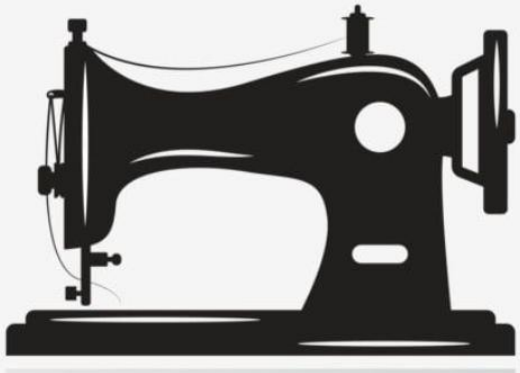
PROGRAMME SPECIFICATION

Bachelor of Engineering in

TEXTILE & GARMENT TECHNOLOGY



Version
2024

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ABBREVIATIONS

CLO	Course learning outcomes
FGD	Faculty of Garment Technology and Textile and Garment Technology
FTE	Full-time-equivalent
GPA	Grade point average
GSFW	Global Student Fashion Weeks
IELTS	International English language testing system
IUH	Industrial University of Ho Chi Minh City
MOET	Ministry of Educational and Training
PEO	Programme education objectives
PLO	Programme learning outcomes
TGT	Textile and Garment Technology
TGTP	Engineer in Textile and Garment Technology programme
TOEIC	Test of English for international communication
VQF	Vietnamese qualifications framework

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PROGRAMME SPECIFICATION

1. GENERAL INFORMATION OF THE PROGRAMME

1.1. Basis for program development

The undergraduate training program in Textile and Garment Technology (TGT) is designed according to Outcome-based Education method, meeting the regulations on training program standards according to the following bases:

- Circular No. 17/2021/TT-BGDĐT of the Minister of Education and Training dated June 22, 2021, stipulating training program standards; formulate, appraise and promulgate training programs for higher education levels;
- Circular 02/2022/TT-BGDĐT of the Minister of Education and Training dated January 18, 2022, stipulating conditions, order and procedures for opening the training sector and suspending the operation of the training sector at university, master and doctoral levels;
- Decision No. 1982/QD-TTg of the Prime Minister dated October 18, 2016, approving the Vietnamese Qualifications Framework;
- Decision No. 1232/QD-TTg of the Prime Minister dated July 15, 2021, approving the Plan for the implementation of the Vietnamese Qualifications Framework for vocational education levels, period 2021 – 2025;
- Circular No. 17/2021/TT-BGDĐT of the Ministry of Education and Training dated June 28, 2021, promulgating the Regulation on enrollment and training at university level;
- Decision 1048/QD-AGM of the Rector of Ho Chi Minh City University of Industry dated August 17, 2021. on the promulgation of Regulations on building, reviewing and updating training programs of Ho Chi Minh City University of Industry;
- Decision No. 1470/QD-ĐHCN of the Rector of Ho Chi Minh City University of Industry dated November 10, 2021 , on the promulgation of the regulation on credit institutions;
- Appropriately absorb stakeholder input;
- Results of the survey on training needs of employers.

1.2. General imformation of the programme

The following details outline the core administrative and academic specifics of our TGT undergraduate program. With a focus on producing highly skilled engineers, this full-time program spans 4.5 years and culminates in the degree award from the Industrial University of Ho Chi Minh City.

- Programme name: Textile and Garment Technology
- Programme code: 7540205
- Type: Undergraduate
- Learning time: 4,5 years – 9 semesters (maximum 7,5 years)
- Total credits: 163
- Name of the final award: The Degree of Engineer in Textile and Garment Technology
- Awarding institution: Industrial University of Ho Chi Minh City

1.3. Job opportunities

Graduates of the Engineer in Textile and Garment Technology programme (TGTP) are equipped with a robust foundation in engineering principles, advanced technical skills, and management expertise. With a curriculum focused on Outcome-Based Education and aligned with

Industry 4.0 trends (specifically in automation and digital transformation), graduates are prepared to excel in various roles within the global textile and apparel supply chain:

Technical & Engineering Roles

- Garment Technologist: Overseeing technical specifications, ensuring product feasibility, and maintaining quality standards from design to final production.
- CAD/CAM/3D Specialist: Utilizing advanced software (such as Lectra, Gerber, or Optitex) for pattern making, marker making, and 3D virtual prototyping to accelerate product development.
- Production Automation Engineer: Designing and optimizing automated manufacturing systems and smart factory layouts to enhance productivity.

Production Management & Optimization

- Industrial Engineer, Lean Consultant: Analyzing and innovating production processes to eliminate waste, improve efficiency, and implement "Lean" manufacturing methodologies.
- Production Manager, Floor Supervisor: Planning, organizing, and leading manufacturing operations to meet strict deadlines and output targets in large-scale enterprises.
- Quality Assurance, Quality Control Manager: Developing and managing quality management systems (ISO, AQL) to ensure compliance with international standards.

Supply Chain & Business Operations

- Production Merchandiser: Acting as a key liaison between the factory and international buyers, managing orders from material sourcing to final shipment.
- Sourcing & Procurement Specialist: Managing the supply chain for raw materials, focusing on sustainable textiles and cost-effective procurement strategies.
- Product Development Engineer: Researching innovative materials and smart textiles to develop high-performance apparel products.

Academic & Professional Services

- Technical Trainer, Educator: Sharing expertise in vocational training centers or higher education institutions.
- Compliance Auditor: Ensuring factories adhere to international safety, social responsibility, and professional ethics standards.

2. THE PROGRAMME OBJECTIVES AND LEARNING OUTCOMES

2.1. Vision – Mission – Objectives of IUH and Educational Philosophy

Industrial University of Ho Chi Minh City was formerly Go Vap Vocational School founded by Don Bosco priests on November 11, 1956 at Hanh Thong commune, Go Vap District, Gia Dinh Province. In 1968, the school was renamed as the Don Bosco Private Junior High School of Technology. Until January 31, 1970 the school was upgraded to be the Don Bosco Private Junior High School of Technology, shortly referred to as the Don Bosco High School of Engineering. After the day of peace and reunification, the Southern Liberation Army took over the school and on December 19, 1975 the School was handed over to the General Department of Metallurgy Engineering and Electronics. In 1978, the School was renamed as the School of Engineering IV belonging to The Ministry of Mechanical Engineering and Metallurgy. By 1994, the school was merged with the Chemical High School II in Bien Hoa City to become the Industrial Engineering School IV under the management of The Ministry of Industry. In March 1999, the school was upgraded to become Industrial College IV and in December 2004 the college was upgraded to

become Industrial University of Ho Chi Minh City according to the Decision of 214/2004/QD - TTg by the Prime Minister. The university is currently one of the big educational and training institutions in Vietnam.

2.1.1. Vision

Nationally recognized as a leading applied university for excellence in education, research, technology transfer, innovation, and creativity.

Articulation of the Vision

- As a leading applied university, we envision ourselves being one of the top ten universities in Vietnam; the university of choice for education and applied research and forging unity and collaboration with schools, faculty students, alumni, partners, and industry.
- As a leading applied university having a reputation for excellence in education and applied research, we develop application-oriented academic programs in response to the practical needs of society
- As a leading applied university having reputation for excellence in technology transfer, innovation, and creativity, we embrace, nurture and develop new ideas, start-ups, cooperation, industrial transformation and smartization, and the commercialization of research products.

2.1.2. Mission

IUH provides high-quality human resources who have competence, attributes, and ability to integrate globally to contribute to Vietnam's socio-economic development.

Articulation of the Mission

- High-quality human resources are those who have professional qualifications that meet practical requirements of society; ability to think creatively; entrepreneurship.
- Human resources with competence and attributes are those who possess moral values, compassion, and passion in research and learning; logical thinking, breakthrough initiatives, safety mindset, and team spirit; good attitude, working style and responsibility for work.
- Human resources with the ability to integrate globally are those who are able to adapt to regional and international working environments; have language (English) proficiency to communicate effectively in regional and international working environments and acquire new fields of knowledge; demonstrate strong IT skills to advance new knowledge and modern technology.
- High-quality human resources that can make their contribution to Vietnam's socio- economic development are those who are able to increase work productivity to meet the demands of national and international markets; enrich their intellectual and work life through their engagement in community service and contribute to the socio- economic development of the country.

2.1.3. Objectives

In order to have a state-of-the-art management system and to build an educational eco-system for training high-quality human resources contributing to society, bringing practical values as well as the effectiveness from research activities, technology transfer and international cooperation.

To be a premier application-oriented university leading in education, research and technology transfer; promote active community engagement and service; improve vibrant student life and build a state-of-the-art campus; retain and develop professional personnel; strengthen financial autonomy.

2.1.4. Educational Philosophy

The **CARE** Graduate Attributes of IUH, a distinctive identity and image of IUH students and graduates; an alignment with the core values, stakeholders' needs, educational philosophy,

programme educational objectives and programme learning outcomes as well as to serve marketing purposes are as follows:

Compassionate Leader

- Compassion and ethics in leadership (C1)
- Effective teamwork and cooperation (C2)
- Management and communication skills in leading teams (C3)
- Confidence and respect to others (C4)

Avid Lifelong Learner

- Curiosity and eagerness to learn and relearn (A1)
- Open mindedness and receptive to new ideas, concepts, knowledge, etc. (A2)

Rational Thinker

- Critical thinking in the analysis of facts and alternatives before making judgement (R1)
- Analyze and solve problems rationally and systematically (R2)

Enterprising Innovator

- Entrepreneurship mindset and resourcefulness (E1)
- Creativity and innovation in generating ideas and solving real-life issues (E2)
- Identify opportunities and take managed risks (E3)

IUH's educational philosophy aims to nurture its students and graduates with CARE attributes and to prepare them for life and future world of work.

It educates students and graduates in applying and advancing knowledge through hands-on experience, active and experiential learning and applied research to meet the needs of stakeholders and the society. The IUH community lives in transforming minds and enriching lives and businesses of students, graduates and stakeholders by serving the community and contributing to the betterment of the society.

Articulation of Educational Philosophy

- CARE attributes – To nurture students and graduates as compassionate leaders, avid lifelong learners, rational thinkers, and enterprising innovators.
- Applying and advancing knowledge – curricula are designed to assure their relevancy and currency considering industrial development and trends and stakeholders' needs using outcome-based education to meet national, regional and international quality assurance standards.
- Preparing for life and future of work – immerse students and graduates in the real- life environment and world of work through internships, projects, applied research, experiments, active learning, and community service. Equipping students and graduates with lifelong skills such as critical thinking, creativity, innovation, communication and management skills, compassion and entrepreneurship mindsets.
- Transforming minds, enriching lives and business - through community services, and contributing to businesses and the economy through applied research and technology transfer for a sustainable economy and higher standard of living.

2.2. Vision – Mission of FGD

Vision: Become the center of reputable and high-quality human resource training, scientific research and technology transfer in the field of Garment Technology and Fashion Design in Vietnam.

Mission: Providing high-quality human resources, have high professional and practical skills, enhancing cooperation, scientific research and technology transfer with partners in the same field.

2.3. The programme educational objectives

The programme educational objectives (PEO) are clearly linked to the vision, mission of the FGD and also reflect the vision, mission, objectives and slogan of IUH to provide high quality human resource and develop scientific research applications which meet the social needs. The objectives of the Textile and Garment Technology Programme are as follows:

PEO1. Perform effectively professional tasks in the fashion industry by using the knowledge and skills that were trained in the Garment Technology programme.

PEO2. Manage, lead and train human resources in the Garment Technology field.

PEO3. Commit to life-long learning and self-update knowledge, catch up with advanced technology trends.

PEO4. Demonstrate professional ethical responsibility and respecting differences.

Vision of IUH	Vision of FGD	PEOs
Nationally recognized as a leading **applied university** for excellence in **education, research, technology transfer, innovation** and **creativity**.	Become the center of **reputable** and **high-quality human resource training, scientific research and technology transfer** in the field of **Garment Technology** and **Fashion Design** in **Vietnam**.	PEO1. **Perform** effectively **professional** tasks in the fashion industry by using the knowledge and skills that were trained in the **Textile and Garment Technology** programme. PEO2. **Manage, lead** and **train human resources** in the **Textile and Garment Technology** field; PEO3. **Commit** to life-long **learning** and **seft-update** knowledge, **catch up with** advanced technology trends; PEO4. **Demonstrate** professional ethical **responsibility** and **respecting** differences.
Mission of IUH	**Mission of FGD**	**PEOs**
IUH provides **high-quality human resources** who have **competence, attributes, and ability** to **integrate globally** to contribute to **Vietnam**'s socio-economic devPLOpment.	Providing **high-quality human resources**, have **high professional and practical skills**, **enhancing cooperation, scientific research** and **technology transfer** with **partners** in the same field.	PEO1. **Perform** effectively **professional** tasks in the fashion industry by using the knowledge and skills that were trained in the Textile and Garment Technology programme. PEO2. **Manage, lead** and **train** human resources in the Textile and Garment Technology field; PEO3. **Commit** to life-long **learning** and **seft-update** knowledge, catch up with advanced technology trends; PEO4. **Demonstrate** professional ethical **responsibility** and **respecting** differences.

