Εγκρίθηκε από την Συνέλευση του Τμήματος Δ.Σ.Ε.:
10/18-05-23 θέμα 7°

ΔΙΕΘΝΕΣ ΠΑΝΕΠΙΣΤΗΜΙΟ ΤΗΣ ΕΛΛΑΔΟΣ

ΣΧΟΛΗ ΕΠΙΣΤΗΜΩΝ ΣΧΕΔΙΑΣΜΟΥ

ΤΜΗΜΑ ΔΗΜΙΟΥΡΓΙΚΟΥ ΣΧΕΔΙΑΣΜΟΥ ΚΑΙ ΕΝΔΥΣΗΣ

STUDY GUIDE

DEPARTMENT OF CREATIVE DESIGN AND CLOTHING (KILKIS)

KILKIS, 2023

EDITING GROUP

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I.H.U. 2023

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FOREWORD

Dear students,

The present study guide of the Faculty is an essential tool for the presentation of the modern university structure, as it enables the student to be informed and understand the functional entity of the subject he/she is treating. As the Chair of the Department of Creative Design and Performance at the International Hellenic University and representing all staff, both teaching and administrative, I welcome you to this guide.

The Department has been operating in its current form since the 2019-2020 academic year. The Department's curriculum of study combines contemporary science and new technologies in garment design and construction. These are basic principles for the proper functioning of a modern business and are utilized with direct application in the department of design concept conception, industrial design and garment manufacturing as well as in promotion and management, the proper structuring of the supply chain with a final result of satisfying the needs of customers.

The Department is closely linked to the local society of Kilkis and the economy of the wider Region as this sector until recently employed about 25%-30% of the workforce. The department has been operating since 1999 and now has its own building, being the only institution teaching this discipline in the whole of Greece, offering knowledge and studies of the highest level to undergraduates and postgraduates from all over Greece and the Balkans.
The faculty members of the Department have extensive teaching experience and contribute to research and the promotion of both the Department and the students themselves through exhibitions, competitions, publications in scientific journals, presentations and participation in conferences and research projects. At the same time, the department has developed relationships with other departments of this institution and other universities in Greece through memoranda of understanding, as well as with the garment and fashion industry itself.

The Department has several modern laboratories with specialized equipment for the design, research and development, processing and finishing of garments and quality control, in which students receive high-quality knowledge through the curriculum of study. The cooperation of the department with foreign universities ensures student mobility through the Erasmus program, enriching the students' experiences as well as broadening their horizons. The department also operates a doctoral program and a postgraduate program is expected to be launched.

By combining the valuable experience and knowledge of its teaching staff, as well as its excellent equipment, the Department is a higher educational structure that can create young, remarkable scientists and key business executives in the clothing and fashion industry, ready to respond to the modern and demanding business and sustainable environment.

The following indicative presentation of the Department cannot give a complete picture of the Department and we are always at your disposal to show you around the premises of the Kilkis campus

The Head of the Department

Apostolos Korlos
Associate Professor

1 THE INTERNATIONAL HELLENIC UNIVERSITY

1.1 General Information

The International Hellenic University (I.H.U.) based in Thessaloniki, was founded by article 1 of Law 3391/2005 (Aʹ 240) and is organized and operates as a Higher Educational Institution (HEI) in the university sector, in accordance with paragraph 1 and indent a' of paragraph 2, article 1, Law 4485/2017 (Aʹ114).

With Law 4610/2019 (Government Gazette 70/Aʹ/7-5-2019) seven (7) Schools were established therein with corresponding Departments in each of them.

Besides, there is a University Center for International Studies in IHU, based in Thessaloniki, which operates as an academic unit of the institution.

The following Departments are established at the University Center for International Studies:

a) Humanities, Social and Economic Sciences, which is part of the School of Humanities, Social and Economic Sciences.

b) Science and Technology, which is part of the School of Science and Technology

The above Departments are located in different cities in Northern Greece. Most of them are mainly concentrated on four campuses: Thermi (where the University headquarters is also located), Sindos, Serres and Kavala.

1.2 Academic and Organizational Structure

According to the current legislation, each University is subdivided into Schools, which cover a set of related scientific disciplines, so that the necessary coordination for the quality of education provided can be ensured. A School is subdivided into individual Departments which also constitute the basic academic units. The units in question cover the subject of a specific scientific field and award the corresponding degree/diploma. The Schools of the International Hellenic University - with their Departments - are as follows:

SCHOOLS	DEPARTMENTS
SCHOOL OF ECONOMICS AND BUSINESS ADMINISTRATION (Thessaloniki)	• Department of Business Administration (Serres) • Department of Economic Sciences (Serres) • Department of Supply Chain Management (Katerini) • Department of Accounting and Finance (Kavala) • Department of Business Administration, Marketing and Tourism (Thessaloniki) • Department of Accounting and Information Systems (Thessaloniki) • Department of Management Science and Technology (Kavala)

SCHOOL OF SOCIAL SCIENCES (Thessaloniki)	● Department of Library, Archive and Information Science (Thessaloniki) ● Department of Early Childhood Education and Care (Thessaloniki)
SCHOOL OF HEALTH SCIENCES (Thessaloniki)	● Department of Biomedical Sciences (Thessaloniki) ● Department of Nutritional Sciences and Dietetics (Thessaloniki) Department of Midwifery Science (Thessaloniki) ● Department of Physiotherapy (Thessaloniki) ● Department of Nursing (Thessaloniki) ● Department of Nursing (Didymoteicho Branch)
SCHOOL OF ENGINEERING (Serres)	● Department of Industrial Engineering and Management (Thessaloniki) ● Department of Environmental Engineering (Thessaloniki) ● Department of Information Technology and Electronic Engineering (Thessaloniki) ● Department of Computer, Informatics and Telecommunications Engineering (Serres) ● Department of Surveying and Geoinformatics Engineering (Serres) ● Department of Mechanical Engineering (Serres) ● Department of Civil Engineering (Serres)
SCHOOL OF DESIGN SCIENCES (Serres)	● Department of Creative Design and Clothing (Kilkis) ● Department of Interior Architecture (Serres)
SCHOOL OF SCIENCES (Kavala)	● Department of Computer Science (Kavala) ● Department of Physics (Kavala) ● Department of Chemistry (Kavala)
SCHOOL OF GEOSCIENCES (Drama)	● Department of Agricultural Biotechnology and Oenology (Drama) ● Department of Agriculture (Thessaloniki) ● Department of Forestry & Natural Environment (Drama) ● Department of Food Science and Technology (Thessaloniki)
SCHOOL OF HUMANITIES SOCIAL SCIENCES AND ECONOMIC STUDIES (Thessaloniki)	● Department of Humanities Social Sciences and Economic Studies (Thessaloniki)
SCHOOL OF SCIENCE AND TECHNOLOGY (Thessaloniki)	● Department of Science and Technology (Thessaloniki)

The administrative bodies of each School are the Dean's Office and the Dean.

The Dean's Office of each School consists of:

-the Dean of the School,

- the Heads of the Departments, and

- representatives of Special Technical Laboratory Staff (E.TE.P.), Special Teaching Laboratory Staff (E.D.I.P.), and students.

The Department is managed by:
- the Department's Assembly
- the Management Board, and
- the Head of the Department

The body of the Department is the Faculty Assembly, which is composed of members of the teaching staff and student representatives.

1.3 .The Campus of Kilkis

The Department has been housed in its own premises since December 2017.

The building complex consists of the Administration building (K1), the Education building (K2) and the Catering building (K3) with a total area of 5.600 m² on a plot of 60.000 m².

On the ground floor of the Administration building, there is the Department's Library and two multi-purpose rooms.

The following laboratories equipped with specialized laboratory and measuring instruments operate in the department for the measurement, evaluation and quality control of the physical and mechanical properties of fibres, yarns, fabrics, textiles and garments.

- Textile & Quality Control Laboratories

For the measurement, evaluation and Quality control of dyes and colours in textiles/clothing.

- Dye Physics & Chemistry Laboratory
  For the Design and Development of Garment Standards.
- Design Centre
- Garment Pattern Technology Laboratory.
- Computer-aided design Laboratory – CAD
- Computer Laboratory
- Sewing Technology Laboratory
- Layering/Cutting Laboratory
- Atelier
  Fully equipped with sewing machines and workbenches, with fabric inventory and material storage, for the preparation of students' projects.

2 THE CITY OF KILKIS

2.1 Geographical and Demographic Information

The prefecture is located in Northern Greece in the region of Macedonia. The city of Kilkis is located in the municipality of Kilkis and is the capital of the Regional Unity of Kilkis in Central Macedonia as formed by the "Kallikrates" program. It was founded in the Byzantine period by the inhabitants of Kallikos under the name Kalkos, In 1913 it became home to several refugees from northern Macedonia, Eastern Rumelia and Eastern Thrace. Kilkis is predominantly a lowland region with a continental climate, experiencing cold winters, but without much rain and snow but warm summers. The town was built at the foot of the hill of Agios Georgios. The area of Kilkis is 2,525 km² with a permanent population of about 80,000 inhabitants.
Kilkis is only 48 km from Thessaloniki. While it does not an airport, Macedonia Airport is located 66 km away and is adjacent to the Greek-Northern Macedonian border.
The city has developed its economy largely due to the Industrial Area located in Stavrochori.

2.2 Historical data

The city is known as the residence of the Paeonians with Amidon (today's Axichori) as its capital known since the Trojan War. Its name comes from the city of Callicos and later Callicum as a Roman station of the 1st century BC, and from there the name of the river "Gallicum" originates.

The town grew around the hill of present-day Kilkis and in the 5th century AD it housed the monastery of Our Lady of Callicum. However, the town was sacked by the Bulgarian Empire in the 10th century and the balance was restored after the victory of Emperor Basil II in 1014 against the Bulgarian army and it evolved into a town called Kallikis, a name which was changed to Kalkousi.

The incorporation of the city into the Byzantine Empire of Nicaea took place in 1246 with the victory of Emperor John III Duke Vatatzis and the annexation of the area from the Axios to the Evros River.

During the period of the Ottoman Empire Kilkis was of key importance due to its position as an agro-trade centre known as "Kilkis village". Until the end of the 18th century, Kilkis was under the control of Yusuf Muhlis Pasha, who was the son of Ismail Bey from Serres.

During the 19th century, there were internal rivalries between the Uniates, who sought the mass conversion of the local Orthodox community to the Catholic Church, and the Patriarchate, which sent a Bulgarian priest to Kilkis to spread Bulgarian national ideology.

In 1913 in the Second Balkan War, the Greek army entered Kilkis victoriously after the battle of Kilkis-Lahana that lasted three days, 19-21 June, the date that gave the name to the current main street of the city. The town was evacuated by the Bulgarian-conscious inhabitants who fled to Sofia the capital of present-day Bulgaria.

The Treaty of Bucharest (1913) created a wave of refugees from the Greek Macedonians of the towns of Stromnitsa, Tikfes and Gevgeli in Northn Macedonia. The refugees gave the name "New Stromnitsa" and carried with them as relics the relic of St. Peter and the old icon of the Pentecadian Hieromartyrs who are the patrons of the city today. This was followed by the

refugee wave of Thracians in 1914 and in 1922-1924 refugees from Asia Minor and Eastern Thrace arrived and finally in 1925 from Eastern Rumelia (Northern Thrace).

In 1943, however, the city again came under Bulgarian occupation, but on November 4, 1944, the ELAS with the Battle of Kilkis brought it back under Greek control.

2.3 Useful means of transportation

Kilkis is accessible by road from the A1 motorway until the Polykastro junction and from National Road 65. The city's ring road is adjacent to the National Road which is connected to the Egnatia Odos. To the north, it is located near the Doirani Customs House and Promachonas. The section is located on a side road of the city ring road.

There is an interconnection of the city through the Kilkis Bus Station (https://ktelkilkis.gr) with regular daily services to Thessaloniki and from there is a connection to other cities in Greece.

The railway line Thessaloniki - Alexandroupoli. passes through the railway station of Kilkis, in Krystoni, just 8km from the city with regular daily services.

There are no city buses but the section is only 3km from the city centre and is accessible by taxi, walking 20 minutes or by other means

The department is listed on Google Maps (google maps) as the Department of Creative Design and Clothing, with a location of 40°59'42.5 "N 22°52'33.4 "E and code 2R2W+JM Kilkis

3 THE DEPARTMENT OF CREATIVE DESIGN AND CLOTHING

The Department of Creative Design and Clothing (Kilkis) of the School of Design Sciences of the International Hellenic University was established in May 2019 by Law 4610 (Government Gazette 90/A/07-05-2019) "Synergies between Universities and Technical Universities, access to higher education, experimental schools, General State Archives and other provisions".
The Department was created and operated for the first time in the academic year 1999-2000 as the Department of Design and Production of Clothing under the direction of the A.TEI of Thessaloniki (Government Gazette of the Establishment of the Department179/τ.Α΄/6-9-1999 article 1, paragraph 1). Then the department was transferred to the management of TEI of Central Macedonia (TEI of Serres), through the Athena project, as the Department of Clothing Design and Technology of the School of Technical Applications (Government Gazette of the Department's renaming 136/A/5-6-2013 article 2 par.1.d).

With its establishment and operation, for the first time during the academic year 1999-2000, it meets the needs of the textile and clothing sector and is the only department in Greece and Cyprus on the subject of Clothing in higher education. It was created in partnership between the Alexandria Technological Educational Institute of Thessaloniki and the institutional body of the Clothing Industry in Greece (https://www.seppe.gr), in an area that for decades has been the heart of business activity for the textile and clothing industry in the wider region of Thessaloniki and Kilkis.

As part of its mission, the Department:

- Provides academic knowledge and skills at the undergraduate level, in the field of creative design in Clothing, following the model of corresponding European undergraduate-level programs of study.
- Cooperates with production units of the Clothing Market and institutions related to its field of knowledge.
- Uses modern technologies in education.
- Monitors international developments in the scientific and academic field and dynamically incorporates them in the educational process & Research.
- Participates in events and competitions to develop student's creativity and to keep them in constant contact with the fields of art and technology.
- Contributes through its curriculum of study (undergraduate) and Research to sustainable development and circular economy.
- Cooperates with higher educational institutions in the country and abroad.
- Has succeeded in attracting 135 students from the Balkan and international areas and looks forward to providing education in a foreign language (English) in the future.

The primary objectives of the Department are:

- To produce graduates who can develop art, build on science, and creatively use new technologies to design functional and innovative Clothing products with added aesthetic, technological or ecological value.
- To provide its students with competitive knowledge and skills necessary for their scientific and professional careers and development in the Clothing sector, both on an industry level and in an academic context.
- To preserve and highlight the specific characteristics of the cultural heritage of the Greek region with Clothing, Fabric and techniques as developed through local traditional arts and crafts.

- To contribute aesthetically to the development and modernisation of traditional processes of Clothing Design and manufacture, using Technology within the context of international trends

As the creation of clothing falls within the field of fashion, the Department of Creative Design and Clothing has a wide range of disciplines that include many scientific fields related to the design and technology of clothing products, the production of textiles and materials, industrial design, visual and applied arts, as well as management and marketing. There are no defined sectors in the department.

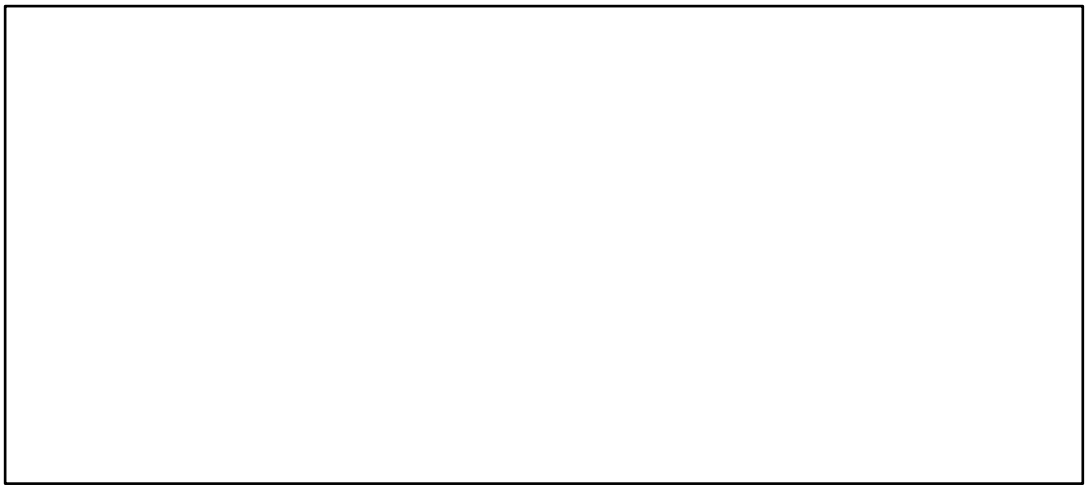

Figure 1. View of the Department's building of Creative Design and Clothing

4 THE UNDERGRADUATE STUDY PROGRAM

4.1 The aims of the Undergraduate Study Program

The Undergraduate Studies Program of the Department aims to develop science and technology in the design of clothing, the technology of its production and the marketing of clothing products, with a view to economy, technological development, respect for the environment and social acceptance. In addition to cultivating and developing its subject matter, it provides its students with excellent training for scientific and professional careers, giving them the necessary skills to respond to a highly competitive working environment, while at the same time contributing to the development and progress of the industrial and craft clothing sector by developing know-how and innovations through the application of scientific, technological, artistic or other fields of knowledge.

The Department's Undergraduate Curriculum of Study aims to achieve high-quality higher education in conformity with internationally accepted standards, both theoretical and laboratory education. The Undergraduate Curriculum of Study follows the developments and trends in the field of Creative Design and Clothing research, technology and creativity and adapts its educational-cognitive subjects to them.

The core knowledge areas of the Undergraduate Curriculum of Study include, among others, knowledge of the necessarily related sciences that accompany it (Materials, Chemistry, Computer Science, Creative Design, Marketing, Management, Business Administration, History of Art, Artistic Dimension of Design, Textile Materials and Structures Production, Textile Processing Refining Materials, Industrial Design and Garment Engineering, Garment Technology, Garment Manufacturing Processes, Visual and Applied Arts, and Supporting Disciplines of the Humanities and Social Sciences as well as Management and Marketing).

4.2 Awarded title and level of qualification

The Undergraduate Curriculum of Study of the Department ensures that graduates of Creative Design and Clothing achieve high-quality higher education in accordance with internationally accepted standards, a high level of theoretical and laboratory education, monitoring of new developments in the field, knowledge of technology and garment creation in the light of sustainable development. It also ensures the cultivation of skills that enable them to respond to a competitive working environment, pursue postgraduate studies, and to fulfill the constant need to keep track of developments in the sector.

