Occupational Health Safety and Enviroment

Specialization	**Program Requirements**
Course Number	**21301111**
Course Title	**General Mathematics**
Credit Hours	**(3)**
Theoretical Hours	**(2)**
Practical Hours	**(2)**

Brief Course Description:

This course covers the following items:

- Coordinates ,Graphs , lines (real numbers, applications ,coordinate planes, Distance and Circles), functions and limits (Operations and Graphs on functions, limits and Continuity of Trigonometric functions),Differentiation(Techniques of Differentiation, The Chain Rule, Implicit Differentiation), Application of Differentiation (Related rates , Concavity, graphs of polynomials, Applications : Rolls Theorem and Mean – Value Theorem), Integration (Integration by substitution, Definite Integral, the Second fundamental Theorem of Calculus)،Applications of the Definite Integral (Area Between two Curves ,Volumes, Applications : area of surface of revolution).

Course Objectives:

This course aims at:

1. Understand basic facts and terminology to numbers, coordinate planes ،graphs, and lines.
2. Describe functions, investigate some of their properties, and use the arithmetic operations on functions.
3. Define and calculate limits of functions and use the limits to test the functions for continuity.
4. Derive different types of functions and derive formulas that express the derivative for some functions.
5. Use derivatives to find the rate at which some quantity is chaining, to make reliable graphs of polynomials and rational functions and to solve some applied optimization problems.
6. Evaluate definite and indefinite integrals.
7. Calculate the area between curves; find arc length of plane curves.
8. find volumes of three-dimensional solid

Detailed Course Description:

Unit Number	Unit Name	Unit Content	Time Needed
1.	**coordinates ,Graphs, lines**	▪ Real number, interval and inequalities, absolute value, coordinate planes and Graphs, lines, distance and circles	
2.	**Functions and limits**	▪ functions, operations on functions, Graphs of functions ,limits, limits (computational techniques) ▪ continuity limits and continuity of trigonometric functions	
3.	**Differentiation**	▪ Tangent lines and rates of change, the derivative techniques of differentiation, derivative of trigonometric functions, the chain rule, implicit differentiation differentials	
4.	**Application of Differentiation**	▪ Related Rates, Intervals of increase And Decrease and Concavity, Relative extrema, ▪ Graphs of polynomials and Rational functions, other Graphing problems, maximum and Minimum values of function, Applied Maximum and Minimum problems, Rolles Theorom and Mean- value Theorem	
5.	**Integration**	▪ Antiderivatives and the indefinite Integral, Integration by substitution, Areas as limits , ▪ the definite Integral, The first fundamental Theorem of calculus, Evaluating definite Integrals by fundamental substitution, The Second Theorem of calculus	
6.	**Application of the Definite Integral**	▪ Area between two curves, volumes by slicing , discs and washers, volumes by cylindrical shells, length of a plan curve, Area of a surface of a surface of revolution	

Evaluation Strategies:

Exams		Percentage	Date
Exams	First Exam	20%	--/--/----
	Second Exam	20%	--/--/----
	Final Exam	50%	--/--/----
Homework and Projects		10%	
Discussions and lecture Presentations			

Teaching Methodology:

- Lecture

Text Books & References:

Textbook:

1. Calculus, Howard Anton, Irl Bivens and Stephen Davis, 8th Edition, John Wiley and Sons Inc., New York 2005.

Occupational Health Safety and Enviroment

Specialization	**Program Requirements**
Course Number	**21302111**
Course Title	**General Physics**
Credit Hours	**(3)**
Theoretical Hours	**(2)**
Practical Hours	**(2)**

Brief Course Description:

- Vectors analysis, Measurement and units and error estimation, Motion in one and Two or three dimensions, laws of motion, circular motion and application, work power and energies, linear momentum and collisions, rational motion of rigid bodies, Rolling and angular momentum, kinds of oscillation.

Course Objectives:

This course aims at:

1. know methods of measurements, units
2. know the primitive unites and their derivatives
3. know the motion in one and different directions
4. Calculate the distance velocity, acceleration
5. know the laws of motion, Newton laws
6. know the circular motion
7. know the kinetic, potential and the mechanical energy
8. know the power ,work, linear momentum
9. Differentiate between tough and smooth surfaces.
10. know Rolling motion and angular momentum
11. know oscillation and Oscillatory Motion.

