

Module Code	MN 3042	Module Title	Business Economics and Financial Accounting			
Credits	03	Hours/Week	Lectures	3	Pre – requisites	None
GPA/NGPA	GPA		Lab/Assignments			
Learning Outcomes To define the basic micro and macro economic concepts. Identify of the links between economy and technology. To define basic concepts in financial, cost and management accounting. To apply basic knowledge on these accounting concepts to business environment and to interpret main accounting statements.						
Outline Syllabus Business Economics (12 hrs) Economics and the economy; Elementary theory of Economics; Tools of economic analysis; Demand, supply and the market; Theory of the firm; Different types of firms; Motivation of firms; Theory of supply; Costs and production; Introduction to macroeconomics and national income accounting. Financial and cost Accounting (24 hrs) Basic accounting concepts; Trial balance; Profit & loss account, balance sheet; Cash flow statements; Interpretation of accounts; Cost concepts and terminology; Analysis and interpretation of cost; Allocation of overheads; Marginal costing, CPV analysis; Standard costing; Stock control.						

Module Code	MN 3052	Module Title	Industrial Management and Marketing			
Credits	03	Hours/Week	Lectures	3	Pre – requisites	None
GPA/NGPA	GPA		Lab/Assignments			

Learning Outcomes

To describe basic concepts and theories of organizational management. To explain the application of these theories for modern organizations.

To describe the fundamentals of technology management, human resource management and legal issues related to modern industrial relations.

To explain basic marketing concepts and theories and their applications.

Outline Syllabus

Organization management (12 hrs)

Introduction to management & systems theory; Organizational theory; stakeholder analysis, organizational vision, mission & objectives. Types of organizations; organizational strategy, structures of modern organization and the concept of learning organization; Different roles of manager; manager & leader. Organizational culture & control; concepts of authority, power, responsibility & their applications and management of conflict. Management of change; importance of change management and conflict management. Modern management techniques; management styles: Japanese vs. Western Systems.

Technology management (6 hrs)

Technology and economic development; Key concepts of technology management and its relation to business management; Technology and competitive advantage; Evaluating technology;

Human Resource Management and Industrial Relations (6 hrs)

Introduction to human resource management, Employee selection, performance evaluation, rewards, Human resource development, Compensation and grievance handling, Labour - Management Relations in Sri Lanka and Business Ethics

Marketing: (12 hrs)

Marketing: overview; Marketing environment, marketing research and product life cycles; Buyer behavior: consumer and organizational; 4Ps of marketing including promotion and communication issues;.

Module Code	MN 4022	Module Title	Engineering Economics			
Credits	02	Hours/Week	Lectures	2	Pre – requisites	None
GPA/NGPA	GPA		Lab/Assignments	-		

Learning Outcomes

To identify the most relevant economic concepts for the engineering decisions.

To apply these concepts to practical engineering projects and decisions.

Outline Syllabus

- **Fundamentals**; time value of money, equivalence and cash flow diagrams; (2 hrs)
- **Discounted cash flow**; time value equivalence, single payment and annuity factors and numerical examples. Cash flows and compounding; (4 hrs)
- **Comparison methods**; assumptions, net present value, annual worth, equivalent annual cost with/without salvage value, equivalent annual worth of fixed asset lives and perpetual lives, internal rate of return (IRR) and minimum acceptable rate of return and IRR irregularities, numerical examples; (6 hrs)
- **Analysis of alternatives**; classification, mutually exclusive alternatives, incremental analysis and preferred method for decision making; (3 hrs)
- **Project feasibility analysis**; financial feasibility, market price analysis, cost of capital and weighted average, economy feasibility, shadow pricing, benefit cost (B/C) analysis, irregularities of B/C analysis and preferred method for decision making; (4 hrs)
- **Sensitivity analysis and decision trees**; What if?, sensitivity graph and interpretation of the analysis, discounted decision trees and application of decision trees; (2 hrs)
- **Risk management**; Risk identification, risk analysis and risk response; (2 hrs)

Module Code	MN 4042	Module Title	Technology Management			
Credits	02	Hours/Week	Lectures	2	Pre – requisites	None
GPA/NGPA	GPA		Lab/Assignments	-		

Learning Outcomes

To recognize basic concepts and theories of management of technology. To identify the usage of MOT concepts and theories in modern organizations and economy.