With the above, it succeeds in conferring the title of Creative Design and Clothing.

4.3 Career Prospects for Graduates

Graduates of the Department have outstanding career prospects because during their studies they acquire a solid scientific and technological background and modern technical skills. In the department, all members, faculty and students, work together in an environment with good building infrastructure, lecture classrooms, modern and technologically up-to-date training, and research laboratory equipment, to create and maintain a fruitful atmosphere of dialogue and cooperation and solve any obstacles. The knowledge, skills and relationships built during study as well as through internships facilitate a high uptake of graduates in the industry given the uniqueness of the department in the field. The department, through the former curriculum of study had established both professional and teaching rights through the Government Gazette

98A'/16-05-2006 (Government Gazette 2400B'/20-12-) and is in the process of updating the above.

5 INFORMATION on the CURRICULUM of STUDIES

5.1 Duration of Studies

The first cycle of studies in the Department of Creative Design and Clothing School of Design Studies of the International Hellenic University requires attending an Undergraduate Study Program (USP), which includes courses corresponding to a minimum of 240 (300) credits (ECTS). It typically lasts four (4) <or five (5)> academic years and culminates in the award of a degree. In each academic year, the student chooses educational activities corresponding to 60 credits (ECTS) (Para. 2b Article 30 LAW 4009/2011)

The USP studies are conducted with the system of semester courses, which are divided into seven instructional and one last (eighth) that includes the preparation of a Diploma Thesis.

The maximum duration of study in a first-cycle study program consists of a minimum duration of eight (8) academic semesters for the award of the degree, increased by four (4) academic semesters. After the completion of the maximum period of study, the Board of Directors of the Department issues an act of deletion (article 76, par. 1, Law 4957/2022).

Students who have not exceeded the upper limit of study may, after applying to the Department Secretariat, interrupt their studies for no more than two (2) years. The right to interrupt studies may be exercised once or partially for at least one (1) academic semester, but the duration of the interruption may not cumulatively exceed two (2) years, in case it is partially provided. Student status is suspended during the interruption of studies and participation in any educational process is not allowed (article 76, par. 4, Law 4957/2022).

5.2 Admission and Registration

Students are those who are registered in the Department of Creative Design and Clothing of the I.H.U. after passing the entrance exams to higher education, by transfer or by qualifying exams in accordance with the current regulations.

The registration of newly admitted students takes place at the Department's Secretariat within the time limits defined each time by the Ministerial Decisions.

The passing candidates of the Panhellenic examinations who completed their registration through the electronic application of the Ministry of Education and Culture must carry out the identity check at the Secretariats of their Departments, submitting the following supporting documents

1. Application for registration (printed from the website of the Ministry of Education),

2. Photocopy of identity card (ID),

3. One (1) photo (ID type),

For the remaining categories of new entrants, the required supporting documents are announced on a case-by-case basis

5.3 Academic Year Calendar

The academic year starts on September 1 every year and ends on August 31 of the following year. The educational work of every academic year is organized into two semesters, the winter

semester and the spring semester, each of which comprises 13 weeks of teaching and one examination period (three weeks of exams). There are courses and workshops for which students are examined with progress tests and/or assignments; in this case, students do not take part in re-sit exams held in September.

For the Department of Department of Creative Design and Clothing the total number of semesters required to complete a course, as specified in the curriculum, is eight semesters.

Winter semester courses start in the last week of September and end in mid-January, followed by the first exam period of the winter semester.

Spring semester courses start in late-February and end at the end of May, followed by the first exam period of the spring semester.

The exact dates are determined by the Executive Committee.
Every semester has two exam periods:

Winter semester courses are examined during the exam period January-February; re-sit exams are held in September.

Spring semester courses are examined during the exam period of June; re-sit exams are held in September.
Every semester, and before the beginning of each exam period, students have the right and obligation to evaluate their courses and instructors, aiming at the improvement of the quality of their studies.

More information is available at the website of the Quality Assurance Unit (MODIP-I.H.U.) and the website of their Faculty/School.

HOLIDAYS
Courses or exams are not held in the two months of summer holidays (July and August). Holidays also include:

Christmas Holidays: December 24 to January 7.

January 30: The Three Patron Saints of Education Day

First Monday of Orthodox Lent

March 25. The Annunciation / National Anniversary of the 1821 Revolution against the Turkish Rule

Easter Holidays: from Holy Monday to Thomas Sunday

May 1st: Labor Day

Holy Spirit Day: Monday (after Pentecost).

October 28: National celebration

November 17: Students' uprising in the National Technical University of Athens against the junta in 1973

On the feast day of the Patron Saint of the city of Kilkis 21st of June.

5.4 Specific Arrangements for Recognition of Previous Studies

In accordance with the existing regulations, the number of admissions by qualifying examinations is equal to 12% of the number of admissions for the academic year of the Department. The right

to participate in the qualifying examinations is open to all graduates of all departments of universities of higher education, technical colleges or equivalent to them, universities of higher education, in Greece or abroad (recognized by the Hellenic National Academic National Recognition and Information Centre, e-D.O.A.T.A.P https://www.doatap.gr/home_english/) as well as the holders of diplomas of higher education institutions of a two-year and two-year cycle of studies under the jurisdiction of the Ministry of Education and Religious Affairs and other Ministries.
The selection of candidates for placement of graduates is made through examinations in the three (3) courses announced on the department's website and the syllabus of these courses. For participation, it is mandatory to apply, a solemn declaration and the supporting documents (copy of the degree or certificate of completion of studies or, for foreign graduates, a certificate of equivalence of their qualification from the D.O.A.T.A.P. or other competent body for the recognition of qualifications, etc.) requested on the respective page of the department on the date posted on the aforementioned page.
For recognition of courses to students from qualifying courses, the relevant posted application form should be completed and submitted to the Department Secretary which the departmental assembly will evaluate.

5.5 Course declaration - Renewal of registration

The registration of first-year students in the Department is done through the online application (https://eregister.it.minedu.gov.gr/) of the Ministry of Education

Thereafter, when the Ministry of Education has sent the lists of the registered students, the relevant online platform will be opened under the supervision of the Ministry of Education, in which, the said students will have to complete the registration by submitting the following to the Secretariat:

- Printed and duly signed the online registration form (printed from the application (site) of the Ministry of Education)
- A copy of the identity card or passport
- Printout of Social Security Number (AMKA, https://www.amka.gr/odigos_en.html)
- One (1) photograph

The Secretariat of the Department sets the supporting documents, and deadlines every year through respective Announcements. Registrations of special categories are made according to the respective circulars of the Ministry of Education, Research and Religious Affairs.

Course Registration and subscription

The teaching of the courses of the curriculum of study takes place according to the timetable that is established for both (2) semesters, by the Department Assembly, following the recommendation of a Committee appointed by the Department Assembly, before the beginning of the academic year, is communicated in time to the students and is posted on the Department's website by the Department's Secretariat. The timetable includes the distribution of the teaching hours of the courses of the Curriculum within the five (5) working days of the week, the lecturers, as well as the classrooms.

Students must renew their registration at the beginning of each academic semester. Renewal of registration occurs after the completion of freshman registration (and in subsequent semesters after the announcement of the previous semester's exam grades) on dates set by the Registrar's Office. Course registrations are made through the University's online information system e-Registrar's Office.

Upon renewal of their registration, students declare the courses they wish to take and the examinations they wish to take. The number of courses that can be declared is specific, but always greater than the number of courses in a typical semester.

In case of failure to declare courses, students cannot take the examinations as well as late declarations are not accepted.

Regarding the registration of the students admitted to the department for the special category of Foreigners-Agregrant graduates of high schools outside the EU and graduates of high schools or equivalent schools of EU member states, the following applies (Ministerial Decision Φ.151/20049/Β6/2007 (Β' 272))

5.5.1 Statement of Preference for Placement in Laboratory Classes

The courses of the undergraduate curriculum are divided into core (compulsory) and elective compulsory courses and are conducted with an exclusively theoretical or theoretical and laboratory approach. In courses with laboratory exercises, attendance is compulsory and a maximum of two (2) absences are allowed to be considered sufficient. Adequate attendance enables the laboratory part to be examined. Only in the case of success is the theoretical part of the course given the possibility to be examined, which carries the highest weighting factor in the final grade of the course. In case of failure in the theoretical component, the student may re-sit the theory in the second examination period in September, given that he/she has sufficient attendance in the laboratory exercises and has already passed the laboratory exercises. In case of failure in the theory examination in the second examination period as well, the student will be re-examined in both the laboratory and theory part in the next academic year. Attending the laboratory part in the compulsory re-registration is not compulsory (as per Lecturer's conclusion) as it is considered that the student has sufficiently attended the laboratory courses in the previous academic year (according to the institution's regulations).

The registration procedure for both the theoretical and laboratory courses is compulsory and students are assigned to equal groups (laboratory sections) of a certain number of laboratories which facilitates the proper and orderly conduct of the laboratory course. For the structuring of these sections, the lecturer has exclusive supervision and responsibility and this is carried out in the first to second week of the course.

5.6 Academic ID- Student pass

Since 09/24/2012, undergraduate, postgraduate and doctoral students of all Universities in the country can electronically apply for the issuance of their academic identity card

Ηλεκτρονική Υπηρεσία Απόκτησης Ακαδημαϊκής Ταυτότητας - Informational Portal (minedu.gov.gr)

Academic Identity Online Service - Information_Portal (https://academicid.minedu.gov.gr)

5.7 Teaching Aids and Resources

The educational work is supported by the corresponding coursebooks, which are provided free of charge to students, through the Electronic Integrated Book Management Service (Eudoxus). Students, after submitting the electronic declaration of courses each semester, also make the corresponding declaration of books on the web portal of the "EUDOXUS" system (http://eudoxus.gr/), with which they declare the coursebooks they wish to receive.

For a student to be able to apply for the application of course materials, a username and password are required, which are issued by the Department's Secretariat and are also used for the other electronic services of the Institution. The student enters a central web page of the Central Information System (CIS) from where he/she is authenticated. There he is informed about the approved textbooks of the Department's courses and selects those he is entitled to (one textbook per course he has registered). The instructor of each course has already proposed one or more textbooks suitable for the study of the course. Then, the student receives directly from the CIS an SMS and an e-mail with a PIN code, with which he/she receives the selected book(s) either from the Library of the University Campus of Serres or Kavala or Thessaloniki, or from another contracted bookstore that will be indicated to him/her, or by any other procedure that will be qualified by the Ministry of Education and the service Eudoxos (e.g. (e.g. by courier services), on working days and hours, on presentation of his/her identity card.

5.8 Course of Study

The Curriculum of study comprises 54 courses, of which 38 are compulsory core courses and 16 are electives. 44 courses are required to obtain the degree, of which 38 are compulsory (core) and 6 are electives (specialisation). All elective courses offered and eligible to be declared by the student for the degree are considered elective courses. Undergraduate studies at the Department of Creative Design and Clothing are conducted based on the semester system and the minimum number of semesters required for the degree, which for the 4-year programme is eight (8) semesters.

After the completion of the 6th semester and provided that the student has completed at least 80% of the course credits (excluding the credits of the dissertation and the internship), the student is required to prepare a dissertation.

In the eighth semester of study, the student can either conduct an internship in a company or institution related to the subject of the department or take two (2) of the four (4) (two pairs) elective courses.

The educational process of each course includes lectures on the theoretical part using ICT (Information Communication Technology) and/or, depending on the nature of the course, laboratory exercises. In theoretical courses, emphasis is also placed on intermediate assessment through assignments other than the final examination. The weighting of each factor of the final grade is regulated on a course-by-course basis and coordinated by the responsible lecturer.

ECTS credits: Each course of the Department's Curriculum of Study is characterized by several credits.

The ECTS credits, which are allocated to each course, are a measure of the workload required to complete the objectives of an Academic Program by each student. An internship, although not graded, carries 10 credit hours and similarly a graded dissertation carries 10 credit hours. To obtain a degree, the student needs to accumulate two hundred and forty (240) credits.

Grade Scale: Grading is expressed as a numerical scale from zero to ten (0 - 10), and five (5) is the minimum passing mark.

For the successful completion of a laboratory course or the laboratory part of a mixed course, the student must have received a probationary grade, i.e. a minimum grade of 5 (five), and to be allowed to take the examination, he/she must have sufficient attendance (up to two (2) absences).

The grade for the laboratory or laboratory part of a mixed course the student must have received a probationary grade, i.e., a grade of 5 (five) minimum, to be allowed to sit the examination for the theory part of the course. However, to be allowed to sit the laboratory part of the course, the student must have sufficient attendance (up to two (2) absences).

For the final grade for the theory part of the course, the student must have obtained a promotable grade, i.e. a minimum grade of 5 (five) in the theory examination.

The final course grade is considered successful when a grade of 5 (five) minimum is given in the theory examination or, in the case of a mixed course, in the laboratory part and theory part with proportional weightings per course.

5.9 Examinations

At the end of each semester, examinations are held for students who have registered and attended the respective courses taught. In September, before the start of the winter semester, a re-examination is held for the courses of both semesters (winter and spring). The student's grade in each course is determined by the instructor based on written and/or oral examinations and/or presentations of individual and group work or laboratory exercises, to assess the full range of knowledge, skills and abilities taught to the students. For participation in the laboratory examination, sufficient attendance in the laboratory part is taken for granted, while for participation in the theoretical part of the examination, it is taken for granted that the student has passed the laboratory part of the examination.

5.10 Bachelor's Diploma Dissertation

The dissertation helps the student to develop the skills needed to tackle complex studies and applications. Namely, through the dissertation, the student practises in order to:

- Plan, schedule, monitor and control the progress of work.
- Identify and effectively use information resources (e.g. literature).
- To use a combination of knowledge, tools and techniques learned.
- Express opinions and ideas.
- Present his/her findings and achievements in a variety of ways.

Through the dissertation, the student builds on the knowledge and skills developed during their studies and also learns to work methodically, using combined thinking methods. In case two students work on the same project, it reinforces the spirit of cooperation and encourages students to solve various division of labor problems.

The preparation of a dissertation is compulsory for all students of the Department. The dissertation is assigned to a student of the Department by decision of the Assembly provided that he/she has completed at least six (6) semesters of study and 80% of the course credits (not counting the credits of the dissertation and the internship).

Each dissertation is conducted under the supervision of a faculty member or an external collaborator of the Department and must be completed within the same academic semester. In special cases and with the consent of the supervising professor, the duration of the dissertation may be extended up to a total of three (3) semesters.

The topics of the theses are announced on the first ten days of each semester through the Department's website from the proposals of the supervising professors and after approval of the Department Assembly. The students express their preferences and then the assignment of the topics is made according to the supervisors' choice based on the criteria announced and an application is submitted to the Secretariat.

The dissertation is presented by the student in public within 15-20 minutes followed by a ten-minute discussion (question and answer session) with the Evaluation Committee. The committee independently evaluates and grades the dissertation and the average is the final grade of the dissertation. The grade is based on skill and diligence in the development of the topic, the degree of originality in the use of research tools, the extent of literature review and understanding of the literature, the drawing of significant and original conclusions and results, the quality of the presentation, and the ability to answer the Committee's questions. The project can be rejected only in case of incomplete presentation. If the second presentation is considered incomplete, the student will be assigned a new dissertation topic.

5.11 Work placement (internship)

Internship in the profession is considered educational training. The provision of article 24 of Law 1404/83, par. 1(e), establishes for the first time work placement as part of the teaching work. This organic inclusion of Work Placement as part of the teaching work, and therefore an integral part of the curriculum in accordance with the IHU's Internal Regulations, characterizes the importance and significance of the internship for higher education institutions as well.
The purpose of the internship is a productive link between education and the labor market, combining theory and practice (learning by doing), but also meeting the urgent need for innovation, which is becoming a dominant objective at both national and European levels. The following main objectives are achieved through the development of the work placements:

- Substantial two-way feedback between Higher Education & the workplace in the context of the curriculum of study at the respective grades and levels of education.
- Qualitative upgrading, expansion and strengthening of Internship programs.
- Integration of new trends & needs of the labor market and the demand for specific specializations and skills of graduates in the curricula offered by Higher Education Institutions

Each student can carry out internships only once during his/her studies either through the NSRF program or through the DYPA (previously known as (OAED) and signify the Active Labor Market Policies (ALMPs) program. Internships abroad are carried out through the Erasmus program (Erasmus Office of the University of Serres Campus, Internships abroad for students, Erasmus - Eng). The employment agency can be chosen by the student himself/herself or by consulting the list of companies/services available at the University Campus Internship Office.

The requirements for students to start an internship are:

- Be in the 8th semester of studies
- They have passed 2/3 of the courses in the curriculum of study
- They have passed 4 elective courses
- They have passed all the specialization courses

The students who decide to conduct this internship must relate to the following posts:

- Fashion Forecast
- Customer order analysis and technical specifications.
- Development of garment technical specifications
- Product design and development (hand design of garments, computer-aided design (CAD), collection development).
- Design and development of print or embroidery patterns using computer-aided design (CAD) systems.
- Design and development of patterns by hand or with the aid of computer-aided design (CAD) systems, sizing, cutting layer development and optimum fabric lay-ups.
- Design and development of a 3D virtual garment prototype
- Design and manufacture of clothing accessories using 3D printing
- Design & Development of digital designs for printing on fabric
- The organization of Sample Manufacturing (study of working methods and time)
- Evaluation and costing of apparel products.
- Organization of procurement of A' and B' materials, and technical specifications.
- Quality control of raw materials, intermediate and finished products and Quality Management Systems.
- Layering/Cutting & Stitching of fabrics - CAD/CAM systems, electronic production monitoring systems (ERP).
- Marketing & Sales, brand development, promotion and advertising.
- Warehouse monitoring (conventional and electronic).
- Health & Safety of Workers in the clothing industry
- Organization of events, including Fashion Shows, Exhibitions and other ready-to-wear-related activities.
- Study of the establishment, operation and staffing of enterprises for the production, marketing and distribution of raw materials, ready-to-wear clothing and clothing accessories.
- Study for the establishment and operation of specialized fashion workshops (Ateliers)

The Practical Training, with few exceptions, takes place in the wider geographical area of Central Macedonia and Attica. Workplaces for Practical Training are:

- The public sector, according to the provisions of Article 1 para. 1256/1982 in conjunction with the similar provisions of Article 12 of Law No. 1351/1983.
- The private subsidized sector

- The private sector in which jobs are created either on the initiative of private operators or on the initiative of the State.
- In particular, the workplaces for the conduct of the Internship may be:
- Private offices providing garment and pattern design services.
- Private companies developing design software (design and/or pattern software, ERP, etc.) or providing technological support solutions to companies in the sector.
- Private or public sector entities that require the expertise of a Fashion Consultant or Costume Designer such as theatres, TV stations, magazines, etc.
- Ready-to-wear garment manufacturing units in the departments of Product Design and Development (CAD design and pattern), Order Analysis and Technical Specifications, Sample Production Organization, Procurement of A' and B' materials, Quality Control and Management, CAD/CAM fabric cutting, Garment Sewing and Assembly (ERP), Marketing, Sales, Advertising and Promotion, Warehousing, Health & Safety.
- Public or private centers or laboratories providing research, technical assistance and quality control services to companies in the clothing sector.
- Offices or agencies of the public sector such as local authorities, institutions, hospitals, and the Military for the government supply of textiles, clothing and household equipment (uniforms, sheets, towels, etc.)
- Study of the establishment, operation and staffing of enterprises for the production, marketing and distribution of raw materials, ready-made garments and clothing accessories.
- Study for the establishment and operation of specialised fashion workshops (ateliers).

