B Sc Fashion & Apparel Design

PROGRAM OUTCOME

After successful completion of the course, the graduates achieve the following key skills:

- 1. **Design Skills**: Graduates develop strong foundation in design principles, including sketching, pattern making, and garment construction. They will be proficient in using design software and tools relevant to the industry.
- 2. **Creativity and Innovation**: Students will have honed their creativity and learned to innovate within the constraints of fashion design. They will be able to develop original concepts and translate them into wearable garments.
- 3. **Technical Proficiency**: A solid understanding of textiles, materials, and manufacturing processes. Graduates will be capable of choosing appropriate fabrics, understanding garment construction techniques, and ensuring quality in production.
- 4. **Industry Knowledge**: Knowledge of fashion history, trends, and the contemporary fashion market & graduates understand consumer behavior, branding, marketing, and the business aspects of the fashion industry.
- 5. **Portfolio Development**: Throughout their course, students build a professional portfolio showcasing their best work which is essential for securing internships, jobs, or further education in fashion design.
- 6. **Communication and Presentation Skills**: Effective communication is vital in the fashion industry. Graduates will be able to present their ideas clearly, both visually and verbally, to clients, colleagues, and stakeholders.
- 7. **Professional Development**: They will be prepared to enter the workforce with a professional attitude, understanding industry ethics, teamwork, and the importance of meeting deadlines.
- 8. **Entrepreneurial Skills**: The program emphasise entrepreneurship, equipping students with the skills needed to start their own fashion labels or businesses.
- 9. **Networking Opportunities**: The program provide opportunities for students to connect with industry professionals through internships, guest lectures, and industry events, helping them to build valuable contacts.
- 10. **Continued Learning**: Fashion is an evolving industry, and graduates are prepared for lifelong learning and adaptation to new trends, technologies, and practices.

To summarise, the fashion design degree equips students with a comprehensive set of skills and knowledge necessary to succeed in the competitive and dynamic field of fashion.

PROGRAM SPECIFIC OUTCOME

The following are the Program Specific Outcome

- 1. **Technical Skills**: Students acquire proficiency in technical aspects such as sketching, pattern drafting, draping, and sewing. They learn how to translate their design ideas into tangible garments using industry-standard techniques.
- 2. **Design Theory and Application**: Understanding design principles, colour theory, and garment construction techniques are fundamental. Students learn how to apply these principles creatively to develop innovative and functional fashion designs.
- 3. **Textile Knowledge**: A strong understanding of textiles and materials used in fashion & students learn about different fabrics, their properties, and suitability for various garments.
- 4. **Fashion Illustration and CAD**: Proficiency in fashion illustration techniques both by hand and using computer-aided design (CAD) software like Adobe Illustrator, CorelDraw & the skill is crucial for communicating design concepts visually.
- 5. **Portfolio Development**: Throughout the course, students build a professional portfolio showcasing their design projects. This portfolio is essential for presenting their skills and creativity to potential employers or clients.
- 6. **Industry Awareness**: Knowledge of current fashion trends, historical influences on fashion, and the global fashion market. Students understand consumer behaviour, fashion forecasting, and the business aspects of the industry.
- 7. **Collaboration and Teamwork**: Fashion design often involves teamwork with professionals such as pattern makers, sample machinists, and marketers. Students will develop collaboration skills through group projects and industry simulations.
- 8. **Professional Practices**: Learning about ethical practices in fashion, sustainability in design, and professional conduct. Understanding the importance of intellectual property rights and respecting cultural sensitivities in design.
- 9. **Presentation Skills**: Effective communication of design concepts through verbal presentations and visual presentations of their work. Students will learn how to articulate their ideas and receive constructive feedback.
- 10. **Internship and Industry Experience**: Students are given industry exposure through internships or industry placements, allowing students to gain practical experience and make valuable connections within the fashion industry.
- 11. **Entrepreneurship and Business Skills**: The program has incorporated entrepreneurship skills, teaching students how to start and manage their own fashion businesses, including aspects such as branding, marketing, and financial planning.
- 12. **Critical Thinking and Problem Solving**: Developing the ability to analyse design challenges critically and find creative solutions which is essential for adapting to the fast-paced and evolving nature of changes in the fashion industry.

These outcomes collectively prepare graduates to enter various career paths within the fashion industry, including fashion design, product development, merchandising, styling, and more.

I SEMESTER

FIBRE & YARN SCIENCE

The Fibre & Yarn Science focus on equipping students with in-depth knowledge and practical skills related to fibres and yarns used in textile manufacturing and related industries. Here are the key course outcomes:

- 1. **Introduction to Fibres & Sources**: Students gain knowledge on various fibres and its sources, Classification and properties of fibres
- 2. **Understanding Fibre Properties**: Students will gain a comprehensive understanding of the physical, chemical, and mechanical properties of natural and synthetic fibres. This includes factors such as strength, elasticity, absorbency, and thermal properties.
- 3. **Fibre Identification and Classification**: Ability to identify different types of fibres based on their microscopic structure, chemical composition, and performance characteristics as this knowledge is essential for quality control, product development, and textile testing.
- 4. **Yarn Formation and Structure**: Knowledge of yarn manufacturing processes, including spinning techniques, twisting methods, and yarn structure. Students will learn how yarn properties such as twist, count, and twist direction affect fabric performance.
- 5. **Sustainability in Fibre and Yarn Production**: Awareness of sustainable practices in fibre production, yarn manufacturing, and textile processing. Understanding the environmental impact of different fibres and processes, and exploring sustainable alternatives.
- 6. **Problem-solving and Research Skills**: Developing critical thinking skills to analyse challenges in fibre and yarn science and propose innovative solutions.
- 7. **Professional Communication**: Effectively communicating technical information related to fibres and yarns, both orally and in written reports. Presenting findings and recommendations to peers, examiners & stakeholders.
- 8. **Career Preparation**: Equipping students with the skills and knowledge necessary to pursue careers in textile manufacturing, apparel design, technical textiles, quality control, research and development, sustainability consulting, and related fields.

To sum up, Fibre & Yarn Science course provides a solid foundation in the science and technology behind textiles, preparing graduates for careers in industries that rely on advanced knowledge of fibres and yarns.

