

GENERAL SIR JOHN KOTELAWALA DEFENCE UNIVERSITY



**FACULTY OF MANAGEMENT, SOCIAL
SCIENCES AND HUMANITIES**
DEPARTMENT OF MANAGEMENT

BSc in Management and Technical Sciences

Background of the Degree Programme

The BSc in Management and Technical Sciences degree programme provides a strong foundation in both management principles and technical knowledge. It has successfully equipped both Day Scholars and Officer Cadets with the necessary skills to excel in their respective fields. This programme aims to enhance the depth of knowledge by providing the opportunity to delve deeper into core management and technical subjects. This will allow for a more comprehensive understanding of complex business environments and advanced technological applications. Also, the programme will incorporate a dedicated research component, fostering critical thinking and independent research capabilities. This will be particularly valuable for Day Scholars seeking to pursue undergraduate studies or research-oriented careers. This ensures graduates possess the most sought-after skillsets for a successful career.

BSc in Management and Technical Sciences programme at KDU is highly regarded for its academic excellence, experienced faculty, and strong industry connections. The programme focuses on providing a comprehensive understanding of various business disciplines, including business economics, business intelligence tools and technologies, management information systems, lean manufacturing, merchandising, IT for business along with existing modules such as strategic management, project management, quality management, productions and operations management, finance, marketing, and human resource management. With a flexible study schedule and a diverse cohort of students, KDU offers ample opportunities for networking and collaboration. KDU is the sole university in the country with a military led administrative system, ensuring prompt and efficient management of activities across multiple campuses. It caters to all faculties, ranging from undergraduate to PhD levels. Its reputation for academic excellence and industry expertise, coupled with considerations of cost, standard of living, and international exposure, opens doors to various career opportunities.

BSc in Management & Technical Sciences programme is designed to equip students with the knowledge and skills to excel in a dynamic business environment. This rigorous four-year programme offers a unique blend of management principles, technical knowledge, and leadership development, preparing graduates for successful careers in a variety of industries.

Why Choose the BSc in Management and Technical Sciences at KDU?

This programme offers several advantages for aspiring professionals:

- **Comprehensive Curriculum:** Gain a thorough understanding of business functions like finance, marketing, human resource management, and operations, alongside a strong foundation in technical subjects.
- **Technical Expertise:** Develop proficiency in areas like applied physics, chemistry, and information technology, enhancing your problem-solving capabilities and adaptability in technology-driven fields.
- **Leadership Development:** Cultivate strong leadership skills through strategic decision-making, effective communication, and teamwork practices.
- **Focus on Ethics and Sustainability:** Integrate ethical considerations and sustainable practices into your decision-making, fostering a responsible approach to business.
- **Experienced Faculty:** Learn from renowned academics with industry experience, ensuring the curriculum reflects the latest trends and best practices.
- **Military-Led Structure:** Benefit from KDU's unique military-led administration, known for its efficiency, discipline, and focus on excellence.
- **Diverse Learning Environment:** Network with a multicultural student body, gaining valuable global perspectives and fostering collaboration skills.
- **Cost-Effective Education:** KDU offers a high-quality education at an affordable cost compared to international universities.

BSc in Management and Technical Sciences degree programme at KDU equips you with the skills and knowledge to become a well-rounded professional. With a focus on both technical proficiency and management expertise, graduates are prepared to tackle complex challenges and thrive in competitive environments. The programme's emphasis on leadership, ethics, and sustainability ensures you are well-positioned to contribute meaningfully to the future of business.

BSc Hons in Management and Technical Sciences-Overview

Semester I					
New	Subject	GP	NG	MG	
MGT 110103	Principles of Management	3			
MGT 110202	Business law	2			
MGT 110302	IT for Business		2		
MTS 110402	Applied Chemistry	2			
MTS 110503	Basic Electrical Technology	3			
MTS 110602	Basic Engineering	2			
MTS 110703	Introduction to Accounting	3			
DOL 110801	Sinhala: Basics for Beginners or		1		
DOL 110901	Tamil: Basics for Beginners		1		
DOL 1101001	English: Basic Study Skills (MTS)		1		
MIL 110101	Military Studies-I			4	
Semester Total		15	5	4	

