial, industrial properties as well as land development.

- Explain and evaluate the taxation and financing issues in the acquisition, ownership and sale of real estate investments.

RESTD350. - Real Estate Principles

- Demonstrate the knowledge of how real estate property is purchased and sold.
- Describe how title to real property is held in California.
- Identify the issues that can arise in real Estate contracts

RESTD351. - Real Estate Practices

- Demonstrate an ability to handle offers, including negotiating and making counteroffers.
- Describe the events that take place after a purchase and sale agreement is signed.
- Describe the functions of a property manager and identify the types of documents commonly used by property managers.

RESTD352A - Legal Aspects of Real Estate

- Demonstrate a knowledge of the basic workings of the legal system in California and the United States as it applies to California real estate and demonstrate a knowledge of the various types of listing agreements.
- Explain and evaluate the real estate licensing process and the administrative agencies that regulate the California real estate industry.
- Explain and evaluate the different forms of holding title to real estate in California and risks/returns therein.

RESTD353. - Real Estate Finance

- Demonstrate knowledge of how real estate is financed in California from a lending, regulatory and borrowers perspective.
- Demonstrate knowledge as to the real estate lending/borrowing process from underwriting and qualifying through funding and loan retirement.

RESTD355. - Real Estate Property Management

- Create property management marketing plan.
- Identify essential lease provisions.
- Identify best practices to reduce property management risk.

RESTD361. - Real Estate Investments

- Identify, analyze and evaluate real estate investments and construct cash flow models utilizing discounted cash flows for analysis of economic viability of investment property.
- Evaluate the risks and returns of real estate investment in residential, commercial, industrial properties as well as land development.
- Explain and evaluate the taxation and financing issues in the acquisition, ownership and sale of real estate investments.