The internship is supported by the services and activities offered by the Internship Office in Serres, which aim to provide comprehensive support and service to the students of the Foundation and the businesses of the regions, mainly in Northern Greece. For the department in general, the supervision of the students' Practical Training is exercised through the Practical Training Supervision Body, which is composed of members of the permanent staff of the department and the Practical Training Supervisor for the department of Creative Design and Clothing (Kilkis).

The Internship is considered full-time work of four (4) calendar months or 16 weeks of five-day work in the private or public sector prior to receiving the degree. The Internship or the selection of 2 elective courses of the 8th semester from the curriculum of study is a prerequisite for obtaining the degree and each student can do it either through an ESPA (National Strategic Reference Framework (NSRF)) program or through a DYPA (previously known as (OAED) which signify the Active Labor Market Policies (ALMPs) program. The PA abroad is carried out through the Erasmus program (Erasmus Office of the University of Serres Campus, Internship abroad for students, Erasmus - Eng).

To complete their studies in the department, students may substitute the internship with two (2) 8th-semester electives,

- Rapid Prototyping Systems
- Advanced Materials Science and Technologies
- Life Cycle and Resource Management Systems
- Entrepreneurship and Innovation

Detailed instructions for the regulation of the Practical Training are given by the Practical Training Regulations that concern both the host institutions with an internship through DYPA (former

OAED, (ALMPs)) or NSPA and the student trainees, while additional instructions, information, applications and material are given by the corresponding page of the department and the corresponding page of the institution as a course in e-learning.

5.12 Degree Grade - Declaration of Graduation

At the end of each examination period, the Secretariats of the Departments apply the procedure for the proclamation of graduates/ diploma holders of the next oath of office and immediately send, in electronic form, the list of graduates/ diploma holders to those involved in housing issues, student accommodation and student care and study services, as well as to the Library and Information Centre of the Institution, to ascertain the existence or not of pending cases and to notify the students concerned in time for the compulsory settlement of the case. The Secretariat of the Department invites, by any appropriate means, the interested students to submit their application for participation in the swearing-in ceremony with the necessary documents within the deadline set.

Upon completion of the requirements for obtaining the degree, the student automatically ceases to have student status, ceases to participate in the collective management bodies of the Department or the Institution and is no longer entitled to any student benefits.

To be awarded a degree, the student is required to complete 210 ECTS credits from the courses, in addition to 20 ECTS credits from the preparation of the dissertation, and has the right to choose between the preparation of a four-month internship or the choice of two (2) courses from the courses offered in the 8th semester.

Performance in the courses shall be assessed by the grades given during the knowledge assessment process. Each course included in the curriculum of study, as well as the dissertation, is graded independently. The marks awarded shall range from zero (0) to ten (10), with grades of one whole or half a point. Promotion points are (five) 5 and above. The grade awarded in a course that includes a delivery and a laboratory exercise shall not be subdivided. For these courses, a student is considered eligible for the promotion if he/she has earned a minimum of five (5.00) points in the final grade as determined by the individual grades achieved with the weighting specified by the instructor in the outline of each course.

The final grade for each course may be the result of either an overall final examination or a combination of individual assessments (of equal or different weighting). The final mark, as well as the individual assessments, may be the result of written or oral examinations or practical exercises or the student's performance in the educational process, in particular the preparation and presentation of assignments, or a combination of these.

Provided that the student has successfully attended courses (including practical training or substituting it with the specific elective courses) and has produced a compulsory dissertation, the degree grade shall be calculated with a weighting factor equal to the exact number of ECTS credits of each course, according to the following equation:

$$\text{Bachelor's Grade} = \{[\text{Grade of Course (1)} \times \text{ECTS of Course (1)}] + [\text{Grade of Course (2)} \times \text{ECTS of Course (2)}] + [....] + [\text{Grade (Dissertation)} \times \text{ECTS (Dissertation)}]\} / \text{Sum of the previously accounted ECTS}$$

If the student has completed more than the minimum number of courses necessary for the calculation of the degree or diploma grade, the remaining courses are indicated on the student's transcript and the Diploma Supplement, with their grade and credits, but their grade is not counted for the final degree or diploma grade.

The grading scale on which student performance grades are calculated is a ten-point scale (0-10).

- Excellent: 8,5 - 10,00
- Very Good: 6.5 - 8.49
- Good: 5.0 - 6.49
- Unsatisfactory: 0.0-4.99

5.13 Graduate Certificate - Transcript of Records –Diploma Supplement

Students of the Department of Creative Design and Clothing (Kilkis) who successfully complete their studies are awarded a “Bachelor’s Degree " if they have successfully attended courses (including the practical training or its replacement with the specific elective courses) and have prepared a compulsory dissertation.

The student becomes a graduate from the completion of his/her studies and even before the award of the degree document to him/her. The date of obtaining the degree or diploma is common for students of the Department who complete their studies in the same examination period. In particular, the date of award of the degree or diploma shall be the common final date for the finalization of the grades of all the courses in the same examination period, which shall be determined each time by a decision of the Assembly of the Department concerned, irrespective of the date of the graduation ceremony.

A prerequisite for the award of the degree is the swearing-in of the graduate in a public ceremony. In cases where attendance is not possible, the swearing-in ceremony shall be carried out following a procedure presented by the Rector. A certificate of successful completion of studies may be issued before the swearing-in ceremony.

To participate in the swearing-in ceremony, a request is submitted by the beneficiary student to the Secretariat of the relevant Department, during which the student takes note of and confirms the correctness of his/her details and the degree awarded.

The graduate is entitled to receive:

- Original copy of the degree.
- One (1) copy of the above degree.
- One (1) transcript of analytical marks

The graduate or diploma holder may obtain copies of his/her degree and/or analytical marks, in addition to the above, by applying to the Department's Secretariat. A Diploma Supplement is attached to the diploma, which provides information on the nature, level, general educational context, content and status of the studies successfully completed by the person whose name is indicated on the original of the diploma to which the Supplement is attached, under the Ministerial Decision under the reference Φ5/72535/Β3/2006 (Β' 1091), as in force. The Annex

does not make any evaluative judgements and there are no statements of equivalence or proposals concerning the recognition of the qualification abroad.

The Diploma Supplement is issued automatically and without any financial charge in Greek and English, bearing the requirements for the authenticity of the qualification. The date of its issue does not necessarily coincide with the date of the award of the degree, provided that it is not earlier than this date and may be issued in particular, the Diploma Supplement (Greek and English) may be issued either during the swearing-in ceremony of the beneficiary together with his/her original degree, or at a reasonable time after the end of the ceremony, at the discretion of the relevant Department.

5.14 Digital Skills Certificate

In the undergraduate curriculum of study, digital knowledge and skills are developed from the simple management of programs and learning systems (e-learning platform) to the use of digital libraries and resources for conducting projects, preparing and presenting them through desktop applications and for advanced digital two-dimensional and three-dimensional design (CAD) to the use of information systems for the management of production processes.

6 STAFF OF THE DEPARTMENT

6.1 The Staff of the Department

The staff of the Department of Creative Design and Clothing (Kilkis) is divided into Teaching and Educational Staff (D.E.P.), Special Technical Scientific Staff (E.DI.P.), Laboratory Teaching Staff (E.TE.P.) and Administrative Staff (A.S.) with corresponding responsibilities.
The Department of Creative Design and Clothing (Kilkis) is staffed with 4 (D.E.P.) School members, it has no (E.DI.P.) members but is in the process of being awarded 1 and has no (E.TE.P.) members so far due to recent retirements.
The members of the teaching and Educational Staff belong to four academic ranks: Professors, Associate Professors, Assistant Professors and Lecturers, while their teaching work is supported by the members of the Laboratory Teaching Staff and Special Technical Scientific Staff At the same time, the educational process of the Department is also supported by temporary educational staff, which consists of Scientific Associates, Laboratory Associates and Academic Scholars.

TABLE of the EDUCATIONAL STAFF

A/A	FULL NAME	TITLE	SUBJECT AREA/ SPECIALTY
1.	Apostolos Korlos	Associate Professor at the Department of Industrial Engineering and Management (Thessaloniki)	Head of Department of Creative Design and Clothing , IHU
2.	HJristos Anastasiou	Professor at the Department of Computer, Informatics and Telecommunications Engineering	Deputy Head of Department of Creative Design and Clothing , IHU
3.	Eurydice Papachristou	Assistant Professor	Fashion Design Engineer / digital methods of clothing design
4.	Eleftheria Stoikou	Assistant Professor	Visual & Applied Arts / Drawing
5.	Michail Karypidis	Assistant Professor	Textile Science and Technology /Chem
6.	Venetia Koutsou	Lecturer	Clothing Design

TABLE of the Special Technical Laboratory Staff (E.TE.P.), Special Teaching Laboratory Staff (E.D.I.P.)

A/A	FULL NAME	CATEGORY	SUBJECT AREA/ SPECIALTY
1.	-	Special Teaching Laboratory Staff	

TABLE of the ADMINISTRATIVE STAFF		
A/A	**FULL NAME**	
1)	Charalampos Markopouloss	Head Secretary
2)	Vasiliki Stampoulidou	Secretary

Address:
Department of Creative Design and Clothing
3rd km Kikis-Metallico, Kilkis, Greece
Campus of Kilkis
ZIP Code. 61100

Τηλ.: +30 23410-29876
FAX: +30 23410-29866
e-mail: cdc@ihu.gr _
URL: http://cdc.ihu.gr

6.2 Administration/Secretariat Office: Duties and working hours

The Department Secretariat is responsible for student and administrative matters.

Student services are provided on all working days, and during the hours of 11.00 to 13.00, at the offices of the Department Secretariat, located at the administration (K1) building of the Campus of Kilkis

Student issues include:

- Registration Procedures
- keeping the students' records, which include their grades, registration renewals every semester, and information about scholarships,
- granting Certificates and Degrees,
- granting certificates for legal use,
- issuing paper forms required for the student's Internship,
- creating/filling in student lists, according to their course enrolment declaration

- registration cancellations of students who have two consecutive non-renewal of the registration or three non-consecutive non-renewal of the registration

Regarding first-year student registrations, transfers and registration of those passing the qualifying exams in the Department of Creative Design and Clothing (Kilkis) of the I.H.U., the following apply:

Registration Renewals - Course Declarations are carried out through the Electronic Secretariat at the beginning of each Semester and for approximately fifteen (15) days. Each student has his/her own personal code, obtained from the Department's Secretariat, with which s/he declares courses electronically.
After the lists of successful candidates in the National Examinations are sent by the Ministry of Education and Religious Affairs, the registration deadline for new entrants is set, which is common for all higher education institutions in our country. This deadline should not be missed, otherwise, latecomers lose the right to register. Registration of new entrants takes place in September.
From November 1 to 15, relevant application forms are submitted for:
- Transfers for financial, social, health reasons, etc., as well as for the children of large families, unless otherwise specified by law.
- Enrolment of Higher Education Graduates, who succeeded in qualifying exams, held every year, at the beginning of December.

6.3 The Role of the Academic Advisor(Tutor)

The institution of the Academic Advisor (Tutor) has been implemented by the Department of Creative Design and Clothing (Kilkis) for a long time. Each year, by decision of the Department, a member of the Teaching and Educational Staff is designated an academic advisor for every first-year student for information and guidance in study matters. The academic advisor informs the students about his/her role and invites them to an introductory meeting. Students are required and encouraged to communicate regularly with their Academic Advisor, discuss educational issues and utilize his/her knowledge and experience throughout the years of their studies.

The regulation of the institution's academic advisor is based on the directive of the Government Gazette 4889/06.11.2020, article 52, consisting of permanent faculty members, with an annual term of office, which begins on September 1 of each academic year and may be renewed with the consent of the person concerned. The assignment per student shall be carried out by matching the list of faculty members of the Department with the corresponding list of first-year students of each academic year and by the end of course registrations but before 30/11. This total list, sorted alphabetically (to ensure randomness), is divided by the available number of faculty in the department's year to whom each subset is assigned, at their option. A student's Academic Advisor role assignment remains the same until the completion of their studies. In the event of the absence of the Academic Advisor for an extended period of time (e.g., sabbatical, health problem, retirement), the Assembly shall assign the students of that Advisor to another faculty member.

Guidance issues may include:

- Course content, participation in laboratories, utilization of the Department's laboratory infrastructure, ways of assessing course performance, encouraging the student to participate in progress, tests, series of exercises, remedial teaching with extra tutorials, etc., which help the student to understand and successfully complete the courses in which he/she has difficulty, ways of studying bibliography

- Content of compulsory and elective courses, determining the optimal choice of courses, minimizing failure in examinations and discussing with the student so that the choice of courses is consistent with his/her personal interests, skills and abilities
- Discussion of examination results
- Choice of topics for dissertations or other assignments
- Postgraduate studies (in the Department, in Greece and abroad)
- Career prospects (opportunities in public, private sector, freelance work, job abroad)
- Discussion of any issue that creates obstacles to studies
- Issues with lecturers
- Information on the services offered by the University to its students (Student Services, Internship Office, etc.)

6.4 Evaluation of the Educational Project

Regular monitoring, review and revision of the Departmental Curriculum of Studies aim to maintain the level of educational provision and to create a supportive and effective learning environment for students.
This includes the evaluation of the content of the curriculum under the latest research in the relevant subject area to ensure that it is keeping up-to-date

- the curriculum of study,
- the changing needs of society,
- the volume of work,
- the course of studies,
- the effectiveness of student assessment procedures,
- student expectations and needs,
- and their satisfaction with their curriculum,
- the learning environment,
- the support services; and
- their suitability for the program in question.

The curricula are regularly reviewed and revised with the participation of students and other stakeholders. The information collected is analyzed and the program is then adapted according to the new data.

To write the annual internal evaluation, the Internal Evaluation Group (IEG) cooperates with all members of the permanent Academic Staff, and all members of the administrative and technical staff. All parties involved are systematically engaged in the analysis of the HAHE criteria, the recording of all required data and regular meetings are held to exchange information and data. All the lecturers involved (with a few exceptions) regularly complete the electronic lecturers' census forms and the census forms of the courses they teach.

The following are used to obtain information:

- The records of the Department's Secretariat (student record).
- The individual records of the members of the staff (permanent and temporary).
- Records relating to laboratory equipment.
- The students' views on the Academic Staff of the Department, through the completion of questionnaires.
- The Department's website.

- Internet resources on the recognition of the research work of the Department's faculty members.
- Internal evaluation reports of previous years
- External evaluation reports of past years

As part of the student evaluation of the available structures, and their functioning, the content and coverage of the curriculum and the performance of the teaching staff, each semester, around the 8-10 week of the course, students evaluate both the course and its instructor through the evaluation system of the Qu.AS.U. The evaluation is anonymous and its results are accessible to the members of the Qu.AS.U. team

The Internal Regulations of the IHU provide in detail the procedure for the evaluation of the teaching ability of candidates for teaching staff positions, which is taken into account by the members of the Selection Panel:

In the case of faculty members of the Department (when they are considered for election or promotion, renewal or tenure), the Evaluation Reports from the students (of the OMA) are forwarded to the Tripartite Selection Committee and the Electoral College through the Head of the Department.

Faculty members who have previous teaching work in higher education institutions in Greece or abroad shall submit the evaluation data of their teaching ability for this teaching work through the APELLA information system.

In the case of candidates who are not members of the International Hellenic University or other higher education institutions in Greece or abroad, the evaluation is based on one (1) test course and the results are submitted by the Qu.AS.U to the Tripartite Selection Committee.

The periodic accreditation of the curriculum of study is organized by the HAHE and is carried out through external evaluation procedures by committees of independent experts. The accreditation of the curriculum, based on the reports of the panels, is granted by the HAHE for a specified period, after which it is re-certified. The quality accreditation of the Curriculum of Study serves as a means of verifying the compliance of the curriculum with the requirements of the standard and as a catalyst for its improvement, offering new perspectives on the international competitiveness of the qualifications awarded. The department takes constant account of the conclusions and recommendations of the expert committee for the continuous improvement of the program.

7 FACILITIES

7.1 Laboratory Spaces and Equipment

The Department has a sufficient number of laboratory spaces for their teaching needs and for the practical part (experimental) of their theses etc.

There are two (2) equipped computer labs, one (1) design lab, one (1) pattern design lab for garment assembly and preparation of the final sample, one (1) atelier equipped with sewing machines and workbenches, with a fabric inventory and a material storeroom for the assembly of the garment and the preparation of the final sample, one (1) sewing lab for training in the operation of sewing devices and practical training in garment construction within projects, one (1) garment layering and cutting lab for practical training in the respective process and preparation of projects, one (1) laboratory of Physics and Chemistry of Materials for the Design and Development of Garment Standards, and one (1) laboratory of Textiles and one (1) laboratory of Quality Control, for the measurement, evaluation and control of Quality of dyes and colorings in fabrics/garments.

7.2 Teaching Classrooms

There are 4 classrooms with 195 desks available. The two largest are air-conditioned, and fully shaded and projection wireless and wired systems are available. The classrooms also have full-length armatures and opening windows for ventilation, a large whiteboard and both wired (ethernet) and wireless high-speed internet connection. A basic computer is available in each room for viewing lecture material.

7.3 E-Learning

The department makes extensive use of Information and Communication Technologies (ICT), due to the nature of its educational subject. In particular, videoconferencing services are provided through the Foundation's videoconferencing room, as well as teaching using multimedia. There is also direct access to the internet, the electronic library and the electronic secretariat system (Unitron), both by staff and students (uniportal, http://uniportal.ihu.gr). The Department also uses the asynchronous education platform (https://elearning.cm.ihu.gr), to which almost all courses are connected, providing educational material such as notes, presentations, questions, exercises, etc.

