



DEPARTMENT OF TEXTILE AND APPAREL ENGINEERING
UNIVERSITY OF MORATUWA



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**STUDENT
HANDBOOK**

**DEPARTMENT OF
TEXTILE & APPAREL ENGINEERING**

University of Moratuwa

STUDENT HANDBOOK 2026



DEPARTMENT OF
TEXTILE & APPAREL ENGINEERING

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DEPARTMENT
OF
TEXTILE AND
APPAREL
ENGINEERING,
UNIVERSITY OF MORATUWA,
SRI ALANKA
.....

Photograph by; Mr. UT Dodampegamage

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Message from The Head of Department



The Department of Textile and Apparel Engineering had its humble beginnings as a division of the Department of Mechanical Engineering. In 1985, under the stewardship of its founder Head, Emeritus Professor Lakdas D Fernando, it became a fully-fledged department. With a newly growing apparel industry having human resource needs for technical people in the middle and upper management, the first ever BSc Engineering programme in Textile and Clothing Technology in the Sri Lankan university system was commenced in 1985.

The Department currently offers two undergraduate degree programmes, namely the BSc Engineering in Textile & Apparel Engineering and the BDesign in Fashion Design and Product Development. The BSc Engineering programme was established with consultancy assistance from the University of Leeds and the Manchester Metropolitan University of the UK, while the BDesign degree programme was established with consultancy assistance from the London College of Fashion of the University of Arts in London. Both degree programmes are well recognised locally as well as internationally, being accredited by the Textile Institute UK, and equip the students for local and foreign employment and postgraduate opportunities.

The Department of Textile and Apparel Engineering is proud to be the main human resources provider to the largest manufacturing industry in Sri Lanka, bringing over 40% of the foreign exchange of the country. The Department is committed to continuously improving the curriculum to reflect the fast-changing needs of the industry and create knowledge to suit industry requirements. Technical Textiles, Smart Textiles, Nanotechnology and Digital Product Development have been incorporated into the curriculum, with state-of-the-art laboratory facilities being set up. The BDesign programme is also continually updated to reflect the pulse of the Fashion Design requirements in the industry.

The Department is committed to excellence in education and research in all areas of Textile and Apparel Engineering and in Fashion Design and Product Development. Most of our graduates are gainfully employed in the textile and apparel industry, both in Sri Lanka and overseas, while a number are employed in other sectors. A significant number have found postgraduate opportunities at prestigious universities around the world.

In addition to the curriculum, the Department makes a special effort to develop the skills and attitudes of students so that the graduate is well-rounded and fit for employment. Speech- craft programmes, mentoring, mock interview sessions, industry awareness sessions, attitude building programmes, skills for work sessions and guest lectures are regularly offered to students. It is our aim that our students will graduate to become the best possible fit for industry and society at large.

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Our Vision

The vision of the Department of Textile and Apparel Engineering is to become a Centre of Excellence in the areas of Textiles, Clothing, Fashion Design and related disciplines through education and knowledge creation.

Our Mission

The mission of the Department of Textile and Apparel Engineering is to provide world class undergraduate teaching, postgraduate research and training to the industry, and consultancy for the benefit of national and international communities. We strive to maintain high standards in all aspects of our work and seek continual improvement of quality in teaching, learning, research and consultancy.

- To enhance current undergraduate programs at the university by continuously updating the curriculum, and to provide a solid basis for all textile related education demanded by the industry.
- To produce new, cross-disciplinary undergraduate and postgraduate programmes through the interaction of other departments.
- To provide state of the art equipment and infrastructure to students, academics and the industry in a world class facility.
- To enhance Information Technology skills in all students
- To build in effective communication skill development in undergraduate programmes.
- To continually improve the academic environment of the Department to become a key facilitator towards social harmony in all its activities.

History of the Department

The University of Moratuwa, situated 18km south of Colombo is the Centre of Excellence for engineering, technological and architectural studies in Sri Lanka. The Department of Textile and Apparel Engineering of the University is one of the Departments in the Faculty of Engineering and is the first of its kind in the Sri Lankan University system.

The Department had its humble beginning in 1976 as a sub-department of the Department of Mechanical Engineering. At that time the course conducted was the National Diploma in Technology course in Textile Technology. Seeing the need for graduates in the industry the Department later began a postgraduate diploma to serve as a conversion course for those graduates from other disciplines employed in the industry.

The Department of Textile & Apparel Engineering came into being as a fully fledged Department in 1985, with the launch of the BSc Engineering Degree Program with the assistance of the Textile Department of the University of Leeds and the Manchester Metropolitan University. In 2001 the Bachelor of Design course came into being, with collaboration from the London College of Fashion of the University of Arts London, a specialist in fashion design education.

The Department of Textile & Apparel Engineering has many “firsts” to its credit:

- first ever BSc Engineering degree in Textile & Apparel Engineering in Sri Lanka.
- first ever degree in Fashion Design in the Sri Lankan University system introduced in 2001.
- first ever testing house providing testing and quality control services and consultancy to the industry.
- first department in the Faculty of Engineering to take in students directly to the Department on entry to the University.

In a comparatively short period of time the Department of Textile & Apparel Engineering has become a trailblazer and the foremost provider of textile education in Sri Lanka.

In addition to academic activities the Department prides itself in its efforts to make an impact on society. The Department has undertaken a number of community service projects, where the staff, both academic and non-academic, students and graduates made visits to provide support in terms of educational material and academic and sports training to students. The students of the BSc Engineering programme have organized a 3 day programme to help the O/L students of Nachchaduwa Sinhala maha vidyalaya by conducting special lessons for 3 major subject areas and also they have organized a programme at Udagama Kanishta Vidyalaya to develop the school facility including creating a new outdoor classroom, renewing the kids play area as well as a shramadhana campaign at the school premises. The students of the B. Design program also carried out a community service project at psychiatric ward “Suwa Mansala” of Aniyakanda Hospital which was in need of help in order to improve the quality of in-house rehabilitate patients’ lives. They have repainted the ward as well as donated many valuable gifts and delicious supper to the patients.

Why study Textile?

Textiles touch today's world in every sphere. The most obvious use of textiles is the clothes we wear, but in addition textiles are found in drapery, upholstery and other furnishings. Going even further, textiles are used extensively in automobiles, aircraft, spacecraft, ships and boats. Medical textiles include a whole range of uses, such as hernia meshes, artificial knee caps and other prosthetic devices, heart valves etc. Textiles are used in the construction industry, as geo-textiles to prevent soil erosion and in diverse other ways.

The Sri Lankan garment industry is the largest export industry in Sri Lanka, with a major portion of the nation's export revenue coming through this industry. The curriculums of both textile engineering and fashion design and product development courses have been tailored to gear the student to face the challenges of this industry with confidence and contribute towards moving our industry on the hi-tech, upmarket route. The industry caters to a worldwide market, and the resulting challenges due to the changes in the global scene, together with the need to integrate information technology, communication and management skills.

Career Opportunities

Being the largest foreign exchange earning industry in the country, the garment industry of Sri Lanka employs over 350,000 personnel. To date the Department has produced more than 1000 graduates, most of whom are gainfully employed in the industry, and making no small contribution to the growth of the industry. There are ample career opportunities for graduates of the Department in the Apparel industry and its related feeder industries. Career opportunities are also available in other textile based industries in the country, and overseas, as well as in quality audit firms and in academia. Graduates holding B.Sc. Engineering in textile & clothing are able to step into any postgraduate degree program in reputed universities worldwide with many of our graduates having obtained postgraduate degrees not only in textile and apparel engineering & management but also in many other areas such as civil engineering, mechanical engineering, computer science.

Why study Fashion Design?

Fashion design is the art of finding inspiration from the most unlikely of sources and turning it into commercially viable and aesthetically appealing pieces of garment to be sold under a brand. The role of Designer is a highly competitive and demanding profession today because of its challenging nature. Success in design will depend on the ability to develop creative, commercial, technical and the other skills that contribute towards expressing individuality and creating identities.

This course aims to develop an understanding of the fashion industry through the principles of creative design research, analysis and the apparel product development of ideas through experimentation in 2D and 3D interpretations. This process involves theoretical, practical, business and entrepreneurship related problem solving while exploring the concepts of fashion design and technology.

In recent years the increased use of technology in production has changed the speed and direction of manufacturing. Undoubtedly, in design the computer and information technology has drastically changed the way of traditional hand-drawing sketches, presentation techniques, draping on mannequins, and product and consumer awareness through internet. Software packages aid designers to visualize products through Augmented reality (AR) and Virtual reality (VR) even before the product are made.

Throughout its four years of course span, the University will provide an inspiring place to root for knowledge, skills and attitudes required in designer career while preparing lifelong learners.

Career Opportunities

Fashion design graduates will have the necessary knowledge, skills and experience to enter the fashion industry within a broad range of opportunities according to personal direction and degree specialism. Graduates will fit into roles of Designer, Patternmaker, Product Developer in addition to taking up careers in Publicity, Photography, Fashion PR, Trend analyst, Buying, Merchandising and Retail Management.

Further, the graduates from this course would qualify for postgraduate studies in any reputed University in Art & Design worldwide.

Department Organisation & Administration

Department Organisation

In the University system the principal officer is the Vice Chancellor. The University of Moratuwa has five faculties, namely Engineering, Architecture, Information Technology, Graduate Studies and Business. Each Faculty has its own Dean, who is responsible for the administrative and academic activities of the Faculty. The Department of Textile & Clothing Technology is part of the Faculty of Engineering and functions under the Head of Department, to whom all other members of the academic and non-academic staff of the Department report. The different courses in the Department function under their respective coordinators/directors.