ELEMENTS OF FASHION & DESIGN

"Elements of Fashion & Design" typically focus on providing students with foundational knowledge and skills related to the fundamental principles of fashion and design. The key outcomes are:

- 1. **Understanding Design Principles**: Students will learn the basic principles of design such as balance, proportion, harmony, rhythm, emphasis, and unity. These principles are essential for creating aesthetically pleasing and functional designs in fashion.
- 2. **Colour Theory**: Knowledge of colour theory and its application in fashion design. Understanding colour psychology, colour schemes, and the use of colour to evoke different moods and convey messages in fashion.
- 3. **Fabric Awareness**: Familiarity with different types of fabrics and materials used in fashion design. Understanding the properties, characteristics, and suitability of various fabrics for different garment styles and purposes.
- 4. **Fashion Sketching and Illustration**: Developing skills in fashion sketching and illustration techniques. Ability to create quick croquis sketches and detailed fashion illustrations to communicate design ideas visually.
- 5. **Portfolio Development**: Building a professional portfolio showcasing design projects, sketches, illustrations, and completed garments or accessories. The portfolio is essential for presenting skills and creativity to potential employers or for further education.
- 6. **Fashion Art**: The students will learn about Fashion Art, Proportion and fashion figure 8 head/10 head/12 head theory of fashion drawing.
- 7. **Presentation and Communication Skills**: Developing effective verbal and visual communication skills to articulate design concepts and present ideas confidently. Learning how to participate in critiques and receive constructive feedback.
- 8. **Creative Problem Solving**: Developing critical thinking skills to solve design challenges creatively. Experimenting with innovative design solutions and adapting to changing fashion trends and consumer preferences.

To sum up, "Elements of Fashion & Design" aims to provide students with a well-rounded understanding of the foundational elements that contribute to successful fashion design equipping students with both theoretical knowledge and practical skills essential for a career in fashion.

PATTERN MAKING & GARMENT CONSTRUCTION

"Pattern Making & Garment Construction" typically focus on equipping students with the technical skills and knowledge necessary to create patterns and construct garments. The key outcomes are:

- 1. **Pattern Making Techniques**: Mastering the pattern making techniques for creating basic blocks (e.g., bodice, skirt, sleeve) and manipulating these blocks to develop different styles and silhouettes. Understanding how to draft patterns manually.
- 2. **Garment Measurement and Fit**: Knowledge of body measurement techniques and understanding how to take accurate measurements for pattern drafting. Ability to analyse fit issues and make adjustments to patterns for proper garment fit.
- 3. **Introduction to Sewing Machine**: History of Sewing machines (Domestic/Industrial), understanding sewing machine parts & Introduction to Specialised machineries.
- 4. **Fabric Selection and Handling**: Understanding different types of fabrics, their properties, and suitability for various garment styles. Knowledge of fabric grain, directionality, and handling techniques during cutting and sewing.
- 5. **Sewing Techniques**: Proficiency in sewing techniques and garment construction processes, including seams, darts, pleats, gathers, closures (zippers, buttons, etc.), and finishing techniques (hemming, binding, etc.). Ability to construct garments using both industrial and domestic sewing machines.
- 6. **Pattern Grading**: Knowledge of pattern grading techniques to scale patterns up or down to different sizes while maintaining proper proportions and fit. Understanding size charts and grading rules used in the fashion industry.
- 7. **Technical Drawings and Specifications**: Ability to create technical drawings and specifications that communicate construction details, seam allowances, and finishing methods to garment manufacturers or production teams.
- 8. **Problem Solving and Adaptability**: Developing critical thinking skills to troubleshoot construction challenges, adapt patterns to different fabrics or design requirements, and innovate solutions to achieve desired garment outcomes.
- 9. **Portfolio Development**: Building a professional portfolio showcasing pattern making and garment construction projects. The portfolio demonstrates technical proficiency, creativity, attention to detail, and the ability to execute designs effectively.
- 10. **Professionalism and Industry Readiness**: Understanding the role of pattern makers and garment construction specialists in the fashion industry. Developing professionalism, teamwork skills, time management, and the ability to work under pressure to meet deadlines.

To sum up, "Pattern Making & Garment Construction" aims to prepare students for careers as pattern makers, garment technologists, sample machinists, or freelance pattern makers in the fashion industry. It combines theoretical knowledge with hands-on practical skills to ensure graduates are capable of creating well-fitting, professionally constructed garments that meet industry standards and client expectations.

II SEMESTER

COURSE OUTCOME

FABRIC SCIENCE & ANALYSIS

"Fabric Science & Analysis" focus on providing students with comprehensive knowledge and practical skills related to textiles, fabrics, and their analysis. The key outcomes are:

- 1. **Understanding fabric formation**: Knowledge on woven, knitted & nonwoven fabrics, its properties.
- 2. **Fabric Structure and Construction**: Understanding the formation of woven fabric formation & the classification & technicalities of different types of looms like Khadi, Handloom & Power looms.
- 3. **Yarn Count, Grain & Density**: Technicalities of woven fabrics, count of yarn, fabric grain, Thread density etc.
- 4. **Weaves**: Classification of weaves, characteristics & construction of weaves, salient features of weaves. Characteristics & salient features of crepe fabrics like georgette, chiffon etc.
- 5. **Knitting**: Details about warp & weft knitting, properties of knitted structure.
- 6. **Fabric Analysis and Evaluation**: Ability to analyse and evaluate fabrics using technical instruments and equipment. Interpreting test results to assess fabric quality, performance characteristics, and suitability for specific applications.
- 7. **Fabric manufacturing clusters in India**: Discussions on fabric manufacturing clusters in India and their salient features like Kancheepuram, Mysore, Illkal, Orissa, Pochampalli etc.
- 8. **Research Skills**: Developing research skills to investigate and explore emerging trends, technologies, and advancements in fabric science. Conducting independent research projects related to fabric development or textile innovation.
- 9. **Communication and Reporting**: Effectively communicating technical information related to fabric science through written reports, presentations, and technical documentation.
- 10. **Industry Applications**: Understanding how fabric science principles apply to various industries, including fashion, apparel manufacturing, home textiles, technical textiles (e.g., automotive textiles, medical textiles), and interior design.

To sum up, "Fabric Science & Analysis" aims to equip students with a deep understanding of textiles and fabrics, from fibres properties to fabric construction and performance characteristics.

FASHION ILLUSTRATION & DESIGN

"Fashion Illustration & Design" focus on developing students' skills in visual communication, creativity, and design principles specific to the fashion industry. The key outcomes are:

FASHION ILLUSTRATOR: explore the types of illustrators, exemplify different approaches to fashion illustration, showcasing how artists can use their skills to capture the spirit and style of the fashion world through their artwork.