The Department's website is regularly updated. New announcements are displayed daily for the information of students and academic staff, every new service is linked to the website, so that there is a possibility of interface and service online the various platforms are linked to the website - uniportal, e-learning, e-class, etc. - are constantly renewed and updated. As far as information services are concerned, the Department is informed about new laws and circulars of the Ministry concerning students, faculty members and administrative issues by the administrative services of the central administration of the institution, mainly in electronic form, through the internet. In addition, information on educational and research programs, job vacancies, library issues and public relations issues is provided by the respective central services of the Foundation through printed and electronic forms, as well as through announcements on the Foundation's main website. The department also has access to a multitude of electronic databases (https://www.ihu.gr/ucipslib/) where e-books, journals and articles are provided. Finally, the

department has access to the Turnitin platform (https://www.turnitin.com) to check plagiarism in coursework and dissertation projects.

7.4 Institutional Research Laboratories

The department has the following laboratories for the provision of educational and research purposes, but they are not institutionally accredited:

(a) CAD laboratory:

The laboratory has installed software for 3D digital garment design and modelling, digital fabric design, software for the development of garment patterns and the development of layering (cutting bench markers). In this lab, courses like Virtual Prototyping, Rapid Prototyping Systems, Visual Merchandising are conducted as they require computers of higher processor power, and its infrastructure in terms of PC hardware is clearly higher with having 22 workstations can be taught in the 2nd PC lab

All labs have Internet access from all PCs, high speed, and projection devices (wireless and wired) available. Wireless internet connection from all classrooms as well as from the CAD lab is also considered important since, this is where the final year students of the course conduct their research. The use of all available software packages from management, design, prototyping, organization and printing is very important for the applied research conducted in this lab. It also has pattern digitizer system, pattern cutter plotter.

(b) Textile Quality Control Laboratory:

There are two (2) Textile-Quality Control laboratories available:

Clothing and fabric digital printing unit, transfer printing pilot unit, color fastness of dyed fabric (wascator) to washing and exposure to sunlight, fabric burst strength tester, dyed fabric sweat fastness test kit, ironing press, washing machine, incubator oven, refrigerators, hank winder for tex evaluation, fabric measuring device, grey scales for color comparison, yarn twist meter, electronic balance, wet and dry crock color fastness with light cabinet, flame resistance test apparatus, softness test apparatus using flexibility for rigid materials, apparatus for measuring fabric wetting and measuring water resistance-hydrophobicity-oleophobicity, precision and fabric thickness gauges, precision spectrophotometer for the evaluation and determination of color differences, fabric and yarn dynamometer (Instron), water permeability and air permeability measuring device.

c) Laboratory of Physics and Chemistry of Materials

In the laboratory, there are fully equipped chemical processing workbenches, precision balances and electric stirrers, an optical polarizing microscope for the identification and study of fibres and micro-phenomena, open-type dyeing apparatus, closed-type water dyeing apparatus and corresponding infrared dyeing apparatus, pilot dryer and steamer, pilot hydraulic pressure pad mangle and absorption spectrophotometer.

8 THE UNDERGRADUATE STUDY PROGRAM

The Undergraduate Studies Programme of the Department of Creative Design and Clothing (Kilkis) is presented in the following summary tables, as well as in the individual detailed tables per semester where they appear:

Module Characterisation	Code
Type of Module	**Type**
Module Class	**MC**
Characterisaton of Module	**CM**
Compulsory	C
Elective Compulsory	EC
Skills Development Module	SDM
Background Module	BM
General Knowledge Module	GKM
Science Field Module	SFM
General Foundation Module	GFM
Specialty Module	SM
Specific Foundation Module	SFM

8.1 Table I. An Overview of the Undergraduate Study Program

Semester									
1ο	2ο	3ο	4ο	5ο	6ο	7ο	8ο		
Freehand Drawing	Colour and Pattern Composition	Fashion Forecasting and Design	Conception and Development of a Design Idea	Design & Technology of Clothing Prototypes III	Computer Aided Design Systems For Garment Prototyping	Greek Culture and Costume	**Dissertation Project**	**Internship Placement (or selection of 2 subjects from 8th semester)**	Rapid Prototyping Systems
Principles and Application of Somatometry	Design of clothing products	Garment Design and Pattern Technology I	Design & Technology of Clothing Prototypes II	Aesthetic Theories	Modern Art and Design	Fashion Consumer Behaviour			Science and Technologies of Advanced Materials
History of Art and Costume I	History of Art and Costume II	History of Modern Fashion	Style Semiology	Costing Methods	Virtual Prototype	Digital Marketing			Life Cycle and Resources Management Systems
Physics and Chemistry of Materials & Dyes	Science of Fibres and Fibre Structure	Fabric Science	Textile Processing	Quality Control I	Quality Control II	Planning and Research Methods			Entrepreneurship and Innovation
Digital Design Principles	Technical Drawing	Digital Fabric Design	Statistics for Textile and Clothing Industry	Brand Management	Design and Development of Fashion Collections	Clothing Business Management			
Mathematical Methods in Design	Principles of Garment Making	Principles of Marketing in Clothing	Communication and Promotion Strategies	Haute Couture Practices in Fashion	Intelligent Systems for Clothing	Creating Collection & Portfolio			
				Management of Clothing Production Processes	Visual Merchandising	Modern Applications in Production Management			
				Corporate Markets in Retail Trade	Fashion Communication	Product Development in Circular Economy			
					Operations Research				
					Clothing Supply Chain Management				

Compulsory Courses	*Elective Compulsory Courses*	**Total Courses**	**Other Liabilities**
38	16	54	Dissertation Project
			Internship

Compulsory Courses
Elective Compulsory Courses

8.2 Table II. Elective Courses

Semester				Selection method
5th	Management of Clothing Production Processes	Haute Couture Practices in Fashion	Corporate Markets in Retail Trade	Mandatory Selection 1 of the 3 available
6 th	Intelligent Systems for Clothing	Design and Development of Fashion Collections	Visual Merchandising	Mandatory Selection 1 of the 3 available
6 th	Operations Research	Fashion Communication	Clothing Supply Chain Management	Mandatory Selection 1 of the 3 available
7 th	Modern Applications in Production Management	Creating Collection & Portfolio	Product Development in Circular Economy	Mandatory Selection 1 of the 3 available
8 th	Science and Technologies of Advanced Materials	Rapid Prototyping Systems		Mandatory Selection 1 of 2 available
8 th	Life Cycle and Resources Management Systems	Entrepreneurship and Innovation		Mandatory Selection 1 of 2 available

8.3 Undergraduate Study Program per Semester

8.3.1 Semester 1

Description			Characterisation			Hours per Week			Load	
No	Code	Title	Type	MC	CM	Th	Lab	Hours	W.L	ECTS
1	101	Sketching	C	BM	GFM	1	4	5	125	5
2	102	Principles and Applications of Bodymetrics	C	BM	GFM	3		3	100	4
3	103	History of Art and Costume I	C	BM	GFM	4		4	150	6
4	104	Physics and Chemistry of Materials and Dyes	C	BM	GFM	2	3	5	125	5
5	105	Digital Design Principles	C	BM	GFM	2	3	5	125	5
6	106	Mathematical Methods in Design	C	GKM	GFM	3		3	125	5
		Total						**25**	**750**	**30**

8.3.2 Semester 2

Description			Characterisation			Hours per Week			Load	
No	Code	Title	Type	MC	CM	Th	Lab	Hours	WL	ECTS
1	201	Colour and Pattern Composition	C	BM	BM	1	3	4	100	4
2	202	Apparel Design	C	SFM	SFM	1	3	4	100	4
3	203	History of Art and Costume II	C	BM	GFM	4		4	150	6
4	204	Science of Fibres and Fibre Structure	C	SFM	SFM	3	2	5	150	6
5	205	Technical Drawing	C	SFM	SFM	2	2	4	125	5
6	206	Principles of Garment Making	C	SDM	SFM	1	3	4	125	5
		Total						**25**	**750**	**30**

8.3.3 Semester 3

Description			Characterisation			Hours per Week			Load	
No	Code	Title	Type	MC	CM	Th	Lab	Hours	WL	ECTS
1	301	Fashion Forecasting and Design	C	SFM	SFM	2	3	5	125	5
2	302	Design & Technology of Clothing Prototypes I	C	SFM	SFM	2	3	5	125	5
3	303	History of Modern Fashion	C	SFM	SFM	4		4	125	5
4	304	Fabric Science	C	SFM	SFM	3	2	5	150	6
5	305	Digital Textile Design	C	SFM	SFM	2	2	4	125	5
6	306	Principles of Marketing in Clothing	C	BM	GFM	3		3	100	4
		Total						**26**	**750**	**30**

8.3.4 Semester 4

Description			Characterisation			Hours per Week			Load	
No	Code	Title	Type	MC	CM	Th	Lab	Hours	WL	ECTS
1	401	Conception and Development of Design Idea	C	SFM	SM	2	3	5	125	5
2	402	Design & Technology of Clothing Prototypes II	C	SFM	SFM	2	4	6	150	6
3	403	Style Semiology	C	SFM	SFM	3		3	100	4
4	404	Textile Processing	C	SFM	SFM	3	2	5	150	6
5	405	Statistics for Textile and Clothing Industry	C	BM	SFM	3		3	100	4
6	406	Communication and Promotion Strategies	C	BM	SFM	3		3	125	5
		Total						**25**	**750**	**30**

8.3.5 Semester 5

Description			Characterisation			Hours per Week			Load	
No	Code	Title	Type	MC	CM	Th	Lab	Hours	WL	ECTS
1	501	Design & Technology of Clothing Prototypes III	C	SFM	SFM	2	4	6	125	5
2	502	Aesthetic Theories	C	SFM	SFM	3		3	125	5
3	503	Costing Methods	C	SFM	SFM	3		3	125	5
3	504	Quality Control I	C	SFM	SFM	3	2	5	125	5
5	505	Brand Management	C	SDM	SM	2	2	4	125	5
Electives Modules (Compulsory to select 1 out of 3)										
6α	506	Haute Couture Practices in Fashion	EC	SDM	SM	2	3	5	125	5
6β	507	Management of Clothing Production Processes	EC	SFM	SM	2	3	5	125	5
6γ	508	Corporate Markets in Retail Trade	EC	SFM	SM	3	2	5	125	5
		Total						**26**	**750**	**30**

8.3.6 Semester 6

Description			Characterisation			Hours per Week			Load	
No	Code	Title	Type	MC	CM	Th	Lab	Hours	WL	ECTS
1	601	Computer Aided Design Systems For Garment Prototyping	C	SFM	SFM	2	3	5	125	5
2	602	Modern Art and Design	C	SFM	SFM	4		4	125	5
3	603	Virtual Prototype	C	SFM	SFM	2	2	4	125	5
4	604	Quality Control II	C	SFM	SFM	2	2	4	125	5
Electives Modules (Compulsory to select 2 out of 6: (one from 5α / 5β / 5γ and one from 6α / 6β / 6γ)										
5α	605	Design and Development of Fashion Collections	EC	SFM	SM	2	3	5	125	5
5β	606	Intelligent Systems for Clothing	EC	SFM	SM	5		5	125	5
5γ	607	Visual Merchandising	EC	SFM	SM	2	3	5	125	5

6α	608	Fashion Communication	EC	SFM	SM	4		4	125	5
6β	609	Operations Research	EC	SFM	SDM	4		4	125	5
6γ	610	Clothing Supply Chain Management	EC	SFM	GFM	4		4	125	5
		Total						**26**	**750**	**30**

8.3.7 Semester 7

Description			Characterisation			Hours per Week			Load	
No	**Code**	**Title**	**Type**	**MC**	**CM**	**Th**	**Lab**	**Hours**	**WL**	**ECTS**
1	701	Greek Culture and Costume	C	SFM	SFM	4		4	125	5
4	702	Fashion Consumer Behaviour	C	SFM	SFM	3		3	125	5
3	703	Digital Marketing	C	SFM	SFM	4		4	125	5
4	704	Planning and Research Methods	C	SDM	GFM	3		3	125	5
5	705	Creating Collection & Portfolio	C	GKM	GFM	4		4	125	5
Electives Modules (Compulsory to select 1 out of 3)										
6α	706	Collection and Portfolio Development	EC	SDM	SM	3	3	6	125	5
6β	707	Modern Applications in Production Management	EC	SDM	SM	3	3	6	125	5
6γ	708	Product Development in Circular Economy	EC	SFM	SFM	3	3	6	125	5
		Total						**24**	**750**	**30**

8.3.8 Semester 8

Description			Characterisation			Hours per Week			Load	
No	**Code**	**Title**	**Type**	**MC**	**CM**	**Th**	**Lab**	**Hours**	**W.L.**	**ECTS**
1	**Dissertation**	Dissertation Project (Dissertation)	C	-	-	-	-	-	500	20
2	**Internship**	Internship or Selection 2 modules from below:	E	-	-	-	-	-	250	10
Electives Modules (Compulsory to select 2 out of 4): (one out of 3α / 3β and one out of 4α / 4β)										
3α	801	Rapid Prototyping Systems	EC	SFM	SM	4		4	125	5
3β	802	Science and Technologies of Advanced Materials	EC	SFM	SM	4		4	125	5
4α	803	Life Cycle and Resources Management Systems	EC	SFM	SM	4		4	125	5
4β	804	Entrepreneurship and Innovation	EC	SFM	SM	4		4	125	5
		Total						**8**	**750**	**30**

9 POSTGRADUATE STUDY PROGRAMS IN THE DEPARTMENT

The Department of Creative Design and Clothing does not offer a postgraduate program at present, although this is a key objective of the department and is to be completed in the near future.

10 DOCTORAL STUDIES in the DEPARTMENT

The Doctoral Studies at the Department of Creative Design and Clothing (Kilkis) are carried out according to the regulation of the Government Gazette 1275-t.B-01.04.2021, which reflects the structure and rules of operation of the Department's Doctoral Studies Program. The governing bodies of the Doctoral Studies are the Assembly of the Department and the Senate as well as the Coordinating Committee for Doctoral Studies (CCD), which coordinates the proper operation and monitoring of the Doctoral Studies.
The published call for expressions of interest from doctoral candidates defines the fields of knowledge, following requests from faculty members. The Assembly shall approve the applications of doctoral candidates for doctoral theses and appoint the members of the three-member advisory committees, the members of the seven-member examination committees and the members of the selection/evaluation committees for candidates. The Assembly shall be informed of the annual progress reports of the doctoral candidates and shall award the doctoral degrees.

Eligibility criteria
The right to apply for a Doctoral Thesis at the Department of Creative Design and Clothing is open to all those who are graduates of a higher education institution (University or TEI) in Greece or a recognized equivalent institution abroad and hold a Diploma of Postgraduate Studies A. E.I. of the domestic language, or recognized as an equivalent institution of foreign countries or are graduates or holders of a single and indivisible degree or postgraduate level in accordance with Article 46 of Law. 4485/2017.
The suitability of the candidate's qualifications and knowledge, as well as the exceptional cases a), b) and c) referred to in case 1 of article 4 par. 4 of the aforementioned Regulation, shall be examined by the three-member Coordinating Committee for Doctoral Studies and approved exclusively by the Assembly of the Department. In exceptional cases, the supervisor and the tripartite evaluation committee shall designate any courses from the Postgraduate Studies Programs of the Department and/or other IHU Departments that must be successfully completed.

Duration
The duration of the Doctoral Degree is at least three (3) full calendar years from the date of appointment of the Tripartite Advisory Committee. For doctoral candidates who are exceptionally admitted without holding an MSc, the minimum time limit for obtaining the Doctoral Degree is four (4) full calendar years from the date of appointment of the Three-Member Advisory Committee.
The maximum time for completion of the dissertation is in any case set at six (6) years. The above time may be extended by annual extensions for two (2) additional years, upon request of the candidate and a well-founded decision of the Departmental Assembly.

Further information can be found in the regulations for doctoral studies and on the website of the Department of Creative Design and Clothing (Kilkis) (https://cdc.ihu.gr/didaktorikes-spoydes)

11 SERVICES and STUDENT WELFARE OFFICE

11.1 European Programs Office (Erasmus)

Erasmus+ is the European Commission's program that aims to strengthen education and vocational training and the exchange of ideas and culture while enhancing skills and modernising education systems. This action is not limited to higher education but extends to school education, youth activities, and other areas of Lifelong Learning.
Through the Erasmus program, student mobility for study purposes is ensured based on inter-university agreements between institutions through which the home institution provides full recognition for the period of study abroad.
The program is suitable for the personal development of both excellent students and for the broadening of thinking, opinions and ideas.

Duration of Mobility

Students can move for study or work placements in all study cycles, for a total of 12 months in each cycle (e.g. 12 months during their undergraduate studies, 12 months during their postgraduate studies and 12 months during their PhD). The same student may receive a mobility grant for a maximum of 12 months per study cycle, regardless of the number and type of mobility (study or placement).
The department cooperates with a significant number of European Universities through the ECTS ERASMUS student exchange program.
The terms and conditions for student mobility are explicitly mentioned on the Erasmus+ program website: http://erasmusplus.teicm.gr/.

In particular, students:

- have completed the first year of their studies
- they must be nationals of a country participating in the Erasmus+ Programme or nationals of other countries enrolled in a regular study programme of the Foundation, in accordance with the Ministerial Decision F. 151/20049/B6/20.02.2007 (Government Gazette 272B/01-03-2007) and other applicable legislation
- may undertake only two Erasmus+ mobility periods, for a maximum total duration of 12 months abroad:
    - one for studies and
    - one for practical training

The basic criteria for the participation of students are the following:

- 50% of the total number of credits up to the current semester of study
- Sufficient knowledge of the language of the programme to be followed by the student
- Level of study of the student (undergraduate, postgraduate, doctoral)
- Year of admission. Preference will be given to non-stigmatising students.
- Academic performance (average grade point average of the courses the student has passed up to the time of application), and

- Curriculum vitae (submitted to the Erasmus academic coordinator of the department) or interview.
- Degree and duration of the degree/postgraduate diploma in the case of a postgraduate student/doctoral candidate. In particular, for the selection of doctoral candidates, a reasoned recommendation of the three-member Advisory Committee is required, stating the topic of the dissertation and confirming that the programme the candidate will follow abroad will form part of his/her research work for the preparation of his/her doctoral dissertation and that it will count towards the total time of his/her studies.

The collaborations that have been established with institutions abroad for the Department within the framework of the Erasmus+ Program are the following:

No	Country	University
1	Portugal	Lisbon School of Architecture
2	Spain	Universidad de Terrassa Polytecnical de Catalunya
3	Estonia	Tallinn University of Applied Science
4	Bulgaria	Technical University of Sofia

The application and selection of students who will participate in the program is valid for the duration of their student status, therefore students interested in carrying out an internship within the program must submit an application during their final year of study and before obtaining their degree.
Terms and conditions for student mobility
The terms and conditions for student mobility are formulated by the ERASMUS+ guide of the IHU and are communicated to students through the departmental website as well as through information lectures by the departmental coordinator.
Good study recognition procedures are based on the relevant academic practices for the recognition of credit transfer between different departments and institutions in Europe, in a manner similar to the principles of the Lisbon Convention on the Recognition of Academic Qualifications. Graduation marks the end of the period of study. Students will receive the relevant documents describing the qualification they have obtained and the learning outcomes they have achieved, as well as the context of competence, degree, content and level of studies followed and successfully completed (Diploma Supplement).
The Department has ensured the full allocation of credits to courses in accordance with the ECTS (European Credit Transfer and Accumulation System). This ensures the academic recognition of the courses taken by mobile students.