Detailed Course Description:

Unit Number	Unit Name	Unit Content	Time Needed
1.	**Vectors**	▪ Coordinate systems ▪ Vector and Scalar Quantities ▪ Some properties of vectors ▪ Components of a vectors and Unit Vectors	
2.	**Motion in one Dimension**	▪ Displacements, Velocity, and speed ▪ Instantaneous velocity and speed ▪ Acceleration ▪ Motion Diagrams ▪ one – Dimensional motion with Constant Acceleration ▪ Freely falling Objects	
3.	**Motion in Two Dimension**	▪ The Displacements, velocity, and Acceleration Vectors ▪ Two-Dimensional Motion with constant Acceleration ▪ Projectile motion ▪ Uniform Circular motion ▪ Tangential and radial Acceleration ▪ Relative velocity and relative Acceleration	
4.	**The law of Motion**	▪ The concept of force ▪ Newton's first Law and Inertial frames −Mass ▪ Newton's second Law ▪ The force of Gravity and weight ▪ Newton's second law ▪ The force of Gravity and weight ▪ Newton's Third law ▪ some Applications of Newton's law ▪ forces of friction ▪ Newton laws of Universal Gravitations ▪ Measuring the Gravitational constant ▪ Free fall Acceleration and the Gravitational ▪ Conservation of Angular Momentum	
5.	**Circular Motion**	▪ Newton's Second Law Applied to	

	and Other Applications of Newton's Laws	Uniform Circular Motion. Non uniform Circular Motion	
6.	**Energy and Energy Transfer (Work & Energy)**	▪ Work Done by a Constant Force ▪ The Scalar Product of Two Vectors ▪ Work Done by a Varying Force ▪ Kinetic Energy and the Work Kinetic Energy Theorem ▪ Power	
7.	**Potential Energy**	▪ Potential Energy of a System. ▪ The Isolated System- Conservation of Mechanical Energy. ▪ Conservative and Non-conservative Forces.	
8.	**Linear Momentum and Collisions**	▪ Linear Momentum and Its Conservation. ▪ Impulse and Momentum. ▪ Collisions in One Dimension. ▪ Two-Dimensional Collisions. ▪ The Center of Mass.	
9.	**Electricity**	▪ Properties of electric charges ▪ Insulator and conductor ▪ Coulomb's law. ▪ The electric field ▪ Electric field lines	
10.	**Electrical potential**	▪ Potential difference ▪ Potential difference in a uniform electric field ▪ Electric potential and potential energy due to point charges	
11.	**Capacitance**	▪ Capacitance ▪ Combinations of capacitors ▪ Energy stored in capacitor	
12.	**Current and resistance**	▪ Electric current ▪ Resistance and ohm's law ▪ Electrical energy and power ▪ Resistors in series and in parallel ▪ Kirchhoff's rules	

Evaluation Strategies:

Exams		Percentage	Date
Exams	First Exam	20%	--/--/----
	Second Exam	20%	--/--/----
	Final Exam	50%	--/--/----
Homework and Projects		10%	
Discussions and lecture Presentations			

Teaching Methodology:

- Lecture

Text Books & References:

References

1. Physics for scientists and Engineers 7th edition 2004 Raymond A. Serway ISBN 0-03-022657-0 Robert J.Beichner Johan w. Jewett Jr. Contributer Anthers
2. Fundamental of physics David Halliday Robert Resnick Jeart walker th edition Johan wiley and Sons .Inc ISBN 0-471-32235-6
3. University physics (2002) last Edition Francis w. sears Mark w .zemansky Hugh d. young Addison – Wesley publishing company

Occupational Health Safety and Enviroment

Specialization	Program Requirements
Course Number	21302112
Course Title	General Physics lab
Credit Hours	(1)
Theoretical Hours	(0)
Practical Hours	(3)

Brief Course Description:

- In this course, the student performs ten experiments in mechanics, in Parallels with the physics course 101 .

Course Objectives:

This course aims at:

1. Improved their skill and confidence in the acquisition and analysis of experimental data.
2. Improved their ability to record their work concisely and precisely.
3. Improved the ability to identify the main sources of uncertainties in measurements.
4. Understand physics phenomena treated in the lecture course.