FASHION FIGURE Understand and Explore the drawing techniques involves in creating a stylized representation of the human form of 8 head, 10 head, 12 head, 1 tailored specifically for fashion design purposes, fashion illustration, proportions are stylized to accentuate the clothing and create a visually appealing composition.

FASHION TERMINOLOGIES Studying fashion terminology can lead to several valuable outcomes that are essential for anyone aspiring to work in the fashion industry, whether as a designer, stylist, merchandiser, or fashion journalist.

FASHION THERORIES – Understand the origins of fashion and clothing theories can lead to several significant outcomes that deepen our understanding of fashion as a cultural, social, and economic phenomenon & Fashion Cycle.

GARMENT FEATURES learn different types of garment features in the context of fashion design - Types Of Collars, Cuffs, Silhouettes, Trouser Fullness Etc and production can lead to several important outcomes that are crucial for designers, manufacturers, marketers, and consumers alike.

FASHION PSYCHOLOGY Fashion and clothing psychology explores the profound impact that clothing has on human behavior, emotions, perceptions, and well-being, professional development, cultural understanding, and ethical awareness within the fashion industry.

FASHION DESIGNERS fashion designers yield outcomes that extend beyond technical skills and industry knowledge. It promotes creativity, cultural understanding, professional development, and critical discourse within the dynamic and influential field of fashion design

To sum up, "Fashion Illustration & Design" aims to prepare students for careers as fashion illustrators, designers, stylists, or visual merchandisers in the fashion and apparel industry. It combines artistic creativity with technical skills in sketching, rendering.

PATTERN MAKING & GARMENT CONSTRUCTION – II

PMGC-II focus on the concept of garment making and to impart knowledge and skills required for garment construction.

- 1. **Sewing Techniques**: Proficiency in sewing techniques and garment construction processes, including seams, darts, pleats, gathers, closures (zippers, buttons, etc.), and finishing techniques (hemming, binding, etc.). Ability to construct garments using both industrial and domestic sewing machines
- 2. **Various types of collars** Develop hands on experience on various types of collars like Peter pan, sailor, turtle collar, shawl, formal shirt collar, Mandarin, collar with stand & its construction.
- 3. Yokes Definitions & Construction: Understanding with fullness & without fullness and the shapes and Construction.
- 4. **Pockets, Neckline, Plackets, Skirts** Developing skill in various types of pockets, neckline, plackets which includes bound placket, two sleeve placket and shirt placket.
- 5. **Skirts, Dresses, Sleeves, Fasteners** Knowledge and expertise in various types of skirts, developing patterns & stitching, torso dress, princess panel and drafting and stitching. Fasteners, shirt button, button hole etc.,
- 6. **Industrial Practices and Standards**: Awareness of industry standards and practices related to pattern making and garment construction. Understanding production processes, quality control measures, and meeting manufacturing specifications.
- 7. **Construction of Different Garment Types**: Experience in constructing a variety of garments, from simple to complex designs, such as dresses, pants, shirts, jackets, and skirts. Understanding the sequence of garment assembly and troubleshooting construction issues.
- 8. **Creativity and Design Integration**: Applying pattern making and garment construction skills to interpret and bring to life fashion designs created by fashion designers. Collaborating effectively with designers to translate their concepts into wearable garments
- 9. **Portfolio Development**: Building a professional portfolio showcasing pattern making and garment construction projects. The portfolio demonstrates technical proficiency, creativity, attention to detail, and the ability to execute designs effectively.
- 10. **Professionalism and Industry Readiness**: Understanding the role of pattern makers and garment construction specialists in the fashion industry. Developing professionalism, teamwork skills, time management, and the ability to work under pressure to meet deadlines.

To sum up, "Pattern Making & Garment Construction" aims to prepare students for careers as pattern makers, garment technologists, sample machinists, or freelance pattern makers in the fashion industry. It combines theoretical knowledge with hands-on practical skills to ensure graduates are capable of creating well-fitting, professionally constructed garments that meet industry standards and client expectations.

III SEMESTER

COURSE OUTCOME

TEXTILE WET PROCESSING

"Textile Wet Processing" focus on equipping students with the knowledge and skills necessary for processing textiles through various wet treatments. The key outcomes are:

- 1. **Understanding of Textile Fibre Properties**: Mastering the properties and characteristics of textile fibres, Understanding how fibre properties influence wet processing techniques.
- 2. **Pre-treatment Processes**: Knowledge of pre-treatment processes such as desizing, scouring, bleaching, and mercerization. Understanding their importance in preparing textiles for dyeing, printing, or finishing.
- 3. **Dyeing Techniques**: Proficiency in different dyeing techniques, including:
 - o **Direct Dyeing**: Application of dyes directly to fibres.
 - o **Reactive Dyeing**: Bonding of dyes to fibres through chemical reactions.
 - o **Disperse Dyeing**: Dyeing synthetic fibres like polyester and nylon.
 - o **Vat Dyeing**: Dyeing with insoluble pigments reduced to a soluble form.
 - o **Acid Dyeing**: Dyeing protein fibres like wool and silk.
- 4. **Printing Methods**: Understanding different textile printing methods such as:
 - o **Screen Printing**: Using screens to apply patterns onto fabric.
 - o Rotary Printing: Continuous pattern printing using cylindrical screens.
 - o **Digital Printing**: Direct printing from digital files onto fabric.
- 5. **Finishing Processes**: Knowledge of finishing processes to improve fabric properties or add special effects, such as:
 - Mechanical Finishing: Calendaring, embossing, or brushing to enhance fabric surface.
 - o Chemical Finishing: Resin finishing, water repellence, flame retardancy, etc.
 - **Functional Finishing**: UV protection, antibacterial treatment, wrinkle resistance, etc.
- 6. **Environmental Considerations**: Awareness of environmental impact and sustainability issues in textile wet processing. Knowledge of eco-friendly dyeing and finishing technologies, wastewater treatment, and compliance with environmental regulations.
- 7. **Problem-solving Skills**: Developing critical thinking skills to troubleshoot issues that may arise during wet processing, such as uneven dye uptake, colour deviations, or fabric defects. Implementing corrective measures and optimizing process parameters.
- 8. **Project Management and Documentation**: Planning and executing textile wet processing projects effectively. Documenting process parameters, test results, and project outcomes in technical reports.
- 9. **Professional Development**: Developing professionalism, teamwork skills, and the ability to collaborate with multidisciplinary teams in the textile and apparel industry. Understanding ethical considerations and industry best practices.