11.2 Library

The Library of the Department, which also functions as a study area, is located on the ground floor of building K1 and has a very large number of books (Greek and foreign high quality), mainly in printed and electronic form, including books, scientific journals, etc.

There is also a sufficient number of PCs installed in the Library of the Institution with direct access to high-speed internet, as well as wireless open connection, and access to the electronic library system, the electronic secretariat system (uniportal, http://uniportal.ihu.gr) and the asynchronous education platform ((https://elearning.cm.ihu.gr).

11.3 Student Restaurant

The department has a student union and provides students with the possibility to dine in an equipped restaurant. All students whose family income does not exceed 45,000 Euros are entitled to free meals. Students are fed by carrying their academic ID cards. The meals are provided throughout the academic year and until 30 June. The weekly menu is available at the following link: https://cm.ihu.gr/index.php?id=5316. It must be mentioned that the department has building facilities for feeding students in building K3 within the Kilkis Campus, which is not yet loaned and operational but is part of the department's future plans.

11.4 Student Dormitory

The department does not provide student accommodation, however, the city of Kilkis offers abundant accommodation facilities for students. The acquisition - construction of a student residence is part of the future plans of the Department.

11.5 Student Health Care Service

The fully equipped Public Hospital of Kilkis is located in the city of Kilkis, just 3km from the University of Kilkis.
The uninsured undergraduate and postgraduate students are entitled to full medical and hospital care in the National Health System (NHS) according to the circular No. 171598/Z1/12.12.2017 of the Ministry of Education, with coverage of the relevant costs by the National Organisation for the Provision of Health Services (E.O.P.Y.Y. https://ec.europa.eu/social/main.jsp?catId=1112&langId=en&intPageId=4562).
Students now apply to the Public Health Structures with their Social Security Number (AMKA https://www.amka.gr/odigos_en.html).

11.6 The University Gym

Although the department does not have an autonomously organized gym, the basement of building K1 houses a multi-purpose room with available table tennis equipment and a target with darts for student entertainment.

11.7 Sports and Cultural Activities

The Department of Creative Design and Clothing regularly carries out collaborative projects between the Department and productive bodies, Cultural Organisations and Institutions.

In the past (after its consolidation in May 2019), various educational visits to museums and companies, but also cultural activities have been organized, such as the following:

- AI for Fashion Workshop, 2-4 September 2022, Ionian University, Corfu, Greece
- Student Exhibition, Kakoyannis Foundation, Athens, 2022
- 1st & 3rd Place International Digital Design Competition, 31 October 2022
- Participation of the department in the 2nd Digital Fashion Summit (28-29/06/2021)
- Exhibition Small Stories of Revolution, Archaeological Museum of Thessaloniki, 2021
- Confucius Institute, Aristotle University of Thessaloniki- Made in China Conference
- AI for Fashion Workshop, 2-4 September 2020, Demokritos, Athens Greece
- Wear is Art? Thessaloniki, Yeni Tzami, 2019

11.8 Network Operations Center (NOC)– Electronic Services

The smooth operation, maintenance and development of the electronic equipment, interfaces and services of the Data Network of the Department of Creative Design and Clothing at the Kilkis Campus is supported by the Network Operation and Management Center (O&M Center) of the University of Serres Campus in collaboration with the voluntary participation of permanent staff of the Department through a fast open internet connection and available desktop computers with open access to the students.

12 INTERNATIONAL DIMENSION and PARTNERSHIPS

The Department of Creative Design and Clothing (Kilkis) is in close cooperation with its social partners on a national scale (Association of Knitting & Ready-made Clothing Enterprises-GREEK FASHION https://www.greekfashion.gr/el/news-trends/1/nea-sepee, Greek Fur Federation) as well as with important international partners.
The department has signed a strategic memorandum of cooperation with the "Confucius Institute" of the Aristotle University of Thessaloniki for the cultural development and cooperation between "Greece and China". The Department has cooperated with the Materials Department of the University of Manchester as well as participated in a competition at Manchester Metropolitan University.
It also maintains excellent relations with garment manufacturing companies and software development companies for the design, manufacture and management of garments in Northern Greece and through this, it achieves a high absorption of students both in the context of internships and subsequent professional rehabilitation.
The department has students from all over Greece, Cyprus and the Balkans and accepts students from Portugal through the Erasmus mobility programme.

13 REFERENCE to the DEPARTMENT and UNIVERSITY REGULATIONS

Below are useful hyperlinks to the various regulations of the Department of Creative Design and Clothing (Kilkis) and the University:

- Department website: https://cdc.ihu.gr
- Quality Policy: https://cdc.ihu.gr/politiki-poiotitas-dipae
- Institution Regulations: https://cdc.ihu.gr/kanonismos-spoydon
- Degree Dissertation Regulations: https://cdc.ihu.gr/ptychiaki-ergasia
- Internship Regulations: https://cdc.ihu.gr/praktiki-askisi
- Departmental e-Learning Policy: https://elearning.cm.ihu.gr
- Diploma Supplement: https://cdc.ihu.gr/parartima-diplomatos
- Admission Qualifying Examination: https://cdc.ihu.gr/katataktiries-exetaseis

Phone Contacts

- Secretariat (+30) 23410-29876 ext 2
- Head Secretary (+30) 23410-29876 ext 3 int.112
- Security Office (+30) 23410-29876 ext 5
- Fax (+30) 23410-29866

14 APPENDIX: DETAILED COURSES OUTLINE

Below is a detailed description of the courses per Semester for the Undergraduate Programme of the Department of Creative Design and Clothing (Kilkis) of the International Hellenic University.

14.1 1st Semester Courses

14.1.1 SKETCHING

1. GENERAL

SCHOOL	Design Sciences		
DEPARTMENT	Creative Design and Clothing		
LEVEL OF STUDIES	Undergraduate		
MODULE CODE	**101**	**SEMESTER**	1
MODULE TITLE	Sketching		

TEACHING METHODS AND ACTIVITIES	**LEARNING HOURS PER WEEK**	**CREDIT UNITS**
Lectures	1	**5**
Studio exercises	4	
TOTAL	**5**	

MODULE TYPE	Compulsory, Background Module, General Foundation Module
PREREQUISITE MODULES:	
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS	yes (English)
MODULE WEB PAGE (URL)	

2. LEARNING OUTCOMES

Learning Objectives
Upon successful completion of the course the student: will have understood the basic principles and concepts of design, will have studied the structure of the composition through measurement and methodical observation. Students will have understood the elements of form and plasticity and use tone scale for volumes. Students will have known and understood the structure of Visual Language and how to communicate the message.
General Skills
• Group & Independent project work • Evolving of design skills • Research, analysis and combination of information • Promoting autonomous, creative and inductive thinking

3. MODULE CONTENT

Theoretical part:
Theory of the basic principles and concepts of Sketching and Design. How the form is observed and performed with shades and tonal values in a work of art. Essential approach of the primary visual elements in the design of objects. Basic elements of the visual language and principles of the Visual Alphabet - Composition. Comparative analysis and connection with classical aesthetic theories and modern theories of Forms. Analysis of individual elements of the Visual Language (point, line, shape, color, movement, direction, texture, etc.).

Studio classwork:
The form and the light and how to design them. Development of the design concept and observation which the students are called to develop in their exercises in physical studies. The human body, the model, as a field of understanding the basic concepts of design.

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHODOLOGY	Theoretical (face to face) teaching with presentation of methodology.

<table>
<tr><td></td><td>Laboratory Exercises. Presentation and then execution of individual work.</td></tr>
<tr><td>USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES</td><td>Teaching support through course webpage, students contact electronically</td></tr>
<tr><td>TEACHING PLAN</td><td>
<table>
<tr><th>Activity</th><th>Semester Workload
(25 h Semester Workload / CU)</th></tr>
<tr><td>Lectures</td><td>25</td></tr>
<tr><td>Studio work</td><td>35</td></tr>
<tr><td>Project</td><td>25</td></tr>
<tr><td>Creative</td><td>25</td></tr>
<tr><td>e-class</td><td>10</td></tr>
<tr><td>Educational visits</td><td>5</td></tr>
<tr><td>Total</td><td>125</td></tr>
</table>
</td></tr>
<tr><td>STUDENT EVALUATION</td><td>The final module grades are formed by total student’s performance in both theoretical and studio part, provided that the student has been evaluated with a promotional grade in each part of the course.</td></tr>
</table>

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- Kozakou Tsiara O. (1999) Introduction to artistic language, Gutenberg Publications
- Papastamoulis K. (2003) Colour - sketch and principles of freehand drawing. ION Publications
- Gombrich E. The chronicle of art, Educational Foundation of National Academy of Fine Arts. National Bank.
- Fischer E. (1981). The necessity of art. Themelio Publications 1981.

14.1.2 PRINCIPLES AND APPLICATIONS OF BODYMETRICS

1. GENERAL

SCHOOL	Design Sciences		
DEPARTMENT	Creative Design and Clothing		
LEVEL OF STUDIES	Undergraduate		
MODULE CODE	102	**SEMESTER**	1
MODULE TITLE	Principles and Applications of Bodymetrics		

TEACHING METHODS AND ACTIVITIES	**LEARNING HOURS PER WEEK**	**CREDIT UNITS**
Lectures	3	**4**
TOTAL	**3**	

MODULE TYPE	Compulsory, Background Module, General Foundation Module
PREREQUISITE MODULES:	
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS	yes (English)
MODULE WEB PAGE (URL)	

2. LEARNING OUTCOMES

Learning Objectives

In the clothing sector, for many years the way of measuring "standard measurements" and their application to the human body was a topic of discussion.. According to researchers, this depends on the requirements of each customer, which is why there are many different sizes in every country and in export companies. What are the sizes and shapes of the body that exist in a particular population? What is the complex of basic body dimensions? What is the appropriate size option that can be used?

The course aims to answer the above questions and offer students the appropriate knowledge and skills related to the study of anthropometric data & sizing systems in the US and Europe to create size charts for personalized mass production of clothing.

After attending the course, students should be able to:

- Recognize the use of anthropometric data in developing size chart systems
- Describe measurement systems for individualized mass production of garments.
- Develop tables of human body anthropometric dimensions
- Know types of body scanning technology
- Determine the way of creating the first size charts but also the need to create the structure of an international sizing system.

General Skills

- Search, analysis and synthesis of data and information, using the necessary technologies.
- Teamwork.
- Project Planning and Management.
- Promoting creative and inductive thinking

3. MODULE CONTENT

- History of sizing systems and ready-to-wear clothing
  Ergonomics and clothing design
  Anthropometrics
  Silhouette categories
  Anthropometric data selection for clothing design
  Anthropometry and clothing manufacture
- Methods of anthropometric data acquisition
  Traditional methods
  Tools of measuring bodymetrics dimensions
  Linear & non-linear methods
- SIze Systems for clothing products
  Creation
  International size standards
  Διεθνή στανταρντ μεγεθών
  Function, application and size

Size and application communication
Mass customisation and size
National Body Measurement Studies (Size UK, Size USA, Size Germany etc)
research interest in fit evaluation

- Body Scanning Technology (3D Body Scanners)
  Introduction to equipment
  Case studies with major market scanners
  Scan for mass production of clothing
  Advantages
  Scan for made-to-measure clothing
  Virtual Clothing Fit
  The application of clothes in the future
  Research interests in body scanning

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHODOLOGY	Lecturing with discussion and students' active participation. During class, share of powerpoint presentation
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Self-evaluation e-exercises (Quizes) Communication via e-mail, course moodle and RSS feeds.
TEACHING PLAN	

Activity	***Semester Workload*** ***(25 h Semester Workload / CU)***
Lectures	26
Writing lab reports and projects	14
Self study	60
Total	**100**

STUDENT EVALUATION	The final grade of the course is shaped by the performance of the students in the theoretical part. The evaluation of the course in terms of the theoretical part, is formed by a written final exam as well as by participation in group work in the form of a project. 1. The written final examination of the theoretical part includes: - Multiple choice questions - Solving problems of application of the acquired knowledge. Comparative evaluation of theory elements. 2. The group work is optional, is given at the beginning of the semester and is completed at the end of the lectures with the presentation of the results by the students of the group in the classroom.

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- Aldrich, W., (2005). Design and cutting of women's clothing. Ion Publications. Book [14729]
- Lambros, L., & Giannakuru-Sioutari, M.,(2003). Papasotiriou. Book [9706].

Notes and Books distributed over the class web site or by the institution service

- Papachristou, E. Notes on "Principles & Applications of Body metrics". Kilkis

- Complementary Bibliography

- Alexander, M., Connell, L. J., & Presley, A. B. (2005). Clothing for preferences of young female adult consumers. International Journal of Clothing Science & Technology , 17 (1), 53-64.
- Apeagyei, P. R., & Otieno, R. (2007). Usability of pattern customising technology in the achievement and testing of fit for mass customisation. Journal of Fashion Marketing and Management , 11 (3), 349-365.
- Cordier, F., Seo, H., & Magnenat-Thalmann, N. (2003). Made-to-measure technologies for an online clothing store. Computer Graphics and Applications , 23 (1), 38-48.
- Daanen, H., & Hong, S. (2008). Made-to-measure pattern development based on 3D whole body scans. International Journal of Clothing Science and Technology , 20.
- Hlaing, E. C., Krzywinski, S., & Roedel, H. (2013). Garment prototyping based on scalable virtual female bodies. International Journal of Clothing Science and Technology , 25 (3), 184-197
- Istook, C., & Hwang, S. (2001). 3D body scanning systems with application to the apparel industry. Journal of Fashion Marketing and Management , 5 (2), 120-132
- Istook, C., Little, T., Hong, H., & Plumlee, T. (2003). Automated Garment Development from Body Scan Data S00-NS15 (formerly I00-S15). National Textile Center Annual Report: November 2003

- Kim, S., & Park, C. K. (2007). Basic garment pattern generation using geometric modeling method. International Journal of Clothing Science and Technology , 19 (1), 7-17.
- Leong, I.-F., Fang, J.-J., & Tsai, M.-J. (2013). A feature-based anthropometry for garment industry. International Journal of Clothing Science and Technology , 25 (1), 6-23
- Simmons, P. K., & Istook, C. L. (2003). Body measurement techniques, Comparing 3D body-scanning and anthropometric methods for apparel applications. Journal of Fashion Marketing and Management , 7 (3), 306-332
- Yang, Y., & Zhang, W. (2007). Prototype garment pattern flattening based on individual 3D virtual dummy. International Journal of Clothing Science and Technology , 19 (5), 334-348
- ASTM International http://www.astm.org
- International Organisation for Standardization (ISO)
- [TC]2, www.tc2.com
- Bodymetrics, www.bodymetrics.com
- Assyst, https://www.assyst.de/

14.1.3 HISTORY OF ART AND COSTUME I

1. GENERAL

SCHOOL	Design Sciences		
DEPARTMENT	Creative Design and Clothing		
LEVEL OF STUDIES	Undergraduate		
MODULE CODE	**103**	**SEMESTER**	1
MODULE TITLE	History of Art and Costume I		

TEACHING METHODS AND ACTIVITIES	**LEARNING HOURS PER WEEK**	**CREDIT UNITS**
Lectures	4	**6**
TOTAL	**4**	

MODULE TYPE	Compulsory, Background Module, General Foundation Module
PREREQUISITE MODULES:	
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS	yes (English)
MODULE WEB PAGE (URL)	

2. LEARNING OUTCOMES

Learning Objectives

The course aims, through contact with the most important periods of art and artworks, to understand the relationship of artistic creation with the general cultural development of each period as well as to acquire the necessary knowledge about the historical components that compose the wide study spectrum for the evolution of Costume through the centuries. Through the combination of theoretical investigation and practical application of the data analyzed during the theoretical presentations of the course, students will be able to identify the historical, social, aesthetic and multidimensional cultural context of the times that defines and marks the currents of clothing evolution from the beginning of human life until the period of Renaissance.

After attending the course students should:

- Understand the value of art as a continuous human creation.
- Be able to deal with the multifaceted phenomenon of art globally and to connect it in general with human society and clothing in every age.
- Be able to observe and understand the works of world art in different periods of history.
- Understand that the perceptions of each era and the different approaches of each artist to them affect the form and content of the work of art & capture the clothing of the respective period.
- Be aware of the big questions that people ask and the ways in which they are answered through art.
- Recognize the individual elements and influences of clothing of each historical period. Be able to observe and understand works of world art in different periods of history.
- Become familiar with the relevant terminology and to acquire tools for the description and analysis of works of art.
- Develop critical thinking in the way of approaching the works through the "reading" of their morphological characteristics and the inference of information about the time that created them.

General Skills

- Individual assignments
- Teamwork
- Research, analysis and synthesis of information, use of various technologies
- Exercising criticism and self-criticism

3. MODULE CONTENT

Through a combination of theoretical inquiry and practical application of the elements of the course modules, students will be able to identify the historical, social, aesthetic and multi-dimensional cultural context of the historic periods that defines and marks the new trends of Fashion until the emergence of Haute Couture. During the module, the main elements of the models in male and female appearance that define the modern concept of the multidimensional social phenomenon of Fashion are studied. The social conditions, the aesthetic values as well as the psychological foundations of Fashion are examined through the historical approach of the periods that contributed to the evolution of clothing from 2000 BC
until the Renaissance (15th-16th centuries).