The Department office is manned by a clerk, a computer application assistant, and assistants, and functions under the direct supervision of the Head of Department. The various laboratories have their individual lecturers in charge, technical officers and laboratory attendants as described under the section on Equipment and Facilities.

Location of the Department

The Department of Textile & Apparel Engineering is located as the last building on the road straight down from the University main gate.

Contact Information

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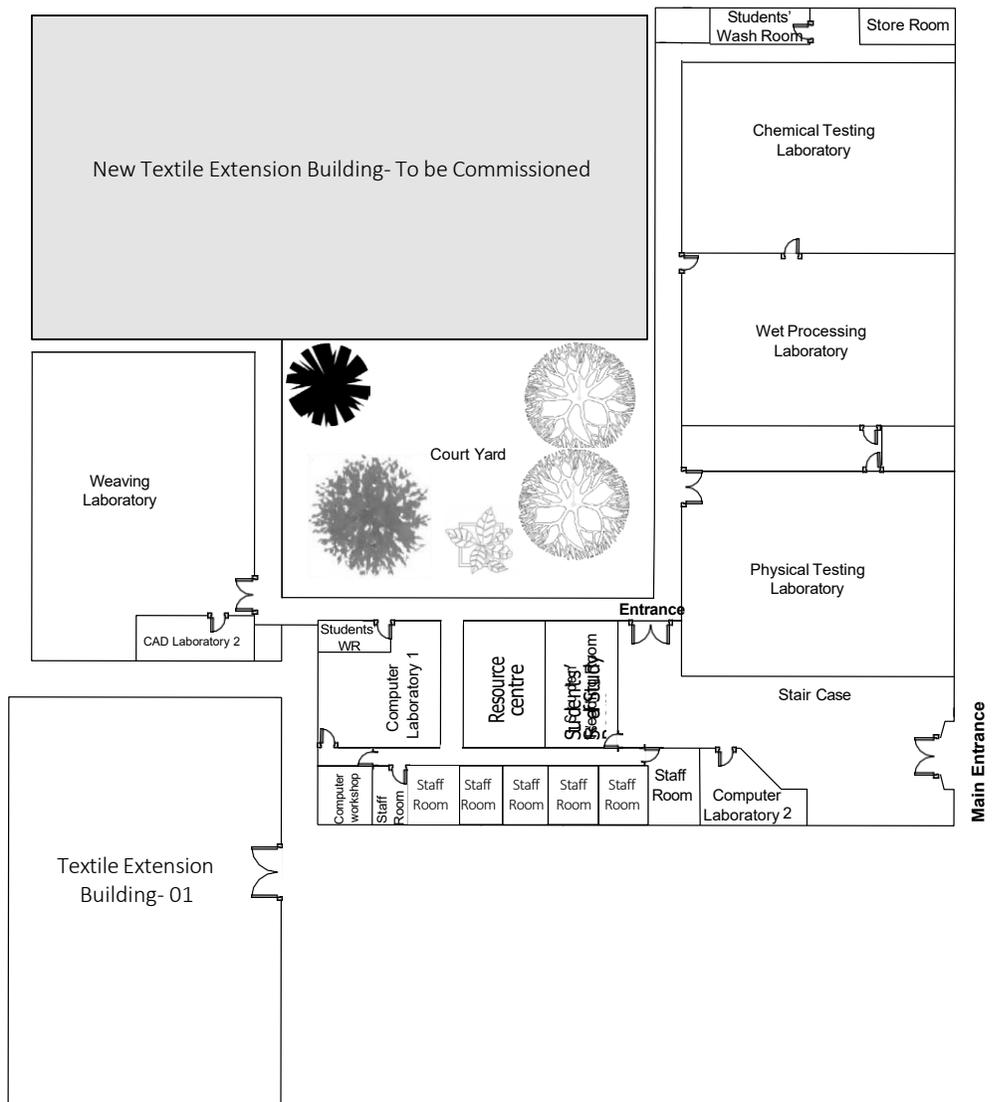
Head of Department

Eng. SN NILES

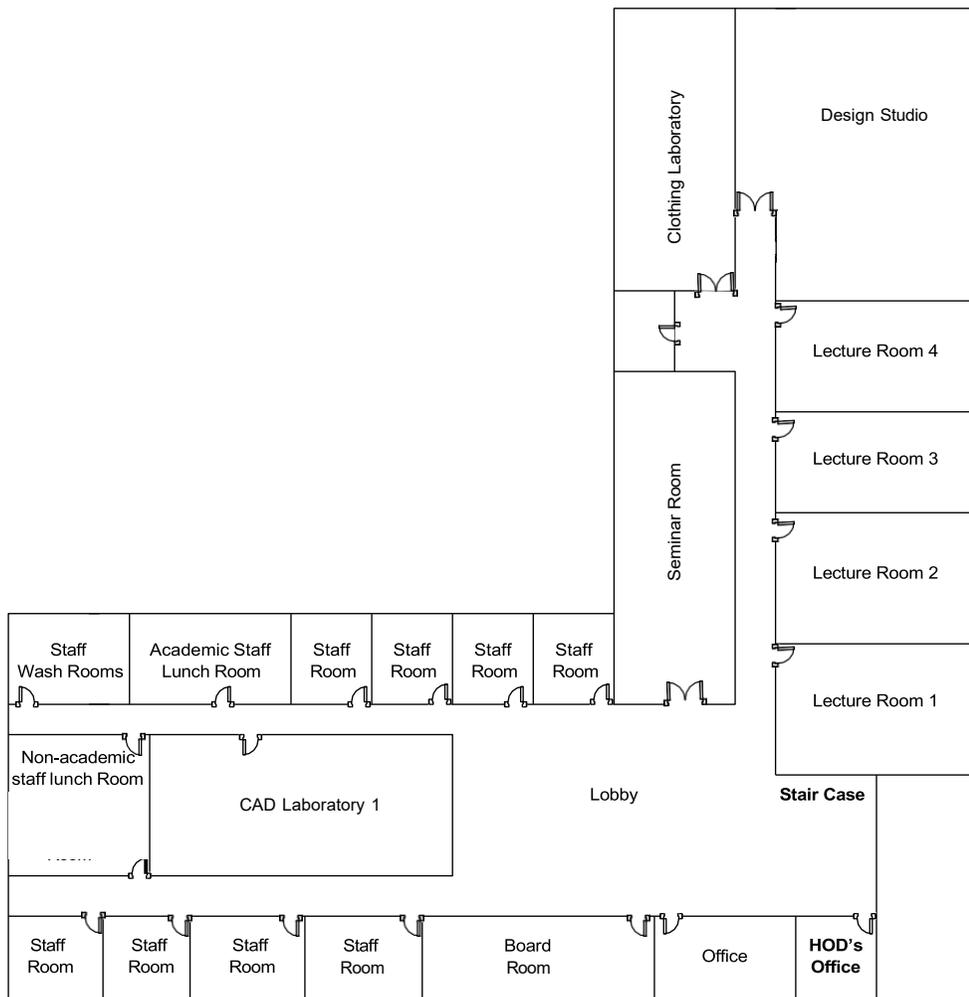
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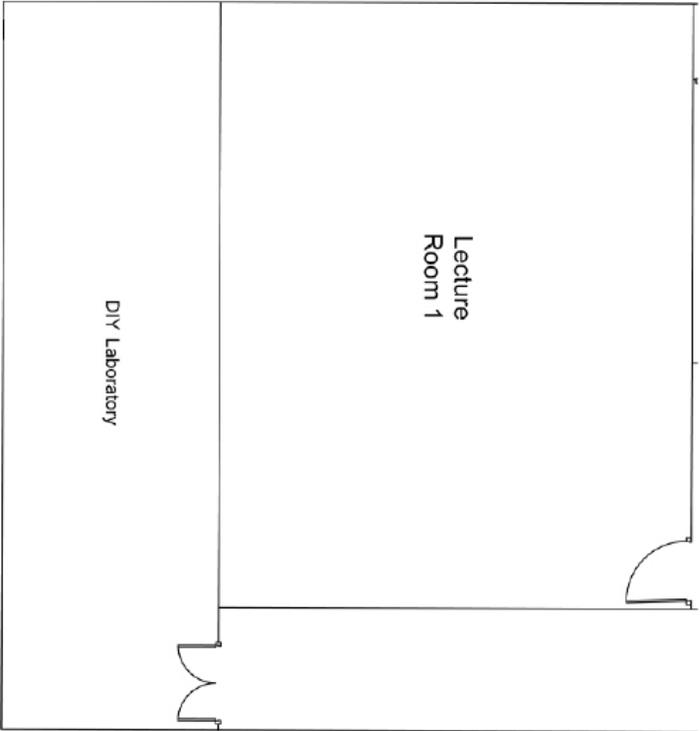
Web : www.textile.mrt.ac.lk