To sum up, "Textile Wet Processing" prepares students for careers in textile dyeing, printing, finishing, quality control, and research and development. It emphasizes both theoretical knowledge and practical skills essential for managing and optimizing wet processing operations in the dynamic and competitive textile industry.

FASHION ART & DESIGN

"Fashion Art & Design" focus on developing students' artistic skills, creativity, and understanding of design principles within the context of fashion. The key outcomes are:

Artistic DESIGN HISTORY -TO Study the design history, especially within the context of fashion and textiles, yields several important outcomes that enrich our understanding of culture, creativity, and societal evolution.

FAHION DESIGN -To help the students to understand about the categories & garments used in the age groups and the various activities

FLAT SKETCH AND SPEC SHEET- Acquire knowledge on the methods used in the development & preparation of the Spec sheet & its application in the different categories.

DESIGNING BASED ON BODY TYPES - To study about the Designing of garments based on body types involves creating clothing that enhances and flatters different body shapes and proportions

CLOTHING AND PERSONALITIES- Understand and learn about the relationship between clothing and personalities is multifaceted, influencing self-expression, identity formation, emotional well-being, social interactions, and cultural affiliations.

INDIAN & INTERNATIONAL DESIGNERS: Developing concept, design, creation and collection of various Indian & International designers like Balenciaga, Anita Dongre, Ritukumar, Rituberi, Sabyasachi Mukherjee

ADVANCED ILLUSTRATION TECHNIQUES Mastery of Advanced Rendering Techniques to develop proficiency in advanced rendering techniques such as shading, highlighting, texture application, and use of light and shadow to create depth and realism in illustrations.

To sum up, "Fashion Art & Design" aims to prepare students for careers as fashion artists, illustrators, designers, stylists, or visual merchandisers in the fashion and apparel industry. It combines artistic creativity with technical skills in fashion illustration, and concept development, ensuring graduates can effectively contribute to the visual storytelling and creative expression within the dynamic world of fashion.

PATTERN MAKING & GARMENT CONSTRUCTION –III

PMGC-III focus on the concept of garment making and to impart knowledge and skills required for garment construction.

- 1. **Style Features & Techniques**: Proficiency in designing and construction of garments with style features using drafting, flat pattern techniques kids wear, Ladies Shirt, Computerised pattern development for Children's , Men's & Women's wear.
- 2. **Various types of Shirts & Tops** Develop hands on experience on various types of designing & construction of garments with style features, mens shirt / women's top.
- 3. **Trouser's –Men's & Women's:** Understanding, designing and construction of men's and women's trousers.
- 4. **Waist Coat** Developing skill in designing & construction waist coat Men's/Women's.
- 5. **Industrial Practices and Standards**: Awareness of industry standards and practices related to pattern making and garment construction. Understanding production processes, quality control measures, and meeting manufacturing specifications.
- 6. **Construction of Different Garment Types**: Experience in constructing a variety of garments, from simple to complex designs, such as dresses, pants, shirts, jackets, and skirts. Understanding the sequence of garment assembly and troubleshooting construction issues.
- 7. **Creativity and Design Integration**: Applying pattern making and garment construction skills to interpret and bring to life fashion designs created by fashion designers. Collaborating effectively with designers to translate their concepts into wearable garments
- 8. **Portfolio Development**: Building a professional portfolio showcasing pattern making and garment construction projects. The portfolio demonstrates technical proficiency, creativity, attention to detail, and the ability to execute designs effectively.
- 9. **Professionalism and Industry Readiness**: Understanding the role of pattern makers and garment construction specialists in the fashion industry. Developing professionalism, teamwork skills, time management, and the ability to work under pressure to meet deadlines.

To sum up, "Pattern Making & Garment Construction" aims to prepare students for careers as pattern makers, garment technologists, sample machinists, or freelance pattern makers in the fashion industry. It combines theoretical knowledge with hands-on practical skills to ensure graduates are capable of creating well-fitting, professionally constructed garments that meet industry standards and client expectations.

IV SEMESTER

COURSE OUTCOME

HISTORY OF TEXTILES AND COSTUMES

"History of Textiles & Costumes" focus on imparting knowledge through the historic influence of design, motifs and colours. The key outcomes are:

- 1. **Historical Knowledge**: Understanding the evolution of textiles and costumes through various historical periods and civilizations
- 2. **Cultural Context**: Gain insights into the cultural, social, economic, and political contexts in which textiles and costumes have evolved and been used.
- 3. **Technological Evolution**: Understand the technological advancements and innovations that have influenced the production, design, and use of textiles and costumes throughout history & tracing its impact on costume design across different eras- Colonial, Victorian, Edwardian Era etc.,
- 4. **Knowledge about the motifs from ancient to modern day**: Brocades of Banaras, Baluchuri, Mashru & Dacca Muslin, Ikat, Bandini, Kalamkari, Madhibani, Warli etc,
- 5. **Critical Analysis**: Develop the ability to critically analyze primary and secondary sources related to textiles and costumes, evaluating their significance and reliability.
- 6. **Comparative Study**: Compare and contrast textiles and costumes from different regions, civilizations, and time periods, identifying commonalities and differences.
- 7. **Research Skills**: Enhance research skills through independent research projects, literature reviews, and analysis of historical artifacts and texts.
- 8. **Communication Skills**: Improve written and oral communication skills, particularly in presenting research findings, discussing historical interpretations, and engaging in scholarly discourse.
- 9. **Ethical Awareness**: Consider ethical issues related to the study, preservation, and display of textiles and costumes, including issues of cultural appropriation, conservation practices, and museum ethics.

To sum up, the course outcome is to equip students with a comprehensive understanding of the history and significance of textiles and costumes, preparing them for both professional careers and further academic pursuits in related disciplines.