Table 1. Alignment between PEOs, the vision and mission of IUH and FGD

2.4. Programme learning outcomes

The graduates from this programme are able to demonstrate the following measurable outcomes.

PLOs	Content	Bloom's level - Domain	Classify
PLO1	**Apply** basic knowledge of mathematics, science, technology and IT in the field of garment technology.	Apply - Cognitive	Generic knowledge
PLO2	**Apply** knowledge of economics, society and management to solve problems in garment enterprises.	Apply - Cognitive	Generic knowledge
PLO3	**Select** the suitable fundamental knowledge to reasoning general problems in the garment industry.	Analyze - Cognitive	Specific skills
PLO4	**Solve** the garment manufacture problems using relevant specialized knowledge.	Create - Cognitive	Specific skills
PLO5	**Apply** discipline-specific skills, especially advanced technologies in the garment manufacturing industry, to solve technical problems in production.	Articulate - Psychomotor	Specific skills
PLO6	**Design** the stages of industrial garment manufacturing systems aligned with trends in production automation.	Create - Cognitive	Generic skills
PLO7	**Evaluate** production issues to innovate products and processes in the garment manufacturing industry, in line with sustainable production.	Evaluate - Cognitive	Generic skills
PLO8	**Communicate** effectively in the field of garment technology via verbal form, written form and technical documents.	Articulate - Psychomotor	Attitude
PLO9	**Implement** teamwork to complete tasks in the field of garment technology.	Articulate - Psychomotor	Generic skills
PLO10	**Comply** with safety standards, industrial style and professional ethics.	Value - Affective	Attitude

Table 2. Programme learning outcomes of Textile and Garment Technology programme

The PLOs are reviewed, evaluated, and ensured in accordance with the CARE graduate attributes of IUH, the PEOs of TGTP and the expected learning outcomes of Vietnamese Qualifications Framework (VQF) as shown in the tables below:

PLOs	Compassionate Leader				Avid Lifelong Learner		Rational Thinker		Enterprising Innovator		
	C1	C2	C3	C4	A1	A2	R1	R2	E1	E2	E3
PLO1					x	x					
PLO2					x	x					
PLO3								x			
PLO4								x			
PLO5										x	
PLO6									x	x	
PLO7							x				x
PLO8			x	x							
PLO9	x	x									
PLO10									x		

Table 3. The mapping between PLOs and CARE

PEOs	PLOs
PEO1. **Perform** effectively **professional** tasks in the fashion industry by using the knowledge and skills that were trained in the Garment Technology programme.	PLO1. **Apply** basic knowledge of mathematics, science, technology and IT in the field of garment technology. PLO2. **Apply** knowledge of economics, society and management to solve problems in garment enterprises. PLO3. **Select** the suitable fundamental knowledge to reasoning general problems in the garment industry. PLO4. **Solve** the garment manufacture problems using relevant specialized knowledge. PLO5. **Apply** discipline-specific skills, especially advanced technologies in the garment manufacturing industry, to solve technical problems in production. PLO6. **Design** the stages of industrial garment manufacturing systems aligned with trends in production automation. PLO8. **Communicate** effectively in the field of garment technology via verbal form, written form and technical documents.
PEO2. **Manage, lead** and **train** human resources in the Garment Technology field.	PLO7. **Evaluate** production issues to innovate products and processes in the garment manufacturing industry, in line with sustainable production. PLO8. **Communicate** effectively in the field of garment technology via verbal form, written form and technical documents. PLO9. **Implement** teamwork to complete tasks in the field of garment technology. PLO10. **Comply** with safety standards, industrial style and professional ethics.
PEO3. **Commit** to life-long **learning** and **seft-update** knowledge, **catch up with** advanced technology trends.	PLO1. **Apply** basic knowledge of mathematics, science, technology and IT in the field of garment technology. PLO2. **Apply** knowledge of economics, society and management to solve problems in garment enterprises. PLO5. **Apply** discipline-specific skills, especially advanced technologies in the garment manufacturing industry, to solve technical problems in production. PLO6. **Design** the stages of industrial garment manufacturing systems aligned with trends in production automation.
PEO4. **Demonstrate** professional ethical **responsibility** and **respecting** differences.	PLO7. **Evaluate** production issues to innovate products and processes in the garment manufacturing industry, in line with sustainable production. PLO8. **Communicate** effectively in the field of garment technology via verbal form, written form and technical documents. PLO10. **Comply** with safety standards, industrial style and professional ethics.

Table 4. Alignment between PEOs and PLOs

	PEO1	PEO2	PEO3	PEO4
PLO1	x		x	
PLO2	x		x	
PLO3	x			
PLO4	x			
PLO5	x		x	
PLO6	x		x	
PLO7		x		x
PLO8	x	x		x
PLO9		x		
PLO10		x		x

Table 5. The mapping between PLOs and PEOs

PLOs	The programme learning outcomes of VQF													
	KT1	KT2	KT3	KT4	KT5	KN1	KN2	KN3	KN4	KN5	KN6	TCTN 1	TCTN 2	TCTN 3	TCTN 4
PLO1		x	x	x	x										
PLO2	x			x	x										
PLO3						x		x	x	x		x		x	
PLO4						x		x	x	x			x		x
PLO5				x			x	x	x				x		
PLO6			x					x	x	x	x	x	x		
PLO7						x	x			x				x	x
PLO8		x					x					x		x	x
PLO9						x	x			x				x	x
PLO10		x					x					x		x	x

Table 6. The mapping between the programme learning outcomes of TGTP and VQF

Note:

KT: Knowledge; KN: Skills; TCTN: Self-control and responsibility.

KT1. Have an advanced theoretical and factual knowledge in the field of study.

KT2. Have basic knowledge of social science, political science and legislation.

KT3. Have knowledge of information technology answering to the requirements of work.

KT4. Have knowledge about planning, organizing and supervising processes of specific fields of work.

KT5. Basic knowledge of the management and control of professional activities.

KN1. Have skills required to solve complex problems.

KN2. Have skills to be a leader and create own jobs or for other people.

KN3. Have argument skills and skills to criticize and apply alternative solutions in unpredictable or changeable contexts.

KN4. Have skills to evaluate the task results and and performance of members in the team.

KN5. Have skills to transfer information about problems and solutions to other peopla at workplace; transfer and disseminate knowledge and skills in performance of defined or complex tasks.

KN6. Have foreign-language capacity at level 3/6 referencing to Vietnam's framework of foreign language proficiency.

TCTN1. Work independently or in team in changeable contexts, take personal responsibility and take partial responsibility for teamwork results..

TCTN2. Guide and supervise the ordinary tasks of others.

TCTN3. Make self-orientation and produce professional conclusions and have ability to protect own viewpoints.

TCTN4. Draw up plans, direct and manage resources, evaluate and find solutions to improve the task performance.

3. ADMISSION INFORMATION, TRAINING PROCESS AND GRADUATION CONDITION

3.1. Admission information

Based on the regulations of the Ministry of Education and Training, notifications and guidelines of IUH (http://www.iuh.edu.vn/TuyenSinh)

- Enrollment area: in the country
- Admission object: high school graduates as prescribed by the Ministry of Education and Training.
- Admission methods: using 04 methods of admission
  - Direct admission and priority for direct admission for provincial/city excellent students, students who win Olympic exams (winning subjects included in the admission complex of the admission field); students with 3 years of academic performance in grades 10, 11, 12 are graded well; students of specialized schools, specialized classes; students with an IELTS certificate of 5.0 or higher or other equivalent International Certificates within the validity.
  - For admission using high school results in grade 12 (subjects included in the admission complex of the corresponding admission field), the threshold for receiving applications is the total score of 3 subjects in the admission combination at least equal to 21.25 points for Fashion Design major and 19.00 for Textile and Garment Technology major.

Admission block	Admission group of subjects
A00	Mathematics, Physics, Chemistry
C01	Literature, Mathmatics, Physics
D01	Mathmatics, Literature, English
D90	Mathematics, Natural Sciences, English

  - Admission uses the results of the high school graduation exam in 2024.
  - Admission using the results of the competency assessment exam conducted by Vietnam National University Ho Chi Minh City held in 2024.
- Admissions number: 210 (140 for Textile and Garment Technology major and 70 for Fashion Design major)

3.2. Training process

The trainning regulations according to the credit systems, creating conditions for students to actively adapt to the training process in order to achieve the best results in studying and practicing. The programme is designed to cover 9 semesters (4.5 academic years), including 163 credits. The learning duration is 4.5 years, the minimum learning duration is 3.5 years and the maximum learning duration is 7.5 years. Each academic year comprises two main semesters and a summer semester. Each main semester consists of 16 weeks of instruction, followed by two weeks of examinations and one week of reserve time. The summer semester spans 8 weeks.

In the learning process, there are a few key points to note:

- Students must take the English entrance exam or submit an English certificate (according to the *Common European framework of reference for languages* or *The 6-level Vietnamese language proficiency framework*) to follow the school's prescribed English learning path.
- Registering courses in each semester will have warrant conditional decision of the course, learning sequence of programme.
- All students must take part in graduate internship and graduate thesis.

3.3. Graduation conditions

Students who meet the following requirements will be considered for graduation:

- Until the time of graduation, without being examined for penal liability, or not discipline at the level of suspension;
- Accumulate enough courses in the programme;
- The cumulative grade point average of all course is 2.00 or higher;
- Having national defense and physical education certificates;
- Having a TOEIC certificate of 450 points (or equivalent certificates);
- Having a certificate of basic information technology application.
- Students who are qualified for graduation must submit their applications to FGD, FGD will make the list and the procedures to submit the graduation council.

4. ACADEMIC STAFF AND INFRASTRUCTURE

Industrial University of Ho Chi Minh City has 1,380 staff members, including 1,022 teaching lecturers. Besides, the University invites hundreds of visiting lecturers from universities, research institutes, academies, and scientific and technical staff working in production and business establishments to diversify the teaching resources. More than 97% of lecturers have a postgraduate degree, which are 06 professors, 28 associate professors, 213 PhDs, 746 masters (including 153 Ph.D. students) (data updated until March 15th, 2021). Many lecturers participate in scientific research at school, ministry, city, and national levels. In recent years, the school has gathered a team of young scientific and technical staff that have professional qualifications and good pedagogical ability. With the enthusiastic and passionate members, the team is a potential resource to develop and improve the University's training quality.

FGD consists of three departments: Department of Fundamental, Department of Garment Technology and Department of Fashion Design.

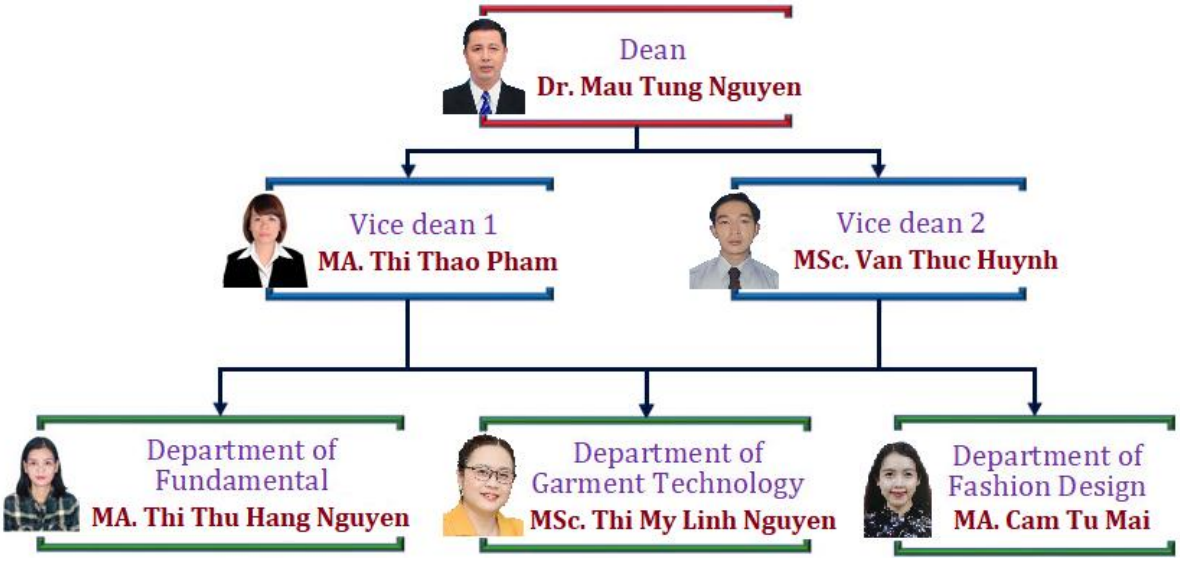


Figure 1. The organizational structure of FGD

There are 44 qualified teaching staffs including 1 associate professor, 13 philosophy doctors and 30 masters with 5 doctoral candidates.