4. TEACHING AND LEARNING METHODS - EVALUATION

<table>
<tr><td>TEACHING METHODOLOGY</td><td>The lectures of the subjects of the course will be presented with the use of supervisory means and the projection of digital lessons through the projector in the classroom.
Also, during the courses, the internet will be utilized, especially during the execution of the laboratory exercises, as the students will be presented with the way of searching bibliography and using digital media.
Field studies in cultural places related to the content of the course.</td></tr>
<tr><td>USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES</td><td>PowerPoint presentations.
Learning process support through the course website.
Use of the internet and virtual applications to support laboratory exercises.
Communication with students via e-mail, the course website and social media</td></tr>
<tr><td>TEACHING PLAN</td><td><table>
<tr><th>Activity</th><th>Semester Workload
(25 h Semester Workload / CU)</th></tr>
<tr><td>Lectures</td><td>52</td></tr>
<tr><td>Writing reports</td><td>13</td></tr>
<tr><td>Self-oriented research</td><td>85</td></tr>
<tr><td>Total</td><td>125</td></tr>
</table></td></tr>
<tr><td>STUDENT EVALUATION</td><td>Final Exam (100%)</td></tr>
</table>

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- Georgitsogianni, E. & Pantuvaki, S. (2011). History of Costume. The Western World and Greece from prehistoric times to the Renaissance. Athens: Diadrasis.
- Lecturer Notes on the class web site

- Complementary Bibliography

- Danto, A (2004). The transformation of the ordinary. A philosophical view of art. Athens: Metahmio Publications
- Gombrich, E. H. (1998). The chronicle of art. Athens: MIET Publications.
- Lagakou, N. (1998). The costume through the centuries. N.E., N.G. (1998): Dodoni Publications

14.1.4 PHYSICS AND CHEMISTRY OF MATERIALS AND DYES

1. GENERAL

SCHOOL	Design Sciences		
DEPARTMENT	Creative Design and Clothing		
LEVEL OF STUDIES	Undergraduate		
MODULE CODE	104	**SEMESTER**	1
MODULE TITLE	Physics and Chemistry of Materials and Dyes		

TEACHING METHODS AND ACTIVITIES	**LEARNING HOURS PER WEEK**	**CREDIT UNITS**
Lectures	2	**5,5**
Studio exercises	3	
TOTAL	**5**	

MODULE TYPE	Compulsory, Background Module, General Foundation Module
PREREQUISITE MODULES:	No
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS	yes (English)
MODULE WEB PAGE (URL)	e-learning platform (cdc.ihu.gr)

2. LEARNING OUTCOMES

Learning Objectives

After successfully attending the course students will have:

- Basic theoretical knowledge of General and Organic Chemistry.
- Specialized knowledge of textile fibers, colorimetric systems.
- Knowledge of the physics and chemistry of pigments and auxiliary materials and their application.
- Environmental and wastewater management of industrial textiles and dyes.
- Experience related to the experimental investigation of physic-chemical effects on textiles and the use of colorimeters and the color differences.
- Experience on dyeing treatments depending on the type of the fabric.
- Knowledge of the structure of textile fibers, the nature and characteristics of the pigments with which they are dyed.
- Understanding the process of creating color sensation and related parameters as well as interactions of light, object, and observer.
- Ability to describe colorimetric systems.
- Ability to identify and measure color in dyed samples and color solutions with color measurement instruments.

General Skills

- General competences that the degree-holder will acquire:
- Search for, analysis and synthesis of data and information, with the use of the necessary technology.
- Respect for the natural environment.
- Production of free, creative and inductive thinking.
- Working independently.
- Team work.

3. MODULE CONTENT

Theoretical part:

Structure of the atom. Periodic system, electron theory. Chemical bonds and intermolecular forces between textile fibers and pigments during the dyeing process. Organic compounds. Introduction to physics and chemistry of polymers. Textile fibers. The basic concept of light, object, vision and color mixing. Interaction of light and object, absorption and reflection, transmission, refraction, fluorescence and their relationship to color. Three-dimensional nature of colors and their classification in color systems. Standard light sources and observers, CIE color classification systems.

Color measuring instruments. Visible-ultraviolet and reflective spectrophotometers. Equations of color differences. Acceptance limits. Ultraviolet radiation spf. Sorting colors and auxiliary materials. Dyeing systems and factors affecting them. Physical chemistry of dyeing and finishing processes.

Laboratory part:

Preparation of solutions, standard solutions, electrolytes. PH measurement, indicators. Buffers. pH measurement of textiles. Spectrophotometric color determination, color measurement on dyed fabric. Dyeing of fibers, yarns, fabrics. Qualitative, quantitative process analysis. UV protection indicator UPF.

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHODOLOGY	Face-to-face
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Use of ICT in teaching, laboratory education, communication with students
TEACHING PLAN	

Activity	***Semester Workload*** ***(25 h Semester Workload / CU)***
Lectures	45
Laboratory practice	45
Essay writing	20
Self-study	27,5
Total	**137,5**

STUDENT EVALUATION	Language of the evaluation methods: Greek In theory Written final exam comprising: - Short-answer questions - Combination judgment questions -Comparative evaluation of theory data In the laboratory Written examination comprising: - Short answer questions - Combination judgment questions - Problem solving - Complete forms in the lab

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- Eleftheriad I. iTsatsaroni, E. Nikolaidis N. Chemistry and Technology of Color, Publications KALLIPOS e-book
- Karagiannidis G., Sideridou E., Chemistry of Polymer, Ziti, 2006,
- Peyiadou S., Tsatsaroni E., Eleftheriadi I., University Lectures of Organic Chemical Technology, AUTh, 2000
- Stathakis K., Eleftheriadis I., Art and Communication in Graphic Arts Volume C Color, Hellenic Open University of Patras, 2002
- Gripari N., Elements of dyeing Athens 1997
- D. J. Hill, M. E. Hall, D. A. Holmes M. Lomas, K. Padmore, Dyeing and Finishing Technology, Translation Peppa Th., Vassiliadis S., Athens 2003
- D. Thomson, Egg Tempera, Armos, Athens, 1997.

- Complementary Bibliography

- Berger - Schunn, Practical Color Measurement, J. Wiley & Sons, N.Y. 1994
- F. W. Billmeyer, J. M. Saltzmann, Principles of Colour Technology, J. Wiley & Sons, N.Y., 1981
- Carneiro, N., Colour Measurement, Seminar, Thessaloniki, 1992 (EUROTEX).
- Colour Index, 3rd edition, Society of Dyers and Colourists, American Association of Textile Chemists and Colorists, Vol. 1-5, Bradford, 1971; CD-ROM 1999
- Giles, C. H. A., Laboratory Course in Dyeing, 4th edition, The Society of Dyers
- and Colourists, Bradford, 1990
- Lewis D. M., Wool Dyeing, Society of Dyers and Colourists, Bradford, 1992.
- Donald R., Colour physics for industry, Soc. of Dyers and Colourists, Bradford, 1987
- McIntyre J. E., The Chemistry of Fibres, Edward Arnold, London, 1971
- Meyer, H. R. Zollinger, Colorimetry, Sandoz, Basle, 1989
- Miles L. W. C., Textile Printing, Dyers Company Publication Trust, Bradford, 1981
- Stiebner E. D., Drucktechnik heute, Novum Press, Münche, 1990
- Peter M., Rouette H., Grundlagen der Textilveredlung, Spohr Verlag, 13 Auflage, Frankfurt / Main, 1980
- Tensidtaschenbuch, H. Stache, Carl Hanser Verlag, München, Wien, 1981
- Rys P., Zollinger H., Leitfaden der Farbstoffchemie, Verlag Chemie,Weinheim, 1976.
- Turner G., Paint Chemistry, 2th edition, Chapman & Hall, London, NY, 1980.

14.1.5 DIGITAL DESIGN PRINCIPLES

1. GENERAL

SCHOOL	Design Sciences		
DEPARTMENT	Creative Design and Clothing		
LEVEL OF STUDIES	Undergraduate		
MODULE CODE	**105**	**SEMESTER**	**1**
MODULE TITLE	Digital Design Principles		

TEACHING METHODS AND ACTIVITIES	**LEARNING HOURS PER WEEK**	**CREDIT UNITS**
Lectures	3	**5**
Lab exercises	2	
TOTAL	**5**	

MODULE TYPE	Compulsory, Background Module, General Foundation Module
PREREQUISITE MODULES:	
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS	yes (English)
MODULE WEB PAGE (URL)	

2. LEARNING OUTCOMES

Learning Objectives

The aim of the course is to introduce principles and techniques of digital technology that can be used in fashion. Problem solving approach is analyzed and students are introduced to software that can be used in fashion design. Laboratory exercises are oriented to digital technology. The course provides the essential background in order to help students understand relevance and relationships between other courses in the curriculum.
By the end of the course the students are expected to:

- Understand how digital technology can help fashion designers and how new techniques can be applied in fashion design.
- Apply logical and critical thinking in solving problems related to fashion design and technology.
- Design, incorporate and organize information to solve complex issues regarding fashion design and technology.
- Understand how to use different software (Photoshop, Illustrator, Rhino) to update digital communication strategy.

General Skills

- Search, analyze and synthesize data and information, using the necessary technologies
- Teamwork.
- Project planning and management
- • Improvement of open minded, creative and inductive thought

3. MODULE CONTENT

- Introduction to digital design software
  Introduction to technological infrastructure, software and terminology
  Creative and effective application of digital tools and techniques
  Page Layout
  Illustration
  Digital image processing
  Creative ways to use specialized software (Photoshop, CorelDraw, Illustrator)
  Presentations with PowerPoint & Prezi
  Future trends
- Digital Color
  Color in fashion design
  Understanding and forecasting of color trends
  International color standards
  Color calibration and traceability
  Future trends

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHODOLOGY	Face to face theoretical teaching (lectures, discussion) with students' active participation. Powerpoint presentations. Laboratory exercises. Use of commercial and specialized software for fashion.
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Specialized software. Self-assessment quizzes. Electronic communication with students via email, webpage and RSS feeds
TEACHING PLAN	

Activity	***Semester Workload*** ***(25 h Semester Workload / CU)***
Lectures	26
Exercises	0
Laboratory Exercises	14
Writing laboratory reports and projects	0
Individual Study	85
Total	**125**

STUDENT EVALUATION	. Final written examination (FE) (50%) which consists of - Multiple choice questions - Problem solving questions - Questions that require comparative assessment 2. Laboratory examination (LE) (50%) to evaluate students skills regarding use of specialized software. The final score of the course (FE*0.5+ LE*0.5). FE and LE individual scores should be at least five (5).

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- Wong, W., (1998). Principles of Color Design. Digital Design. Ion Publications, Book [14471]
- Efstathiou, K., (2019). Digital Design - 2nd Edition. NEON TECHNOLOGIES PUBLISHINGS Book [86057354]
- Faukner, A., & Chavez, C., (2018). Adobe Photoshop CC Step by Step Edition 2017. Book [77107461]
- Brian Wood, Adobe Illustrator CC Step by Step Edition 2018, X. GIOURDA & Co EU, 1st Edition/2019, Book [86055137]
- Manavis Athanasios, Menaoglou Prodromos, Eukolidis Nikolaos, Kyratsi Panagiotis Product Design Tools, 2nd Edition, A. Tziolas & S.A. Publications, Book [112692019].

- Complementary Bibliography

- Notes and slides of theory, Kilkis.
- Laboratorial Exercises, Kilkis
- Best, J., (2017). Colour Design, Theories and Applications. The Textile Book Series. Woodhead Publishing
- International Journal of Fashion Design, Technology and Education
- Journal of Fashion Technology & Textile Engineering,.

14.1.6 MATHEMATICAL METHODS IN DESIGN

1. GENERAL

SCHOOL	Design Sciences		
DEPARTMENT	Creative Design and Clothing		
LEVEL OF STUDIES	Undergraduate		
MODULE CODE	106	**SEMESTER**	1
MODULE TITLE	Mathematical Methods in Design		

TEACHING METHODS AND ACTIVITIES	**LEARNING HOURS PER WEEK**	**CREDIT UNITS**
Lectures	3	5
Practice Assessment	0	
TOTAL	3	

MODULE TYPE	Compulsory, General Knowledge Module, General Foundation Module
PREREQUISITE MODULES:	
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS	yes (English)
MODULE WEB PAGE (URL)	http://moda.teicm.gr/C5347BD2.el.aspx

2. LEARNING OUTCOMES

Learning Objectives

The aim of the course is to develop analytical and critical thinking and to acquire and consolidate basic knowledge of mathematical concepts and techniques that are required to cover cognitive objects related to the creation, design & production of clothing as well as management & marketing.
After successful attendance of the course, students will have improved critical thinking, assessment ability and creativity. They will also have assimilated the basic mathematical tools from the algebra and geometry they need in their curriculum. Finally, they will have acquired the basic skills to analyze problems in order to rationalize conclusions, will have acquired a solid mathematical background in the techniques taught, and will be able to use them effectively to solve application problems

General Skills

- Implementing knowledge in practice
- Retrieve, analyze and synthesize data and information, using the necessary technologies
- Make decisions
- Promoting free, creative and inductive thinking
- Working in an interdisciplinary environment

3. MODULE CONTENT

Basic Elements of Algebra: Naturals, Integers, Decimals, Rounding, Reals, Powers, Roots, Units, Fractions, Percentages and Ratios: fraction equivalence, fraction comparisons, fractional operations, percentages, ratios, proportional quantities and graphs, Equations, inequalities and Functions: the concept of variable, logarithms, linear equations and quadratics, solving systems of linear equations, basic functions
Basic concepts of Geometry and Trigonometry: straight lines and line segments, angles (measurements and comparison), special types of angles, complementary and supplementary angles, trigonometric numbers
Plane geometry: Triangles, Pythagorean theorem, equation of triangles, rectangles, parallelograms, trapezoids, circles, inscribed angles, arc lengths, polygons, areas
Solid Geometry: coordinate systems, dihedral and trihedral angles, prism, cylinder, pyramid, cone, sphere, positions of straight lines and planes with respect to spheres, volumes
Geometrical constructions: construction of rectilinear segments, corner construction, polygon construction, circle and arch construction, 3D geometric constructions

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHODOLOGY	Face to face lectures in class
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Teaching support through course webpage, students contact electronically

TEACHING PLAN	

Activity	*Semester Workload* *(25 h Semester Workload / CU)*
Lectures	26
Tutoring	13
Self-study	86
Total	**125**

STUDENT EVALUATION	Final Exam (100%), containing problem solving and short answer questions

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- Karageorgos A., Dinakis I, Rapti E., «Elements of Mathematics with Applications in Furniture Making», Hellenic Academic ebooks, (www.kallipos.gr), 2015.
- Spiegel M.R. & Moyer R.E., «College Algebra», Kleidarithmos Publishing, 2007.
- Karapistolisς N.D., «Mathematics for Economists», Athanasiou-Atintzi Publishing, 2012.
- Voskoglou M.G., «Higher Mathematics for Engineers and Economists», Voskoglou Publishing, 2012.
- Vougiouklis T., «Geometry and Analytic Geometry», Spanidis Publishing, 2009.
- Bradley T., «Essentail Mathematics for Economics and Business», Kritiki Publishing, 2014.
- Xenos T.P., «Practical Algebra», Ziti Publishing, 2001.
- Apostolopoulos T. & Apostolopoulos K, «Practical Algebra», Stamoulis Publishing, 2005.
- Halatsis A., «Geometry», Ziti Publishing, 2006.

14.2 2nd Semester Courses

14.2.1 COLOUR AND PATTERN COMPOSITION

1. GENERAL

SCHOOL	Design Sciences		
DEPARTMENT	Creative Design And Clothing		
LEVEL OF STUDIES	Undergraduate		
MODULE CODE	201	**SEMESTER**	2
MODULE TITLE	Colour and Pattern Composition		

TEACHING METHODS AND ACTIVITIES	**LEARNING HOURS PER WEEK**	**CREDIT UNITS**
Lectures	1	**4**
Studio	3	
TOTAL	**4**	

MODULE TYPE	Compulsory, Background Module, Background Module
PREREQUISITE MODULES:	
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS	yes (English)
MODULE WEB PAGE (URL)	

2. LEARNING OUTCOMES

Learning Objectives

Upon successful completion of the course the student: will have the necessary knowledge to understand basic concepts of color. Students will be able to use the dye easily. They will have the necessary knowledge to use materials. They will explore new expressions without the limits of the material. They will have gained experience in "making" by decoding their own medium, the material. They will be able to express themselves and communicate verbally, using appropriate terminology on chromatology and materials. They will have been introduced to the most prevalent decorative motifs in the history of art and fashion. They will know ArtNouveau, cubism, pop art, opart and other artistic currents. Ethnicity and its performance in Fashion. Symbols and symbolisms of shape and color.

General Skills

- Independent work
- Teamwork practice
- Exercise criticism and self-criticism
- Promoting autonomous, creative and inductive thinking

3. MODULE CONTENT

Theoretical Part of the Course Theory of the basic principles and concepts of color. How color was used in the visual and applied arts. Laboratory part of the Course: The form and the color in the Free Design. Development of design concept with color. Approach to the various topics that students are asked to develop in their exercises in studies in order to gain an understanding of color. Analysis of how the form is observed and rendered with color. Research, study of decorative motifs as they appear in history, art history and fashion. Pattern and weaving exercises such as plaid. Creating new ones, drawing on the originals. ArtNouveau, cubism, pop art, opart and other artistic currents will be some of the fields of study. Study and performance in the garment of those elements (color, lines) that highlight a style. Ethnicity and its performance in Fashion. Symbols and symbolisms of shape and color

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHODOLOGY	Face to face theoretical teaching (lectures, discussion) with students' active participation. Powerpoint presentations.
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	**Communication with students via e-mail, module website and interaction within a closed social network group.**

TEACHING PLAN	<table><tr><th>*Activity*</th><th>*Semester Workload* *(25 h Semester Workload / CU)*</th></tr><tr><td>Lectures</td><td>25</td></tr><tr><td>Studio work</td><td>45</td></tr><tr><td>Inspiration</td><td>15</td></tr><tr><td>Self-oriented research</td><td>10</td></tr><tr><td>e-class</td><td>5</td></tr><tr><td>***Total***</td><td>**100**</td></tr></table>
STUDENT EVALUATION	The final module grades are formed by total student's performance in both theoretical and studio part, provided that the student has been evaluated with a promotional grade in each part of the course. The evaluation of the course in terms of the theoretical part, is formed by final written work & presentation. 1. The final written examination of the theoretical part includes Public theme Multiple Choice Test 2. Studio work exams include the evaluation of the practical skills acquired throughout the semester, and related briefs/ projects implementation set within the whole module.