Detailed Course Description:

Unit Number	Unit Name	Unit Content	Time Needed
1.	**Significant Figures & Errors**		
2.	**Measurements And Uncertainties**		
3.	**Vectors (equilibrium of Forces)**		
4.	**Force and Motion**		
5.	**Rectilinear Of Kinematics of Motion**		
6.	**Friction**		
7.	**Centripetal Force**		
8.	**Conservation Of Linear Momentum (Collision)**		
9.	**Ohm's law**		
10.	**Wheatstone bridge**		

Evaluation Strategies:

Exams		Percentage	Date
Lab. Reports		30%	--/--/----
Mid-term Exam (Practical)		20%	--/--/----
Final Exam		50%	

Teaching Methodology:

- Lecture

Text Books & References:

References:

1. General physics manual (111, prepared by AL – Balqa Applled University, 1999
2. Exercises and experiments in physics, john E. Williams.
3. laboratory Experiments, University of Jordan.
4. Experiments in Mechanics, Yarmouk University

Occupational Health Safety and Enviroment	
Specialization	**Program Requirements**
Course Number	**20201111**
Course Title	**Engineering Workshops**
Credit Hours	**(1)**
Theoretical Hours	**(0)**
Practical Hours	**(3)**

Brief Course Description:

- Development of basic skills in Mechanics, Welding, Lathing, and Central Heating works, including Hand Filing, Turning, Welding, Metal Cutting and Forming.

Course Objectives:

This course aims at:

1. Technical basic skills by using engineering and practical methods.
2. Manual utilization for working by tools, machines in workshops as mechanics, welding, lathing, and central heating.
3. Utilization tools and instruments both electrical and mechanical.
4. Determination of production works cost.
5. Applied safety tools in workshops.

Detailed Course Description:

1. **General Mechanics Workshop:**

Unit Number	Unit Name	Unit Content	Time Needed
1.	**Mechanical instrument**	▪ Safety in mechanics workshop ▪ Tools and mechanical instruments (Ruler, Caliper, angle, protractor, etc.) with their utilizations, classifications, and applications ▪ Practical applications on using mechanical measurement tools	(2 hours)
2.	**Sheet works and drafting tools**	▪ Basic marking tools (trammel, markers, dot marker, gauge marker.) ▪ Drawing on simple flat work pieces ▪ Drawing on cylindrical work pieces ▪ Repairing work pieces and removing chip and dust. ▪ Practical applications on sheets using drawing tools	(2 hours)
3.	**Metal cutting**	▪ Cutting by using manual and fixed automatic cutters. ▪ Cutting by using manual and electrical metal saws. ▪ Cutting by using files. ▪ Practical applications like rounded cutting, angular cutting, pipe and flat iron shearing, making hollow shapes.	(4 hours)
4.	**Filing**	▪ File types, categories, and applications. ▪ File handling and fixing work pieces on vice. ▪ Practical applications like filing square and flat iron shapes with different sizes.	(2 hours)
5.	**Metal joining**	▪ Manual and mechanical drilling tools; their types and proper speeds. ▪ Methods of metal joining - joining by screws, joining by rivets, joining by welding. ▪ Practical applications including drilling of different sheets and flat pieces, and choosing the best rivet for drilling and joining metals.	(2 hours)

2. **Welding and forging workshop**

Brief Course Description:
Welding and forging: This workshop aims to teach the students a lot of practical skills and theoretical information about arc welding, gas welding, Oxy-Acetylene welding, manual casting, sheet works, screw and rivet joining, with taking into consideration all safety rules.

Detailed Course Description:

Unit Number	Unit Name	Unit Content	Time Needed
1.	**Welding**	▪ Methods of metal welding (Electrical arc, Oxy-Acetylene, Gas welding, Spot welding.) ▪ Applications on arc welding (using arc welding instruments, choosing the proper arc, choosing the welding wire, polarity, welding positions, preparing work pieces for welding.) ▪ Applications on spot welding. ▪ Application on Oxy-Acetylene welding ▪ Different applications on welding with different positions (straight lines, T welding, right angle welding, horizontal and vertical welding, pipes and sheets welding.)	(12 hours)

3.Turning Workshop :

Brief Course Description:
Turning workshop: Teaching and training students practically about working with tools, machines That are used in the turning operations, while focusing on general safety rules and reducing loses by: precise measurements, marking, drilling and turning, milling and shaping, flat surfaces grinding.

