

English Communication (ENG101):	English Communication is a first-semester ESP course focused on workplace communication for students in the Associate Degree programs at the Royal Commission at Yanbu's colleges and institutes division. This course emphasizes elements of business letters and oral communication basics in professional settings. Students will write claim and adjustment letters and actively engage in group discussions, debates, and deliver effective oral presentations.
Calculus I (GSMA101):	Calculus I covers differential calculus concepts necessary for mathematics, science, and technology, including limits, continuity, differentiation of algebraic and transcendental functions, and partial differentiation. Application problems are tackled during problem-solving sessions to emphasize continuity, derivatives, and partial derivatives.
General Physics (GSPH101):	General Physics is an algebra-based course that provides students with fundamental physics principles to support applied fields. Topics include measurements, motion in 1-D and 2-D, dynamics, work and energy, fluids, heat, electrostatics, electricity, magnetism, and light. Laboratory activities reinforce theoretical aspects of the course.
Physical Education (GSPE101):	Physical Education teaches calculus concepts needed in mathematics, science, and technology, covering topics like limits, continuity, differentiation, and partial differentiation with an emphasis on applications in continuity and derivatives.
Electric Circuit I (ELET101):	Electric Circuit I introduces students to electrical circuit concepts, focusing on current, voltage, power, electromagnetism, and fundamental laws and theorems. Topics include Ohm's law, KVL, KCL, and basic theorems. Theory is supported by lab experiments for a hands-on study of these electrical concepts.
Computer Programming (ELET104):	Computer Programming focuses on problem-solving using the C programming language. Students learn input/output statements, control statements, and structured data types like arrays, pointers, and structures. The course includes laboratory exercises.

General Chemistry (GSCH101):	General Chemistry gives foundational knowledge in chemistry, covering atomic structure, chemical bonding, gases, thermochemistry, solutions, kinetics, equilibrium, acids and bases, electrochemistry, and modern materials. Labs and virtual chemlabs support this course.
Calculus II (GSMA102):	Calculus II extends integral calculus concepts used in mathematics, science, and technology, covering integration, techniques of integration, definite integrals, numerical integration, and differential equations.
English Composition (ENG102):	English Composition, a second-semester ESP course, follows ENG101 and focuses on written technical communication. Students learn technical writing fundamentals, including producing graphs, charts, and writing technical descriptions.
Electrical Circuits II (ELET102):	Electrical Circuits II covers alternating current fundamentals and AC Circuits, including three-phase systems, filters, and resonance. Students use electrical laws and theorems to analyze circuits, with lab support for modeling and testing.
Materials Technology (MCET104):	Materials Technology explores the manufacture of metals, alloys, and materials like insulating and corrosion-resistant ones. Topics include metallurgy, shaping, forming, casting, plastic molding, heat treatment, and joining techniques, with labs examining material microstructure and properties.
Applied Statics (MCET105):	Applied Statics introduces fundamental mechanics concepts, covering forces, moments, equilibrium, trusses, frames, and motion kinematics. It includes concepts like centroid, center of gravity, friction, and motion kinematics.
Applied Statistics (GSST201):	Applied Statistics teaches data analysis techniques for science and technology applications. Topics include data collection, frequency distributions, central tendency measures, probability, hypothesis testing, correlation, regression, and reliability analysis.

Industrial Safety (ENGT201):	Industrial Safety trains students in workplace safety practices. It covers industrial safety principles in sectors like mechanical, electrical, chemical, and industrial. Topics include hazard recognition, risk management, and safety regulations.
Industrial Supervision (ENGT202):	Industrial Supervision introduces industrial supervision concepts, exploring its evolution, the impact of technology, and factors influencing industry development in Saudi Arabia. It includes supervisor roles, responsibilities, and skills.
Applied Dynamics (MCET301):	Applied Dynamics covers kinematics and dynamics of particles and rigid bodies. It emphasizes drawing free-body and kinetic diagrams, with work-energy and impulse-momentum principles for motion analysis.
Machining Processes I (MCET103):	Machining Processes I introduces machine shop processes, including cutting tools, lathes, drills, milling, and grinding machines, supported by workshop training for practical skills and safety practices.
Digital Electronics I (ELET202):	Digital Electronics I covers digital electronics basics, including logic gates, TTL, number systems, Boolean algebra, and combinational logic circuits. Topics include flip-flops, registers, counters, and introductory microprocessor knowledge, supported by lab work.
Control System Components (ELET203):	Control System Components covers process control system fundamentals. It introduces control systems, their applications, and Simulink software. PLC programming and practical lab work complement theory.
Electrical Machines I (ELET103):	Electrical Machines I focuses on magnetism, electromagnetism, magnetic circuits, and DC machines. Topics include transformers, autotransformers, and their practical applications, with lab exercises for hands-on learning.

Fluid Mechanics:(MCET212)	Fluid Mechanics covers fluid properties, fluid dynamics, and applications in pipelines and machines like pumps and turbines, with lab activities for practical learning.
Applied Strength of Materials (MCET222):	Applied Strength of Materials teaches material strength, stresses, and strains, covering axial stress, shear, beam and shaft stress, impact stress, and column buckling, with labs on material testing methods.
Technical Report Writing (ENG201):	Technical Report Writing is a third-semester ESP course focusing on report writing skills. Students learn to draft professional reports with visuals and graphics, enhancing effectiveness.
Islamic Ideology and Thoughts (GSIS101):	Islamic Ideology and Thoughts explores Islamic principles and ideology.
Maintenance and Reliability Engineering (ELET251):	Maintenance and Reliability Engineering teaches maintenance, diagnosis, and troubleshooting in mechatronics, with practical workshop training.
Introduction to Mechatronics System Design (ELET252):	Introduction to Mechatronics System Design focuses on creating and maintaining integrated mechatronics systems. Topics include systems engineering, control systems, sensors, actuators, and embedded programming, supported by labs and a course project.
Cooperative Training (ELET350):	Cooperative Training provides hands-on experience in a real work environment, culminating in a technical report and presentation.