TEXTILE & APPAREL TESTING

"Textile & Apparel Testing" focus on imparting knowledge on testing of fabrics & garment accessories with an aim to provide a deep insight on testing. The key outcomes are :

- 1. **Understanding Testing Standards**: Gain knowledge of international and national standards for textile and apparel testing.
- 2. **Yarn Testing**: Learn practical skills in conducting various Yarn tests, Yarn count, Yarn twist, effects and measurements of twists.
- 3. **Testing Methods and Techniques**: Learn practical skills in conducting various tests such as fabric composition analysis, colour fastness testing, dimensional stability, tensile strength, abrasion resistance, and pilling resistance
- 4. **Garment & Garment accessories testing**: Gain knowledge on testing of fusible interlings, zippers & dimensional stability of fabrics etc.
- 5. **Quality Assurance**: Understand the importance of textile and apparel testing in ensuring product quality, durability, safety, and compliance with regulatory standards.
- 6. **Interpreting Test Results**: Develop the ability to interpret test results accurately and analyse their implications for product performance and consumer satisfaction.
- 7. **Laboratory Skills**: Acquire hands-on experience in using laboratory equipment and instruments for conducting textile and apparel tests.
- 8. **Documentation and Reporting**: Learn to document test procedures, record results, and prepare comprehensive reports that communicate findings effectively.
- 9. **Industry Standards and Practices**: Familiarize with industry best practices in textile and apparel testing, including quality control processes, sample preparation, and testing protocols.
- 10. **Ethical Considerations**: Understand ethical considerations in testing, including the responsibility towards consumer safety, environmental impact, and ethical sourcing of materials.
- 11. **Professional Development**: Prepare for careers in fashion design, textile manufacturing, quality assurance, product development, and related fields by applying theoretical knowledge to practical applications in textile and apparel testing.

To sum up, the outcome aim to equip students with the necessary technical skills, knowledge of standards, and ethical understanding required to ensure the quality and performance of textiles and apparel in the fashion industry.

APPAREL PRODUCTION

"Apparel Production" equip the students with a range of skills and knowledge necessary for successful careers in the apparel industry. Key outcomes are:

- 1. **Technical Skills**: Students learn the technical aspects of apparel production, including pattern making, garment construction techniques, and understanding of textiles and materials.
- 2. **Industry Knowledge**: Gain insights into the fashion industry's dynamics, including sampling department, Cutting department, Production Department, Finishing & Pressing department, supply chain management, sourcing, and manufacturing processes.
- 3. **Design and Innovation**: Develop skills in designing garments that are both aesthetically pleasing and functional, considering trends, market demands, and consumer preferences.
- 4. **Quality Control**: Understand quality standards and practices in apparel production to ensure garments meet desired specifications and standards.
- 5. **Sustainability**: Learn about sustainable practices in apparel production, including ethical sourcing, eco-friendly materials, and reducing environmental impact.
- 6. **Communication and Collaboration**: Enhance communication skills necessary for collaborating with designers, manufacturers, and other stakeholders involved in the production process.
- 7. **Problem Solving**: Develop critical thinking and problem-solving skills to address challenges that may arise during apparel production, such as production delays, quality issues, or cost constraints.
- 8. **Professional Development**: Prepare for careers in apparel production through resume building, portfolio development, internship opportunities, and networking with industry professionals.

To sum up, the course aims to blend creativity with technical proficiency, preparing students to contribute effectively to the apparel production sector or pursue entrepreneurial ventures in fashion design and manufacturing.

V SEMESTER

COURSE OUTCOME

FASHION RETAILING, MARKETING & MERCHANDISING

"Fashion Retailing, Marketing, and Merchandising" typically aim to equip students with comprehensive knowledge and skills necessary for successful careers in the fashion industry, particularly in retail and marketing sectors. The key outcomes are:

- 1. **Understanding Consumer Behaviour**: Gain insights into consumer psychology and behaviour in the context of fashion retail, allowing students to anticipate and meet consumer demands effectively.
- 2. **Retail Management**: Develop skills in managing fashion retail operations, including store layout and design, inventory management, and retail merchandising strategies.
- 3. **Fashion Marketing**: Learn principles and strategies of marketing specific to the fashion industry, including branding, advertising, digital marketing, and promotional techniques.
- 4. **Trend Analysis and Forecasting**: Acquire the ability to analyse fashion trends, forecast future trends, and apply this knowledge to merchandise assortments and marketing campaigns.
- 5. **Visual Merchandising**: Understand the principles of visual merchandising and display techniques to enhance the aesthetic appeal of retail spaces and promote sales
- 6. **E-commerce and Omni-channel Retailing**: Gain knowledge about e-commerce platforms, online retail strategies, and omni-channel retailing to adapt to the changing landscape of retail.
- 7. **Retail Analytics**: Learn how to use data analytics and market research to make informed decisions regarding product assortment, pricing strategies, and customer segmentation.
- 8. **Supply Chain Management**: Understand the basics of supply chain management in the context of fashion retail, including sourcing, logistics, and inventory control.
- 9. **Sustainability in Retail**: Explore sustainable practices within the fashion retail industry, including eco-friendly sourcing, ethical manufacturing, and promoting sustainable consumption.
- 10. **Professional Development**: Prepare for careers in fashion retail and marketing through resume building, networking opportunities, internships, and exposure to industry professionals.

To sum up, the course aims to blend business acumen with a deep understanding of the fashion industry, preparing students to excel in various roles such as retail managers, merchandisers, marketers, buyers, and brand managers within the dynamic and competitive world of fashion retailing.

APPAREL COMPUTER AIDED DESIGN

'Apparel Computer-Aided Design (CAD)' focus on equipping students with the necessary technical skills and knowledge to effectively use digital tools in the design and production of apparel. The key outcomes are:

- 1. **Proficiency in CAD Software**: Students gain proficiency in industry-standard CAD software used for apparel design, such as Adobe Illustrator, CorelDraw, Reach Software etc.
- Technical Drawing Skills: Develop skills in creating technical drawings, flats, and sketches digitally, ensuring accurate representation of garment designs and specifications.
- 3. **Pattern Making and Grading**: Students learn how to digitize and manipulate patterns using CAD software, including grading patterns to create different sizes efficiently.
- 4. **Digital Prototyping**: Use CAD tools to create digital prototypes of apparel designs, enabling quick modifications and iterations before physical production.
- 5. Collaboration and Communication: Enhance collaboration and communication skills by sharing digital designs and concepts with colleagues, manufacturers, and clients using CAD files.
- 6. **Integration with Manufacturing Processes**: Understand how CAD designs integrate with manufacturing processes, including marker making, cutting, and sewing operations, optimizing production efficiency.
- 7. **Creative Design Exploration**: Utilize CAD software's features to explore creative design ideas, experiment with colors, prints, and textures digitally, and simulate different design variations.
- 8. **Quality and Precision**: Learn to maintain quality and precision in digital designs, ensuring that garments meet design specifications and standards during production.
- 9. **Industry-Relevant Projects**: Engage in hands-on projects that simulate real-world scenarios in apparel design, providing practical experience and preparing students for careers in the fashion and apparel industry.