Semester II					
New	Subject	GP	NG	MG	
MGT 120102	Human Resource Management	2			
MGT 120202	Management Accounting	2			
MGT 120303	Business Statistics	3			
MGT 120403	International Trade and Documentation	2			
MGT 120502	Business Economics	2			
MTS 120602	Applied Chemistry & Explosives or	2			
MTS 120702	Waste Management				
MTS 120803	Energy Conservation		2		
DOL 120901	English: Advanced Study Skills (MTS)		1		
MIL 1201002	Military Studies-II			4	
Semester Total		15	1	4	

Semester III					
New	Subject	GP	NG	MG	
MGT 210103	Operations Research	3			
MGT 210203	Disaster Management	2			
MTS 210302	Basic Electronics	2			
MTS 210401	Applied Physics	2			
MTS 210502	International Relations		2		
MTS 210603	Managerial Psychology	2			
MTS 210702	Organizational Behavior	2			
DOL 210804	English: Writing and Speaking Skills (MTS)		1		
DOL 210902	Strategic and Defense Studies		2		
MIL 2101002	Military Studies-III			2	
Semester Total		15	5	0	

Semester IV					
New	Subject	GP	NG	MG	
MGT 220103	Research Methodology and Research Project	3			
MGT 220203	Project Management	3			
MGT 220302	Business Intelligence Tools and Technologies	3			
MTS 220403	Supply Chain Management	3			
MTS 220503	Environmental Management	3			
DOL 220601	English: Research Writing Skills		1		
MIL 220704	Military Studies-IV			4	
Semester Total		15	1	4	

Semester V					
New	Subject	GP	NG	MG	
MGT 310103	Strategic Management	3			
MGT 310202	Marketing Management	2			
MGT 310303	Quality Management and Techniques	3			
MGT 310402	Enterprise Resource Planning	2			
MGT 310502	Management Information Systems	2			
DOL 310602	Business Communication	1	2		
MTS 310702	Computer Application for Managers	2			
MIL 310805	Military Training (Officer Cadets Only)				
Semester Total		15	2	0	

Semester VI					
New	Course Code	GP	NG	MG	
<i>Cadet Officers</i>					
MIL 3208015	Advanced Military Training	15			
<i>Day Scholars (3 year exit)</i>					
MGT 320909	Industrial Training	9			
MGT 3201006	Skill Based Project	6			

Programme Structure: BSc in Management and Technical Sciences –Year 1

The following table gives an overall summary of the course units entitled for the Year one of the BSc in Management and Technical Sciences Degree Program. The respective course units have been outlined in detail beneath the table.

Semester I					
Code	Subject	GP	NG	MG	
MGT 110103	Principles of Management	3			
MGT 110202	Business law	2			
MGT 110302	IT for Business		2		
MTS 110402	Applied Chemistry	2			
MTS 110503	Basic Electrical Technology	3			
MTS 110602	Basic Engineering	2			
MTS 110703	Introduction to Accounting	3			
DOL 110801	Sinhala: Basics for Beginners or		1		
DOL 110901	Tamil: Basics for Beginners		1		
DOL 1101001	English: Basic Study Skills (MTS)		1		
MIL 1101101	Military Studies-I			4	
Semester Total				15	5
Semester II					
Code	Subject	GP	NG	MG	
MGT 120102	Human Resource Management	2			
MGT 120202	Management Accounting	2			
MGT 120303	Business Statistics	3			
MGT 120403	International Trade and Documentation	2			
MGT 120502	Business Economics	2			
MTS 120602	Applied Chemistry & Explosives or	2			
MTS 120702	Waste Management				
MTS 120803	Energy Conservation	2			
DOL 120901	English: Advanced Study Skills (MTS)		1		
MIL 1201002	Military Studies-II			4	
Semester Total				15	1

Principles of Management

MGT110103

This course provides an overall understanding on management techniques and principles which is a prerequisite to understand the basic management functions. It will help students to identify managerial roles and skills, demonstrate an understanding on the management process including planning, organizing, leading and controlling. It will enable students to analyze the internal and external environmental factors that affect an organization, evaluate different management schools of thoughts.