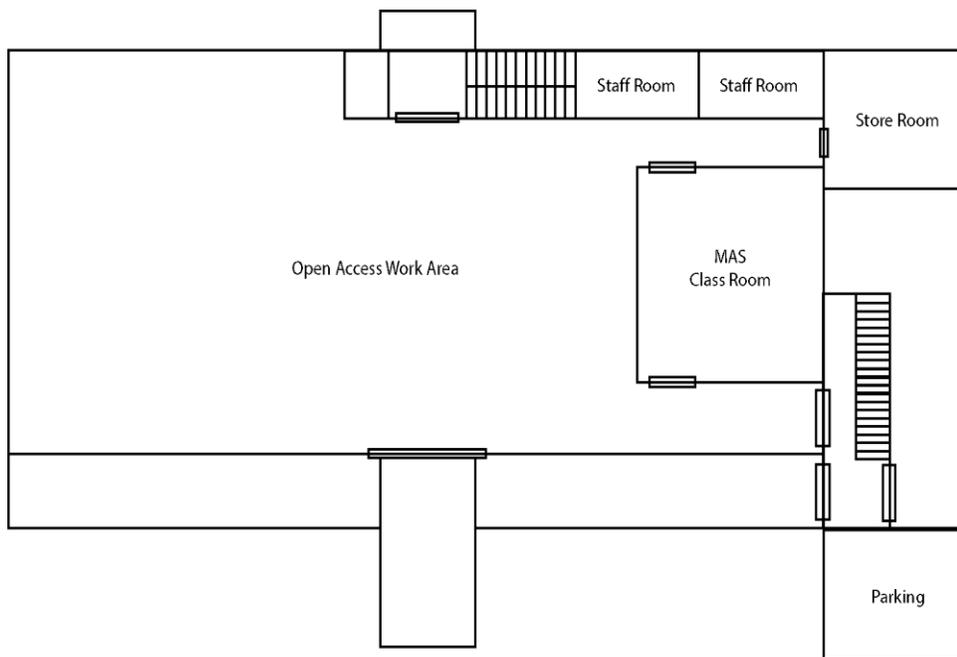
Ground Floor- Main Building of the Department of Textile & Apparel Engineering
 (Floor plan- not drawn to scale)



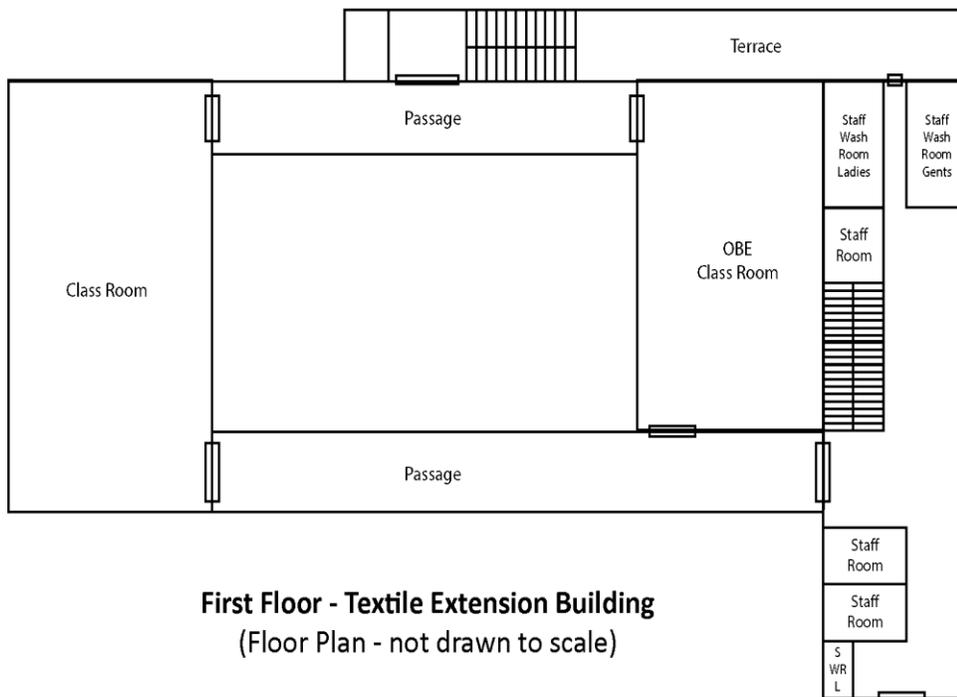
**First Floor- Main Building of the Department of Textile & Apparel Engineering
(Floor plan- not drawn to scale)**



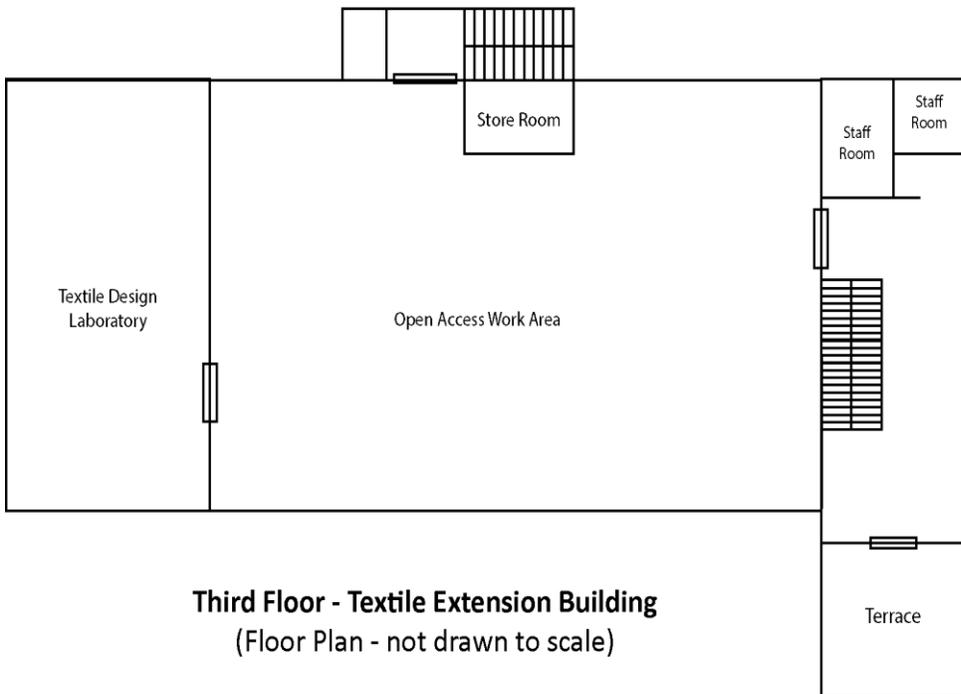
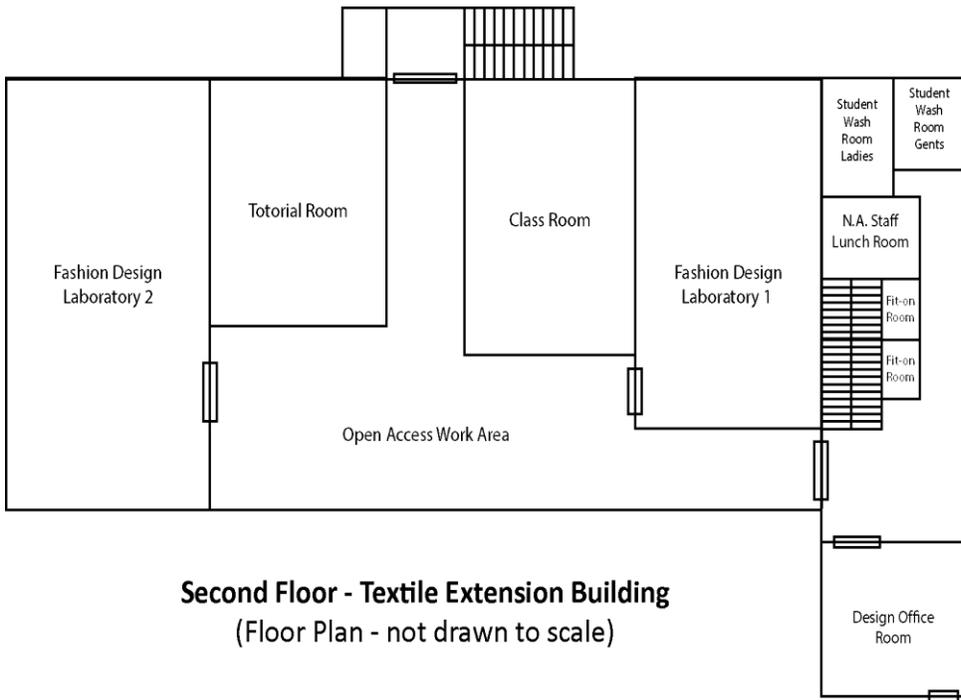
Floor Plan - Textile Old Building
(Floor plan- not drawn to scale)