To sum up, the course in Apparel CAD aims to blend creativity with technical proficiency, leveraging digital tools to streamline the design and production processes in the dynamic and competitive field of fashion and apparel design.

FASHION ACCESSORIES

"Fashion Accessories" focus to provide students with a comprehensive understanding of designing, producing, and marketing various fashion accessories. The key outcomes are:

- 1. **Design Skills**: Develop proficiency in designing a wide range of fashion accessories, including jewellery, handbags, belts, footwear, scarves, hats, and other embellishments.
- 2. **Material Knowledge**: Gain knowledge about different materials used in accessory design, including metals, gemstones, leather, textiles, and synthetic materials, understanding their properties and suitability for various designs.
- 3. **Trend Analysis and Forecasting**: Learn how to analyse fashion trends specific to accessories, forecast future trends, and incorporate them into design concepts.
- 4. **Technical Drawing and CAD Skills**: Acquire skills in technical drawing and computer-aided design (CAD) software relevant to accessory design, allowing for precise visualization and communication of design ideas.
- 5. **Prototype Development**: Explore the process of developing prototypes and samples for accessories, considering factors like functionality, aesthetics, and market appeal.
- 6. **Manufacturing Processes**: Understand the manufacturing processes involved in producing fashion accessories, including sourcing materials, prototyping, production techniques, and quality control.
- 7. **Marketing and Merchandising**: Learn strategies for marketing and merchandising fashion accessories, including branding, retail presentation, promotional campaigns, and digital marketing techniques.
- 8. **Retailing and Distribution**: Gain insights into the retailing and distribution aspects of fashion accessories, including supply chain management, pricing strategies, and sales techniques.
- 9. **Sustainability and Ethical Practices**: Explore sustainable practices within the fashion accessories industry, including ethical sourcing, eco-friendly materials, and responsible manufacturing processes.
- 10. **Entrepreneurship Skills**: Develop entrepreneurial skills necessary for starting and managing a fashion accessories business, including business planning, budgeting, and understanding market opportunities.
- 11. **Portfolio Development**: Build a professional portfolio showcasing design projects, technical skills, and creative concepts in fashion accessories, essential for career advancement and job applications.

To sum up, the course aims to prepare students for diverse career paths within the fashion accessories industry, including roles such as accessory designer, product developer, merchandiser, buyer, retail manager, and entrepreneur, by providing a blend of creative, technical, and business skills.

DRAPING

"Draping" in fashion design focus on teaching students the art and technique of manipulating fabric directly on a dress form or mannequin to create garment designs. The key outcomes are:

- 1. **Technical Draping Skills**: Develop proficiency in the techniques of draping fabric on a dress form or mannequin to create various garment shapes and styles, including skirts, dresses, tops, and more complex designs.
- 2. **Understanding Fabric Behaviour**: Gain a deep understanding of how different types of fabrics drape and behave when manipulated, enabling students to choose appropriate fabrics for specific designs.
- 3. **Pattern Development**: Learn how to translate draped fabric designs into flat patterns, ensuring accuracy and proportion while maintaining the integrity of the original draped design.
- 4. **Fit and Silhouette**: Master the art of achieving proper fit and silhouette through draping, considering factors such as garment structure, seam placement, and ease allowance.
- 5. **Creativity and Design Exploration**: Use draping as a creative tool to explore and develop innovative design concepts, experimenting with asymmetry, texture, volume, and other design elements.
- 6. **Problem Solving and Adaptability**: Develop problem-solving skills to address challenges that arise during the draping process, such as achieving desired drape effects, resolving fit issues, and making design adjustments.
- 7. **Collaboration with Other Design Processes**: Understand how draping integrates with other design processes such as pattern making, sewing, and finishing techniques to produce a finished garment.
- 8. **Professional Presentation**: Learn techniques for presenting draped designs effectively, including documentation through sketches, photographs, and technical drawings, essential for communication with clients, manufacturers, and collaborators..
- 9. **Portfolio Development**: Build a professional portfolio showcasing draped designs, technical skills, and creative concepts, essential for career advancement and job applications in the fashion industry.

To sum up, the course in Draping aims to equip students with the technical skills, creative vision, and practical knowledge necessary to excel as fashion designers specializing in garment construction and design through draping techniques.

NEEDLE CRAFT

"Needle Craft" focus on variety of skills and knowledge related to traditional and contemporary techniques of needlework. The key outcomes are:

- 1. **Technical Skills**: Develop proficiency in a range of needlecraft techniques such as embroidery, cross-stitch, needlepoint, quilting, appliqué, and lace-making.
- 2. **Understanding of Materials**: Gain knowledge of different types of fabrics, threads, yarns, and embellishments used in needlecraft, understanding their properties and suitability for various techniques.
- 3. **Design and Composition**: Learn principles of design, color theory, and composition as applied to needlecraft, enabling students to create aesthetically pleasing and balanced designs.
- 4. **Pattern Development**: Acquire skills in designing and transferring patterns for needlecraft projects, including motifs, borders, and overall compositions.
- 5. **Contemporary Applications**: Apply traditional needlecraft techniques to contemporary contexts, such as fashion embellishments, home decor, textile art, and mixed-media projects.
- 6. **Tools and Equipment**: Familiarize with tools and equipment used in needlecraft, including various types of needles, hoops, frames, sewing machines (for quilting), and specialty tools.
- 7. **Problem Solving and Adaptability**: Develop problem-solving skills to address challenges encountered during needlecraft projects, such as achieving desired stitch effects, resolving tension issues, and adapting designs.
- 8. **Creativity and Personal Expression**: Use needlecraft as a medium for personal expression and creativity, exploring innovative techniques and experimenting with materials and textures.
- 9. **Portfolio Development**: Build a portfolio showcasing a range of needlecraft projects, demonstrating technical skills, creativity, and ability to apply design principles.
- 10. **Professional Presentation**: Learn techniques for presenting needlecraft work effectively, including documentation through photographs, descriptions, and explanations of techniques used.