Category	Male	Female	Total Headcount	Percentage of PhDs
Full-time lecturers	9	21	30	20%
Part-time lecturers	4	1	5	100%
Vistiting professors/lecturers	6	3	9	33.33%
Total	**19**	**25**	**44**	

Table 7. FGD academic staff

The University features a comprehensive, state-of-the-art network of facilities, including over 500 spacious, well-ventilated lecture halls and classrooms, and more than 350 laboratories and workshops outfitted with advanced technology. Student dormitories accommodate up to 8,000 residents. The student cafeteria, designed in a modern, open layout, operates on a self-service model, allowing students to select meals based on their tastes and budgets, mirroring contemporary lifestyles. The University Library holds more than 200,000 diverse volumes. Information technology is seamlessly integrated into operations, enabling students to access digital networks and electronic library resources to enhance their studies. Students and lecturers can communicate efficiently online, and information about faculties, academic programs, and the University is readily available online. The cafeteria, dormitories, traditional house, sports hall, e-library, workshops, laboratories, classrooms, and lecture halls are continually upgraded to align with international standards. The University's robust IT infrastructure is fully networked and internet-connected, supporting effective teaching, learning, and administration.



Figure 2. Library and student dormitory at IUH

In addition, FGD has a number of practical workshops with modern equipment which are maintained and updated on a regular basis. Following is a list of the equipment and workshops:

- 06 Garment Technology workshops;
- 04 workshops for pattern making;
- 03 computer labs;
- 02 workshops for fashion drawing;
- 01 size stream 3D body scanner;
- 01 textile lab that offers inspections and laboratory tests for all modern texttiles;
- 01 production line model with specialized sewing and knitting machines;
- 01 photo studio.



Figure 3. Workshops at FGD

5. TEACHING - LEARNING STRATEGIES

IUH's educational concept aims to instill CARE attributes in its students and graduates, as well as to educate them for life and the future world of work. It prepares students and graduates to address the demands of stakeholders and society by providing hands-on experience, active and experiential learning, and applied research. By serving the community and contributing to the advancement of society, the IUH community transforms minds and enriches the knowledge and lives of students, graduates, and stakeholders. The educational philosophy is not only communicated to all stakeholders, but it is also reflected in FGD's teaching and learning activities via the CARE attributes, as illustrated in the table below:

IUH Graduate attributes	Teaching and learning activities	Supporting courses	Supporting activities
Compassionate Leader	Classroom activities (discussion, team-work, presentation, etc.); Field trip activities; Extracurricular activities.	Philosophy of Marxism and Leninism, General laws, Overview of garment technology and labor safety, Costume sanitary, Teamwork Skills, Psychology, Sociology, Intership 1 & 2, Organization and management of production processes, Production planning and control, English 1 & 2, English in Fashion Industry.	Site-visit to factory; Community services; Club activities.
Rational Thinker	Classroom activities (discussion, think-pair-share, exercise assignment, etc.); Experiments; Simulation; Demonstration; Project-based learning; Experiential learning; Field trip activities.	Calculus 1 & 2, General Physics, Logics, Numerical Analysis, Research Methodology, Apparel Quality Management, Application of Kaizen Method and 5S, Technique for Manufacturing, Manufacturing process in apparel industry.	Student research; Internship at fashion companies and design worshops.
Enterprising Innovator	Classroom activities (discussion, think-pair-share); Experiential learning.	Ideas for Start-up, Product Brand Management, Apparel Merchandising, Business of import and export of garments, Consumer psychology, Production process automation, Computer-Aided Fashion Design, 3D Simulation,	Seminar; Student research.

IUH Graduate attributes	Teaching and learning activities	Supporting courses	Supporting activities
		Productivity Improvement in Apparel Industry.	
Avid Lifelong Learner	Classroom activities (lecturing, exercise assignment, etc.); Experiments; Project-based learning; Experiential learning; Extracurricular activities.	History of costume, Introduction to Vietnamese Culture, Aesthetics, Research Methodology, Information Technology in Digital Transformation, Using keyboard and office equipment skills, Technical textile products and applications.	Student research; Seminar.

Table 8. CARE attributes reflected in teaching and learning activities

In this model, courses often contribute to multiple goals simultaneously, rather than just one:

The Graduation Thesis plays the most critical role as it integrates all knowledge (R), demands creativity (E), requires teamwork (C), and demonstrates self-study capability (A).

The Internship courses provide the environment for students to practice all the qualities, from Leadership (C) and Rational Thinking (R) to Enterprising Innovation (E), in a real-world setting.

The TGTP is committed to student-centered learning and teaching activities that empower students to take responsibility and actively engage in their learning process, with a direct focus on maximizing student achievement. Common approaches utilized within the TGTP include goal-setting, enhancing student contributions to research, flexible scheduling, and structured feedback mechanisms. Recently, active learning methodologies have been integrated as a compulsory component, particularly within specialized courses. Numerous active learning methods - such as project-based learning, flipped classrooms, and demonstrations - are currently being applied widely across the TGTP. Furthermore, leveraging the development of IT, digital learning is considered a highly effective method to support and improve the students' learning journey. Table 9 details the teaching and learning activities in the TGTP that promote active learning.

No.	Teaching & learning activities	Lecturer's activities	Student's activities
1	Project-Based Learning	- Introduce the topic/project - Provide knowledge/skills to the students by lecturing, demonstration, etc. - Give advice to students on their reports	- Brainstorm the goal and the general platform of the project - Regularly report the work and make revisions if any - Demonstrate the final product - Deliver a presentation
2	Demonstration of Prototypes or models	- Introduce the lesson and perform demonstration - Supervise the student's demonstration - Evaluate the students' demonstration	- Observe the demonstration by the lecturer - Perform the demonstration
3	Flipped Classrooms	- Prepare electronic materials: slides, videos, etc. - Instruct the students how to learn effectively from electronic materials	- Consult electronic materials outside the classrooms. - Discuss and practice what have been learnt

No.	Teaching & learning activities	Lecturer's activities	Student's activities
4	Digital Learning	Instruct the students how to use appropriate software and online platforms to practice, doing assignments and tests, etc.	- Install appropriate software and online learning platforms - Practice using software - Do work assignment and tests using the online learning platforms

Table 9. Teaching and learning activities involving active learning

The teaching and learning processes of the TGTP are continuously improved based on the needs of stakeholders. Accordingly, the PLOs, CLOs, teaching and learning activities and all other elements are reviewed, updated and improved based on the needs of the labor market, which are collected and synthesized from the feedback of the stakeholders.The procedure as shown in the figures below:

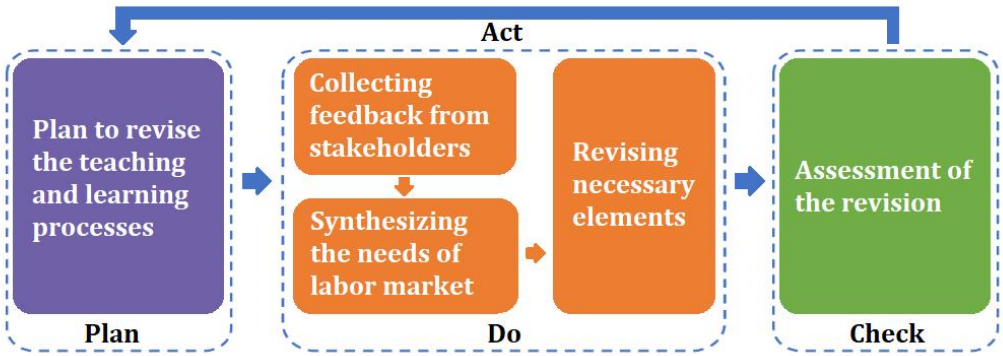


Figure 4. PDCA procedure for teaching and learning processes

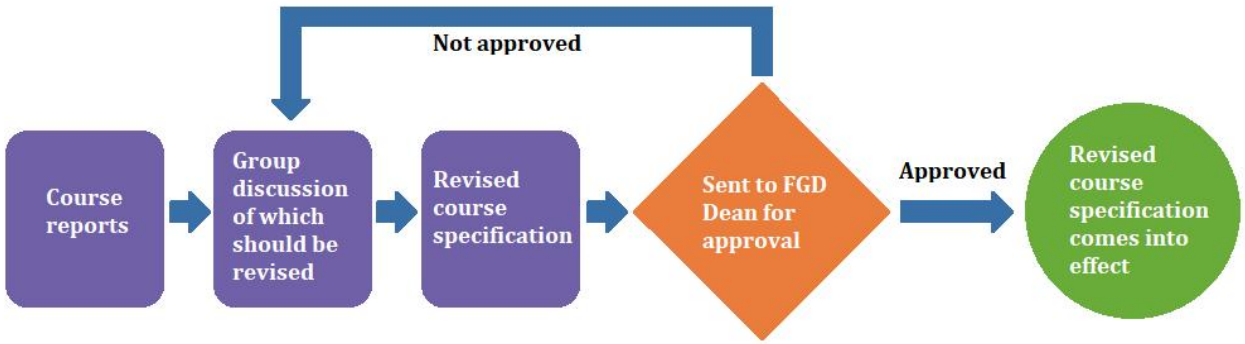


Figure 5. Annual revision procedure of course specifications

6. ASSESSMENT METHODS

6.1. Process assessment

Assessments are conducted based on CLOs, reflecting the achievement of PLOs. Assessments must ensure validity, reliability, and fairness. Assessment formats include regular quizzes, mid-term and final exams. Assessment methods employed include multiple-choice questions, in-class tests, homework assignments, presentations, practical exams, design projects, essays, etc. These assessments are conducted based on specific criteria set for each course. Grading, student feedback, and faculty feedback are received and processed according to IUH procedures.

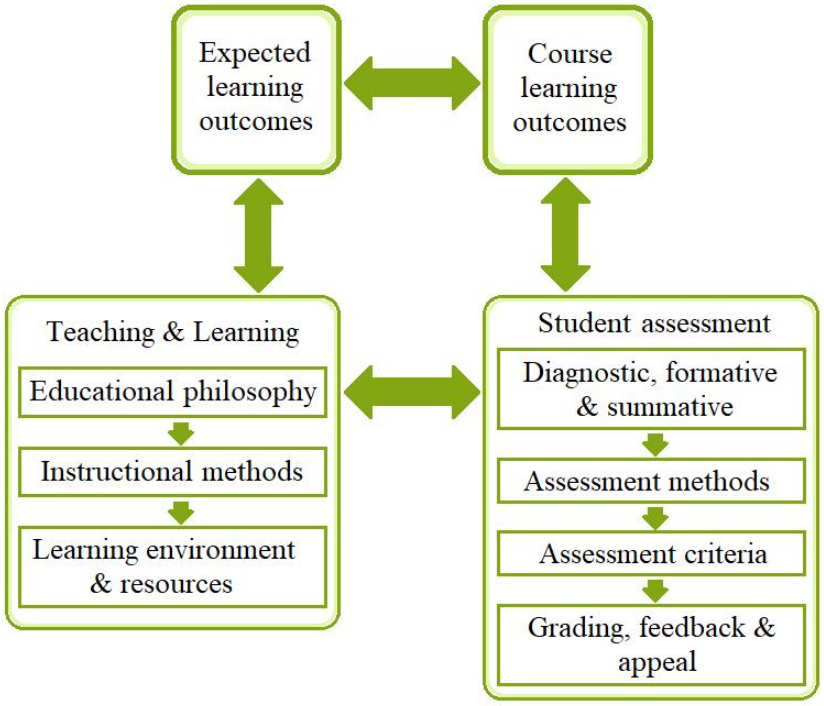


Figure 6. Process of teaching, learning and student assessment

During the study, students' questions about the results of regular and midterm exams will be answered by the academic staff or academic advisors. Students have the right to request for the reconsideration of their academic performance if they have any questions or complaints about the results of the tests.