Detailed Course Description:

Unit Number	Unit Name	Unit Content	Time Needed
1.	**Turning machines**	▪ Types, main parts, motion transmission methods, cutting path, feed, and concentrating on the ratio of the feed speed and the cutting depth ▪ Methods of fixing work pieces on lathe machines ▪ Types of tools and their working temperatures with mentioning their rake angle, clearance angle, and cutting angle ▪ Basic maintenance principles about working on lathe machines ▪ Practical applications including all operations to understand each type of tool machines	(3 hours)
2.	**Turning machines**	▪ Types and parts ▪ Motion of the turning tool, choosing the proper speeds, methods of tool fastening on different milling machines and different vice ▪ Describing the main angles on milling tools and all used metals for manufacturing these tools General guides during working on milling machines and concentrating on safety and maintenance methods	(3 hours)
3.	**Shaping machines**	▪ Types and main parts ▪ Tool motion and methods of fixing tools, feed rate, required cutting depth and the existed feet range in these machines ▪ The best methods for fixing work pieces on shaping machines	(3 hours)

4. Central heating Workshop : (12 hours)

Brief Course Description:
Heating workshop: This workshop aims to teach the student how to build a central heating set in a building for both hot and cold water networks, and to teach him how to get the proper measurements and sizes during execution.

Detailed Course Description:

Unit Number	Unit Name	Unit Content	Time Needed
1.	**The utilized tubes in heat connections**	▪ Cutting, matching, and toothing black and galvanized metal tubes ▪ Determining cutting, joining, and welding defects for all types of tubes ▪ Practical applications to upgrade skills	(3 hours)
2.	**Hot Water heating system**	▪ Introducing parts and contents of hot water heating circle for closed and opened systems ▪ Boiler: types, parts, technical specifications, joining and disjoining, maintenance, and comparison between its different types ▪ Burner: types, mechanical and electrical parts, discussing each part function, illustrating specifications for the different types ▪ Joining and disjoining the parts mechanically and electrically, maintenance and repair, determining damages and defects, starting up and calibration ▪ Pumps: Classifications, specifications, parts, methods of insulating and connecting, determining defects and fixing them ▪ Radiators: Types, specifications, parts, technical comparison between their parts, connecting and insulating, introducing its connecting systems and the characteristic of each system. ▪ Cylinder: function, types, methods of insulating and connecting ▪ Chimney: types, specifications, function, maintenance methods. ▪ Expansion tank: function, joining methods ▪ Diesel tank: function, specifications, joining methods. ▪ Connection apparatus: shapes, types	(3 hours)

Evaluation Strategies:

Exams		Percentage	Date
Exams	First Exam	20%	--/--/----
	Second Exam	20%	--/--/----
	Final Exam	50%	--/--/----
Homework and Projects		10%	
Discussions and lecture Presentations			

Occupational Health Safety and Enviroment

Specialization	**Program Requirements**
Course Number	٢٠٥٠١١١١
Course Title	**General Chemistry**
Credit Hours	**(2)**
Theoretical Hours	**(2)**
Practical Hours	**(0)**

Brief Course Description:

- This course provides students with a working knowledge of the basic concepts of general chemistry needed for creative problem solving, as well as a background for advance chemistry and related science courses, and for laboratory applications.

Course Objectives:

This course aims at:

1. Draw the electronic configuration of elements.
2. Predict the physical and chemical properties of elements from the Electronic configuration of their atoms.
3. Classify elements in the periodic table.
4. Define mole and molar concentration.
5. Use the chemical equation to calculate the mass or volume of products or reactants.
6. Know the commonly used terms in chemical thermodynamics.
7. Define laws of thermodynamics.
8. Calculate the heat of reactions using a bomb calorimeter.
9. Apply Hess's Law to calculate heat of reaction.
10. Calculate $\Delta H°$ for a reaction from standard heats of formation and bond energies.
11. Study reaction that occur on electrodes of the electrolytic cells.
12. Calculate $\Delta E°$ for a Redox reaction.
13. Study the applications of electrolysis and Galvanic cells.