Credits 3 **GPA-Compulsory**

Business Law

MGT110202

This course provides students with a comprehensive understanding of legal principles and their application in the context of business. Students will be able to understand legal frameworks, apply legal principles to business scenarios, identify potential legal risks facing businesses and develop strategies to mitigate these risks through compliance programs.

Credits 2 **GPA-Compulsory**

IT for Business

MGT110302

This course aims to foster critical thinking, teamwork, and cross-cultural communication awareness, alongside promoting ethical conduct and a commitment to continuous self-improvement in English language skills and study habits.

Credits 2 **GPA-Compulsory**

Applied Chemistry

MTS110402

The aim of this course is to develop students' knowledge of the fundamentals of General Chemistry, macromolecules, solid state chemistry, electrochemistry, petroleum and petrochemicals, fats, oils, waxes, soaps, and detergents, along with understanding separation methods and phase rules, and to equip them with the theoretical background and laboratory techniques necessary to solve chemical problems.

Credits 2 **GPA-Compulsory**

Basic Electrical Technology**MTS110503**

The aim of this course is to develop students' understanding of fundamental principles of electricity and electrochemical power sources, proficiency in performing DC calculations using basic laws and network theorems, knowledge of electrical measuring instruments, ability to design effective data visualizations, and comprehension of domestic wiring systems and power generation in Sri Lanka, along with techniques to solve chemical problems.

Credits

3

GPA-Compulsory

Basic Engineering**MTS110602**

This course aims to equip students with the ability to apply basic engineering principles to evaluate management problems, analyze the impact of engineering on production processes and resource allocation, effectively communicate technical concepts to non-technical stakeholders, and utilize relevant engineering data for informed management decisions.

Credits

2

GPA-Compulsory

Principles to Accounting**MTS110703**

The aim of this course is to develop students' knowledge of accounting standards and their application in preparing and presenting financial statements of corporate entities, including identifying the role and scope of financial accounting, understanding relevant regulatory requirements in Sri Lanka, comprehending the conceptual framework for financial reporting, applying specific accounting treatments, and preparing financial statements in accordance with current standards.

Credits

3

GPA-Compulsory

Sinhala: Basics for Beginners (LM)**DOL110801**

This course introduces students to the cultural context of Sri Lanka, where Sinhala is considered as the primary language. This awareness is vital for professionals working in MTSistics, where cross-cultural communication plays a significant role.

Credits

1

GPA-Compulsory

Tamil: Basic for Beginners (LM)

DOL110901

Tamil is widely spoken in Sri Lanka, India, and other parts of the world. Learning Tamil introduces students to the cultural nuances and diversity of regions where Tamil is a primary language. This understanding is crucial for effective communication and relationship-building in MTSistics, which often involves working with diverse communities.

Credits 1 NGPA-Compulsory

English: Basic study skills (MTS) DOL111001

English is the lingua franca of international business and MTSistics. Study skills in English ensures that students develop proficiency in the language necessary for academic success and future professional endeavors in the MTSistics field, where English is commonly used for communication, documentation, and negotiation.

Credits 1 NGPA-Compulsory

Semester II

Human Resources Management MGT120102

Recognize the dynamic relationship between people, strategy, technomoTSy, and the processes that drive organizations. Key topic areas include: Human Resource Planning, staffing, compensation, human resource development, and performance management and grievance handling.

Credits 2 GPA-Compulsory

Management Accounting MGT120202

The objective of this course is to provide students with the knowledge, skills, and competencies necessary to effectively manage financial resources and support decision-making within organizations. This is designed to equip students with a solid understanding of accounting principles and techniques specifically tailored to meet the needs of managers and decision-makers.

Credits 2 GPA-Compulsory

Business Statistics**MGT120302**

This course aims to provide the students with knowledge and skills regarding core quantitative techniques from statistics. A particular emphasis is placed on developing the ability to interpret the numerical information that forms the basis of decision-making in business. It is expected to improve the skills of the students, including problem-solving, analytical and critical thinking skills with regards to basic statistical analysis by taking examples which are drawn from a variety of business applications.