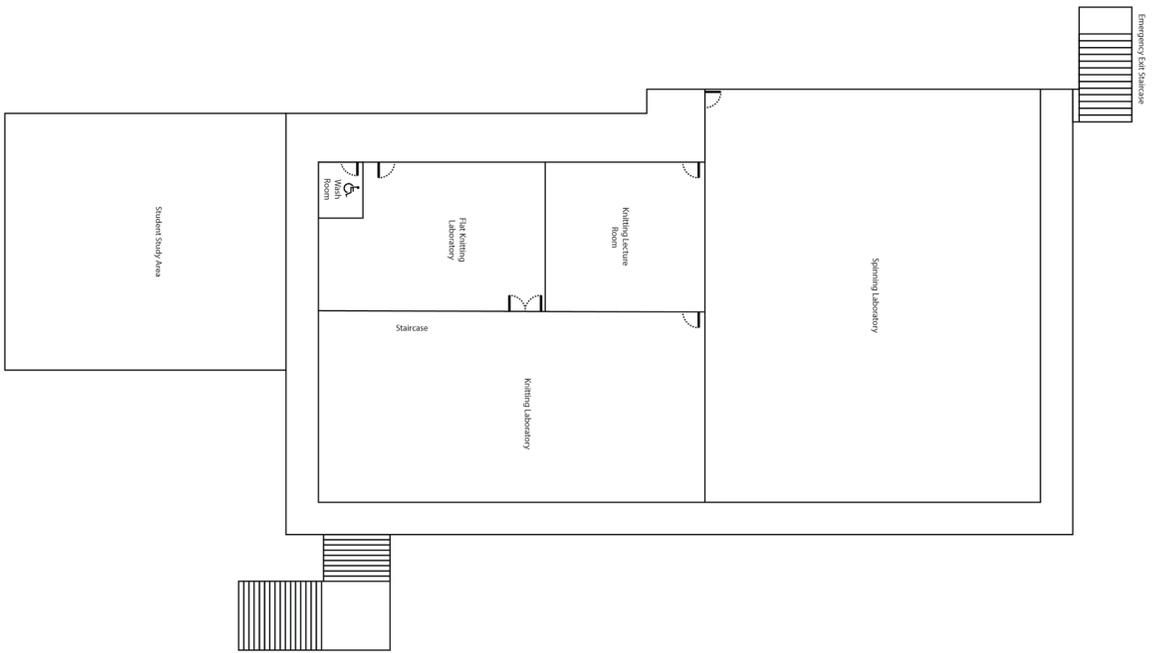


Ground Floor - Textile Extension Building
(Floor Plan - not drawn to scale)

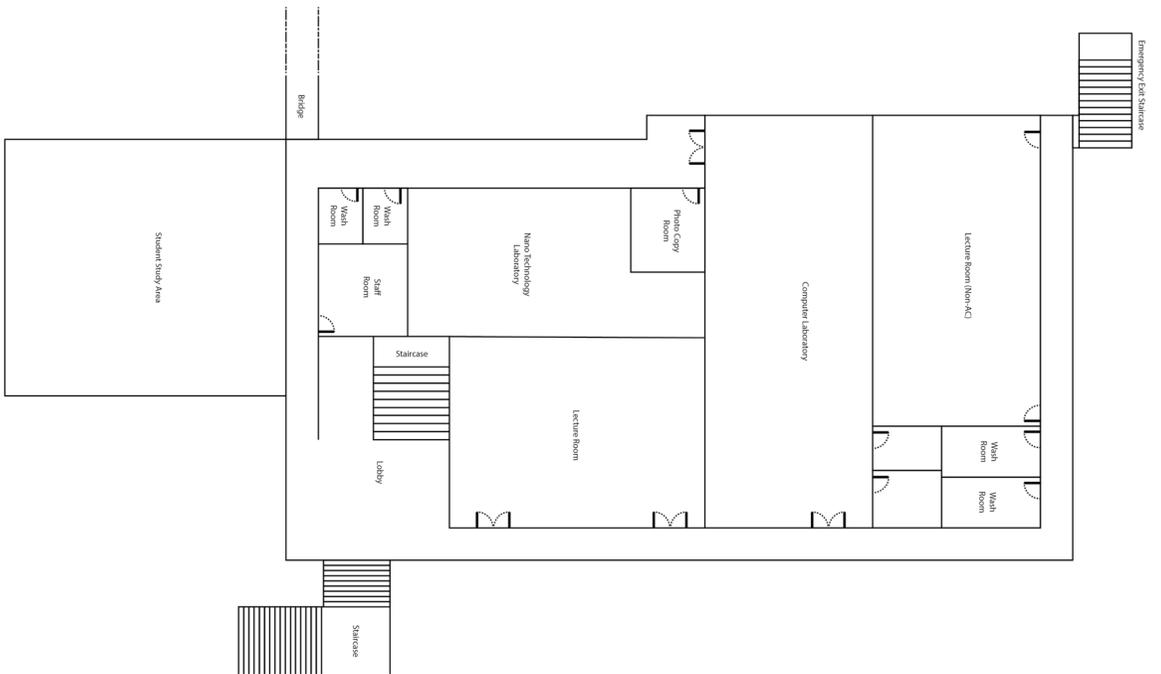


First Floor - Textile Extension Building
(Floor Plan - not drawn to scale)

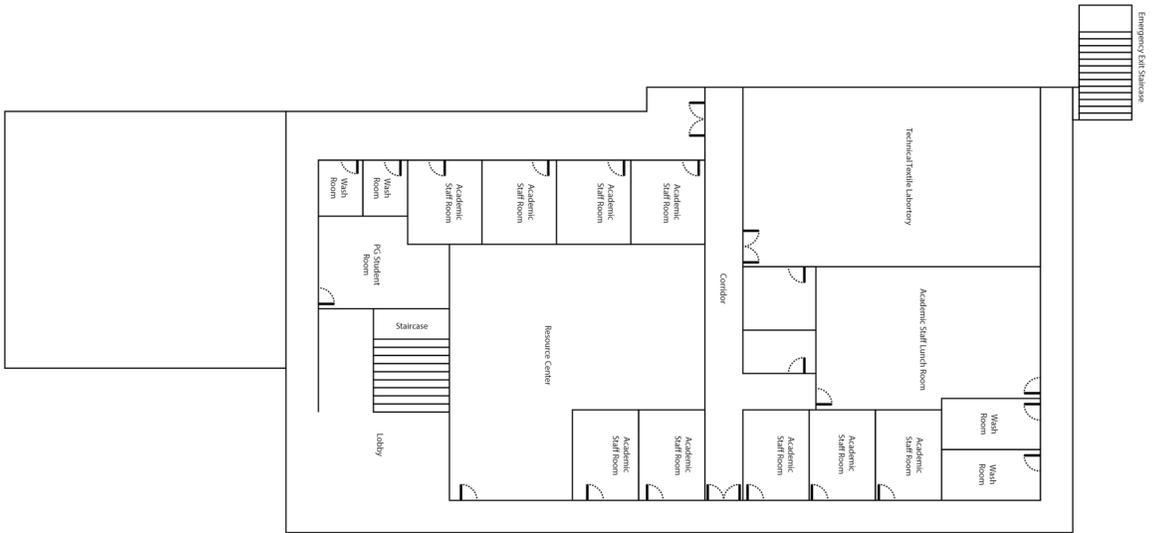




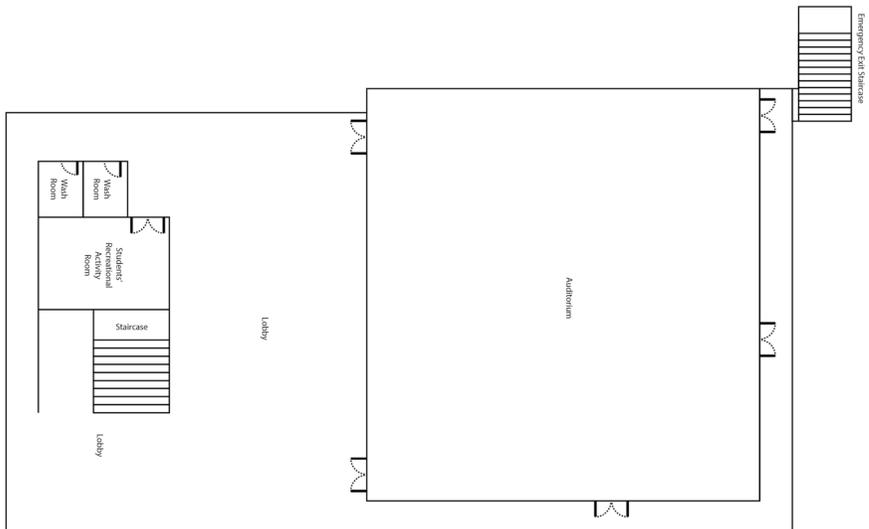
Ground Floor- New Textile Extension Building of the Department of Textile & Apparel Engineering (Floor plan- not drawn to scale)



First Floor- New Textile Extension Building of the Department of Textile & Apparel Engineering (Floor plan- not drawn to scale)



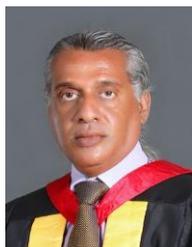
Second Floor- New Textile Extension Building of the Department of Textile & Apparel Engineering (Floor plan- not drawn to scale)



Third Floor- New Textile Extension Building of the Department of Textile & Apparel Engineering (Floor plan- not drawn to scale)

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Lecturers



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Non-Academic Staff

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Mr. GHD Wijesena

Staff Technical Officers



Mr. CP Malalanayake



Mrs. DMDS Dissanayake



Mr. HM Senevirathne



Mrs. SWNA Samaraweera



Mrs. BADIU Bogoda



Mr. JA Chinthaka



Mrs. IS Disapali

Technical Officer



MR. B T R BULATHSINGHALA

Senior Management Assistants (Clerical)



Mr. ULB Perera

Machinist



Mr. SA Gnanarathna

Laboratory/Support Staff



Mr. R P U S senarathna



Mr. J P S Silva



Mr. PGC Wiranjeewa



Mr. HH Nishantha



Mr. KDTA Kumara



Mr. G.K Abeyrathna



Mr. AU de Silva



Mr. KU Murage

Laboratory Facilities

The Department of Textile & Apparel Engineering contains twelve laboratories which are equipped with state-of-the-art machinery and equipment. These laboratories help students to carry out the necessary practical work and research related to their studies. A brief overview of the laboratories is given below:

Spinning Laboratory



The spinning laboratory houses a range of spinning machines. Students are given hands on experience on these machines, which cover the spinning preparatory, spinning and finishing stages of yarn manufacture.