Detailed Course Description:

Unit Number	Unit Name	Unit Content	Time Needed
1.	**Electronic structure and periodic properties of Elements**	❖ Atomic structure and quantum numbers. ❖ Electronic configuration, Periodic table. ❖ Variations of chemical properties through the periodic table (Ionization energy, Electron affinity, Atomic size, and Metallic Properties).	
2.	**Chemical Bonding**	❖ Lewis symbols. ❖ Ionic bond. ❖ Covalent bond and coordinated covalent.	
3.	**Quantitative chemical relationship**	❖ The mole concept. ❖ Mass and volume calculations based on the balanced equation. ❖ Molar and % w/w concentration. ❖ Application of molar concentration and % w/w in quantitative analysis.	
4.	**Reactions in solutions**	❖ Acid-base titrations. ❖ Oxidation numbers. ❖ Oxidation-reduction reactions. ❖ Balancing chemical equations in acidic and basic media and stoichiometry related	
5.	**Thermo chemistry**	❖ General terms. ❖ First law of thermodynamics. ❖ Calculating the heat of the reaction using the bomb calorimeter. ❖ Calculation of $\Delta H°$ of reaction using Hess's Law. ❖ Bond energies and standard heats of formation $\Delta H_f°$. ❖ The second and third law of thermodynamics. ❖ Standard entropy and free energy.	

6.	**Electrochemistry**	❖ Metallic and electrolytic conduction. ❖ Electrolysis of aqueous solutions and molten salts. ❖ Quantitative aspects of electrolysis. ❖ Galvanic cells. ❖ Reduction potentials. ❖ Effects of concentration of cell potentials (Nernst Equation). ❖ Application of Nernst equation for ❖ determining the solubility product under constant pH. ❖ Practical application of electrolysis and Galvanic cell.	

Evaluation Strategies:

Exams		Percentage	Date
Exams	Drawing	30%	--/--/----
	First Exam	10%	--/--/----
	second	10%	--/--/----
	Final Exam	50%	--/--/----

Teaching Methodology:

❖ Lectures, Video Tapes, Slide Show, Presentations, Group work)

Text Books & References:

Occupational Health Safety and Enviroment

Specialization	**Program Requirements**
Course Number	**20501112**
Course Title	**General Chemistry Lab**
Credit Hours	**(1)**
Theoretical Hours	**(0)**
Practical Hours	**(2)**

Brief Course Description:

- This course covers theoretical concept studied in the general chemistry course Practical experiments are carried out on following topics: Physical and chemical properties of various substances, preparation and standardization of solutions, oxidation and reduction, acid base titration, heat of reaction.

Course Objectives:

1.

Detailed Course Description:

Unit Number	Unit Name	Unit Content	Time Needed
1.	**Exp: No.1**	Common lab: techniques	
2.	**Exp: No.2**	Physical properties of substances.	
3.	**Exp: No.3**	Chemical properties of substances.	
4.	**Exp: No.4**	Preparation and standardization of solutions 0.1 NaOH, 0.1 HCL.	
5.	**Exp: No.5**	Determination of equivalent weight of an acid.	
6.	**Exp: No.6**	PH – measurement deterring of pH of solutions by using indicators.	
7.	**Exp: No.7**	Heat of reaction (acid base titration)	
8.	**Exp: No.8**	Determination of empirical formula of compound	
9.	**Exp: No.9**	Limiting reactant of reaction.	
10.	**Exp: No.10**	Oxidation and reduction of reaction.	
11.	**Exp: No.11**	Electrolysis of (KI)	

Evaluation Strategies:

Exams		Percentage	Date
Exams	First Exam	20%	--/--/----
	Second Exam	20%	--/--/----
	Final Exam	50%	--/--/----
Homework and Projects		10%	
Discussions and lecture Presentations			

Teaching Methodology:

- Lecture

Text Books & References:

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Occupational Health Safety and Enviroment

Specialization	**Program Requirements**
Course Number	**22401113**
Course Title	**Technical Writing and Training Skills**
Credit Hours	**(3)**
Theoretical Hours	**(3)**
Practical Hours	**(0)**

Brief Course Description:

- written communication skills, Technical and Reports writing, Write a research based occupational health and safety report, Identify principles of adult learning, Appraise the needs of the learner, Organize Training session, Deliver an training presentation / session, Conduct meetings , Prepare health and safety promotional training activities.