Student performance in a course is graded on a 10-point scale. Evaluation rubrics are constructed to assess students' performance levels, covering the entire 10-point scale. The grading system employs letter grades (A, B, C, D, and F) to classify students based on their performance. The student performance can be converted to a four-point scale, which is then used to calculate the Grade Point Average (GPA). The GPA is a key metric listed on the transcript, which is provided to graduates alongside their degree. Students are classified in table 8 as follows:

0-4 scale	0-10 scale	Letter scale	Classification
3.60 - 4.00	8.5 - 10	A	Excellent
3.20 - 3.59	7 - 8.4	B	Good
2.50 - 3.19	5.5 - 6.9	C	Fair
2.00 - 2.49	4.0 - 5.4	D	Average
0.0 - 1.99	0 - 3.9	F	Weak

Table 10. Student grading system

6.2. Some rubrics in programme

For course outcome assessment, the rubric is structured using the OBE methodology, featuring four performance levels: 1 - Weak, 2 - Average, 3 - Good, and 4 - Very Good. Students are required to attain at least Level 3 (Good) as the minimum benchmark for achieving the learning standard. The specific assessment criteria are dynamic, changing based on the course content and its classification as either theoretical or practical.

6.2.1. Rubric for assessment of graduate thesis

Below is the rubric for instructor of the course Graduate thesis (year 2022):

PLOs	Criteria evaluate	1 - Weak	2 - Average	3 - Good	4 - Very good
PLO4: Solve the garment manufacture problems using relevant specialized knowledge *(4.0 points)*	Identify key issues ***(2.0 points)***	Students fail to identify or misidentify the key issues to be addressed within the scope of their research.	Students identify key issues within the scope of their research but with incomplete or inaccurate information.	Students analyze key issues and other related issues within the scope of study.	Students analyze all major issues and other related issues within the scope of study.
	Apply specialized knowledge ***(2.0 points)***	Students are unable to propose solutions to problems or the solutions proposed are inconsistent with the identified problems.	Propose solutions to key issues but do not fully consider influencing factors.	Propose appropriate solutions to key issues, taking full account of influencing factors.	Propose optimal solutions to research problems.
PLO6: Design technical systems in the clothing industry. *(3.0 points)*	Analysis of options for designing factories and production lines.	A stage or part of the system cannot be designed, or the product is not suitable for the specific garment manufacturing technology.	It is possible to design a stage or part of the system, suitable for a specific garment manufacturing technology, but there are still some shortcomings.	It is possible to design a stage or part of the system, suitable for specific garment manufacturing technology; the product is efficient and has practical application.	It is possible to design a stage or part of the system, suitable for specific garment manufacturing technology; the product has outstanding characteristics, is efficient and highly applicable.
PLO9: Implement teamwork to complete tasks in the field of garment technology. *(2.0 points)*	Evaluate work assignments and progress ***(0.5 point)***	Task assignment is unclear or not suitable to members' abilities; progress is slow, greatly affecting the common work.	Basic task assignment is unclear or unreasonable; progress has some delays that have a small impact on goals.	Assign tasks clearly and reasonably to most members; work progress is guaranteed but sometimes needs to be adjusted to keep up with the plan.	Scientific assignment of tasks, suitable to each member's capacity; progress is well controlled, completed on or ahead of schedule.

PLOs	Criteria evaluate	1 - Weak	2 - Average	3 - Good	4 - Very good
	Evaluate the completion of tasks and contributions of each member ***(0.5 point)***	Tasks are not completed satisfactorily or are incomplete; some members do not contribute or contribute very little.	The task was basically completed, but the quality was not high; some members contributed but not evenly or effectively.	The task was completed as required with fairly good quality; most members contributed positively and cooperated effectively.	The mission was completed excellently, exceeding expectations; all members made outstanding contributions, cooperated well, and demonstrated a high sense of responsibility.
	Final product sample review ***(1.0 point)***	The final sample product did not meet the required criteria.	The final prototype partially meets the criteria but still has many errors or shortcomings.	The final prototype product meets the required criteria with some minor defects.	The final prototype product fully meets or exceeds the expectations of the required criteria.
PLO10: Comply with safety standards and industrial style and professional ethics. ***(1.0 point)***	Demonstrate respect for ethical standards in research	Students exhibit dishonesty or plagiarism in research.	The student is honest, does not plagiarize but has minor errors in presenting references (e.g. incorrect formatting).	Students are honest, do not plagiarize; provide accurate citations for references used.	Students are honest, do not plagiarize; present all citations and references fully and accurately.

6.2.2. Rubric for assessment of practice assignment

Below is the rubric for practice section of the course *3D design by information technique* (year 2022):

CLOs	Assessment criteria	Weight (%)	1 - Weak	2 - Average	3 - Good	4 - Very good
Implementing fashion clothing simulation on graphics software according to product technical requirements.	Perform full process simulation (pattern placement, sewing, sample fitting)	40	Missing many steps, wrong procedure	Has all the steps but lacks detail	Complete, may have minor errors	Complete, logical, technical standard process
	Ensure correct product technical	30	Wrong product form,	50–70% correct technique	Close to technical standards	Accurate, meets industrial

CLOs	Assessment criteria	Weight (%)	1 - Weak	2 - Average	3 - Good	4 - Very good
	requirements (form, fit, seams)		significant sewing error			technical standards
	Applying the right technical tools in simulation operations	30	Wrong or missing tools	Using the right tool but doing it wrong	Used correctly, the operation is not smooth yet	Use flexibility, the right tools, and operate effectively

7. CURRICULUM DESCRIPTION

The curriculum is systematically structured, progressing from basic to specialized knowledge with constantly updated content and gradually increasing difficulty. This ensures students have sufficient time to accumulate knowledge and focus directly on achieving both Course Learning Outcomes (CLOs) and overall Programme Learning Outcomes (PLOs). The comprehensive structure integrates technical expertise with essential soft skills, IT proficiency, and foreign language abilities, preparing graduates for professional practice, ethics, and workplace safety. Furthermore, the curriculum maintains flexibility, supporting transfers to other majors in the early years and accommodating dual or multiple degree pursuits.

No.	Cluster	Credits	
1	General Knowledge Block	**52**	
		Required	43
		Elective	9
2	Fundamental Knowledge Block	**32**	
		Required	30
		Elective	2
3	Intermediate Knowledge Block	**62**	
		Required	42
		Elective	20
4	Specialized Knowledge Block	**17**	
		Required	17
Grand total		**163**	

Table 11. Brief of Textile and Garment Technology programme

7.1. Curriculum

The curriculum spans nine semesters, detailed as follows:

No.	Course code	Course name	Credits	Pre-course (a), Prerequisite course (b), Co-requisite course (c)
		Semester 1	**17**	
		Compulsory course	**17**	
1	2199451	Certificate of English Language Proficiency	0(0,0,0)	
2	2199406	Certificate of Informatics	0(0,0,0)	
3	2106402	Ergonomics and sizing systems	2(2,0,4)	

No.	Course code	Course name	Credits	Pre-course (a), Prerequisite course (b), Co-requisite course (c)
4	2120405	Physical Education 1	2(0,4,4)	
5	2132001	Teamwork Skills	2(1,2,4)	
6	2106512	Overview of garment technology and labor safety	3(2,2,6)	
7	2113431	Calculus 1	2(2,0,4)	
8	2112012	Philosophy of Marxism and Leninism	3(3,0,6)	
9	2106521	Art drawing	3(2,2,6)	
		Semester 2	**22**	
		Compulsory course	**19**	
1	2120503	National Defence Education and Security	8(6,4,16)	
2	2120406	Physical Education 2	2(0,4,4)	2120405(a)
3	2112013	Political Economics of Marxism and Leninism	2(2,0,4)	
4	2106434	History of costume	2(2,0,4)	
5	2111108	English 1	3(3,0,6)	
6	2113432	Calculus 2	2(2,0,4)	
		Elective course	**3**	
		Group 1 *(Students choose one of the following courses)*	**3**	
1	2113436	Complex Analysis and Laplace Transform	3(3,0,6)	
2	2113438	Logics	3(2,2,6)	
3	2113435	Numerical Analysis	3(3,0,6)	
4	2113434	Applied Mathematics	3(3,0,6)	
5	2113437	General Physics	3(3,0,6)	
		Semester 3	**21**	
		Compulsory course	**18**	
1	2101777	Information Technology in DigitaTransformation	3(3,0,6)	
2	2112015	History of Vietnamese Communist Party	2(2,0,4)	2112012(a)
3	2106410	Industrial Sewing Equipment and Maintenance	3(2,2,6)	
4	2111188	English 2	3(3,0,6)	
5	2106456	Applied Informatics for Apparel Industry	2(0,4,4)	CS
6	2112005	Ho Chi Minh Ideology	2(2,0,4)	2112012(a)
7	2106642	Science of textile materials	3(2,2,6)	2106512(a)
		Elective course	**3**	
		Group 2 *(Students choose one of the following courses)*	**3**	
1	2112011	Music - Music Theory and Guitar Basics	3(1,4,6)	
2	2111491	Introduction to Vietnamese Culture	3(3,0,6)	
3	2106529	Fine Art	3(1,4,6)	
4	2101727	Using keyboard and office equipment skills	3(2,2,6)	
5	2110585	Psychology	3(2,2,6)	
6	2111492	Vietnamese Language in Use	3(3,0,6)	

No.	Course code	Course name	Credits	Pre-course (a), Prerequisite course (b), Co-requisite course (c)
7	2113439	Sociology	3(3,0,6)	
		Semester 4	**22**	
		Compulsory course	**17**	
1	2112014	Scientific Socialism	2(2,0,4)	2112012(a)
2	2106403	Basic apparel assembly technology	4(2,4,8)	2106410(a) 2106512(a) 2106642(a)
3	2106454	Graphics Design for Garment Technology	2(2,0,4)	
4	2106643	Quality control of sewing materials	2(1,2,4)	2106642(a)
5	2131678	General laws	3(3,0,6)	
6	2106413	Basic Pattern-making	4(2,4,8)	2106402(a)
		Elective course	**5**	
		Group 3 *(Students choose one of the following courses)*	**3**	
1	2107402	Economic Geography	3(3,0,6)	
2	2132002	Planning Skills	3(2,2,6)	
3	2123800	Environment and Human	3(2,2,6)	
4	2104487	Application of Kaizen Method and 5S Technique for Manufacturing	3(2,2,6)	
5	2104486	Industrial Applications of Chemistry	3(3,0,6)	
6	2107515	Ideas for Start-up	3(2,2,6)	
		Group 4 *(Students choose one of the following courses)*	**2**	
1	2106509	Dyeing Technique - Shape Printing	2(2,0,4)	
2	2106411	History of Fine Arts	2(2,0,4)	
3	2106463	Aesthetics	2(2,0,4)	
4	2106516	Apparel Anthropometric	2(2,0,4)	
		Semester 5	**20**	
		Compulsory course	**16**	
1	2106520	English in Fashion Industry	2(2,0,4)	
2	2106450	Printing and embroidery technology in apparel industry	2(1,2,4)	
3	2106404	Apparel assembly technology for men's and women's clothing	5(2,6,10)	2106403(a)
4	2113433	Research Methodology	2(1,2,4)	
5	2106414	Men and women costome pattern making	5(3,4,10)	2106413(a)
		Elective course	**4**	
		Group 5 *(Students choose two of the following courses)*	**4**	
1	2106435	Fine-Art for Industrial Technology	2(2,0,4)	
2	2106461	Product Brand Management	2(2,0,4)	
3	2106500	Consumer psychology	2(2,0,4)	

No.	Course code	Course name	Credits	Pre-course (a), Prerequisite course (b), Co-requisite course (c)
4	2106412	Computer-Aided Fashion Design	2(1,2,4)	
5	2106513	Production process automation	2(2,0,4)	
		Semester 6	**21**	
		Compulsory course	**17**	
1	2106475	Apparel assembly technology for traditional costume and jacket	5(2,6,10)	2106403(a)
2	2106408	Applied CAD/CAM for Garment Technology	3(1,4,6)	
3	2106409	Apparel Quality Management	2(2,0,4)	2106403(a) 2106410(a)
4	2106503	Manufacturing process in apparel industry	3(3,0,6)	2106404(a)
5	2106476	Traditional dress and Jacket pattern making	4(2,4,8)	2106413(a)
		Elective course	**4**	
		Group 6 *(Students choose two of the following courses)*	**4**	
1	2016517	3D Simulation	2(2,0,4)	
2	2106515	Simulation data in apparel	2(2,0,4)	
3	2106425	Pattern-making for shoes	2(2,0,4)	
4	2106459	Protective clothing pattern making	2(2,0,4)	2106413(a)
5	2106429	Organization and management of production processes in apparel industry	2(2,0,4)	2106404(a)
6	2106507	Finishing treatment of garment product	2(2,0,4)	2106403(a) 2106410(a)
		Semester 7	**17**	
		Compulsory course	**13**	
1	2106644	Apparel CAD/CAM	3(1,4,6)	
2	2106406	Apparel assembly technology for advanced suit jackets	4(2,4,8)	2106475(a)
3	2106445	Production planning and control in apparel manufacturing	2(2,0,4)	2106503(a) 2106409(a)
4	2106416	Advanced costumes pattern making	4(2,4,8)	2106476(a)
		Elective course	**4**	
		Group 7 *(Students choose two of the following courses)*	**4**	
1	2106420	Apparel assembly technology for knitted Garments	2(1,2,4)	
2	2106449	Business of import and export of garments	2(2,0,4)	
3	2106647	Technical textile products and applications	2(2,0,4)	
4	2106506	3D design by information technique	2(1,2,4)	
5	2106541	Factory design and installation of sewing equipment	2(2,0,4)	
6	2106424	Bag and Hat pattern making	2(2,0,4)	
7	2106470	Fashion Design for Manequins	2(1,2,4)	