Lecturer in charge: Snr. Prof. G.L.D. Wickramasinghe

Technical Officer: Mr. JA Chinthaka



Weaving Laboratory

The weaving laboratory is equipped with machinery used for weaving preparation, as well as a number of looms of shuttle, rapier, air jet and water jet types. These machinery were obtained under a JICA grant.

Lecturer in charge: Snr. Prof. EASK Fernando
Laboratory Attendant:
Mr. RPUS Senarathne



Knitting Laboratory



The knitting laboratory is equipped with Shima Seiki flat bed knitting machine, Hand flat knitting machines and multi-feeder circular knitting machines. One circular knitting machine and a flatbed knitting machine were provided under the ADB Science and Technology Personnel Development Fund.

Lecturer in charge: Dr. WDG Lanarolle
Technical Officer: Mr. BTR Bulathsinhala



Physical Testing & Quality Control Laboratory



This laboratory is one of the busiest in the Department, serving students of both degree programmes for practical classes as well as testing work related to projects, assignments and research. The laboratory is equipped with two universal tensile testing machines and several modern equipment.

Lecturer in charge: Dr. Gayani K. Nandasiri
Technical Officer: Mrs. DMDS Dissanayake
Lab Attendant : Mr. KDTA Kumara

Wet Processing Laboratory



The wet processing laboratory is equipped with a range of dyeing and printing machines. This laboratory is also used extensively by students for project and research work. Under the ADB Science and Technology Personnel Development Project the equipment was further enhanced by a number of modern hi-tech colour fastness testing machinery.

Lecturer in charge: Prof. UGS Wijayapala
Technical Officer: Mr. CP Malalanayake
Lab Attendant : Mr. KDTA Kumara



Chemical Testing Laboratory

This laboratory is used by students from Level 1 itself for a range of subjects related to textile fibres. Facilities include electronic microscopes, rotational viscometer and extracting machines. The laboratory is also used extensively for project work. Some practical classes for students of other departments are also undertaken in this laboratory.

Lecturer in charge: Dr. USW Gunasekara
Technical Officer: Mr. CP Malalanayake
Lab Attendant : Mr. KDTA Kumara



Clothing Laboratory



The clothing laboratory is equipped with more than 50 industrial sewing machines of different types. In addition there are different types of cutting machines and a fusing machine. A model of an Eton material handling system is also available. The laboratory is heavily used by students of all courses for the practical classes in garment manufacture and equipment technology, and for project work.

Lecturer in charge: Dr. Jayamali De Silva

Technical Officer: Mr. HM Seneviratne

Laboratory Attendant: Mr. JPS Silva



Design Studio

The Design studio provides all the facilities to learn how to interpret a sketch or photograph of a simple design, and to drape and produce a pattern for it. The laboratory is equipped with all the equipment used for pattern developments and students are provided with 'hands on' experience on using French curves, grade rulers, tape measures, pattern notches, tracing wheelers etc. Dress stands are available for students to drape and observe the visual effect of their patterns.



Lecturer in charge: Dr. Jayamali De Silva

Laboratory Attendant: Mr. JPS Silva

Computer Laboratories

The Computer Laboratories of the Department are widely used by students for academic activities. The original laboratory was established in 1991 with a donation from the Government of the Federal Republic of Germany to upgrade the level of Information Technology in the Department.

The Computer Laboratory is linked to all staff rooms and laboratories of the Department via the Departmental intranet, and provides internet and email, centralized printing and data communication facilities within the Department. The main student Laboratories are equipped with about 65 workstations, printers and scanners. All workstations have facility for browsing the internet and some others are limited to application software.

Lecturer in charge: Prof. TSS Jayawardene
Technical Officer: Mr. GHD Wijesena
Lab Attendant : Mr. HH Nishantha



CAD Laboratory 1- (Gerber)



The CAD Laboratory was set up in 2003 with the assistance of the ADB Science & Technology Personnel Development Project. The CAD system was supplied by the Gerber Garment Technologies Ltd., a leading provider of CAD support to the local garment industry.

The laboratory is one of its kind in the island that is equipped with all the necessary facilities to train fifteen individuals at a time.

The laboratory is equipped with 15 workstations with 12 scanners, 2 colour laser printers, 2-meter wide plotter, inkjet printer, digitiser table and a multi media projector.

Lecturer in charge: Dr. RKJ De Silva
Technical Officer: Ms. IS Disapali



CAD Laboratory -2 (Lectra)

Lectra is a world leading integrated technology solution software with CAD/CAM equipments, specifically designed for industries using fabrics, leather, technical textiles, and composite materials to manufacture their products. The CAD system in this laboratory was donated by Lectra International, the leading provider of CAD support to the garment industry.

The laboratory is equipped with all the necessary facilities to train 16 individuals at a time. The laboratory is equipped with 16 workstations with necessary CAD software.

Lecturer in charge: Prof. EASK Fernando



Fashion Design Laboratory -1 (Textile Extension Building)

This laboratory is equipped with facilities required for pattern production and sewing machines for making prototypes.

Lecturer in charge: Dr. CP Vithanage
Technical Officer: Mrs. SWNA Samaraweera
Lab Attendant: Mr. KU Murage
Support Staff: Mr. MRGK Abeyrathne



Fashion Design Laboratory -2 (Textile Extension Building)

This laboratory is equipped with sewing machines for making prototypes and the facilities required for pattern production.

Lecturer in charge: Dr. RKJ De Silva
Technical Officer: Mrs. BADIU Bogoda
Lab Attendant: Mr. KU Murage
Support Staff: Mr. MRGK Abeyrathne



Textile Design Laboratory (Textile Extension Building)

This laboratory is equipped with facilities required for Weaving, which includes Table looms and computerized Technology

Lecturer in charge: PAPH Manthirathne
Technical Officer: Mrs. SWNA Samaraweera

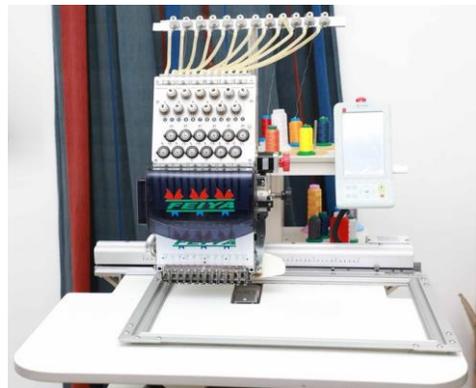


Special Machinery (Textile Extension Building)

Laser Cut Machine



Embroidery Machine



DIY Laboratory

"DIY" stands for Do It Yourself. Basic intension of development of this laboratory to provide hands on experience on design projects done under module TT 1963 Engineering Skill Development . It will be further used in conducting laboratory classes in TT 3262 Instrumentation and Programming for Automation module.

DIY laboratory basically comprising of two segments namely electronic work space and mechanical workshop. Electronic work space has two work benches facilitating four stations to work. It also equipped with electronic multi-meters, storage oscilloscopes, signal generators, DC regulated power supply, computer workstation equipped with simulation software (multisim), toolkits and furniture. Mechanical workshop equipped with a lathe machine, heavy duty work bench with a vice, a angle grinder, bench drilling machine, portable drilling equipment and many other gigs and tools.

Depending on the necessity of the students, the laboratory is planned to be open for the students after hours.

Lecturer in charge: Dr. Ranga Abeysooriya
Machinist: Mr. SA Gnanarathna



Other Facilities

Student Common Room, Reading Room

The Student Common Room is located on the ground floor (Room 101) of the main building of Department. This room is used by students for general purposes including study and discussion. Students are requested to keep this room clean and tidy at all time, switch off the fans and lights when not in use, and refrain from consuming food or drink there.

LRC (Learning Resource Center)

The LRC is located on the ground floor (Room 108) of the main building of Department. LRC is developed under the Quality and Innovation Grant from World Bank. It contains traditional educational resources such as books, journals, as well as modern learning facilities such as software and audio/visual materials. The expectations of Learning Resource Centre are to promote self study, discussions and usage of multimedia facilities for education.

Department Vehicles

The Department has its own bus and a van, which are used for official visits to factories and other places pertaining to academic work.

Lecture Rooms

The Department has four lecture rooms which can accommodate about 50 students each, as well as one larger lecture room in the old building. All of these rooms are equipped with multimedia facilities. Lecture rooms suitable for smaller groups are also found in the weaving laboratory.

Auditorium

The Department has an auditorium capable of accommodating 160 individuals. The auditorium has multimedia facilities, and is used for normal lectures, guest lectures and for special programs of the Department and of student societies.

Textile Extension Building

The Textile Extension Building is equipped with two design studios, lecture/workshop room and two tutorial rooms on its first floor and planning on students' self directed study areas, resource center and staff rooms to be on the first and second floors.

New Textile Extension Building

The new Textile Extension Building is equipped with an auditorium of 300 seating arrangements, New OBA model class rooms, computer lab equipped with modern computer facilities, and technical textile and smart textile laboratories.

Central Facilities

The central library of the University provides the main library facility to the students. Around 450 students can be accommodated in the reference and reading sections. A large number of textbooks and journals are available for borrowing and reference.

A central computing facility is also currently housed in the library. Students may also find different areas for study purposes on different parts of the campus.

In addition to the above a medical centre is available with two doctors in attendance during working hours. All registered students of the University are eligible to meet the doctors and receive treatment and medication. Cases which cannot be handled by the centre will be directed to a hospital.