Credits

2

GPA-Compulsory

International Trade and Documentations**MGT120402**

The objective of this module is to provide students with a comprehensive understanding of international trade practices and the documentation processes involved, equipping them with the necessary knowledge and skills to navigate the complexities of global MTSistics management effectively.

Credits

2

GPA-Compulsory

Business Economics**MTS120502**

The objective of a Business Economics course is to provide students with a comprehensive understanding of economic principles and theories as they apply to the business environment. This course aims to equip students with the analytical skills and knowledge necessary to analyze economic factors affecting business decisions, formulate strategies, and contribute to organizational success.

Credits

2

GPA-Compulsory

Applied Chemistry & Explosives**MTS120602**

The aim of this course is to develop students' understanding of nuclear chemistry, including nuclear reactors and weapons, chemical separation and detection, chemical warfare agents, common explosives, and the evaluation and analysis of explosions.

Credits **2** **GPA-Compulsory**

Waste Management **MTS120702**

The aim of this course is to equip students with comprehensive knowledge of waste classification, sources of waste generation, and their environmental and economic impacts, analyze and evaluate waste management hierarchies and strategies, design sustainable waste management plans, assess their effectiveness through data analysis, and effectively communicate responsible waste management practices to stakeholders.

Credits **2** **GPA-Compulsory**

Energy Conservation **MTS120802**

The aim of this course is to provide students with a comprehensive understanding of the current energy sector, economic criteria for energy management, methods and tools for energy auditing, integration of alternative energy technologies, and the role of energy conservation in achieving sustainability goals.

Credits **2** **GPA-Compulsory**

English: Advanced Study Skills **DOL120801**

Advanced study skills in English empower students to engage with complex academic materials, including scholarly articles, research papers, and case studies.

Credits **1** **GPA-Compulsory**

Programme Structure: BSc in Management and Technical Sciences –Year 2

The following table gives an overall summary of the course units entitled for the Year one of the BSc in Management and Technical Sciences Degree Program. The respective course units have been outlined in detail beneath the table.

Semester III				
Code	Subject	GP	NG	MG
MGT 210103	Operations Research	3		
MGT 210203	Disaster Management	2		
MTS 210302	Basic Electronics	2		
MTS 210401	Applied Physics	2		
MTS 210502	International Relations		2	
MTS 210603	Managerial Psychology	2		
MTS 210702	Organizational Behavior	2		
DOL 210804	English: Writing and Speaking Skills (MTS)		1	
DOL 210902	Strategic and Defense Studies	2		
MIL 2101002	Military Studies-III		2	
Semester Total		15	5	0
Semester IV				
Code	Subject	GP	NG	MG
MGT 220103	Research Methodology and Research Project	3		
MGT 220203	Project Management	3		
MGT 220302	Business Intelligence Tools and Technologies	3		
MTS 220403	Supply Chain Management	3		
MTS 220503	Environmental Management	3		
DOL 220601	English: Research Writing Skills		1	
MIL 220704	Military Studies-IV			4
Semester Total		15	1	4

Operations Research

MGT210103

OR equips students with analytical tools and techniques to optimize MTSistics processes, such as inventory management, transportation routing, and facility location. By learning OR methods like linear programming, integer programming, and simulation, students can identify the most efficient and cost-effective solutions to MTSistical challenges, improving operational performance and resource utilization.

Credits

3

GPA-Compulsory

Disaster Management

MGT210202

Upon completion of this course, the students are expected to have a broad understanding of the knowledge on elements that drive a successful disaster preparation and mitigation plan in the business context. The students will also learn the roles of different stakeholders in disaster situations and resource utilization within the context to minimize the impact to the business sector.

Credits

2

GPA-Compulsory

Basic Electronics

MTS210302

The aim of this course is to provide students with a comprehensive understanding of the historical evolution of electronics, the principles and applications of diodes, bipolar junction transistors, and operational amplifiers, as well as the analysis of digital circuits using combinational and sequential logic gates.

Credits

2

GPA-Compulsory

Applied Physics

MTS210402

The aim of this course is to develop students' understanding of fundamental physics concepts such as mechanics, thermodynamics, electricity, magnetism, and waves, and to enable them to apply these principles to analyze and solve problems related to motion, forces, energy, and efficiency in technical and business settings, interpret experimental data for management applications, discuss the impact of physical phenomena on technological systems, and identify emerging trends in physics relevant to technological and management advancements.

