

BACHELOR OF ENGINEERING TECHNOLOGY (HIGHWAYS)
BRIEF COURSE OVERVIEW FOR 3RD YEAR COURSES

Code	Course	Course Outline
BEH7.301	Wearing Surface Technology	<ul style="list-style-type: none"> • Wearing Surfaces: Types, properties, selection, materials. • Surfacing Design & Construction: Chipseals, AC, Emulsions. Safety. • Asphalt Plant production • Pavement Marking, Materials & Practice.
BEH7.311	Road Asset Management	<ul style="list-style-type: none"> • Project Evaluation: Specific, Simplified, Full Procedures, Accident Analysis, Risk Analysis, Project Feasibility Report, Scheme Assessments. • Quality Management: Concepts, Systems, Quality Plans. • Asset and Maintenance Management: Lifecycle Asset Management, Contract types, Asset & Maintenance Management systems, Optimised Decision Making, Risk assessment, Maintenance Management.
BEH7.321	Project Management	<ul style="list-style-type: none"> • Project Management: Principles & Functions. • Cost, Time & Risk Management. • Contract Management: Conditions of Contract, Costing, Tendering, Pricing Procedures, Variations, Time Extensions, Disputes.
BEH7.331	Management Fundamentals	<ul style="list-style-type: none"> • Leadership; Operations Management; Planning & Control; Decision-making; Marketing; Employment Relations; Human Resource Management; Change Management; Establishing a Business; Office Functions.
BEH7.341	Geometric Design	<ul style="list-style-type: none"> • Geometric Design Criteria and Standards; Horizontal & Vertical Alignment Design and Coordination; Speed Environment Concept; Safety;
BEH7.351	Drainage Design	<ul style="list-style-type: none"> • Road Drainage Components & Hydraulics; Surface Drainage; Urban Storm-water Drainage Systems; Subsurface Drainage Systems; Culvert Design; External Loadings on Pipes; Environmental Impact Assessment & Management.
BEH7.361	Pavement Design	<ul style="list-style-type: none"> • Pavement Design: Fundamentals; Material Properties & Characterisation; Design Traffic Determination; Mechanistic Analysis; Pavement Rehabilitation Design; Computer Applications.
BEH7.371	Traffic Operations and Planning	<ul style="list-style-type: none"> • Traffic Surveys; Traffic Flow Theory; Capacity Analysis; Intersection Design; Parking; Traffic & Transportation Planning; Road Crash Investigations.
BEH7.381	Engineering Economics	<ul style="list-style-type: none"> • Accounting: Principles; Financial Statements; Costing & Budgeting. • Economics: Concepts; Principles; Resources; Supply & Demand; GDP.
BEH7.399	Engineering Project A	<ul style="list-style-type: none"> • This course aims to integrate and synthesise previously acquired knowledge and skills in a typical project in which the student is required to investigate an engineering problem or project or situation; propose and develop a suitable solution, design or response; and communicate the execution and results using appropriate means. Research Methods is not a pre-requisite since the emphasis is on practical application of acquired knowledge rather than on fundamental research.