General Policy regarding the use of Facilities

1. The facilities of the Department are for the use of the entire Department, and students are requested to use them responsibly without disturbing others.
2. Please refrain from loitering in corridors during lecture hours and disrupting other lectures that are going on.
3. Consumption of food or drink within lecture rooms, laboratories or the student common room is strictly prohibited.
4. Please switch off all mobile phones during lectures and laboratory classes. If you are expecting an urgent call please place your phone on silent mode and leave the room if you need to answer the call.
5. Please note that caps should be removed while in the laboratory or lecture room.
6. Computers should be used for authorised purposes. The use of computers for the purpose of viewing or downloading unacceptable material, such as pornography, gambling etc. are strictly forbidden, and strict action will be taken against students violating this.
7. Laboratory facilities are used for practical classes. If these facilities are required for projects or assignments outside of these scheduled classes, a letter requesting these facilities should be sent through the lecturer assigning the projects. All equipment should be used under the guidance of an authorised member of the staff.
8. Working hours of the Department for academic purposes are from 8:15 am to 4:15 pm on weekdays. Additional work may take place after hours or on weekends.

Moratuwa University Textile Association (MUTA)

The Moratuwa University Textile Association is the alumni association of the Department. All graduates, undergraduates and permanent staff of the Department are eligible for membership. Student membership fee is Rs. 100/= per year. The life membership fee is Rs. 3000/=. MUTA acts as a forum for its members, to widen the interest and the knowledge of the members and to enhance social interaction.

MUTA has contributed immensely to the welfare of the students by regularly organising guest lectures on topics of interest, mentoring programs, speechcraft programs, orientation programme and mock interviews for students preparing for industrial training. MUTA also financially supports few BSc Engineering students every year. All students are encouraged to obtain membership of MUTA.

For further details contact Eng. SN Niles.

Textile Engineering Student Society (TESS)

The Textile Engineering Student Society is the student association of the BSc Engineering students of the department which was inaugurated in 2010. All BSc Engineering students of the Department are eligible to be members of TESS.

For further details contact Dr. DGK Dissanayake.

Fashion Design Student Society (FDSS)

The Fashion Design Student Society is the student association of the B.Design in Fashion Design & Product Development students of the Department which was inaugurated in 2015. All Bachelor of Design students of the Department are eligible to be members of the Society.

For further details contact Dr. PVM Karunarathne, Senior Treasurer of the Society for the year 2018.

Degree Programmes & Administration

The Department of Textile & Apparel Engineering of the University of Moratuwa offers two degree programmes: the BSc Engineering degree in Textile & Apparel Engineering, and the BDes Degree in Fashion Design & Product Development. Both these programs have been formulated with the needs of the Apparel and Textile Industry in mind, and periodic revisions are made to keep the courses relevant to the industry, as well as to provide students with a well-rounded education that will enable them to meet the challenges they would have to face in the working world.

For both degree programmes, students are admitted directly to the Department on the basis of the Z-score at the GCE Advanced Level examination. In addition, an aptitude test is held for the BDes degree programme.

BSc Engineering Degree Programme

The BSc Engineering degree is a four year degree programme running according to a modular system. Each year of study is roughly divided into two semesters. During Semesters 1 & 2 the student learns the fundamentals of engineering in common with students of other disciplines, but with a few textile specific modules as well. In Semester 2 the students are also given opportunities to hone their practical engineering skills and to carry out an engineering design project. In addition, an Industry Orientation program is carried out, where the student spends few days in an industrial plant and obtains an introductory exposure to the textile and apparel industry.

In Semesters 3 & 4 the students receive instruction in fundamentals of textile processing and apparel manufacture, together with a module in computer programming and a number of mathematics and general engineering modules. Semester 5 builds on the foundation already laid, with aspects of management and quality control being taught as well. It is at this point that students begin to specialise in their chosen stream.

Students undergo a 6-month industrial placement, where they gain practical experience in a leading textile or garment manufacturing concern. Following this is a short semester 6 (semester 6), where students take a fewer number of course modules.

In Semesters 7 & 8 students focus their learning based on the knowledge gained in the previous years as well as the experiences obtained during industrial training, and also carry out a final year project which is supervised by an academic staff member, as far as possible on industry-specific problems. The project is usually multi-disciplinary in nature.

A total of 150 credits are required to successfully complete the degree, of which a minimum of 135 accounts from GPA modules, and a minimum of 12 from non-GPA modules.

Vision of the BSc Engineering Degree Programme

To be the most sought after degree programme in Textile and Apparel related disciplines.

Mission of the BSc Engineering Degree Programme

- To provide competent well-rounded graduates for the benefit of national and regional communities.
- To maintain high standards and be subjected to continuous improvement in all aspects of teaching and learning.
- To produce graduates who excel in up to date knowledge, relevant skills and positive attitudes.

B.Design Degree Programme

The B.Design course runs under a yearly system. Entry to this course is administered by the UGC and the eligibility requirements are published in the UGC Handbook. The minimum requirement to be admitted to this course is good GCE A Level results and a knack for creativity and interest in Design.

The University of Moratuwa holds an Aptitude Test in an attempt to evaluate the creative thinking abilities of the applicants. Thereafter the selection of candidates are carried out by the UGC through the prevailing University selection method.

The annual intake to this degree programme is 50. Tuition Fees are not charged but is usually termed as 'expensive' because of the course demands such as materials, technology, visiting exhibitions and trade shows and study tours.

At University the FOUR years comprise of the following:

Year 1 - Introductory - Foundation & Experimental

Year 2 - Exploratory & Developmental

Year 3 - Industrial Placement - In industry under guidance

Year 4 - Definitive - Final year individual collections development for graduation Fashion Show

Subjects included and incorporated to the programme throughout the 4 years are;

- Visual Studies
- Fashion & Textile Design
- Product Development & Garment Technology
- Pattern Cutting, Grading, fit & styling
- Garment Construction
- Textile Technology
- ICT, Cad Cam, Photoshop, Illustrator, Flash and other software
- Introduction to the Fashion Business – Buying, Marketing, Merchandising
- Production, Supply Chain, Sourcing and Global Strategies.
- Fashion Forecasting, Consumer Studies
- Historical and Cultural Studies
- English Language for Communication
- Personal Professional Development (PPD)

On completion of the course the student is expected to enter a broad range of Fashion industry related employment, fashion entrepreneurship or pursue higher studies at postgraduate level.

Graduates from this programme are able to demonstrate a sound understanding of the Fashion industry, both Fashion Product and Process, and deploy critical and analytical problem-solving skills in relation to both aesthetic and commercial aspects of the Fashion and related product. They are also able to demonstrate an ability to confidently and effectively express their ideas through visual, verbal and written media.

Graduation Fashion Show

The B.Design Degree in Fashion Design & Product Development celebrates the work of its' graduating batches of students each year with their catwalk collections.

Each collection is designed to a theme and comprises of six complete brand new outfits, developed during the final year of the degree. The collections are based upon in-depth research of a particular market and a customer. The research begins with a strategic proposal to identify a particular label, designer or market segment. The outcome of research leads to develop a brand new idea to a wearable design by solving problems related to manufacturing, pattern development, and design development to achieve the final collection of outfits.

Graduation Fashion Show 2019 Collections



Graduation Fashion Show 2019 Collections



Graduate Profile of a Textile Engineering Graduate

1. Apply knowledge of mathematics, basic sciences and engineering fundamentals to the analysis of complex engineering and technological problems in the textile and apparel industry.
2. Identify, investigate and analyse complex textile engineering and technological problems, research literature and formulate solutions, and reach substantiated conclusions.
3. Design systems, components and processes as solutions for textile engineering problems.
4. Conduct investigations of complex problems using research based knowledge and research methods.
5. Create, select and apply appropriate techniques, resources, and modern engineering and IT tools to complex engineering activities.
6. Assess societal, health, safety, legal, cultural and environmental issues related to professional engineering solutions.
7. Demonstrate broad knowledge of sustainable development concepts and practices required for dealing with contemporary issues related to professional engineering practice.
8. Demonstrate broad knowledge of ethical responsibilities and professional standards.
9. Demonstrate ability to function effectively as an individual and in multidisciplinary and multi cultural teams, with the capacity to be a leader or manager as well as an effective team member.
10. Communicate effectively on complex engineering activities with the engineering community and with society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11. Demonstrate broad knowledge of management and business practices, including financial management, risk and change management.
12. Engage in independent and lifelong learning in the broad context of technological change.

Graduate Profile of a Fashion Design & Product Development Graduate

On completion of the course the student should be able to,

- Demonstrate a sound understanding of the Fashion industry, a knowledge of both Fashion Product and Process.
- Demonstrate a high level of competence in specialist area.
- Deploy critical and analytical problem-solving skills in relation to both aesthetic and commercial aspects of the Fashion and related product industry
- Demonstrate an ability to confidently articulate their ideas effectively through the use of visual, verbal and written media
- Demonstrate the ability to apply the knowledge and skills acquired to new and varied situations which are to be encountered in the changing world of the Fashion industry
- Ability to assess personal, intellectual and professional capabilities and strengths in order to identify and plan areas of further personal development and progress.

The student is expected to enter a broad range of Fashion industry related employment, self-employment or pursue higher studies at postgraduate level.