No.	Course code	Course name	Credits	Pre-course (a), Prerequisite course (b), Co-requisite course (c)
8	2106489	Wedding costume pattern making	2(1,2,4)	2106414(a)
		Semester 8	**15**	
		Compulsory course	**7**	
1	2106468	Apparel Merchandising	2(2,0,4)	2106503(a) 2106520(a)
2	2106645	Intership 1	3(0,6,6)	2106503(a)
3	2106646	Intership 2	2(0,4,4)	2106503(a)
		Elective course	**8**	
		Group 8 *(Students choose four of the following courses)*	**8**	
1	2106418	Productivity Improvement in Apparel Industry	2(2,0,4)	2106404(a) 2106503(a) 2106429(a)
2	2106448	Inventory Management	2(2,0,4)	
3	2106519	Production management on computer	2(2,0,4)	
4	2106433	Garment pattern modeling	2(2,0,4)	2106414(a)
5	2106495	Intrustrial garment pattern making.	2(2,0,4)	2106414(a)
6	2106423	Underwear and Swimsuit pattern making	2(2,0,4)	2106414(a)
7	2106528	Kid clothing pattern making	2(2,0,4)	
8	2106514	Costume sanitary	2(2,0,4)	
		Semester 9	**8**	
		Compulsory course	**8**	
1	2106537	Graduation Thesis	8(0,16,16)	2106503(a) 2106645(a)

7.2. Matrix of integrated courses and programme learning outcomes

The alignment between CLOs and PLOs is strategically orchestrated through a comprehensive Curriculum Mapping Matrix. This matrix serves as the structural backbone of the educational program, ensuring that every individual course serves a distinct and vital purpose in the collective attainment of the graduate profile. The contribution level of each course toward these overarching outcomes is precisely defined by a developmental hierarchy, categorized as follows:

I (Introduced): At this foundational stage, courses are designed to familiarize learners with essential theories, core concepts, or basic professional attitudes. The primary goal is to provide initial exposure and create a conceptual framework upon which more complex skills will be built.

R (Reinforced): This intermediate level provides students with deliberate opportunities to practice, apply, and consolidate the knowledge and skills previously acquired. Courses at this stage focus on deepening understanding through practical application, case studies, or laboratory work, moving beyond theory toward functional competency.

E (Emphasized/Achieved): Representing the pinnacle of the learning trajectory, these courses require advanced application, critical synthesis, and high-level problem-solving. These modules typically serve as critical assessment points—such as capstone projects or internships—to verify and confirm that the learner has fully mastered the desired outcomes to the required professional standard.

This mapping is not merely a static alignment but a dynamic, logical progression designed to increase in complexity and rigor throughout the academic journey. By following this sequential path, the curriculum ensures a cohesive and cumulative learning experience. It guarantees that by the time of graduation, every student has systematically acquired and demonstrated all necessary technical knowledge, professional skills, and ethical attributes required to excel in their field.

No.	Course code	Course name	Programme learning outcomes									
			1	2	3	4	5	6	7	8	9	10
		Semester 1										
		Compulsory course										
1	2199451	Certificate of English Language Proficiency		I						I		
2	2199406	Certificate of Informatics	I				I					
3	2106402	Ergonomics and sizing systems	I	I								
4	2120405	Physical Education 1		I								
5	2132001	Teamwork Skills								I	I	
6	2106512	Overview of garment technology and labor safety			I					I		I
7	2113431	Calculus 1	I									I
8	2112012	Philosophy of Marxism and Leninism		I							I	
9	2106521	Art drawing		I	I							
		Semester 2										
		Compulsory course										
1	2120503	National Defence Education and Security		R								I
2	2120406	Physical Education 2		R								I
3	2112013	Political Economics of Marxism and Leninism	I	I								
4	2106434	History of costume		R	I						I	
5	2111108	English 1		I						I		
6	2113432	Calculus 2	R									I
		Elective course										
		Group 1 *(Students choose one of the following courses)*										
1	2113436	Complex Analysis and Laplace Transform	R		I							
2	2113438	Logics			I				I			
3	2113435	Numerical Analysis	I						I			
4	2113434	Applied Mathematics	R						I			
5	2113437	General Physics	I						I			
		Semester 3										
		Compulsory course										
1	2101777	Information Technology in Digital Transformation	R		R					R		

No.	Course code	Course name	Programme learning outcomes									
			1	2	3	4	5	6	7	8	9	10
2	2112015	History of Vietnamese Communist Party		I								I
3	2106410	Industrial Sewing Equipment and Maintenance			I		I					I
4	2111188	English 2		R						R		
5	2106456	Applied Informatics for Apparel Industry	R				R					
6	2112005	Ho Chi Minh Ideology		I								I
7	2106642	Science of textile materials	I		I		I					I
		Elective course										
		Group 2 *(Students choose one of the following courses)*										
1	2112011	Music - Music Theory and Guitar Basics		I								I
2	2111491	Introduction to Vietnamese Culture		I								I
3	2106529	Fine Art		I								I
4	2101727	Using keyboard and office equipment skills	R							I		
5	2110585	Psychology		I								I
6	2111492	Vietnamese Language in Use		I								I
7	2113439	Sociology		I								I
		Semester 4										
		Compulsory course										
1	2112014	Scientific Socialism		I						I		
2	2106403	Basic apparel assembly technology				I	I					I
3	2106454	Graphics Design for Garment Technology				I				I		
4	2106643	Quality control of sewing materials				R	R					I
5	2131678	General laws			I							I
6	2106413	Basic Pattern-making			I	I	I					
		Elective course										
		Group 3 *(Students choose one of the following courses)*										
1	2107402	Economic Geography		I								I
2	2132002	Planning Skills		I							I	
3	2123800	Environment and Human		I								I

No.	Course code	Course name	Programme learning outcomes									
			1	2	3	4	5	6	7	8	9	10
4	2104487	Application of Kaizen Method and 5S Technique for Manufacturing		I				I				
5	2104486	Industrial Applications of Chemistry		I								
6	2107515	Ideas for Start-up		I							I	
		Group 4 *(Students choose one of the following courses)*										
1	2106509	Dyeing Technique - Shape Printing			R	R					R	
2	2106411	History of Fine Arts		R	I							
3	2106463	Aesthetics			R							
4	2106516	Apparel Anthropometric		R		R					I	
		Semester 5										
		Compulsory course										
1	2106520	English in Fashion Industry		R						I	R	
2	2106450	Printing and embroidery technology in apparel industry				R	R					
3	2106404	Apparel assembly technology for men's and women's clothing				R	R					R
4	2113433	Research Methodology		R						R	R	
5	2106414	Men and women costome pattern making			R	R	R					
		Elective course										
		Group 5 *(Students choose two of the following courses)*										
1	2106435	Fine-Art for Industrial Technology		R							R	
2	2106461	Product Brand Management		R							R	
3	2106500	Consumer psychology		R	R						R	
4	2106412	Computer-Aided Fashion Design			R			R			R	
5	2106513	Production process automation				R			R	R		
		Semester 6										
		Compulsory course										
1	2106475	Apparel assembly technology for traditional costume and jacket				E	E				E	E
2	2106408	Applied CAD/CAM for Garment Technology	R		R					R		
3	2106409	Apparel Quality Management		E		E				E		

No.	Course code	Course name	Programme learning outcomes									
			1	2	3	4	5	6	7	8	9	10
4	2106503	Manufacturing process in apparel industry		E		E		R				
5	2106476	Traditional dress and Jacket pattern making			E	E	E				E	
		Elective course										
		Group 6 *(Students choose two of the following courses)*										
1	2016517	3D Simulation	E		R			E			E	
2	2106515	Simulation data in apparel			R	R	R					
3	2106425	Pattern-making for shoes				R	R		R			
4	2106459	Protective clothing pattern making			E	E						
5	2106429	Organization and management of production processes in apparel industry	E	R		E					E	
6	2106507	Finishing treatment of garment product			R				R			
		Semester 7										
		Compulsory course										
1	2106644	Apparel CAD/CAM	E					E			E	
2	2106406	Apparel assembly technology for advanced suit jackets				E	E					E
3	2106445	Production planning and control in apparel manufacturing		E		E			E	E		
4	2106416	Advanced costumes pattern making				E	E		E			
		Elective course										
		Group 7 *(Students choose two of the following courses)*										
1	2106420	Apparel assembly technology for knitted Garments				E	E					E
2	2106449	Business of import and export of garments			R	R					R	
3	2106647	Technical textile products and applications	R		R					R		
4	2106506	3D design by information technique			E			E		E		
5	2106541	Factory design and installation of sewing equipment				R		R	R	R		
6	2106424	Bag and Hat pattern making			R				R			
7	2106470	Fashion Design for Manequins					R				R	

No.	Course code	Course name	Programme learning outcomes									
			1	2	3	4	5	6	7	8	9	10
8	2106489	Wedding costume pattern making			E	E	E					
		Semester 8										
		Compulsory course										
1	2106468	Apparel Merchandising			E	E			E			
2	2106645	Intership 1		E		E	E	E	E	E	E	E
3	2106646	Intership 2	E				E		E	E	E	E
		Elective course										
		Group 8 *(Students choose four of the following courses)*										
1	2106418	Productivity Improvement in Apparel Industry				E	E		E			
2	2106448	Inventory Management		E				E	E			
3	2106519	Production management on computer	E					E				
4	2106433	Garment pattern modeling			E				E		E	
5	2106495	Intrustrial garment pattern making.			E		E					
6	2106423	Underwear and Swimsuit pattern making			E	E						
7	2106528	Kid clothing pattern making			E	E						
8	2106514	Costume sanitary		R	R							
		Semester 9										
		Compulsory course										
1	2106537	Graduation Thesis	E		E	E		E	E	E	E	E

7.3. Curriculum map

This Curriculum Map serves as the core navigational tool for the programme, explicitly illustrating the alignment between every course and the PLOs. Following the principles of OBE, the map clearly shows where each PLO is Introduced (I), where it is Reinforced (C - Contributed), and critically, where it is formally Assessed (A). This transparency ensures all stakeholders - students, faculty, and industry partners - understand how each module contributes to the holistic development of the essential competencies required of a graduating engineer.