To sum up, the course in Needle Craft aims to foster appreciation for traditional craftsmanship while encouraging creativity and innovation in applying needlework techniques to contemporary artistic and practical contexts. Graduates of such courses are equipped to pursue careers in various fields such as textile design, fashion embellishment, craft entrepreneurship, and teaching.

VI SEMESTER

COURSE OUTCOME

FASHION BUSINESS MANAGEMENT

'Fashion Business Management' focuses on equipping students with a blend of creative and managerial skills tailored specifically for the fashion industry. The key outcomes are:

- 1. **Understanding of Fashion Industry Dynamics**: Students gain insights into the structure, trends, and key players within the fashion industry. This includes understanding the global supply chain, retail dynamics, and consumer behaviour.
- 2. **Business and Entrepreneurial Skills**: Emphasis is placed on developing foundational business skills such as marketing, finance, strategic management, and entrepreneurship within the context of fashion.
- 3. **Fashion Marketing and Branding**: Students learn how to create and manage fashion brands, develop marketing strategies specific to fashion products, and understand the role of digital marketing and social media in the industry.
- 4. **Fashion Merchandising and Retail Management**: This covers aspects such as retail buying, visual merchandising, inventory management, and retail operations, preparing students for roles in retail management or merchandising.
- 5. **Fashion Communication**: Students learn how to effectively communicate ideas, present fashion concepts, and negotiate within the industry, essential for roles in sales, marketing, and management & also study the importance of Communication, PR, Advertising, Photography, Journalism which helps in promotion and marketing of operations.
- 6. **Sustainability and Ethical Practices**: Given increasing industry focus on sustainability, courses may cover topics such as ethical sourcing, sustainable fashion practices, and the environmental impact of fashion.
- 7. **Legal framework**: Students acquire knowledge on legal framework of fashion business and the various types of ownerships and its legal obligations and limitations.
- 8. **Critical Thinking and Problem Solving**: Courses aim to develop students' analytical and critical thinking abilities, enabling them to solve complex problems within the fashion business environment.

To sum up, Fashion Business Management prepares students for careers in the fashion industry, whether in management, marketing, merchandising, entrepreneurship, or other related fields. The emphasis is on combining creativity with business acumen to succeed in a competitive and dynamic industry.

FASHION EVENT MANAGEMENT

'Fashion Event Management' focus on preparing students to plan, organize, and execute various types of fashion events, such as fashion shows, exhibitions, trade fairs, and promotional events. The key outcomes are:

- 1. **Event Planning and Coordination**: Students learn how to plan and coordinate fashion events from conception to execution, including budgeting, scheduling, logistics, and venue selection.
- 2. **Understanding of Fashion Industry Dynamics**: A deep understanding of the fashion industry's structure, trends, and key players is essential for organizing successful events that resonate with industry standards and audience expectations.
- Creative Concept Development: Students develop skills in creating unique and compelling event concepts that align with fashion brands' identities and marketing objectives.
- 4. **Marketing and Promotion Strategies**: Emphasis is placed on developing marketing and promotional strategies specific to fashion events, including social media campaigns, partnerships with influencers, and media relations.
- 5. **Production Management**: Skills in managing event production aspects such as stage design, lighting, sound, and AV equipment are crucial for creating impactful and visually appealing fashion events.
- 6. **Fashion Show Management**: Specific focus on organizing fashion shows, including model casting, choreography, backstage management, and runway presentation techniques.
- 7. **Event Evaluation and Feedback**: Learning how to evaluate the success of fashion events through feedback analysis, attendee surveys, and performance metrics to improve future event planning.
- 8. **Legal Compliance & Risk Management and Crisis Handling**: Ensuring legal compliance, licences & permissions to be obtained, identifying potential risks associated with fashion events and implementing strategies to mitigate them, ensuring smooth event operations.
- 9. **Ethical and Sustainable Practices**: Understanding the importance of ethical considerations and sustainable practices in organizing fashion events, including choices related to materials, suppliers, and event operations.
- 10. **Project Management and Leadership**: Developing leadership skills and project management capabilities to lead event teams effectively and ensure the seamless execution of fashion events.

To sum up, Fashion Event Management courses aim to equip students with a comprehensive set of skills and knowledge required to succeed in the dynamic and competitive field of fashion events. Graduates are prepared for careers as event managers, coordinators, producers, or specialists within fashion brands, event agencies, or entertainment companies.

GARMENT SURFACE ORNAMENTATION

"Garment Surface Ornamentation" focus on developing students' skills in embellishing garments with various decorative techniques. These techniques enhance the aesthetic appeal and value of garments, making them visually attractive and unique. The key outcomes are:

- 1. **Technique Proficiency**: Develop proficiency in a range of surface ornamentation techniques which includes
 - Embroidery: Hand embroidery, machine embroidery, and computerized embroidery.
 - Beadwork and Sequin Embellishment: Techniques for attaching beads, sequins, and other embellishments to fabric.
 - o Appliqué: Methods for attaching fabric pieces onto a base fabric to create patterns or designs.
 - Printing and Stenciling: Techniques for printing patterns, motifs, and designs onto fabric using various methods such as screen printing, block printing, and digital printing.
- 2. **Different states embroidery**: Gain knowledge of different states embroidery like Kutch, Kathiawar, Sindh, Phulkari, Kantha, Kashida & the materials, motifs, symbolism etc
- 3. **Design Principles** of Traditional Indian Embroidery: Learn principles of design and history and types Kasuthi, Chambarumal, Zardosi, Chikankari etc.,.
- 4. **Cultural and Historical Context**: Explore the cultural and historical significance of surface ornamentation techniques in different regions and periods, understanding how traditions and trends influence contemporary fashion like Tribal Embroidery like Nagaland, Manipuri, Lambadi, Thoda etc.,
- 5. **Creative Exploration & Western Embroidery**: Use surface ornamentation techniques as a medium for creative expression and experimentation, developing original designs and motifs & develop skill in Western Embroidery like Bargello & Persian Embroidery.
- 6. **Technical Skill Development**: Develop technical skills in handling tools and equipment used in surface ornamentation, such as embroidery hoops, sewing machines, needles, beads, sequins applicators, and printing equipment.
- 7. **Quality and Craftsmanship**: Understand standards of quality and craftsmanship in surface ornamentation, ensuring finished garments meet design specifications and industry standards.
- 8. **Application to Fashion Design**: Apply surface ornamentation techniques to enhance fashion design projects, including garments, accessories, and textile art pieces.
- 9. **Ethical and Sustainable Practices**: Explore ethical considerations and sustainable practices related to surface ornamentation techniques, including responsible sourcing of materials and minimizing environmental impact.