Credits

2

GPA-Compulsory

International Relations**MTS210502**

The aim of this course is to develop students' understanding of the state system's key features, theoretical perspectives on international events and processes, the role of diverse actors in the international system, and the anarchic nature of a system without central authority.

Credits

2

GPA-Compulsory

Managerial Psychology**MTS210602**

The aim of this course is to equip students with the ability to apply psychological principles to understand behavior in organizations, demonstrate effective communication and interpersonal skills, employ conflict resolution strategies to foster positive work environments, and manage personal stress using emotional intelligence techniques.

Credits

2

GPA-Compulsory

Organizational Behaviour**MTS210702**

The aim of this course is to provide students with a comprehensive understanding of management theories related to employee, team, and organizational behavior, their application in real business settings, analysis of case studies in various institutional environments, and an evaluation of the pros and cons of organizational behavior in the context of technological advancements.

Credits

2

GPA-Compulsory

English: Writing and Speaking Skills (LM)**DOL211101**

Developing strong writing and speaking skills in English enables students to communicate their ideas, analyses, and recommendations clearly and persuasively in both written and oral formats.

Credits

1

GPA-Compulsory

Strategic & Defence Studies**MTS210902**

Strategic & Defence Studies aims to equip students with comprehensive understanding and critical analysis of national security policies, military strategies, and global defense dynamics, enabling them to navigate complexities in contemporary security landscapes.

Credits

2

GPA-Compulsory

Research Methodology and Research Project**MGT220103**

This subject aims to empower undergraduate students with the skills and knowledge needed to undertake independent research, contribute to scholarly discourse, and engage critically with research literature in their respective disciplines and develop a research proposal followed by a research project.

Credits

3

GPA-Compulsory

Project Management**MGT220203**

This subject focuses on the development of understanding of basic concepts and principles of project management used in the area of business and economics.

Credits

3

GPA-Compulsory

Business Intelligence Tools and Technologies**MGT220302**

This subject equips students with essential skills and knowledge to leverage data effectively for decision-making in business contexts

Credits

3

GPA-Compulsory

Supply Chain Management**MTS220403**

This course aims to equip students with a comprehensive understanding of Logistics and Supply Chain Management by identifying its fundamentals, outlining organizational practices of auxiliary services, explaining its role in businesses, and identifying emerging trends in the field.

Credits

3

GPA-Compulsory

Environmental Management**MTS220503**

This course aims to equip students with a comprehensive understanding of ecosystem dynamics, environmental policy and legislation, sustainable resource management, environmental impact assessment (EIA), and climate change adaptation and mitigation strategies..

Credits

2

GPA-Compulsory

English: Research Writing Skills (LM)**DOL221001**

Developing research writing skills in English enables students to produce high-quality academic papers, reports, and dissertations that meet scholarly standards. By mastering research methodologies, citation conventions, and academic writing styles, students can contribute original insights to the field of logistics management and excel in their academic pursuits.

Credits

1

GPA-Compulsory

Programme Structure: BSc in Management and Technical Sciences –Year 3

The following table gives an overall summary of the course units entitled for the Year one of the BSc in Management and Technical Sciences Degree Program. The respective course units have been outlined in detail beneath the table.

Semester V				
Code	Subject	GP	NG	MG
MGT 310103	Strategic Management	3		
MGT 310202	Marketing Management	2		
MGT 310303	Quality Management and Techniques	3		
MGT 310402	Enterprise Resource Planning	2		
MGT 310502	Management Information Systems	2		
DOL 310602	Business Communication	1	2	
MTS 310702	Computer Application for Managers	2		
MIL 310805	Military Training (Officer Cadets Only)			
Semester Total			15	2
Semester VI				
Code	Course Code	GP	NG	MG
	<i>Cadet Officers</i>			
MIL 3208015	Advanced Military Training	15		
	<i>Day Scholars (3 year exit)</i>			
MGT 320909	Industrial Training	9		
MGT 3201006	Skill Based Project	6		

Semester V

Strategic Management

MGT310103

This course equips students with the knowledge, skills, and analytical frameworks necessary to understand the complexities of strategic decision-making in organizations and to prepare them for future leadership roles in various industries.