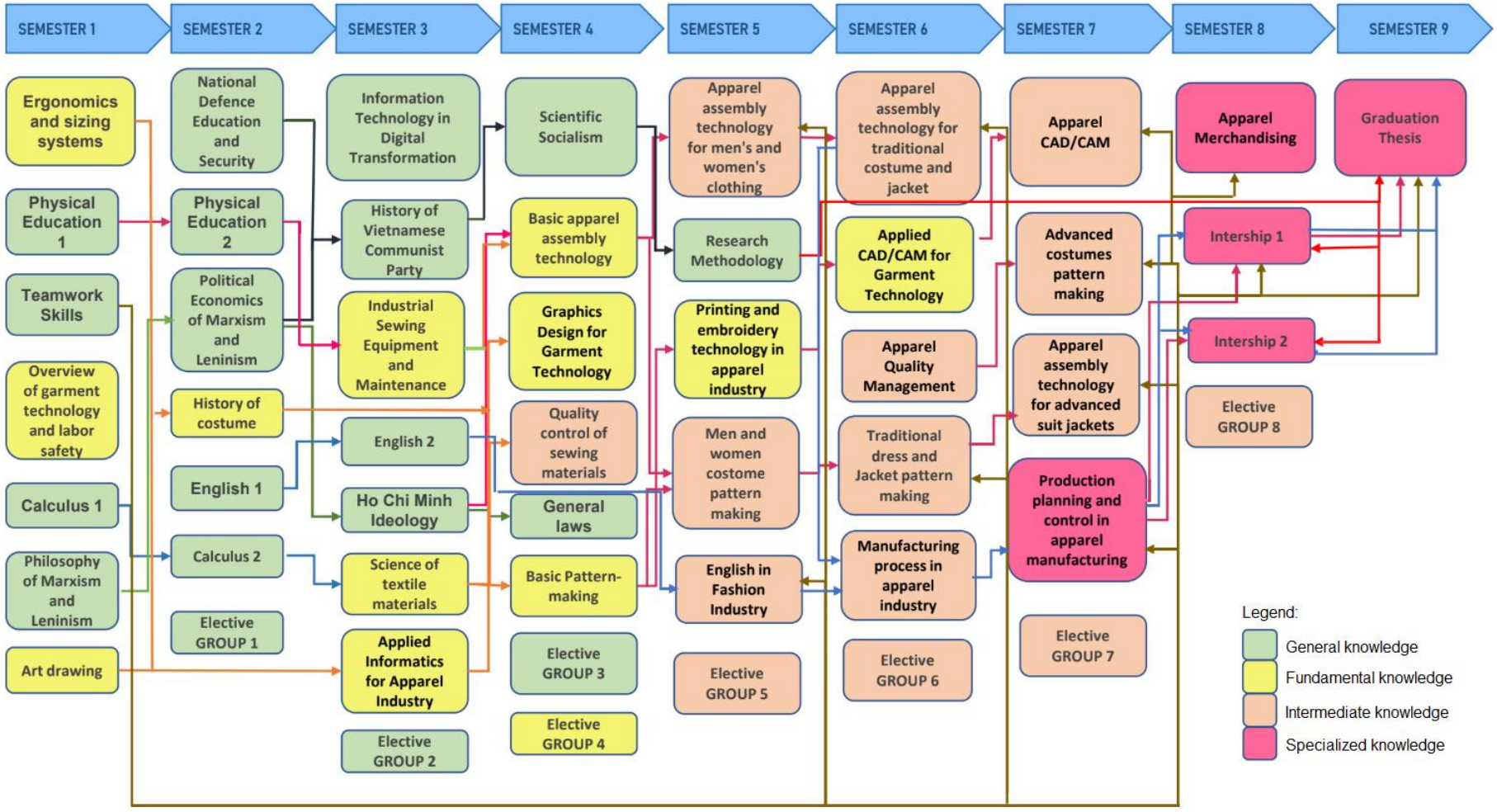


Figure 7. Curriculum map

7.4. Outline of the courses

7.4.1. General courses

❖ Compulsory courses

Physical Education 1

Theory: Knowledge of Athletics, Principles and methods of training in Athletics in particular, self-training in sports in general.

Practice: Short distance running skills. "Belly-up" high jump skills.

Physical Education 2

Basic knowledge of the chosen sport (football, volleyball, basketball, etc.). Basic skills when playing the chosen sport. Knowledge of basic techniques, tactics, competition rules, competition format, method of refereeing and organizing a movement sports tournament.

Philosophy of Marxism and Leninism

Present an overview of the history of Marxist- Leninist philosophy and philosophy in social life. Present the basic contents of CNDV BC, including material and conscious problems; materialist dialectics; cognitive reasoning of CNDVBC. Present the basic contents of the CNDVLS, including socio-economic issues; class and ethnicity; the state and social revolution; social consciousness; philosophy of man.

History of Vietnamese Communist Party

The course provides students with specialized understanding of how costumes vary between nations and ethnic groups throughout time, allowing them to recognize the origins and distinguishing elements of costumes in each historical period, as well as strategies for garment design. This foundation allows students to use their knowledge as inspiration for designing fashion collections, maintaining, and promoting the cultural history of costumes from various nations and ethnic groups.

Ho Chi Minh Ideology

Ho Chi Minh Thought has 6 chapters, chapter 1 discusses the concept, objects, research methods and learning meaning of Ho Chi Minh Thought. The remaining chapters discuss the basis, process of formation and development of Ho Chi Minh's thought; on national independence and socialism; The Communist Party of Vietnam and the State of the people, by the people, for the people; on national unity and international solidarity; culturally, morally, humanly.

Sciencetific Socialism

The content of the subject programme consists of 7 chapters: In which, chapter 1 presents the basic introductory issues of socialism (the process of formation and development of socialism). Chapters 2 to 7 present the basic content of socialism according to subject objectives.

Information technology in digital transformation

The main contents of the module include basic knowledge of information technology in digital transformation; introducing current advanced technologies and applications in digital transformation such as artificial intelligence (AI), IoT, BigData, Cloud Computing and some information security background knowledge.

National Defence Education and Security

The main content of the course is to provide students with basic knowledge of the Party's views, the State's policies and laws on national defense and security; building the whole people's defense and people's security; on the tradition of resisting foreign invaders of the nation, the people's armed forces and military arts of Vietnam, building the all-people defense posture in association with the

people's security posture, building the people's armed forces; be ready to perform military service and police duty to defend the Fatherland.

Political Economics of Marxism and Leninism

The content of the programme consists of 6 chapters. In which, chapter 1 discusses the subjects, research methods and functions of Marxist-Leninist political economy. Chapters 2 to 6 present the core content of Marxist-Leninist political economy according to subject objectives. Specifically, issues such as: Goods, markets and the role of actors in the market economy; Surplus value and interest relations in a market economy; Competition and monopoly in a market economy; Socialist-oriented market economy in Vietnam; Industrial Revolution and international economic integration in Vietnam's development process.

General laws

Part 1: Equip students with the most basic issues of state and law, and at the same time have a relationship with the state and the law of the Socialist Republic of Vietnam.

Part 2: Equip students with specialized legal contents including: Constitutional Law, Administrative Law, Civil Law, Civil Procedure Law, Labor Law, Marriage and Family Law, Criminal Law, Criminal Procedure Law and Anti-Corruption Law.

Calculus 1

The module provides learners with the basics of single-variable, two-variable function analysis and number series theory. The module aims to help learners have a knowledge base to acquire specialized knowledge effectively.

Calculus 2

Equip students with basic knowledge of Linear Algebra such as matrices, systems of linear equations, vector spaces, linear mapping, crossing of a matrix. From there, it is possible to self-improve, develop, apply and solve related problems.

Teamwork skills

Theoretical content: Some basic concepts of groups; The role of teamwork, the principles of teamwork; PDCA model and teamwork process; Basic skills in teamwork.

Practical content: Working group formation skills, working group planning and organization skills, working group executive and control skills, global and virtual team working skills.

English 1

The course helps students understand and comprehend the listening, speaking, reading and writing skills of English. In addition, the subject also has skills lessons accompanied by speaking activities that provide opportunities for students to acquire and practice vocabulary and grammar.

English 2

The course helps students to expand and acquire the listening, speaking, reading and writing skills of English. In addition, the subject also has skills lessons accompanied by speaking activities that provide opportunities for students to acquire and practice vocabulary and grammar.

Research Methodology

The content of the subject covers basic concepts, processes and methods commonly used in scientific research. The course also aims to develop students with basic academic and research skills such as academic reading and writing skills, thinking skills, problem detection and solving skills, data collection and processing skills. The subject also facilitates student group work. Thereby, students can develop the ability to work effectively in teams. Students can apply the knowledge and skills learned to carry out subject projects or graduation projects, graduation thesis scientifically and

effectively. Students can also use this knowledge and skills to conduct scientific research in their studies as well as in future work.

❖ **Elective courses**

Applied Mathematics

This course focuses on equipping students with the core quantitative methods essential for engineering analysis and decision-making. Key topics covered include: mastering the methods for solving linear programming problems and understanding the fundamental concepts of random variables. A major emphasis is placed on applying statistical methods for evaluating and testing hypotheses related to statistical parameters. Furthermore, students will gain proficiency in multi-dimensional statistical techniques such as correlation, regression, ANOVA, and Principal Component Analysis (PCA). The course concludes by integrating these skills with mathematical modeling methods and techniques to solve various optimization problems in practical settings.

Numerical Methods

This course aims to equip students with the essential numerical techniques required for solving complex engineering problems. Students will master the methods for finding approximate roots of single and systems of linear and nonlinear equations. A core focus will be placed on the approximate calculation of integral problems that lack precise analytical solutions. Furthermore, students will gain proficiency in techniques for continuous methods of discrete data. Ultimately, learners will be able to confidently apply this knowledge to effectively solve significant, complex problems within their specialized field.

Laplace Complex Functions and Laplace Transforms

Many problems in engineering, in electronics and telecommunications, in circuit theory,... are brought to solve equations, systems of equations containing derivatives and integrals of certain functions, that is, to solve differential, integral or partial derivative equations. Direct solving of these equations is generally difficult or unsolvable. This course studies complex variable functions and Laplace transforms used to solve some of these problems.

General Physics

Present general concepts and laws of point mechanics, heat and molecular kinetic theory, principles of thermodynamics. Present general concepts and laws of static electric fields, static magnetic fields, conductors, constant current, electromagnetic induction. economy; Socialist-oriented market economy in Vietnam; Industrial Revolution and international economic integration in Vietnam's development process.

Logics

The Logic module provides learners with knowledge about: Basic rules and forms of thinking, in order to train learners to think correctly and rigorously. Help learners have the ability to test the logic of an inference by themselves; know how to consistently present their thoughts clearly. Help learners know how to distinguish between inference and proof; Recognize common cases of fallacy and always think critically.

Fundamentals of Management

This course is structured to equip students with the fundamental knowledge of management operations, enabling them to rapidly adapt to the dynamic business environment of modern enterprises. Students will gain essential background knowledge of core management functions, allowing them to confidently apply concepts and propose practical solutions for common management situations. Beyond theory, the course emphasizes developing crucial professional skills, including data collection and processing, report writing, and effective presentation techniques. Furthermore, it actively cultivates vital soft skills, such as teamwork, to ensure effective task

completion, alongside fostering a proactive and positive attitude essential for active participation in thematic reporting, group discussions, and organizational problem-solving.

Applied mathematics

The course provides learners with knowledge of applied statistics such as estimation, hypothesis testing and linear regression analysis methods. From there, it is well applied to specialized research and practical life.

Business Administration

This course is designed to fully equip students with the foundational knowledge of enterprise business operations, specifically enabling them to apply the core functions of management—planning, organization, leadership, and control—to effectively manage and administer production activities. Furthermore, the curriculum guides students on how to evaluate the significance of corporate culture and provides them with the ability to apply cultural principles to assessment and quality inspection activities within business operations. Finally, the course is committed to enhancing students' communication and professional behavior skills, building their confidence for the working environment, and developing their capacity for handling administrative challenges, excelling in teamwork, and delivering impactful presentations to resolve complex business issues.

Skills of using keyboard and office equipment

This course is designed to ground students in the fundamental knowledge necessary for effective computer and office equipment usage, establishing a strong foundation to highlight the critical role of efficient 10-finger typing skills. Furthermore, the curriculum enables students to identify and categorize common office equipment, while emphasizing the user’s responsibilities in their operation. Crucially, students will develop the ability to maintain equipment, detect common errors, and perform minor repairs, ensuring the optimal and full utilization of these resources for maximum efficiency in future professional and office environments.

Environment and Human

This course is designed to provide students with the fundamental concepts of the environment, emphasizing the critical role of the natural world to human life. A core focus is placed on analyzing various forms of pollution, understanding the resulting consequences, and exploring effective methods for environmental remediation. Furthermore, the course familiarizes students with current environmental programs and official protection policies. Ultimately, this course seeks to significantly raise students' awareness and sense of responsibility toward proactive environmental protection and sustainability.

Sociology

This course is designed to provide students with the fundamental knowledge necessary for sociological inquiry, covering core sociological concepts, categories, key theoretical perspectives, and established research methods. Students will gain a deep understanding of cultural differences, social adjustment mechanisms, and the processes driving social stabilization and change, including the complex relationship between individuals, social groups, organizations, and society as a whole. Ultimately, the course empowers learners to critically analyze and evaluate various contemporary social phenomena occurring within the context of Vietnamese society from a sophisticated sociological perspective.

Planning skills

This course aims to synthesize the fundamental knowledge of planning skills, covering core concepts such as plan categorization, structure, the step-by-step planning process, and various plan development methodologies. Students will be empowered to immediately apply these planning skills to their academic life, self-development efforts, and the strategic preparation for future business and

production activities. Crucially, the course focuses on developing a complete cyclical skillset, enabling students to plan, execute, analyze, evaluate, and monitor the implementation results of any plan, ensuring they can effectively modify and refine strategies where necessary.