Outline Syllabus

- Concept of technology Management
 - Strategic management of technology; (4 hrs)
 - Technology-strategy relationship
 - Elements of technology strategy and formulation of a technology strategy
 - Integration of technology strategy and business strategy for competitive success
 - Technology, the environment and sustainable development
 - Organizational Aspects of technology management; (4 hrs)
 - Human dimension of technology and concepts of the entrepreneur and entrepreneur
 - Organizational cultures and structures for promotion of creativity and innovation
 - The learning organization
 - The imperative of knowledge management
 - Acquiring technology through technology transfer; (3 hrs)
 - Motivations for acquiring technology through technology transfer
 - Elements of technology transfer process
 - Success and failure factors in technology transfer
 - Acquiring technology through research and development; (3 hrs)
 - The concepts of invention and innovation
 - Definition and classifications of research and development
 - New product development
 - Challenges in commercializing research results
 - National innovation systems for facilitating technology-based development (4 hrs)
 - Concepts of the national innovation system (NIS) and science and technology infrastructure
 - Comparison of NISs of developed, developing and first and second tier NIC countries
 - State involvement and growth of science and technology parks in developed and developing countries
 - **Practical** : 4 industry case studies, 2 plant/lab visit

Module Code	MN 4062	Module Title	Organizational Behavior and Management			
Credits	02	Hours/Week	Lectures	2	Pre – requisites	None
GPA/NGPA	GPA		Lab/Assignments	-		
Learning Outcomes To explain the basic concepts and theories of organizational management. To apply these concepts and theories to modern organizations.						
Outline Syllabus <ul style="list-style-type: none"> ▪ Introduction to and foundation for organizational behavior and management; (4 hrs) ▪ Basic human process and characteristics; (4 hrs) ▪ Group behavior; (4 hrs) ▪ Power and leadership; (4 hrs) ▪ Communication and motivation; (4 hrs) ▪ Individual and organizational effectiveness; (3 hrs) ▪ Decision making and planning function; (3 hrs) ▪ Organizing staffing, directing and controlling; (4 hrs) 						

Module Code	MN 4112	Module Title	Production and Operations Management			
Credits	02	Hours/Week	Lectures	2	Pre – requisites	None
GPA/NGPA	GPA		Lab/Assignments	-		
Learning Outcomes On successful completion of the module the learner will be able to: <ul style="list-style-type: none"> • Design an efficient and effective operations system to give required output. • Use operations management techniques and tools to plan and control the activities of operations system. • Develop and implement the programmes for improving the operations system. 						
Outline Syllabus <ul style="list-style-type: none"> ▪ Introduction to Production & Operations Management, Operations Strategy ▪ Product & Process Design ▪ Strategic Capacity Planning ▪ Location and Layout Planning ▪ Work Organization and Job Design ▪ Supply Chain Management ▪ Demand Forecasting ▪ Aggregate Production Planning ▪ Inventory Control ▪ Manufacturing Resource Planning (MRP, MRPII, ERP), Just-In-Time Operations ▪ Operations Scheduling ▪ Quality Management 						

Module Code	MN 4122	Module Title	Human Resource Management and Industrial Relations			
Credits	02	Hours/Week	Lectures	2	Pre – requisites	None
GPA/NGPA	GPA		Lab/Assignments	-		
Learning Outcomes						
Acquire and develop capabilities in human resource management concepts and application						
Outline Syllabus						
<u>Human Resource Management</u>						
<ul style="list-style-type: none"> • Role of the human resource function and practitioner • Organization, jobs and roles • Employee resourcing • Performance management • Human resource development • Rewarding people 						
<u>Industrial Relations</u>						
<ul style="list-style-type: none"> • Labour – Management relations in Sri Lanka • Industrial dispute • Trade unions • EPF, ETF and Gratuity acts • Work place health, safety and welfare • Business ethics 						

Module Code	MN 4132	Module Title	Consumer and Industrial Marketing			
Credits	02	Hours/Week	Lectures	2	Pre – requisites	None
GPA/NGPA	GPA		Lab/Assignments	-		
Learning Outcomes						
To explain the basic marketing management concepts and theories.						
To be able to differentiate between different theoretical constructs of marketing and to demonstrate their respective applications in relation to real world marketing situations.						
Outline Syllabus						
<ul style="list-style-type: none"> • Marketing : Overview • Marketing environment • Consumer markets and consumer buying behavior • Business markets and business buying behavior • 4Ps of marketing including promotion and communication issues • Product life cycle • Market segmentation • Competitive marketing strategies • Marketing intelligence and marketing research 						