Course Administration

Courses in the Department function under various course coordinators, who are responsible for the administration of the respective courses at the given levels, and who report to the Head of Department. The course coordinators are as follows:

BSc Engineering Degree Program

Semester 1 & 2	Dr. U.S.W. Gunasekera
Semester 3 & 4	Prof. D. Wickramasinghe
Semester 5,	Prof. Sandun Fernando
Industrial placement	Prof. Sandun Fernando
Semester 6	Dr. Ranga Abeysooriya
Semester 7	Dr. RKJ De Silva
Semester 8	Dr.(Mrs) J. De Silva
Project Coordinator	Dr.(Mrs) J. De Silva

BDes Degree Program

B.Design Degree Program

Year 1 : Prof.(Mrs.) Virajini Karunaratne

Year 2 :Dr.(Mrs.) Padmini Vithanage

Year 3: FIIS: Mrs. Niromi Seram

Year 4 : Dr. A.T.P. Wickramasinghe

The above staff members also function as academic advisors for the respective courses.

Teaching and Learning

All classes in the Department, as well as the time table, have been structured to help the student to get the optimum benefit.

At the beginning of each module the student will be provided with the syllabus and Learning Outcomes of the module, so that he/she can structure his/her learning accordingly. Visual aids, printed lecture notes and other teaching material are used. Some lecturers will make their notes available on the Department Intranet for access by students.

Please note that what takes place at the lecture is important, and on no account should students attempt to stay away from lectures and do only with the lecture notes. Students should also supplement their lecture notes by self-study, referring to materials in the library and on the internet, and by checking out practical aspects for themselves in the laboratories. Students are also encouraged to ask questions in class, and to meet the lecturer or instructor to clarify any doubts. Students who do not attend classes will not be allowed to submit in-class assignments for classes they have missed.

Examinations & Assessment Strategy

All students are required to achieve a minimum of 80% attendance at all classes. However, students are advised that in the case of some modules, particularly laboratory classes, 100% attendance may be required for the student to get sufficient marks.

Continuous assessment carries 30% upwards of the final mark for the BSc Engineering examinations. This means that all tutorials, assignments and laboratory work should be completed and submitted, and a required grade obtained. Students are expected to obtain minimum of 35% from both continuous and end semester examination to pass a course module. Continuous assessment may take the form of practical reports, viva, spot tests and quizzes, assignments and oral presentations. Assessment criteria may differ for different modules, and it is the student's responsibility to ensure that he/she meets the criteria for each module. Late submissions may be penalised or even rejected.

Students who have medical or other problems are requested to contact an academic advisor at the earliest opportunity and work out some solution with regard to academic activities. All such solutions should be according to recommended University procedures.

Mentoring & Development

At present the Department, in collaboration with its alumni association, has organised an annual speechcraft program to help students to improve their leadership and communication skills. This program is organised by the Moratuwa University Textile Association in collaboration with the Colombo West Rotaract club, and conducted by the Millenium Toastmasters club. Currently it is restricted to 25 students at a time. Each student is taken under the wing of a toastmaster, who will help him/ her to develop both leadership and public speaking skills.

In addition to this, the alumni of the Department function as mentors to the students, and are available to help them during their industrial placement and also a special mentoring programme was recently introduced in focusing small groups of students being continuously mentored by an appointed mentor throughout their staying in the University.

Students are also given access to follow special English and communication skills development courses conducted by the English Language Teaching Centre of the University.

Student Records

Student performance records are maintained by the overall degree course coordinator or course director, and by the respective level/ year coordinators.

Awards & Scholarships

The Hirdaramani Memorial Trust Gold Medal is awarded annually to the BSc Engineering student of the Department obtaining the best overall GPA of 3.8 or more. If no student meets this criteria the best student having at least a GPA of 3.7 receives the Hirdaramani Memorial Trust award at the convocation.

The MAS Holdings Gold Medal is awarded annually to the B.Design student of the Department obtaining the best average of 85% or more at the convocation.

The MAS Holdings Award for the Best Overall Student is awarded to one student each on the BSc Engineering and the BDes (FDPD) programmes. The recipients are selected from the final year students according to a senate approval criteria.

The A&E Award for the Best Industrial Trainee is offered to the BSc Engineering programme. Students who receive a stipulated minimum Cumulative Grade Point Average and a stipulated minimum mark at the Industrial Training module may apply, and a shortlist is expected to submit a brief report and make a presentation to a panel.

The Serendib Inspirational award, Commercially Creative Designer award, Menswear Designer award, Creative Knitwear Designer award, Innovative Designer award, Innovative Textile Fabric Designer award as well as the Outstanding Designer Brand award are given to Year 4 B.Design students at the Graduation Fashion Show. All the awards are decided by a panel of judges based on the catwalk presentation.

The '00 batch bursaries are donated by graduates of the 2000 intake of the BSc Engineering degree programme to be given to 3 students of Level 1 or 2 based on their financial need. Other buraries may be offered time to time through MUTA.

BSc Engineering Honours Curriculum, Textile & Apparel Engineering

The Textile & Apparel Engineering curriculum is developed to award four focus areas are mentioned below.

01. Textile Engineering
02. Apparel Engineering
03. Colouration & Finishing of Textile
04. Technical textile

The students will have the choice in selecting modules to meet the criterion to obtain the above focus areas as graduate without any focus areas.

C -Compulsory O -Optional E -Elective

Module Code	Module Name	Category C/E/O	Time allocation [Hours/Week]		Credits offered		Norm		Evaluation %	
			Lecture	Lab / Tute	GPA	NGPA	GPA	NGPA	CA	WE
Semester 1			Specialization requirement				18.0			
MA1014	Mathematics	C	5/2	1	3.0		18.0		20	80
CS1033	Programming Fundamentals	C	2	2	3.0				20	80
ME1033	Mechanics	C	2	2/4	2.0				20	80
MT1023	Properties of Materials	C	2	2/4	2.0				20	80
EE1040	Electrical Fundamentals	C	2	2/4	2.0				20	80
TE1010	Fibre Science	C	5/2	2/2	3.0				30	70
CE1023	Fluid mechanics	C	2	2/4	2.0				20	80
EL1030	Language Skills Enhancement (S1 & S2)	C	-	2	1.0				100	0
Total					18.0	0.0	18.0	0.0		

Module Code	Module Name	Category C/E/O	Time allocation [Hours/Week]		Credits offered		Norm		Evaluation %	
			Lecture	Lab / Tute	GPA	NGPA	GPA	NGPA	CA	WE
Semester 2			Specialization requirement				23.0			
MA1024	Methods of Mathematics	C	5/2	1	3.0		21.0		30	70
EN1803	Basic Electronics for Engineering Applications	C	2.0	2	3.0				40	60
MT1814	Engineering Materials	C	3/2	1	2.0				40	60
TE1020	Introduction to Textile and Apparel Industry	C	2.0	2	3.0				50	50
CS2813	Visual Programming	C	1.0	2	2.0				60	40
TE1030	Textile Chemistry	C	3.0	-	3.0				30	70
TE1040	Pattern Technology and Construction I	C	1.0	2	2.0				70	30
TE1050	Principles of Textile Machinery & Instrumentation	C	3/2	2/2	2.0				30	70
EL1030	Language Skills Enhancement (S1 & S2)	C	-	2	1.0				100	0
HM-1	Humanities Elective I	E	2.0	-	2.0		2.0			
Total					23.0	0.0	23.0	0.0		

Module Code	Module Name	Category C/E/O	Time allocation [Hours/Week]		Credits offered		Norm		Evaluation %	
			Lecture	Lab / Tute	GPA	NGPA	GPA	NGPA	CA	WE
Semester 3			Specialization requirement				23.0			
MA2014	Differential Equations	C	2.0	-	2.0		20		30	70
MA2024	Calculus	C	2.0	-	2.0				30	70
ME1823	Fundamentals of Engineering Thermodynamics and Applications	C	5/2	2/2	3.0				30	70
TE2010	Principles of Yarn Manufacture	C	5/2	2/2	3.0				30	70
TE2020	Work Study	C	5/2	2/2	3.0				40	60
TE2030	Knitting Technology	C	5/2	2/2	3.0				30	70
TE2040	Weaving Technology I	C	5/2	2/2	3.0				40	60
TE2050	Communication Skills Enhancement (S3 & S4)	C	-	2	1.0				100	0
TE2900	Engineering Skills Development	C	1/2	5		3		3	100	0
Total					20.0	3	20	3		

Module Code	Module Name	Category C/E/O	Time allocation [Hours/Week]		Credits offered		Norm		Evaluation %		
			Lecture	Lab / Tute	GPA	NGPA	GPA	NGPA	CA	WE	
Semester 4			Specialization requirement				19.0				
MA2034	Linear Algebra	C	2.0	-	2.0		16.0	3.0	30	70	
MA3014	Applied Statistics	C	2.0	-	2.0					30	70
TE2110	Weaving Technology 11 and Structures	C	3.0	2	4.0					40	60
TE2120	Apparel Production Engineering	C	2.0	2	3.0					40	60
TE2130	Pneumatics	C	5/2	2/2	3.0					30	70
TE2050	Communication Skills Enhancement (S3 & S4)	C	-	4	2.0					100	0
TE2910	Computer Applications in Textile Engineering	C	1.0	4		3.0				100	0
TE2210	Pattern Technology and Construction II	E	1.0	2	2.0					70	30
TE2220	Nanotechnology	E	5/2	2/2	3.0					30	70
Total					21.0	3.0	16.0	3.0			