To sum up, the course in Garment Surface Ornamentation aims to equip students with the technical skills, creative vision, and cultural understanding necessary to excel in careers related to fashion design, textile embellishment, costume design, and related fields within the fashion and textile industries.

APPAREL QUALITY MANAGEMENT

"Apparel Quality Management" focus on ensuring that garments meet or exceed quality standards throughout the manufacturing process. Quality management in apparel production involves various aspects to ensure consistency, reliability, and customer satisfaction. The key outcomes are:

- Understanding Quality Standards: Gain knowledge of international quality standards and regulations relevant to apparel manufacturing, such as ISO 9001,MIL STD 105E for Garment inspection methods & sampling techniques, AQL (Acceptable Quality Limit), and industry-specific standards.
- 2. **Quality Assurance Techniques**: Learn techniques and methodologies for quality assurance in apparel production, including inspection methods, sampling procedures, and quality control checkpoints.
- 3. **Quality Control Tools**: Familiarize with tools and equipment used in quality control, such as measuring instruments (e.g., rulers, gauges), color assessment tools, fabric testing machines (e.g., tensile testers), cutting process and seam strength testers.
- 4. **Defect Analysis and Prevention**: Understand common defects in apparel production (e.g., stitching issues, fabric flaws, color discrepancies) and strategies for preventing defects through process improvement and training.
- 5. **Supplier Quality Management**: Learn how to evaluate and manage supplier quality, including supplier audits, performance evaluations, and corrective action procedures.
- 6. **Statistical Process Control (SPC)**: Gain skills in using SPC techniques to monitor and control production processes, ensuring consistency and identifying trends or deviations that may affect quality.
- 7. **Root Cause Analysis**: Develop techniques for identifying root causes of quality issues and implementing corrective and preventive actions (CAPA) to address underlying problems.
- 8. **Quality Improvement Strategies**: Explore strategies for continuous improvement in quality management, including lean manufacturing principles, Six Sigma methodologies, and Kaizen practices.
- 9. **Customer Satisfaction and Feedback**: Understand the importance of customer feedback and satisfaction surveys in improving product quality and enhancing brand reputation.
- 10. **Documentation and Reporting**: Learn how to maintain accurate records and documentation related to quality assurance activities, including inspection reports, quality metrics, and compliance records.
- 11. Ethical and Sustainable Practices: Explore ethical considerations and sustainable practices in apparel quality management, including responsible sourcing, waste reduction, and environmental impact mitigation.

To sum up, the course in Apparel Quality Management aims to prepare students for roles such as quality assurance manager, quality control inspector, production supervisor, and supply chain manager within the apparel and textile industry. Graduates are equipped with the skills to ensure that garments meet high-quality standards, comply with regulations, and meet customer expectations in a competitive global market.

VISUAL MERCHANDISING

'Visual Merchandising' focus on teaching students how to create compelling retail environments that attract customers and enhance the overall shopping experience. The outcomes are:

- 1. **Understanding of Retail Environments**: Students gain knowledge of the physical and digital retail environments, including store layouts, display areas etc.,
- 2. **Design Principles and Techniques**: Learning design principles such as color theory, spatial arrangement, focal points, and visual hierarchy to create aesthetically pleasing and effective displays.
- 3. **Product Presentation Skills**: Developing skills in showcasing merchandise effectively, including understanding how to highlight features, benefits, and brand identity through visual elements.
- Store Layout and Fixture Selection: Understanding how to optimize store layouts and select appropriate fixtures, props, and signage to enhance the customer journey and maximize sales.
- 5. **Visual Communication**: Developing skills in visual storytelling and communication through displays, windows, and in-store visuals that convey brand messages and narratives effectively.
- 6. **Customer Engagement and Experience**: Emphasis on creating immersive and engaging experiences that captivate customers, encourage interaction with merchandise, and increase dwell time in stores.
- 7. **Sustainability and Ethical Considerations**: Understanding the importance of sustainable practices in visual merchandising, including choices related to materials, production processes, and environmental impact.
- 8. **Project Management and Collaboration**: Developing project management skills to coordinate visual merchandising projects, collaborate with cross-functional teams, and meet deadlines effectively.
- 9. **Industry Trends and Professional Development**: Staying updated with current industry trends, attending trade shows, and networking with professionals to build a successful career in visual merchandising.

To sum up, Visual Merchandising courses prepare students for careers as visual merchandisers, retail designers, store planners, display coordinators, or merchandising managers within retail companies, fashion brands, design agencies, or visual merchandising firms. The outcomes emphasize creativity, strategic thinking, and the ability to create impactful retail experiences that drive sales and enhance brand perception.

FASHION PORTFOLIO & DESIGN COLLECTION

"Fashion Portfolio & Design Collection" aims to equip students with the skills and knowledge necessary to create comprehensive fashion portfolios and design collections. The key outcomes are:

- 1. **Portfolio Development**: Students learn to develop a professional fashion portfolio that showcases their design skills, creativity, and ability to conceptualize and execute fashion designs.
- 2. **Design Conceptualization**: Gain proficiency in conceptualizing fashion designs, from initial sketches and mood boards to final illustrations and technical drawings.
- 3. **Collection Planning**: Learn how to plan and organize a cohesive fashion collection, including theme development, colour palette selection, and fabric choices.
- 4. **Technical Skills**: Develop technical skills in garment construction, pattern-making, draping, and sewing techniques relevant to fashion design.
- 5. **Market Research and Trend Analysis**: Conduct research on fashion trends, consumer preferences, and market demands to inform design decisions and collection development.
- 6. **Presentation Skills**: Acquire presentation skills to effectively communicate design concepts and collection ideas through visual and verbal means, including digital presentations and portfolio layouts.
- 7. **Critique and Revision**: Participate in critiques and feedback sessions to refine designs and improve creative problem-solving skills.
- 8. **Portfolio Review and Career Preparation**: Prepare for career opportunities in fashion design by refining their portfolios, networking with industry professionals, and understanding job roles within the fashion industry.

To sum up, the course aims to provide students with a comprehensive understanding of the fashion design process, from initial concept development to the creation of a professional portfolio and design collection that reflects their creativity, technical skills, and understanding of current industry trends and practices.