Course Objectives:

This course aims at:

1. Apply written communication skills
2. Technical and Reports writing
3. Write a research based occupational health and safety report
4. Identify principles of adult learning
5. Appraise the needs of the learner
6. Organize Training session
7. Deliver a training presentation / session
8. Conduct meetings
9. Prepare health and safety promotional training activities

1.

Detailed Course Description:

Unit Number	Unit Name	Unit Content	Time Needed
1.	**written communication skills**	❖ Discuss punctuation and sentence structure ❖ Identify basic punctuation and sentence structure errors ❖ Correct basic punctuation and sentence structure errors	
2.	**Technical and Reports writing:**	❖ Types of Writing ❖ Technical Writing for HSE ❖ Paragraph & Section Development ❖ Controlling Sentence Length ❖ Coherence & Wordiness ❖ Technical Vocabulary ❖ Letters ❖ Resumes ❖ Report Format Structure & Communication ❖ Types of Reports ❖ Procedures of Reports Writing	
3.	**Write a research based occupational health and safety report**	❖ Discuss research techniques ❖ Identify credible information sources ❖ Describe four main types of analysis ❖ Identify elements of analysis ❖ Discuss the process of writing an analytical HS&E report	
4.	**principles of adult learning.**	❖ Define adult education. ❖ Define adult learning. ❖ Discuss learning principles. ❖ Discuss characteristics of adult learners. ❖ Describe learning styles and abilities. ❖ Recognize the basic modes of teaching. Define teaching strategies to promote learning. ❖ Discuss elements of learning objectives. ❖ Develop a learning objectives.	

5.	**Needs of the learner.**	❖ Define needs assessment. ❖ Describe organizational workplace needs assessment ❖ Describe assessment of the learner. ❖ Define adult learning needs. ❖ Describe barriers to learning.	
6.	**Organize Training session**	❖ Discuss types of visual teaching aides. ❖ Prepare a teaching visual aid ❖ Discuss teacher presentation characteristics. ❖ Describe participatory learning tips. ❖ Examine powerpoint (PPT) presentation software ❖ Outline an education session. ❖ Develop a PPT presentation based on a HS&E topic	
7.	**Deliver antraining presentation / session**	❖ Examine the evaluation techniques ❖ Discuss constructive criticism ❖ Develop a peer presentationevaluation ❖ Deliver your presentation ❖ Evaluate peer presentation	
8.	**Conduct meetings**	❖ Prepare a HS&E committee meeting agenda ❖ Participate in meetings effectively ❖ Chair a meeting ❖ Prepare minutes	
9.	**Prepare health and safety promotional training activities.**	❖ List materials used in health and safety promotional activities. ❖ Discuss correct formatting for poster displays. ❖ Discuss correct pamphlet layout. ❖ Develop a poster or pamphlet on an HS&E topic ❖ Prepare health and safety promotional activities. ❖ Discuss steps to plan a health and safety promotional activity	

Evaluation Strategies:

Exams		Percentage	Date
Exams	First Exam	20%	--/--/----
	Second Exam	20%	--/--/----
	Final Exam	50%	--/--/----
Homework and Projects		10%	
Discussions and lecture Presentations			

Teaching Methodology:

- Lectures, Video Tapes, Slide Show, Presentations, Group work)

Text Books & References:

1. Dubrin, A. J. &Geerinck, T. (2009). *Human Relations: Interpersonal Job Oriented Skills* (3rd ed). Toronto, ON. Pearson Education Canada Inc.
2. Lannon, J. M., &Klepp, D. (2009). *Technical communications* (4th ed.). Toronto, ON: Pearson Longman.