Module Code	Module Name	Category C/E/O	Time allocation [Hours/Week]		Credits offered		Norm		Evaluation %	
			Lecture	Lab / Tute	GPA	NGPA	GPA	NGPA	CA	WE
Semester 5		Specialization requirement					17.0			
MN3043	Business Economics & Financial Accounting	C	3.0	-	3.0		17.0		30	70
TE3010	Textile Testing, Evaluation and Quality Assurance	C	7/2	2/2	4.0				50	50
TE3020	Non Wovens and Technical Textiles	C	3.0	-	3.0				40	60
TE3030	Circular knitting	C	5/2	2/2	3.0				30	70
TE3040	Colouration & Finishing of Textiles	C	5/2	2/2	3.0				40	60
TE3880	Engineer and Society (S5 & S6)	C	0.0	2	1.0				100	0
TE3210	CAD in Apparels	E	2.0	2	3.0				100	0
TE3220	Analytics for Manufacturing and Service Businesses	E	5/2	2/2	3.0				70	30
TE3230	Instrumentation & Programming for Automation	E	5/2	2/2	3.0				40	60
Total					26.0	0.0	17.0	0.0		

Module Code	Module Name	Category C/E/O	Time allocation [Hours/Week]		Credits offered		Norm		Evaluation %	
			Lecture	Lab / Tute	GPA	NGPA	GPA	NGPA	CA	WE
Industrial Training		Specialization requirement					6.0			
TE3990	Industrial Training	C	-	-		6.0		6.0		
Total					0.0	6.0	0	6		

Module Code	Module Name	Category C/E/O	Time allocation [Hours/Week]		Credits offered		Norm		Evaluation %	
			Lecture	Lab / Tute	GPA	NGPA	GPA	NGPA	CA	WE
Semester 6		Specialization requirement					10.0			
TE4200	Design/Research Project (S6, S7 & S8)	C	1/2	2/2	1.0		6.0		100	0
TE3050	Quality Management	C	3.0	-	3.0				40	60
TE3880	Engineer and Society (S5 & S6)	C	1.0	2	2.0				100	0
TE3200	Comprehensive Design Project (Textile)	E	0.0	4	2.0		2.0		100	0
TE3210	Comprehensive Design Project (Apparel)	E	0.0	4	2.0				100	0
HM-2	Humanities Elective II	E	2.0	-	2.0		2.0			
TE3240	Equipment Technology in Apparels	E	3/2	2/2	2.0				30	70
Total					14.0	0.0	10.0	0.0		

Module Code	Module Name	Category C/E/O	Time allocation [Hours/Week]		Credits offered		Norm		Evaluation %	
			Lecture	Lab / Tute	GPA	NGPA	GPA	NGPA	CA	WE
Semester 7			Specialization requirement				9.0			
TE4200	Design/Research Project (S6, S7 & S8)	C	1	4	3.0		9.0		100	0
TE4010	Control Systems & Applications	C	5/2	2/2	3.0				40	60
TE4020	Environmental Management and Sustainability	C	5/2	2/2	3.0				30	70
TE4210	Structural Mechanics of Yarn & Fabrics	E	2	2	3.0				40	60
TE4220	Advanced Yarn Manufacture	E	5/2	2/2	3.0				30	70
TE4230	Textile Composites	E	5/2	2/2	3.0				30	70
TE4240	Advanced Colouration	E	5/2	2/2	3.0				40	60
TE4350	Functional Finishing for Textiles	E	5/2	2/2	3.0				40	60
TE4250	Warp Knitting & Structures	E	3/2	2/2	2.0				30	70
TE4260	Modern Technologies in Apparel Construction	E	1	2	2.0				30	70
TE4270	Advanced Weaving Technology & Structures	E	2	4	4.0				40	60
TE4280	Work Place Engineering	E	3	-	3.0				30	70
TE4290	Production Planning & Control	E	2	2	3.0				40	60
MN4063	Organizational Behavior and Management	E	2.0	-	2.0					30
MN4133	Consumer and Industrial Marketing	E	2.0	-	2.0				30	70
Total					42.0	0.0	9.0	0.0		

Module Code	Module Name	Category C/E/O	Time allocation [Hours/Week]		Credits offered		Norm		Evaluation %	
			Lecture	Lab / Tute	GPA	NGPA	GPA	NGPA	CA	WE
Semester 8			Specialization requirement				12.0			
TE4200	Design/Research Project (S6, S7 & S8)	C	-	8	4.0		12.0		100	0
TE4110	Marketing & Merchandising for Textiles & Apparels	C	2	2	3.0				60	40
TE4120	Lean Manufacturing	C	5/2	2/2	3.0				40	60
MN4123	Human Resource Management and Industrial Relations	C	2	-	2.0				30	70
TE4310	Flat Knitting Techniques & Integrated Designing	E	1	4	3.0				100	0
TE4320	Plant Maintenance Engineering	E	3/2	2/2	2.0				40	60
TE4340	Advanced Pattern Technology & Virtual Prototyping	E	1	4	3.0				70	30
TE4330	Smart and Functional Textiles	E	5/2	2/2	3.0				40	60
TE4360	Computer-aided Woven Fabric Design	E	1	4	3.0				100	0
TE4370	Colour Measurement & Colour Matching	E	2	2	3.0				40	60
MN4151	Project Management	E	2	-	2.0			30	70	
MN4043	Technology Management	E	2		2.0			30	70	
MN4113	Production and Operations Management	E	2		2.0			30	70	
			Total		35	0	12.0	0.0		

Grand Total	199.0	12.0	125.0	12.0
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Total credit requirement for the Specialization	137.0
Faculty/Specialization Electives beyond the specialization requirements [refer faculty electives table]*	13.0
TOTAL CREDIT REQUIREMENT FOR GRADUATION	150.0

Curriculum of the BDes in Fashion Design & Product Development Honours Degree Program

Units with Assessment MAP YEAR 1

Year 1 - Term 1

code	Unit	Lps	Assessment Value
FD1010	Foundation Studies	20	50%
FD1020	Visual Studies	20	50%
FD1090	Learning Portfolio	** 1	Pass
		41	

Year 1- Term 2

code	Unit	Lps	Assessment Value
FD 1210	Design and Technical Studies in Fashion	20	50%
FD 1220	Design and Technical Studies in Textiles	20	50%
FD 1270	Introduction to Textiles for Design	***3	Pass
FD 1080	Historical and Contextual studies 1	**2	Pass
FD 1090	Learning Portfolio	**2	Pass
		47	

Year 1- Term 3

code	Unit	Lps	Assessment Value
FD 1310	Design Realisation 1 in Fashion	30	55%
	OR	OR	
FD 1320	Design Realisation 1 in Textiles	30	55%
FD 1370	Textiles for Design 1	7	20%
FD 1350	The Business of Fashion / Textiles	10	15%
FD 1080	Historical and Contextual Studies 1	3	05%
FD 1090	Learning Portfolio	2	05%
		52	

** - Formative Mandatory

*** - Mandatory

Total Learning points 140

Units with Assessment MAP Year 2

Year 2 -Term 1

code	Unit	Lps	Assessment Value
FD 2110	Design Realisation 2 in Fashion OR	30 OR	70%
FD 2120	Design Realisation 2 in Textiles	30	70%
FD 2150	Business and Marketing	10	30%
FD 2080	Historical and Contextual studies 2	** 5	Pass
FD 2090	Learning Portfolio	** 1	Pass
		46	

Year 2- Term 2

code	Unit	Lps	Assessment Value
FD 2210	Design Realisation 3 in Fashion OR	25 OR	70%
FD 2220	Design Realisation 3 in Textiles	25	70%
FD 2350	Introduction to Production planning and the supply chain	10	10%
FD 2270	Textiles for Design 2	5	10%
FD 2080	Historical and Contextual studies 2	5	10%
FD 2090	Learning Portfolio	** 2	Pass
		47	

Year 2 -Term 3

code	Unit	Lps	Assessment Value
FD 2310	Industry linked Team project in Fashion OR	30 OR	75%
FD 2320	Industry linked Team project in Textiles	30	75%
FD 2370	Textiles for Design 3	5	10%
FD 2250	Introduction to Product strategy	10	10%
FD 2090	Learning Portfolio	2	05%
		47	

** - Formative Mandatory

Total Learning points 140

Units with Assessment MAP Year 3

code	Unit	Lps	Assessment Value
FD 3200	Industrial placement	*** 5	Pass
FD 3300	Fashion Industry Investigative Study report	30	100%
FD 3090	Learning Portfolio	*** 5	Pass
		40	

*** - Mandatory

Total Learning points 40

Units with Assessments MAP Year 4

Year 4 - Term 1 (Final Major Project Stage 1)

Code	Unit	Lps	Assessment Value
FD 4110	Concept Development and Project Proposal of final major project in Fashion OR	30 OR	70%
FD 4120	Concept Development and Project Proposal of final major project in Textiles	30	70%
FD 4150	Product Strategy and Production Planning	10	30%
FD 4090	Learning Portfolio	** 5	Pass
		45	

Year 4- Term 2 (Final Major Project Stage 2)

Code	Unit	Lps	Assessment Value
FD 4210	Design Development and Problem Solving of final major project in Fashion OR	30 OR	80%
FD 4220	Design Development and Problem Solving of final major project in Textiles	30	80%
FD 4270	Materials Analysis and Evaluation	10	20%
FD 4090	Learning Portfolio	** 5	Pass
		45	

Year 4- Term 3 (Final Major Project Stage 3)

Code	Unit	Lps	Assessment Value
FD 4310	Realisation and Evaluation of final major project in Fashion OR	40 OR	80%
FD 4320	Realisation and Evaluation of final major project in Textiles	40	80%
FD 4090	Learning Portfolio	10	20%
		50	

** - Formative Mandatory

Total Learning points 140

Fire Assembly point : “Lagaan” opposite textile main building open area