Numerical anlysis

Equip learners with skills in approximating equations and systems of equations, approximating integrals as well as differential equations. Method of processing measurement data using linear regression functions and nonlinear functions.

Introduction to Vietnamese culture

This course aims to provide students with a robust foundational knowledge of culture in general, with a specific and deep focus on the rich tapestry of Vietnamese culture. By fostering this understanding, the course seeks to actively cultivate profound respect and love for the nation's heritage. Ultimately, students will be empowered to become conscious advocates for the preservation and active promotion of Vietnam's traditional cultural values.

Vietnamese language in use

This course aims to empower students to identify and critically analyze the fundamental characteristics and intricate structure of the Vietnamese language. A core component of the curriculum involves teaching students to effectively identify and evaluate common errors in spoken and written Vietnamese, including mistakes in word usage and sentence construction. Ultimately, the course develops the practical ability to produce coherent texts and deliver Vietnamese speech fluently and confidently, ensuring effective professional and academic communication.

Music theory and Guitar basics

This course is designed to provide students with a solid grasp of basic music theories, establishing the necessary foundation for reading sheet music, solfeggio (sight-singing), and pursuing further instrumental practice. Students will be empowered to apply this fundamental musical knowledge to enhance their appreciation and perception of diverse musical works. Critically, the course ensures learners can effectively utilize the techniques taught to confidently play the instrument studied, specifically the guitar.

Fine art

This course aims to establish a foundational understanding of various painting types and their content, focusing particularly on the principles of layout and color theory. Students will develop the critical ability to analyze and interpret different forms of painted artwork. Crucially, the course ensures learners can apply this fundamental artistic knowledge to successfully execute basic drawings, including portraits, still life compositions, and landscapes.

7.4.2. Fundamental courses

❖ **Compulsory courses**

Overview of Textile and Garment Technology and labor safety

The course equips students with an overview of industrial garment production technology processes and knowledge in the field of occupational safety to guide them in complying with regulations and safety technical measures in both learning and production environments.

Science of textile materials

This course is designed to provide students with the fundamental knowledge of textile and garment materials, including key industry standards and methods used to assess final garment product quality. A major focus is placed on developing practical skills through laboratory work, enabling students to effectively conduct textile testing and perform statistical analysis of material properties. Crucially,

students must demonstrate a thorough understanding and strict compliance with labor safety and industrial hygiene protocols throughout all practical sessions.

Ergonomics and sizing systems

The course provides students with an overview of the human body and clothing, enabling them to identify body shapes to determine appropriate clothing choices and develop a sizing system for garments. It serves as a foundation for scientifically based fashion design.

Art drawing

Demonstrate an understaning of the features of art, rules of coloring, and the stylized methods to create decorative motifs and patterns. Practice the skills to practice realistic drawing of nature.

Applied informatics for apparel industry

This course aims to establish a strong technical foundation, enabling students to analyze the basic characteristics and structure of clothing patterns. Students will gain a deep understanding of the standard methods for drawing seams, assembly lines, and preparing comprehensive garment product specifications. Crucially, the curriculum focuses on developing practical application skills, empowering students to creatively utilize CorelDraw software for professional illustration of costume patterns and ensuring they master the process of presenting complete technical documentation required in the garment industry.

Industrial sewing equipment and maintenance

The course provides students with knowledge about the operating principles of various types of machinery and equipment in the garment industry; classifies different types of stitches and seams used in industrial sewing. From there, students can apply this knowledge to operate basic sewing equipment and repair common malfunctions.

Basic pattern-making

The course equips students with fundamental specialized knowledge and skills in methods for determining garment ease, pattern-making, and cutting basic men's and women's clothing, as well as children's wear. It also applies design techniques to create complete products for specific target groups.

Basic apparel assembly technology

This course is designed to fully equip learners with essential knowledge concerning assembly processes, technological flows, common failure types, and the causes and corrective solutions for basic garment components and products, including shirts, shorts, and children's clothing. A major focus is placed on developing practical skills to assemble homeware products in strict accordance with technical requirements. Furthermore, the curriculum aims to actively cultivate a strong passion for the profession, fostering a positive attitude toward learning and instilling a deep sense of responsibility vital for both academic success and future professional roles.

Graphic design for Garment technology

This course provides students with knowledge about setting up technical drawings and skills to grasp and understand symbol systems, parameters in garment technical drawing. The knowledge of graphic design for Textile and Garment Technology helps standardize the fashion garment manufacturing industry and promote production rapidly.

Printing and embroidery technology in apparel industry

This course is dedicated to providing comprehensive knowledge of decorative technologies used on garment products, including drawing, printing, embroidery, and beading. Students will gain a deep understanding of the principles and structure of industrial embroidery equipment. The core focus is on practical application, enabling students to confidently apply printing and embroidery methods for

shaping designs on both industrial and high-fashion products. Furthermore, the curriculum reinforces crucial skills in teamwork, critical reasoning, and technical analysis necessary to propose effective solutions for problems related to embroidery design and equipment operation.

Applied CAD/CAM for Garment technology

The course provides students with basic knowledge of technical sample design process, jump size and schematic diagram for industrial production products.

❖ **Elective courses**

Apparel anthropometry

This course is designed to ensure students fully grasp the fundamental knowledge regarding the anatomical features and physiological characteristics of the human body. By leveraging anthropometric principles, students will learn to explain the root causes of common fit flaws and body variations. Critically, the curriculum empowers learners to strategically devise solutions through costume design to effectively minimize potential visual weaknesses for various body types. Ultimately, students will develop the capacity to apply professional research methods to construct a reliable system of body measurements, thereby informing the design process and creating superior apparel products.

History of fine art

This course is designed to provide students with comprehensive knowledge regarding the historical development process and the inherent aesthetic value found in diverse works of art. Crucially, the course actively cultivates the students' way of thinking about artistic creations, serving as a vital intellectual premise and foundation for the subsequent study of the History of Costume.

Aesthetics

This course provides students with fundamental theories concerning the perception and appreciation of beauty across nature, art, and society, framed through the core values of "The Truth, The Goodness, and The Beauty." Crucially, the curriculum actively develops students' ability to anticipate and keep pace with current and emerging fashion trends, and, significantly, empowers them with the critical thinking skills necessary to reshape and influence these trends. Furthermore, the course enhances students' thinking methodologies, which serves as a valuable intellectual approach for better understanding and mastering other academic subjects.

Product brand management

This course is designed to equip students with the essential marketing knowledge of the brand environment, including fundamental theories related to branding, the definition of a brand, and the different product levels. Students will be trained to clearly distinguish between the core concepts of products and brands and understand their strategic implications. Furthermore, the course actively develops crucial professional skills, specifically enhancing students' teamwork proficiency and improving their communication capabilities essential for navigating the complex business working environment.

Computer-aided Garment Technology

This course is designed to fully equip students with the necessary skills to effectively use key drawing and graphic design software, including Photoshop, Illustrator, and Kaledo Style. Students will develop the critical ability to analyze basic characteristics of clothing design elements, such as materials, style, lines, patterns, and colors. The curriculum focuses on developing practical application, empowering students to creatively utilize Photoshop and Kaledo Style for professional design outputs like fashion outfits, product catalogs, and packaging labels relevant to the Garment Technology and Art Design industries. Furthermore, students are encouraged to actively engage in

teamwork, discussion, and problem-solving related to software use, fostering a positive attitude, discipline, a high sense of responsibility, and professional conduct.

Industrial fine-art

The course offers students the knowledge of the history of branches of industrial fine arts, most general rules of industrial decoration, and methods of arranging motifs in industrial production conditions. The course also helps students develop a view towards industrial fine arts.

Consumer psychology

The course equips students with the skills to conduct research on human psychology in general and research on consumer psychology, consuming behavior of consumers, factors affecting buying behavior of consumers as well as equipping content related to the communication skills of the sales person in particular. The course also helps students understand the trends in customer behaviours and be able to make survey to investigate the factors affecting the buying behavior of consumers.

7.4.3. Intermediate courses

❖ **Compulsory courses**

Apparel assembly technology for men's and women's clothing

The course provides students with knowledge about technological processes of producing products: shirts, trousers, jeans, skirts, dresses to serve the actual production process. The causes of common defects and proposed methods to improve: shirts, trousers, jeans, skirts, dresses.

Quality control of sewing materials

This course introduces basic knowledge of fabric quality control in garment production, quality control standards, and fabric quality inspection characteristics. The structural parameters, mechanical and physical characteristics of fabrics, and the significance of these characteristics in the design, processing, and use of products are also covered. Additionally, the course provides students with knowledge of material inspection in garment export, international regulations on chemical management in the textile and garment industry, restricted substances in garment export, and materials potentially containing restricted substances in garment export.

Men and women costume pattern making

This course is designed to provide students with specialized technical knowledge in pattern-making, marker making, and cutting processes for both men’s and women’s clothing. A core focus is placed on developing the ability to creatively analyze diverse product styles and apply this knowledge to select the most appropriate and efficient pattern-making process. Furthermore, the curriculum equips students with the critical skills needed to accurately evaluate technical problems, confidently propose, and select the optimal corrective solutions to ensure superior garment quality.

Traditional dress and jacket pattern making

This specialized course provides students with in-depth technical knowledge essential for pattern-making, marker making, and cutting processes specific to traditional costumes and complex jacket designs. Students will develop the critical ability to creatively analyze diverse product styles and apply their understanding to select the most precise and appropriate pattern-making process. Furthermore, the curriculum equips learners with the advanced skills necessary to accurately evaluate intricate technical problems, confidently propose, and select the optimal corrective solutions to ensure superior quality in specialized garment production.

Apparel assembly technology for traditional costume and jacket

The course provides students with knowledge about sewing process, technical standard about 1 layer jacket, 2 layers jacket, 1 layer women's vest, 2 layers women's vest in industrial garment production. The course also provides students with the knowledge about the process of making traditional clothes.

Advanced costumes pattern making

The High-End Men's Apparel Design module provides students with the knowledge and skills required for pattern design, marker making (cutting diagrams), fabric consumption calculation (fabric norms), and cutting high-end men's clothing products. Furthermore, students learn to analyze product designs and select appropriate manufacturing processes (design processes) to modify styles and develop industrial patterns according to the finished product specifications (parameters).

Apparel assembly technology for advanced suit jackets

This specialized course provides students with foundational and advanced knowledge of the essential techniques and overall manufacturing process for assembling men's suits and vests. A core focus is placed on developing high-level analytical skills required to effectively construct detailed technical standards and precisely define the assembly and finishing processes for these garments, ensuring strict compliance with stringent technical regulations.

English in fashion industry

This specialized course is designed to fully immerse students in the English vocabulary and terminology essential for effectively reading and comprehending technical documents within the Garment, Textile, and Garment Technology industry. The curriculum equips learners with the necessary knowledge and skills to confidently apply these specialized English terms when interpreting documents from foreign partners, significantly improving their design capabilities and deepening their understanding of the global fashion industry.

Apparel quality management

The main content of the course provides students with knowledge about: The concept of quality and product quality management, The concept of quality and product quality management, The concept of quality and product quality management, Methods of inspection and evaluation criteria for garment product quality. Additionally, the course enhances students' abilities in teamwork, discussion, presentation, analysis, proposal development, and problem-solving related to product quality and quality management in practical contexts.

Apparel CAD/CAM

This course is structured to provide students with a progression of knowledge, beginning with basic specialized knowledge in utilizing industry-standard design software. This foundation then advances to specialized application, enabling students to employ CAD/CAM software to design complete technical samples that strictly adhere to production requirements. Crucially, students will develop strong analytical skills to calculate, test samples, and propose effective, software-based solutions related to production preparation. Furthermore, the course emphasizes optimization ability: students will learn to thoroughly analyze products and assembly steps to accurately calculate time and material norms, and propose practical improvement options tailored to specific business conditions.

Manufacturing process in apparel industry

The course provides students with: Basic knowledge about the apparel manufacturing process, from pre-production preparation to production deployment. Methods for calculating production factors, developing technical documentation files, and organizing work in industrial apparel production deployment.

❖ **Elective courses**

Dyeing technique - Shape printing

This course provides students with knowledge about the textile materials, theory of colors and dyes, color schemes and guidance in pretreatment technology, dyeing, shape printing and completing the textile materials.

Apparel quality management

This course aims to provide students with the fundamental knowledge of general quality concepts, quality management principles, ISO standards, and essential product inspection methods. It emphasizes the crucial role and importance of effective apparel quality management within the industry. Students will acquire advanced professional knowledge across the entire quality lifecycle, covering methods for inspecting raw materials, managing quality during preparation and production stages, and conducting final inspection and physical property assessment of finished sewing products. Crucially, the curriculum includes training on statistical acceptance methods for product quality inspection. Ultimately, the course develops students' capacity for teamwork, discussion, and analysis, enabling them to propose and solve complex quality management issues in alignment with both practical requirements and customer expectations.