Occupational Health Safety and Enviroment	
Specialization	**Program Requirements**
Course Number	**22401112**
Course Title	**Personal and Professional Development Skills**
Credit Hours	**(3)**
Theoretical Hours	**(3)**
Practical Hours	**(0)**

Brief Course Description:

- elements of interpersonal communication, the personal skills and attitudes in relation to those most valued by employers, Prepare a resume and cover letter for employment, Prepare for an employment interview, Module Use time management skills, teamwork skills, critical thinking,the principles of critical thinking, problem solving process, problem solving techniques

Course Objectives:

This course aims at:

1. Discuss elements of interpersonal communication
2. Identify the personal skills and attitudes in relation to those most valued by employers
3. Prepare a resume and cover letter for employment
4. Prepare for an employment interview
5. Module Use time management skills
6. Demonstrate teamwork skills
7. Describe critical thinking
8. Demonstrate the principles of critical thinking
9. Explain problem solving process
10. Apply problem solving techniques

Detailed Course Description:

Unit Number	Unit Name	Unit Content	Time Needed
1.	**elements of interpersonal communication**	❖ Explain the basic steps in the communication process ❖ Express factors affecting communication climate ❖ Describe non-verbal communication ❖ Explain methods to improve non-verbal communication ❖ Explain the use of passive and active voice in communication ❖ Identify guidelines for overcoming communication problems ❖ Recognize gender differences in communication style ❖ Apply skills to improve communication	
2.	**personal skills and attitudes in relation to those most valued by employers**	❖ Discuss employability skills ❖ Describe desirable work habits, work behaviour and positive work habits ❖ Recognize respectful workplace policies and workplace ethics ❖ Identify employer expectations	
3.	**resume and cover letter for employment**	❖ Discuss the aspects of a resume ❖ Identify transferable skills ❖ Select a resume style ❖ Review resume checklist ❖ Prepare a resume ❖ Discuss the aspects of a cover letter ❖ Review a cover letter ❖ Review a cover letter checklist ❖ Prepare a cover letter	
4.	**Prepare for an employment interview**	❖ Describe the different types of interviews utilized by employers ❖ Prepare interview questions ❖ Describe the steps required to prepare for an interview ❖ Discuss what to do during an interview ❖ Discuss common interviewing mistakes	

		Discuss what to do after an interviewPractice interview skills	
5.	**Module Use time management skills**	❖ Define time management ❖ Explain the physiological and psychological impact of stress ❖ Describe approaches to time management ❖ Identify the advantages and obstacles to effective time management ❖ Identify tools for time management ❖ Describe methods for developing SMART (specific, measureable, attainable, relevant, timely) goals ❖ Demonstrate the use of time management skills	
6.	**teamwork skills**	❖ Identify types of teams that exist in the workplace ❖ Discuss the strengths and weakness of teams ❖ Identify team member roles ❖ Describe guidelines for the interpersonal aspect of team play ❖ Discuss effective leadership qualities ❖ Discuss effective meeting techniques ❖ Demonstrate effective teamwork skills	
7.	**critical thinking**	❖ Define critical thinking ❖ Identify critical thinking skills ❖ Describe the positive attributes of a critical thinker ❖ Identify critical thinking procedures ❖ Define root cause analysis	
8.	**principles of critical thinking**	❖ Apply the steps of decision making ❖ Demonstrate critical thinking process ❖ Demonstrate root cause analysis	
9.	**problem solving process**	❖ Explain the principles of problem solving ❖ Identify problem solving methods ❖ Describe characteristics of effective problem solvers ❖ Discuss factors that can constrain a problem	

		❖ Identify resources available in solving problems	
10.	**problem solving techniques**	❖ Collect required information ❖ Compare methods of problem solving ❖ Evaluate work related situations ❖ Apply the steps of decision making ❖ Solve technical and practical problems ❖ Solve interpersonal and supervision problems ❖ Solve ethical, legal and workplace safety problems ❖ Recommend effective solutions to problems	

Evaluation Strategies:

Exams		Percentage	Date
Exams	First Exam	20%	--/--/----
	Second Exam	20%	--/--/----
	Final Exam	50%	--/--/----
Homework and Projects		10%	
Discussions and lecture Presentations			

Teaching Methodology:

- ❖ Lectures, Video Tapes, Slide Show, Presentations, Group work)

Text Books & References:

1. Langton, N., & Robbins, S. P. (2010). Organizational Behaviour, (5th ed.) Toronto: ON: Pearson Education Canada
2. Dubrin, A. J. &Geerinck, T. (2009). *Human Relations: Interpersonal Job Oriented Skills* (3rd ed). Toronto, ON. Pearson Education Canada Inc.
3. Lannon, J. M., &Klepp, D. (2009). *Technical communications* (4th ed.). Toronto, ON: Pearson Longman.