Credits 3 **GPA-Compulsory**

Marketing Management

MGT310202

Provide undergraduate students with a solid foundation in marketing management principles and practices, preparing them for successful careers in the dynamic and competitive field of marketing.

Credits 2 **GPA-Compulsory**

Quality Management and Techniques

MGT310303

This course prepares undergraduate students with a solid foundation in quality management principles, tools, and techniques, enabling them to contribute effectively to organizational success and societal well-being in their future careers.

Credits 3 **GPA-Compulsory**

Enterprise Resource Planning (ERP)

MGT310403

This course provides students with a comprehensive understanding of ERP systems, their functionalities, and their strategic significance in modern organizations.

Credits 2 **GPA-Compulsory**

Management Information Systems (MIS)

MGT320502

This course provides students with a comprehensive understanding of the role, functions, and significance of information systems in organizations.

Credits 2 **GPA-Compulsory**

Computer Application for Managers**MTS310702**

The subject equips students with the essential skills and knowledge necessary to effectively communicate in professional settings. Through a combination of theoretical concepts and practical exercises, students will develop proficiency in written and oral communication, interpersonal skills, critical thinking and prepare them well for their internship placements.

Credits

1

GPA-Compulsory

Business Communication**DOL320601**

The subject equips students with the essential skills and knowledge necessary to effectively communicate in professional settings. Through a combination of theoretical concepts and practical exercises, students will develop proficiency in written and oral communication, interpersonal skills, critical thinking and prepare them well for their internship placements.

Credits

1

GPA-Compulsory

Semester VI**Industrial Training****MGT320909**

To provide students with hands-on experience in a real workplace setting to enhance their practical skills and industry knowledge. The following areas are expected to be covered in the industrial training.

Credits

9

GPA-Compulsory

Skill Based Project**MGT321006**

The students who undergo their industrial training are expected to come up with a real-world issue in the respective organization and are expected to analyze and present solutions and recommendations. The objective is to sharpen the students' critical thinking, problem solving, evaluation and reporting skills.

Credits

6

GPA-Compulsory

The BSc in Management and Technical Sciences Degree Programme contains 90 GPA credits from core course units, 10 NGPA credits and 34 MGPA credits. The distribution of the academic credits in BSc in MTS degree program are illustrated in the table below.

GPA Summary			
SEMESTER	GPA	NGPA	MGPA
Semester 1	15	5	4
Semester 2	15	1	4
Semester 3	15	1	6
Semester 4	15	1	4
Semester 5	15	-	1
Semester 6	15	2	15
Total	90	10	34

Career Opportunities

Graduates of the BSc in Management and Technical Sciences programme can pursue diverse careers in various sectors. Here are some potential areas:

- i. **Operations Manager:** Operations managers oversee the day-to-day operations of a company or department. In businesses, they may be responsible for optimizing processes, managing resources, and ensuring smooth operations of the organization.
- ii. **Productions Manager:** Graduates can find opportunities in organizations, where they can work on the production processes using the managerial knowledge along with the technical knowldwge.
- iii. **Consultant:** This programme combines technical aspects with management skills can be valuable in consulting firms advising businesses on strategy and operations.

- iv. **Project Manager:** This programme equips you with the necessary skills to handle complex projects, manage resources, and ensure successful completion within deadlines and budget constraints.
- v. **Industrial Engineering Manager:** This programme can pave the way for a career in industrial engineering management, where you can oversee technical teams and projects.
- vi. **Defense Industry:** For military officer cadets, this degree combined with military training opens doors to leadership positions within the armed forces, where technical and management expertise are crucial.
- vii. **Operations Analyst:** Operations analysts use data and analytics to improve supply chain processes. They identify areas for optimization and help organizations make data-driven decisions.
- viii. **Entrepreneur/ Startup Founder:** Some graduates could choose to start their own business venture. This could include management consulting, manufacturing and production etc.
- ix. **Government and Nonprofit Sector:** Graduates can also find opportunities in government agencies or nonprofit organizations, where they can work on government policies, disaster relief operations and academia.