Fashion design on mannequin

This course helps students grasp the structure of costumes and improve their designing skills: fabric wrapping and making 3D patterns. Students will be enriched with diverse modeling skills, and apply flexibly in solving technical problems in costume design.

3D simulation

This course aims to ensure students acquire essential theoretical and updated knowledge concerning both 2D and modern 3D simulation methodologies. A core focus is placed on developing robust analytical skills, specifically empowering students to effectively collect, analyze input data, verify, validate, and interpret 3D simulation outputs. Critically, the curriculum emphasizes practical application using Optitex apparel software to accurately perform 3D simulation of body measurements derived from collected anthropometric data. Furthermore, the course strengthens crucial professional skills, including the capacity for information search, synthesis, communication, and effective teamwork.

Business of import and export of garments

This course is designed to equip students with comprehensive knowledge of international trade practices, focusing specifically on the features and correct application of Incoterms (International Commercial Terms). Students will develop the crucial ability to analyze various international payment methods and strategically select the most appropriate option for specific transactions. A major emphasis is placed on practical skills: students will learn to creatively apply theoretical knowledge to accurately calculate and construct export product quotations, manage payment collection reports, and process payments for imported products. Furthermore, the course ensures students gain the capacity to draft complete garment export processing contracts based on given technical and legal requirements. Throughout the course, students will also strengthen essential professional skills, including information search, synthesis, communication, and effective teamwork.

Simulation data in apparel

This advanced course provides students with specialized theoretical knowledge of 3D costume design, focusing on the fundamental relationship between human anatomy, sewing materials, and the final garment design. The curriculum ensures learners receive updated knowledge regarding emerging design methodologies and contemporary product assessment techniques. Furthermore, the course actively develops essential professional skills, including the capacity for information search, synthesis, effective communication, and collaborative teamwork.

Organization and management of production processes in apparel industry

This course is designed to equip students with comprehensive knowledge essential for effective production management, covering business concepts and classification, types of production systems, production division, and core management areas including labor, materials, and engineering

management. Students will develop the practical skills necessary to organize and implement a team's production plan, accurately calculate product costs, and propose strategic methods for cost reduction. Furthermore, the curriculum introduces advanced concepts such as process analysis and worker implementation improvement, alongside lean production methodologies aimed at minimizing waste, significantly reducing production costs, and increasing overall labor productivity.

Garment pattern modeling

This course is designed to provide students with both general and advanced knowledge of the core principles required for creating complex and sophisticated garments. Upon completion, students will be fully qualified to master the use of basic blocks and apply advanced modeling techniques to design a wide variety of apparel types, including tops, pants, dresses, and other complex costume structures.

Pattern-making for shoes

This specialized course provides students with in-depth technical knowledge essential for the accurate measurement and pattern-making of various basic footwear designs. Students will develop the critical ability to creatively analyze diverse product styles and apply their understanding to select the most suitable and efficient design process. Furthermore, the curriculum equips learners with the advanced skills necessary to accurately evaluate technical problems, confidently propose, and select the optimal corrective solutions to ensure superior product quality in footwear manufacturing.

Costume sanitary

Knowledge about the relationship between the body, clothing and its surroundings. The requirements are about sanitary and ecological conditions for clothes. How to define and evaluate the sanitary and ecological criteria of clothes.

Pattern-making for underwear and swimsuit

This highly specialized course provides students with in-depth technical knowledge essential for the accurate pattern-making, diagram construction, and cutting processes specific to basic underwear and swimwear garments. Students will develop the critical ability to creatively analyze diverse product styles and apply their understanding to select the most suitable and efficient pattern-making process for these complex garments. Furthermore, the curriculum equips learners with advanced skills necessary to accurately evaluate intricate technical problems commonly encountered in the production of intimate apparel and swimwear, confidently propose, and select the optimal corrective solutions to ensure superior product quality.

Pattern-making for bags and hats

This specialized course provides students with in-depth technical knowledge essential for the pattern-making, marker making, and cutting processes specific to various bag and hat designs. Students will develop the critical ability to creatively analyze diverse product styles and apply this understanding to select the most suitable and efficient pattern-making process. Furthermore, the curriculum equips learners with the advanced skills necessary to accurately evaluate technical problems commonly encountered in accessory production, confidently propose, and select the optimal corrective solutions to ensure superior product quality.

Knitted fabric manufacturing process

This course aims to provide students with comprehensive general knowledge of knitted fabrics and the operational styles of machinery used in the actual production process. The curriculum covers essential aspects such as designing patterns for industrial knitted fabric products, specific knitting apparel assembly techniques, and the complete production process. A core focus is placed on establishing and adhering to technical standards, and ensuring the design, assembly, and finishing processes for all products strictly comply with these regulations. Furthermore, students will gain the

critical ability to analyze the root causes of defects arising during the product assembly process and propose effective corrective solutions.

Factory design and installation of sewing equipment

This course is designed to fully equip students with essential knowledge of workshop concepts in general and industrial sewing workshops in particular, providing a critical foundation for designing efficient production lines. Students will acquire fundamental knowledge regarding factory construction standards, regulations, and design requirements. They will develop the ability to analyze and critically evaluate the various factors impacting the industrial garment production environment. This analytical skill set empowers students to propose effective technical and operational solutions aimed at optimizing the working environment and maximizing efficiency within the garment factory.

3D design on computers

The course gives students knowledge and skills in using some garment softwares such as Opitex. Students are equiped with skills to use the tools on the software to design patterns, giving standards parameters, selecting types of fabrics/ materials for the 3D models of the finished products and then add on decorative items for these 3D models in accordance with students' own design ideas.

Industrial garment pattern making

This specialized course aims to equip students with advanced technical knowledge necessary for industrial pattern making, enabling them to create accurate patterns for mass production based on precise parameters derived from finished products or product samples. Students will develop the crucial ability to analyze diverse product designs and strategically apply this understanding to select the most efficient pattern-making process. Furthermore, the curriculum focuses on training students to accurately evaluate problems related to technical defects, confidently propose, and select the optimal corrective solutions to ensure manufacturing excellence.

Productivity improvement in apparel industry

The course provides an overview of production improvement in the garment industry, including improvement philosophies, methods, and tools. It focuses on applying improvement methods to real production practices and introduces recent advancements in industrial garment manufacturing.

Inventory management

This course provides students with fundamental knowledge of warehouse management for materials and goods in an economical, efficient, and timely manner. It also equips students with knowledge of documentation procedures related to the import and export of raw materials, accessories, and finished garment products.

Production management on computer

This course enables students to analyze, calculate, and test software-based solutions for work method improvement; to analyze products and sewing operations in order to determine standard time and propose improvement solutions suitable for enterprise conditions; and to develop communication and teamwork skills, the ability to comprehend English information in the software, as well as a positive learning attitude and strong professional ethics.

7.4.4. Specialized courses

Internship 1

In this course, students undergo 8 weeks of study and practical work at a business or production facility related to the garment technology field. This experience helps learners gain exposure to real-world production practices within the industry. Students are expected to apply the knowledge and skills they have acquired to actual work in the garment sector, thereby enabling them to better orient themselves toward the right career path after graduation.

Internship 2

The course requires students to implement the production of a specific order from the production preparation stage: preparation of raw materials, design and technology to the production implementation stage: cutting, sewing and completing the product.

Graduation thesis

The primary goal of this course is to equip students with critical practical and professional skills. Specifically, students will learn to skillfully develop and outline a comprehensive technical project plan within the field of industrial sewing, ensuring all specified industry requirements are met. Furthermore, students will gain the competence to effectively execute and manage the planned project, and clearly and professionally present and document their technical results in detailed reports. Beyond technical execution, the course emphasizes the development of a strong professional attitude, ensuring students consistently demonstrate ethical behavior, a progressive mindset, self-motivation, and effective cooperation within a team environment.

Production planning and control in apparel manufacturing

The course gives the overview of production planning. Principles of schedule arrangement, work assignment and moderation work in production planning. The method of planning production for garment orders based on special requirements.

Apparel merchandising

This course is to provide students an understanding of knowledge of apparel merchandising from order receipt to the production process of garment orders; methodsfor costing, as well as how to make files in apparel merchandising; methods for negotiating with consumers, as well as how to solve some of the problems that arise in apparel merchandising.

8. ACTIVITIES IN THE TRAINING PROGRAMME

Teaching and learning activities for both faculty and students are continuously improving to enhance quality. Beyond traditional methods, FGD utilizes active teaching methods that promote interactive communication and engagement, encouraging student participation through discussions and questions, creating a vibrant classroom environment. Faculty employ diverse approaches, including lectures, flipped classrooms, and practical exercises. Learning is no longer confined to the traditional classroom; it occurs anywhere that is convenient and effective for students. Theory-based courses are taught in classrooms, while practical skills are developed in workshops, factories during internships, and laboratories at both the institution and partner enterprises. Learning activities can be individual or group-based, and take place both during and outside of scheduled class times.



Figure 8. FGD's students with wedding dress products

FGD has always been cooperating with businesses so that FD programme students can begin their fieldtrips right from their first year of study after finishing the course, “Overview of Textile and Garment Technology and labor safety”. After the fieldtrips, students will have to make a report on how an actual production process look like and what they learn from the actual process. In addition, FGD annually organizes exhibition tours and textile industry seminars, which help students update on the most advanced machinery as well as diverse fields of operation of the industry.



Figure 9. Fieldtrip at American Fashion in 2024



Figure 10. Participation in the Vietnam International Textile & Garment Industry Exhibition 2024

Through a strong collaboration between FGD and businesses and organizations in the textile and fashion industry, fourth-year students will be introduced to internships at these companies. After

seven semesters of foundational and specialized training, students will have the opportunity to apply their knowledge and skills in a real-world setting. This internship period, on the one hand, allows learners, training institutions, and employers to evaluate the effectiveness of the training, and on the other hand, helps students better orient themselves for future career choices.



Figure 11. Job fair 2023 at IUH



Figure 12. International Cultural and Scientific Exchange Week 2023

Beside the tasks of teaching and learning, teaching staff and students of the FGD involve themselves in community service activities. Taking part in these activities is where students learn more about the needed soft skills required by enterprises and society.



Figure 13. FGD students with different activities on IUH campus

9. OUTSTANDING ACHIEVEMENT

Over a quarter of a century, with the vision and mission of providing high-quality human resources, promoting scientific research, international cooperation, and technology transfer with partners in the fields of Textile and Garment Technology and Fashion Design, FGD has continuously strived to improve both its human and material resources.

With a foundation of advanced technology and modern aesthetic knowledge, students majoring in Textile and Garment Technology at FGD have a wide range of career opportunities in the fashion industry. Specifically, in addition to becoming talented designers, creating unique collections, and leading trends, students can also develop their careers in production, brand management, styling, fashion editing, and many other roles.

Since 2023, FGD has started hosting large-scale graduation project presentations for Textile and Garment Technology students, attracting much attention from professionals and the press.



Figure 14. IUH Graduate Fashion show 2023

In addition, FGD has also signed cooperation agreements with art organizations such as the Global Student Fashion Week (GFSW) and the Ho Chi Minh City Design Association (VDAS) to expand international cooperation opportunities, enhance the position of students, and create conditions for young Vietnamese talents to integrate into the global fashion market.



Figure 15. Mou signing ceremony between FGD and GSFW

Accompanying the sustainable development of FGD, the faculty is also constantly striving to improve their expertise and perfect their professional skills.



Figure 16. FGD's lecturers won the award for Excellent lecturer 2023

The continuous investment in resources and international exposure has directly fostered remarkable achievements among FGD students. Our students regularly secure top placements in prestigious national and international fashion and design competitions, demonstrating their technical mastery and innovative vision. Beyond competition success, many students have successfully launched their own independent brands even before graduation, a testament to the strong entrepreneurial spirit and creative confidence instilled by the programme. Their graduation projects and portfolio work are consistently recognized by industry leaders, resulting in high employment rates and rapid career advancement across leading textile, garment, and fashion houses. These student successes not only reflect the quality of the FGD curriculum but also solidify the faculty's reputation as a key incubator for Vietnam’s next generation of fashion innovators and industry leaders.

10. APPROVAL OF PROGRAMME SPECIFICATION

Programme specification was checked, approved and revised according to the process and regulations of the Inductrial University Industry of Ho Chi Minh City./.

Ho Chi Minh City, March 2024

Dean of FGD



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