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- Papastamoulis K. (2005). The Drawing and Colour in painting. ION Publications, Athens.
- Engonopoulos N., Gyparaki M., The Drawing or the Colour, Ikaros Publications, 1/2007.
- Farantou G. P,Introduction to the Psychology of Colours. Color Psychology, ION Publishing Group, 2015
- Itten Johannes Art of Colour, , Texts of Visual Artists, 1998
- P. Klee The visual thought, , 1989, Vol. 1& Vol. 2, Melissa, 2000
- Paul Stella, Chromaphilia: The Story of Colour in Art, Phaidon

14.2.2 APPAREL DESIGN

1. GENERAL

SCHOOL	Design Sciences		
DEPARTMENT	Creative Design And Clothing		
LEVEL OF STUDIES	Undergraduate		
MODULE CODE	202	**SEMESTER**	2
MODULE TITLE	Apparel Design		

TEACHING METHODS AND ACTIVITIES	**LEARNING HOURS PER WEEK**	**CREDIT UNITS**
Lectures	1	**4**
Studio work	3	
TOTAL	4	

MODULE TYPE	Compulsory, Science Field Module, Specific Foundation Module
PREREQUISITE MODULES:	
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS	yes (English)
MODULE WEB PAGE (URL)	

2. LEARNING OUTCOMES

Learning Objectives

The fashion garment product is a consumer product serving as a cultural factor in human societies. Its special features meet the daily needs (work, comfort, etc.), special body types and other fashion parameters signifying every season. Through the study of garment classifications, key items and their typology, the module aims to approach knowledge & design skills related to individual garment characteristics of modern fashion. "Inspiration" and its function throughout the design process will be investigated. Main purpose of the course is to integrate sections from design theory (design methodologies, theoretical disciplines and tools) into the practical use of traditional and contemporary media within the creative product design process.
On successful attendance of the module students should:
Understand the type and function of each garment.
Recognize and name the individual typological characteristics of garments.
Understand key factors (gender, age) that function as constraints on the character and function of the garment.
To accurately design a fashion product by capturing its individual characteristics (silhouette, line, fabric, etc.).
Understand and design the body-fabric-clothing relationship and dynamics.
Use "inspiration" as a powerful design tool.
To design garments on a fashion figure tenplate with different bodymetric characteristics.
Draw inspiration from patterns and objects developing an innovative design proposal.
Comprehend different garment volumes.

General Skills

Independent work
Teamwork practice
Exercise criticism and self-criticism
Promoting autonomous, creative and inductive thinking

3. MODULE CONTENT

Figure design in B/W format
Study & design of different silhouette types from the 20s to the 80s (sack line, barrel, hourglass, etc.)
Rendering ruffles, folds and volumes of the garment.
Transforming and rendering garment elements from the past decades in modern clothing.
Design variations on the "little black dress".
Male figure design of Dandy style.
Menswear garment design
Research inspiration, design and development of garment all-over prints from Art, nature, etc.

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHODOLOGY	. Face to face in class
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Communication with students via e-mail, module website and interaction within a closed social network group.

TEACHING PLAN	<table><tr><th>*Activity*</th><th>*Semester Workload* *(25 h Semester Workload / CU)*</th></tr><tr><td>Lectures</td><td>10</td></tr><tr><td>Studio work</td><td>40</td></tr><tr><td>Self-oriented research</td><td>50</td></tr><tr><td>***Total***</td><td>**100**</td></tr></table>
STUDENT EVALUATION	The final module grades are formed by total student's performance in both theoretical and studio part, provided that the student has been evaluated with a promotional grade in each part of the course. The evaluation of the course in terms of the theoretical part, is formed by final written work & presentation. 1. The final written examination of the theoretical part includes: - Public theme group-presentation - Multiple Choice Test 2. Studio work exams include the evaluation of the practical skills acquired throughout the semester, and related briefs/ projects implementation set within the whole module (book evaluation).

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- Eberle Hannelore, Salo Tuula, Dollel Hannes, Fashion. Creative Design, Colors, Styles, Book [59396943]
- Norman D A., Designing Everyday Objects, Book [13903]
- D' Ortenzio D. Alfred, Fashion Design Sketching- Scenarios, Book [14528].
- Sproles, G.B. & Burns, L. D. (1994) Changing Appearances: understanding dressing in contemporary society. USA: Fairchilds Publications.
- Tate, S. L. (1984) Inside Fashion Design. New York: Harper & Row Publishers Inc.
- Thomas, R. K. (1969). three-dimensional design: A Cellular Approach. London: London: Reinhold Book Corporation.
- Diamond J., & Diamond, E. (1997). The world of fashion. USA: Fairchild Publications.
- Rouse, E. (1989). Understanding Fashion. Oxford: BSP Professional Books.

14.2.3 HISTORY OF ART AND COSTUME II

1. GENERAL

SCHOOL	Design Sciences		
DEPARTMENT	Creative Design And Clothing		
LEVEL OF STUDIES	Undergraduate		
MODULE CODE	203	**SEMESTER**	2
MODULE TITLE	History of Art and Costume II		

TEACHING METHODS AND ACTIVITIES	**LEARNING HOURS PER WEEK**	**CREDIT UNITS**
Lectures	4	**6**
TOTAL	4	

MODULE TYPE	Compulsory, Background Module, General Foundation Module
PREREQUISITE MODULES:	
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS	yes (English)
MODULE WEB PAGE (URL)	

2. LEARNING OUTCOMES

Learning Objectives

The course aims, through contact with the most important periods of art and artworks, to understand the relationship of artistic creation with the general cultural development of each period as well as to acquire the necessary knowledge about the historical components that compose the wide study spectrum for the evolution of Costume through the centuries. With the combination of theoretical investigation and practical application of the data analyzed during the theoretical presentations of the course, students will be able to identify the historical, social, aesthetic and multidimensional cultural context of the times that defines and marks the currents of clothing evolution from Renaissance until the end of the 19th century in Europe.

After attending the course students should:

- Understand the value of art as a continuous human creation.
- Be able to deal with the multifaceted phenomenon of art globally and to connect it in general with human society and clothing in every age.
- Be able to observe and understand the works of world art in different periods of history.
- Understand that the perceptions of each era and the different approaches of each artist to them affect the form and content of the work of art & capture the clothing of the respective period.
- Be aware of the big questions that people ask and the ways in which they are answered through art.
- Recognize the individual elements and influences of clothing of each historical period. Be able to observe and understand works of world art in different periods of history.
- Become familiar with the relevant terminology and to acquire tools for the description and analysis of works of art.
- Develop critical thinking in the way of approaching the works through the "reading" of their morphological characteristics and the inference of information about the time that created them.

General Skills

- Search, analysis and synthesis of sources
- Critical attitude towards issues related to Art & Clothing
- Individual & group work
- Promoting free, creative thinking.

3. MODULE CONTENT

Through a combination of theoretical inquiry and practical application of the elements of the course modules, students will be able to identify the historical, social, aesthetic and multi-dimensional cultural context of the historic periods that defines and marks the new trends of Fashion until the emergence of Haute Couture. During the module, the main elements of the models in male and female appearance that define the modern concept of the multidimensional social phenomenon of Fashion are studied. The social conditions, the aesthetic values as well as the psychological foundations of Fashion are examined through the historical approach of the periods that contributed to the evolution of clothing from the Renaissance (15th-16th centuries) until the emergence of High

Fashion in the late 19th century. At the same time, the artistic movements that shaped aesthetics during the 17th and 18th centuries (Baroque, Rococo) and the 19th century (Neoclassicism, Romanticism, Realism) are studied.

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHODOLOGY	The lectures of the subjects of the course will be presented with the use of supervisory means and the projection of digital lessons through the projector in the classroom. Also, during the courses, the internet will be utilized, especially during the execution of the laboratory exercises, as the students will be presented with the way of searching bibliography and using digital media. Field studies in cultural places related to the content of the course.
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Powerpoint presentations. Learning process support through the course website. Use of the internet and virtual applications to support laboratory exercises. Communication with students via e-mail, the course website and social media
TEACHING PLAN	
STUDENT EVALUATION	The final grade of the course is shaped by the performance of the students in the theoretical part. The evaluation of the course is formed by a written final exam.

Activity	***Semester Workload*** ***(25 h Semester Workload / CU)***
Lectures	52
Writing reports and project	13
Self-oriented research	85
Total	**150**

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- Gombrich, E. H. (1998). The chronicle of art. Athens: MIET. Athens, Greece.
- Lecturer's notes on the course website.
- Lagakou, N. (1998). N. N. K. (1998). N. (1998): Athens.
- Charalambidis, A. (2014). The Italian Renaissance: Architecture, Sculpture, Painting. Thessaloniki.
- Christou, Chr. (1970). The Italian Painting of the 14th and 15th centuries. Thessaloniki.
- Lambraki-Plaka, M. (2004). Italian Renaissance: Art and Society. Athens: Athens, Greece.

14.2.4 SCIENCE OF FIBRES AND FIBRE SSTRUCTURE

1. GENERAL

SCHOOL	Design Sciences		
DEPARTMENT	Creative Design And Clothing		
LEVEL OF STUDIES	Undergraduate		
MODULE CODE	**204**	**SEMESTER**	2
MODULE TITLE	Science of Fibres and Fibre Sstructure		

TEACHING METHODS AND ACTIVITIES	**LEARNING HOURS PER WEEK**	**CREDIT UNITS**
Lectures	3	**6**
Laboratory exercises	2	
TOTAL	5	

MODULE TYPE	Compulsory, Science Field Module, Specific Foundation Module
PREREQUISITE MODULES:	No
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS	yes (English)
MODULE WEB PAGE (URL)	e-learning platform (cdc.ihu.gr)

2. LEARNING OUTCOMES

Learning Objectives

After successfully attending the course students will have knowledge about:

- The nature, properties, production and use of textile fibers in finished textiles
- The methods of forming the fibers in particular structures such as yarns, types and properties of them.
- Quality and how this responds technically to the requirements of the end products and the consumer.

After successfully attending the course, students should:

- Have the necessary knowledge of the nature and importance of textile fibers and yarns for the clothing sector.
- Be able to identify fibers, know their trade names and be able to choose the appropriate materials (as a raw material) for the manufacture of clothing with the desired final characteristics.

General Skills

General competences that the degree-holder will acquire:

- Search for, analysis and synthesis of data and information, with the use of the necessary technology.
- Respect for the natural environment.
- Production of free, creative and inductive thinking.
- Working independently.
- Team work

3. MODULE CONTENT

Theoretical part:

Historical evolution. Classification, general characteristics of polymers and formation of natural and artificial fibers. General characteristics and properties of textile fibers (technical significance of length, fiber fineness, morphology, cross-section and method of measurement). Importance of maturity of cotton fibers, effect of temperature, humidity and light on the mechanical and physical properties of fibers, fiber resistance - recovery - lag - heat - absorption - absorption rates - diffusion - moisture retention etc.) of the main fibers used in the Clothing sector. The most important brands of fiber manufacturers, applications - uses - blends, innovations and innovative products. Identification of Fiber. Techniques and terminology applied to the textile industry. General principles of spinning systems. Study of the methods of producing yarns, mechanical equipment and factors affecting the quality of yarns. Sorting threads. Effect of twists on yarn and fabric properties. Monocular, polyclones, fantaise and texture yarns. Measurement and control of humidity. Check fiber and thread properties. Mechanical properties, uniformity test, yarn scarf coefficient of rubbing.

Laboratory part:

Introduction. First contact with textiles (fibers and yarns) and their macroscopic observation (recording of basic physical characteristics). Practice in the identification of textile fibers by microscopy (microscopic examination and observation of the morphology and cross-section of the fibers). Fiber moisture measurement (absorption rate, moisture content of various fibers, etc.).

Practice on textile identification by other methods such as:

- Special Shirlastein dyes

- Burning
- organic solvents
- specific gravity measurement, etc.

Practice in the calculation of finenesses of fibers and threads (monocular and polyclonal), measurement of yarn twists and calculation of torsional coefficient, measurement of tensile strength of a yarn in stress (stress-strain diagram)

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHODOLOGY	Face-to-face. In the classroom or in the Textile Lab.
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Use of ICT in teaching, laboratory education, communication with students
TEACHING PLAN	

Activity	***Semester Workload*** ***(25 h Semester Workload / CU)***
Lectures	50
Laboratory practice	30
Essay writing	40
Self-study	30
Total	**150**

STUDENT EVALUATION

In theory

Written final exam (100%) comprising:

- Short-answer questions
- Combination judgment questions
- Comparative evaluation of theory data
- Problem solving
- Open-ended questions

In the laboratory

Written examination (60%) comprising:

- Short answer questions
- Combination judgment questions
- Problem solving

40% complete forms in the lab

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- Richards A.F., Cropper A.E., Miraftab M., Holmes D.A., Introduction to Textiles, Volume 1, Textile Fibres, Editions - Edited in Greek by Vassiliadis S., Peppas Th., 1st edition, 2003.
- Rowe T., K.P. Busby, J.R. Halfrenney, D.A. Holmes, Introduction to Textiles, Volume 2, Yarn Technology, Editions - Edited in Greek by Th. Pippas, S. Vassiliadis, 1st edition, 2003.
- Vassiliadis S.G., Modern Spinning Technologies, S.G. Vassiliadis Publications, 1st edition, 1997.
- Primentas A., Moutsatsos Ch., Spinning Applications in Cotton System, N.A. Primentas Publications, 1st edition 2002.
- Kadolph S., Textiles, Fibre and Yarn Technology, Edited by E. Dimitrakopoulos, Ion Publications, 2014..
- Karagiannidis G., Sideridou E., Chemistry of Polymers, ZITI Publications, 2006.
- McIntyre J. E., The Chemistry of Fibres, Edward Arnold, London, 1971.
- Ullmann's Encyclopedia of Industrial Chemistry, 4th edition, VCH Verlagsgesellschaft, Weinheim, 1992.
- Williams E.D., Synthetic Fibre Materials, Longman, Harlow, 1994.

14.2.5 TECHNICAL DRAWING

1. GENERAL

SCHOOL	Design Sciences		
DEPARTMENT	Creative Design And Clothing		
LEVEL OF STUDIES	Undergraduate		
MODULE CODE	**205**	**SEMESTER**	2
MODULE TITLE	Technical Drawing		

TEACHING METHODS AND ACTIVITIES	**LEARNING HOURS PER WEEK**	**CREDIT UNITS**
Lectures	2	**5**
Laboratory exercises	2	
TOTAL	4	

MODULE TYPE	Compulsory, Science Field Module, Specific Foundation Module
PREREQUISITE MODULES:	No
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS	yes (English)
MODULE WEB PAGE (URL)	

2. LEARNING OUTCOMES

Learning Objectives

Technical drawing is a visual way of communication in the fashion industry, that includes all the important information (flat designs, measurements, notes, specification sheets) for a fashion design to become a finished garment. Based in 2D and 3D visual design, technical drawing plays an important role in quality and competitiveness of the final products.
This course is orientated to evolve students' technical design skills, analyze and communicate efficient garments' specifications through the fashion departments.
During the studio work, students get familiar with the use of CAD software (CorelDraw/Adobe Illustrator) on technical drawing.
Learning outcomes:

- Students learn the graphic design language of communication for creation in the fashion industry.
- Become aware of the importance of CAD software in the fashion industry, as a self-evolving and life process.
- Develop their fashion design skills with the use of CAD software.
- Demonstrate an ability of analyzing and critical thinking in terms of the style, construction, fabrics and other components suitable for garments realization.
- Evolve their design skills on technical drawing, analyzing garments' details & specifications.

General Skills

- Research, analysis and configuration of facts and information with the use of the essential technology.
- Group work.
- Project design and management.
- Encouragement of open minded, creative and inductive thinking.

3. MODULE CONTENT

Introduction in technical drawing design

- Design studio and tools
- Vectors
- Straight & curved line drawing
- Color application
- Color communication
- Fabrics and Components – Selection, processing, representation, finishing

Technical drawing digital design

- Creation of new file
- Draw basic shapes
- Edit basic shapes: Rotation & Merging
- Use of fashion body template
- Design technical drawing of shirt and blazer jacket

- Design technical drawing of skirt, trousers and denim jeans
- Design technical drawing of sportswear garments
- Design technical drawing of outerwear
- Creation of fashion brushes for buttons, stiches, endings, zipper
- Creation of technical drawing presentation board

SPECS – Specification Sheets

- Technical drawing and presentation - Storyboards
- Technical drawing and garments analysis for production – Spec Sheets
- Garments construction details
- Garments variations with technical drawing

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHODOLOGY	Lectures in class include discussion and students' active participation. During class PowerPoint presentations are taking place. CAD Studio work and use of CAD software. .
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Use of specialized design software Digital design exercises for self-evaluation Communication with students through emails, e-learning website and RSS feeds.
TEACHING PLAN	

Activity	***Semester Workload*** ***(25 h Semester Workload / CU)***
Lectures	10
Studio Work	25
Design Project essays	10
Independent Research	80
Total	**125**

STUDENT EVALUATION	Final grade is formed from students' performance in studio projects and lectures (theory) on condition that the grade is in both cases above base score. Students' evaluation will be based according to the level of their development in analytical thinking, understanding and consolidating technical drawing principles, their creativity, their skills in composing and design and also their participation in the educational courses. 1. Final essay of the lecture part includes: Multiple choice tests Solving questions with skills obtained during classes Comparative evaluation of the theoretical part 2. Final project's exam (a portfolio with technical drawings from all the semesters' classwork), includes the evaluation of technical & software skills obtained during semesters' classes.

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- Wood, B., (2019) Adobe Illustrator CC Step by Step. X. GIOURDA & SIA EE, Book [86055137[
- Wirschun, B., (2009). Electronic Garment Design with CorelDraw. Book [41957120]

- Complementary Bibliography

- Adu, Gyamfi, S. and Osei, Agyedu, G. (2008) Essentials of Information Technology, Willas Press Ltd Kumasi, Ghana.
- Burke, S. Fashion (2006) Fashion Computing: Design and Techniques and CAD.
- Center, M. and Vereker, F. (2008) Fashion Designer's Handbook for adobe Illustrator. Berns, R. S. (2000), Billmeyer

14.2.6 PRINCIPLES OF GARMENT MAKING

1. GENERAL

SCHOOL	Design Sciences		
DEPARTMENT	Creative Design and Clothing		
LEVEL OF STUDIES	Undergraduate		
MODULE CODE	**206**	**SEMESTER**	2
MODULE TITLE	Principles of Garment Making		

TEACHING METHODS AND ACTIVITIES	**LEARNING HOURS PER WEEK**	**CREDIT UNITS**
Lectures	1	**5**
Laboratory exercises	3	
TOTAL	**4**	

MODULE TYPE	Compulsory, Skills Development Module, Specific Foundation Module
PREREQUISITE MODULES:	No
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS	yes (English)
MODULE WEB PAGE (URL)	

2. LEARNING OUTCOMES

Learning Objectives

The acquisition of knowledge of the procedures and work performed in the environment of a garment production unit, from the raw material to the manufacture of the final product.
Upon successful completion of the course students should:
Understand the parameters and the stages of perfection of the garment from the design to its production through the monitoring of the manufacturing processes of the garments.
Be able to understand the philosophy of manufacture of clothing, by exploring the relationship that arises between somatometric data and fabric
Be aware of the various types, function and technical characteristics of the equipment & the various systems used for the manufacture of garments,
Study and be acquainted with the various alternative methods of assembling clothes
Use somatometric tools
Have developed skills in handling design tools for making garment patterns
Apply the methodologies of designing basic clothing standards of individualized and standard measures.
Use pattern conversion techniques on a variety of lines

General Skills

- Autonomic work
- Skills Development
- Search, analysis and synthesis of data and information, using the necessary technologies
- Adaptation to new situations
- Exercise criticism and self-criticism

3. MODULE CONTENT

Theoretical part: The structure of Garment manufacturing companies. The Premises and the Organization of the production department. General concepts of Sewing Technology. Historical Review and Evolution of the Technology of manufacturing clothes and sewing machines. Technical characteristics of tailoring equipment. Basic principles of pattern design and principles of garment assembly. From the template to the first sample, procedures and steps. Introduction to the philosophy of creating a corsage & skirt.
Workshop part: Application of the knowledge acquired in the theoretical part, through laboratory exercises and projects, with emphasis on the design of a basic prototype. Patterns and personalized body measures-variations, modifications of clothing pattern bases. Familiarity with the tools and equipment for recording somatometric dimensions. Familiarity with the tools and equipment for creating garment patterns and assembling (sewing) textile surfaces. Familiarity with seam quality assessment. (woven / knitted)

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHODOLOGY	Theoretical (face to face) teaching with presentation of methodology. Laboratory Exercises. Presentation and then execution of individual work. Monitoring and on-site correction of works.

USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Communication with students via e-mail.
TEACHING PLAN	<table><tr><th>***Activity***</th><th>***Semester Workload*** ***(25 h Semester Workload / CU)***</th></tr><tr><td>Lectures</td><td>13</td></tr><tr><td>Visits</td><td>8</td></tr><tr><td>Laboratory Exercises</td><td>39</td></tr><tr><td>Independent Study</td><td>65</td></tr><tr><td>***Total***</td><td>**125**</td></tr></table>
STUDENT EVALUATION	The final grade of the course is formed by the performance of the students in both the theoretical and the laboratory part, provided that the student has been evaluated with a passing grade in each part of the course. The evaluation of the course in terms of the theoretical part is formed by a written final examination of the theoretical part which includes: - Short answer questions 2. The examination of the laboratory exercises includes the evaluation of the laboratory skills acquired through a final examination of a related topic or laboratory work

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- Marckwort Marianne, Marckwort-Ulf-Heiner, Applied Tailoring, G.&S. Parikou & SIA EE, 1st ed./1996
- Almond, K. (2016). The Status of Pattern Cutting. Fashion Practice, 8, 168 - 180.
- Almond, K. Inspiration for Creative and Innovative Pattern Cutting.
- Hardingham, L. (2016). How a box can become a garment. International Journal of fashion design, Technology, and Education, 9, 105 - 97.
- Moretz, C.A. (2018). Transformative Innovative Pattern Cutting and Draping.
- Ward, J., & Shoben, M. (1987). Pattern Cutting and Construction (1st ed.). Routledge. https://doi.org/10.4324/9780080937946

14.3 3rd Semester Courses

14.3.1 FASHION FORECASTING AND DESIGN

1. GENERAL

SCHOOL	Design Sciences			
DEPARTMENT	Creative Design and Clothing			
LEVEL OF STUDIES	Undergraduate			
MODULE CODE	301	**SEMESTER**	3	
MODULE TITLE	Fashion Forecasting and Design			
TEACHING METHODS AND ACTIVITIES		**LEARNING HOURS PER WEEK**		**CREDIT UNITS**
Lectures		2		**5**
Laboratory exercises		3		
TOTAL		**4**		
MODULE TYPE	Compulsory, Science Field Module, Specific Foundation Module			
PREREQUISITE MODULES:				
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek			
COURSE OFFERED TO ERASMUS STUDENTS	yes (English)			
MODULE WEB PAGE (URL)	https://elearning.cm.ihu.gr/course/view.php?id=512			

2. LEARNING OUTCOMES

Learning Objectives
Through research and study of the trends for the Fashion market, the course aims to acquire knowledge related to modern Clothing design approaches. In addition, it aims to develop design skills within a framework defined by rules of commercialism and Fashion, as well as the development of research skills in Fashion Trends (shopping trends) After attending the course students should be able to: Search and analyze modern fashion trends. Understand how forecasting works and interpret the "messages" of the Market. Recognize and name the individual characteristics and influences of each trend. Design the new clothing requirements of the Market. Accurately design an up to date clothing product. Create updated design "environments" (moodboards). Use Forecasting as a design tool. Develop complete design proposals with a common style. Manage Garment Design with a commercial orientation.
General Skills
Search, analysis and synthesis of data and information, using the necessary technologies Adaptation to new situations Decision making Autonomous work Teamwork Exercise criticism and self-criticism Promoting free, creative and inductive thinking

3. MODULE CONTENT

Theory & studio: What is Fashion Prognosis and its impact in Fashion Design. Fashion Trends history and style bureaus. International Trade Fairs & their implication in the Design procedure. Research & trend sources. Methods of style updating within the design procedure. Trends management according to the style. Megatrends influence. Contains a studio project part. .

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHODOLOGY	Theoretical teaching and methodology presentation. Power point presentations are made during the course. Studio work. Presentation and then execution of individual work. Monitoring and on-site correction of works. Assignment of teamwork.
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Connecting students through e-learning platform.
TEACHING PLAN	

Activity	***Semester Workload*** ***(25 h Semester Workload / CU)***
Lectures	26
Studio Work	39
Group project	20
Personal study	40
Total	**125**

STUDENT EVALUATION	The final grade of the course is formed by the performance of the students in both the theoretical and the studio part, provided that the student has been evaluated with a passing grade in each part of the course. The evaluation of the course in terms of the theoretical part is formed by: 1. a written final examination of the theoretical part includes: Short Answer Questions Public presentation of work (optional). 2. The examination of the laboratory exercises includes the evaluation of the laboratory skills acquired through a final examination of a related topic and evaluation of the whole laboratory exercises (book).

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- Roland Barthes, (2016). Blue Is in Fashion This Year. PLETHRON E.E.

- Complementary Bibliography

- View, View on color, Textile Report, Bloom.
- Edelkoort, L. (1999). *The Theories Behind Colour Forecasting*. Glasgow: The Briggait Centre. October, 19th, 1999. (Presentation)
- Green, B. (1994). *An investigation into the decision-making process used by colorists within clothing fashion prediction, with special reference to women's wear*. London: Royal College of Art.
- Hipsey, J. C. (1995). *To what extent does fashion forecasting influence the fashion industry?* Leicester: De Montfort University.
- Perna, R. (1987). *Fashion Forecasting*. USA: Fairchilds Publications.
- Vinken, & M. Hewson, *Fashion Zeitgeist : Trends and Cycles in the Fashion System* (pp. 99-108). Oxford, GBR: Berg.

14.3.2 DESIGN & TECHNOLOGY OF CLOTHING PROTOTYPES I

1. GENERAL

SCHOOL	Design Sciences		
DEPARTMENT	Creative Design and Clothing		
LEVEL OF STUDIES	Undergraduate		
MODULE CODE	302	**SEMESTER**	3
MODULE TITLE	Design & Technology of Clothing Prototypes I		

TEACHING METHODS AND ACTIVITIES	**LEARNING HOURS PER WEEK**	**CREDIT UNITS**
Lectures	2	**5**
Applied exercises	3	
TOTAL	**5**	

MODULE TYPE	Compulsory, Science Field Module, Specific Foundation Module
PREREQUISITE MODULES:	
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS	yes (English)
MODULE WEB PAGE (URL)	

2. LEARNING OUTCOMES

Learning Objectives

The course aims to provide the student with basic knowledge and skills of making and processing patterns for woven garments. The interest is focused on understanding the pattern design techniques of drafting and using basic blocks for creating new designs.
Upon successful completion of the course the student should be able to:
Apply the pattern design methodologies for drafting skirt, bodice, sleeve and dress blocks.
Create pattern designs from basic skirt blocks such as yokes, high and low waist, tulip, balloon ect.
Apply the pattern design methodologies for drafting skirts like circles, paneled ect.
create pattern designs from basic bodice and dress blocks with different necklines, seams ect
Apply collar pattern design methodologies for drafting basic collar blocks and designs.
use techniques such as dart manipulation, pleats, cowl, ruffles, gathers, asymmetries, cuts, biaw cut, various lines such as A, flared etc.
create pattern designs of skirts, dresses, blouses and shirts from flats
Compose techniques for constructing models of various designs.
Implement clothing prototypes
Adopt all the above techniques, applying them in complicated skirt, dress, blouse and shirt designs

General Skills

Individual work
Skills Development
Search, analysis and synthesis of data and information, using the necessary technologies
Adaptation to new situations
Criticism and self-criticism

3. MODULE CONTENT

Lectures/Theory:
Block construction and manipulation for creating a wide range of garment styles, lines, seams and details in skirts, dresses and shirts. Creating decorative details-ruffles, folds, cowl, pleats gathering ect. Study the technical details of the garments (finishes, seams, accessories).

Lab/Practice:
Pattern cutting of simple and complex designs of skirts (e.g. high and low waist, yoke, circle, wrap, paneled, balloon, pleats, gather, bias cut), dresses (e.g. necklines, seams, non-symmetrical, pleats, gathers, ruffles, collars, sleeves) and shirts (e.g. collars, sleeves, yokes, plackets), applying methods and techniques in scale and real size. Pattern design and projects implementation.

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHODOLOGY	Lectures with presentation of methodology. Laboratory Exercise with presentation and practice individually. Monitoring and on-site correction of progress. .
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Communication with students via e-mail, module website and interaction within a closed social
TEACHING PLAN	

Activity	***Semester Workload*** ***(25 h Semester Workload / CU)***
Lectures	13
Studio Work	39
Atelier	26
Self-oriented research	47
Total	**125**

STUDENT EVALUATION	The final grade of the course is formed by evaluating the students both in theory and in lab, provided that in each part of the course a passing grade have been secured. 1. The evaluation of the theoretical part consists of a written examination which includes: - Short answer questions 2. The evaluation of the laboratory consists of a final drafting a pattern design from a technical flat or projects

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- Aldrich Winifred, Design and cutting of women's clothing, Stella Parikou & Co., 1 edition /2005
- Manavis A, Eukolidis N, Kyratsi P, Product Design Tools, A. Tziola & Sons Publications, 1st/2020
- Aldrich, W. (1999) Metric Pattern Cutting for Children's Wear and Babywear: from birth to 14 years.
- Aldrich, W. (1985) Metric Pattern Cutting for Children's Wear: from 2-14 years.
- Bray, N. (1964) More Dress Pattern Designing.
- Hadijah, I., Prahastuti, E., & Astuti, A.D. (2019). Analysis of dress pattern with body fitting without waist stitch in chiffon fabrics. Proceedings of the 2nd International Conference on Vocational Education and Training (ICOVET 2018).
- Kazlacheva, Z., & Radieva, K. (2021). Study on the manufacturing of patterned sleeves with curved shoulders. IOP: Materials Science and Engineering conference series, 1031.

14.3.3 HISTORY OF MODERN FASHION

1. GENERAL

SCHOOL	Design Sciences		
DEPARTMENT	Creative Design and Clothing		
LEVEL OF STUDIES	Undergraduate		
MODULE CODE	303	**SEMESTER**	3
MODULE TITLE	History of Modern Fashion		

TEACHING METHODS AND ACTIVITIES	**LEARNING HOURS PER WEEK**	**CREDIT UNITS**
Lectures	4	**5**
TOTAL	**4**	

MODULE TYPE	Compulsory, Science Field Module, Specific Foundation Module
PREREQUISITE MODULES:	
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS	yes (English)
MODULE WEB PAGE (URL)	https://elearning.cm.ihu.gr/course/view.php?id=513

2. LEARNING OUTCOMES

Learning Objectives

The ultimate goal of the course is to acquire the necessary knowledge about the historical trends that pervade the wide range of the modern phenomenon of Fashion. Through the combination of lectures and personal research in fields related to the thematic units of the course, students will be able to

Recognize the historical, social, aesthetic and cultural context of the times that defines and marks the new currents of Fashion from the appearance of Haute Couture to the establishment of the prêt-a-porter.

Identify, compare and justify the costume characteristics of each decade.

Connect and analyze the reasons for the prevalence of a Fashion.

Recognize the designers of each time period and their work

General Skills

research and sources' analysis

presenting and highlighting individual issues.

teamwork.

3. MODULE CONTENT

Theory. The social context, the aesthetics & the psychological impact on Fashion through a long period between the beginning of Haute Couture at the end of 19th century to the 60s prêt-a-porter culture. The Belle Epoque era, mid war season, the 50s under the New Look influence, new generation Designers of the 60s & the 70s.

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHODOLOGY	Theoretical teaching with powerpoint presentations. research in bibliography sources, visits in fashion exhibitions.
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Communication with students through the e-learning platform
TEACHING PLAN	

Activity	***Semester Workload*** ***(25 h Semester Workload / CU)***
Lectures	52
Dissertation	13
Personal study	60
Total	**125**

STUDENT EVALUATION	The final grade of the course comes from the students' performance in the theoretical part. The evaluation of the course in terms of the theoretical part, is formed by optional work & written final exam. The written final examination of the theoretical part includes: - development questions and / or multiple-choice questions

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- Dick Hempnitz, Subculture: The Meaning of Style, Elena C. Sarafidou & CO.
- Costume Design. History of Clothing, Payne Blance, Winakor Geitel, Farrell - Beck Jane
- Vigarello Georges, The History of Beauty, Alexandria S.A., 1st ed.
- V. Koutsou, Notes and presentations, History of Fashion (Theory)
- Lehnert G. (1999), Geschichte der Mode des 20 Jahrhundreds, Cologne: Konemann
- Mendes, V. & de la Haye, A. (1999). Twentieth Century Fashion. London: Thames & Hudson.
- Audot, F. (1999). A Century of Fashion. London: Thames & Hudson Ltd.
- Payne Blance, Winakor Geitel, Farrell - Beck Jane.(1997). The History of Costume. London: Addison Wesley Longman Inc.

14.3.4 FABRIC SCIENCE

1. GENERAL

SCHOOL	Design Sciences		
DEPARTMENT	Creative Design and Clothing		
LEVEL OF STUDIES	Undergraduate		
MODULE CODE	304	**SEMESTER**	3
MODULE TITLE	Fabric Science		

TEACHING METHODS AND ACTIVITIES	**LEARNING HOURS PER WEEK**	**CREDIT UNITS**
Lectures	3	**6**
Laboratory exercises	2	
TOTAL	**5**	

MODULE TYPE	Compulsory, Science Field Module, Specific Foundation Module
PREREQUISITE MODULES:	No
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS	yes (English)
MODULE WEB PAGE (URL)	e-learning platform (cdc.ihu.gr)

2. LEARNING OUTCOMES

Learning Objectives

After successfully attending the course students will have:

- Knowledge about the structure of the fabrics and how they are produced,
- The main categories of knitted, woven and non-woven textiles.
- Properties and use of each category of fabrics as well as their trade names

After successfully attending the course, students should:

- Be familiar with the technology, types and properties of knitted fabrics
- Know the technology, types and properties of woven fabrics
- Know the technology, types and properties of non-woven fabrics
- Describe the design and color schemes applied to different types of fabrics

General Skills

General competences that the degree-holder will acquire:

- Search for, analysis and synthesis of data and information, with the use of the necessary technology.
- Respect for the natural environment.
- Production of free, creative and inductive thinking.
- Working independently.
- Team work.

3. MODULE CONTENT

Theoretical part:

Knitted fabric technology. Evolution of knitting. Mechanisms of plotting and structure characteristics of knitted fabrics. Weft / warp knitting and lace. Fabrics of single/ double sock, pile and sweatshirt, zakar fabrics. Fully-fashioned machines, intarsia. Properties and use of knitwear. Recent developments in knitting.

Textile woven fabric technology. Evolution of weaving. Processes and mechanical equipment. Principles of Dobby - Jacquard systems. Principles of shuttle systems (rapier, projectile, water jet, air jet). Textile designs, color and weave effects, advanced textiles (3D fabrics, three-dimensional structures, multi-layer fabrics). Properties and uses.

Non-woven fabric technology. Production systems, uses and comparison with other fabric production systems. Properties and uses. Nomenclature of knitted and woven fabrics.

Laboratory part:

Experimental investigation of structural features of knitted / woven / non-woven fabrics. Analysis of structures and their presence. Ranking and creating a fabric file. Trade names.

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHODOLOGY	Face-to-face. In the classroom or in the Textile Lab.
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Use of ICT in teaching, laboratory education, communication with students

TEACHING PLAN	

Activity	***Semester Workload*** ***(25 h Semester Workload / CU)***
Lectures	60
Laboratory practice	40
Essay writing	30
Self-study	20
Total	**150**

STUDENT EVALUATION	**In theory** Written final exam (100%) comprising: ● Short-answer questions ● Combination judgment questions ● Comparative evaluation of theory data ● Problem solving ● Open-ended questions **In the laboratory** Written examination (60%) comprising: ● Short answer questions ● Combination judgment questions ● Problem solving 40% complete forms in the lab

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- Marks R., Lawton, P.J., Holmes D.A., Introduction In Textiles, Volume 1, Textile Fabrics, Publications - Editing in Greek Vassiliadis S., Peppas Th., 1st edition, 2003.
- Kadolph S., Textile Fabrics, Fabric Technology, Dyeing and Finishing, Edited by E. Dimitrakopoulos, Ion Publications, 2016.
- Eberle H., Hermeling H., Honberger M., Menztr D., Ring W., Fabrication Ii - Fabrics, Ette Publications, 1997.
- Gravas, Analysis of The Structure Of Knitted Fabrics, TEI of Piraeus, Department of Textiles, 2005.
- D. Spenser, Knitting Technology, 1980.
- Primentas N., Dictionary of Textile Terms, TEI of Piraeus, Department of Computer Science, 1998
- Perivaiotoy M., The Art of Fabric I And Ii, Ion Publications, 2004.
- Angelopoulou E. - Wolf, Textile Loom, Publications Domos, 1986.
- Brossard, Technologie Des Textiles, Dunod Publishing, 1977

14.3.5 DIGITAL TEXTILE DESIGN

1. GENERAL

SCHOOL	Design Sciences		
DEPARTMENT	Creative Design and Clothing		
LEVEL OF STUDIES	Undergraduate		
MODULE CODE	305	**SEMESTER**	3
MODULE TITLE	Digital Textile Design		

TEACHING METHODS AND ACTIVITIES	**LEARNING HOURS PER WEEK**	**CREDIT UNITS**
Lectures	2	**5**
Laboratory exercises	2	
TOTAL	**4**	

MODULE TYPE	Compulsory, Science Field Module, Specific Foundation Module
PREREQUISITE MODULES:	
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS	yes (English)
MODULE WEB PAGE (URL)	

2. LEARNING OUTCOMES

Learning Objectives

Over the past 15 years, digital printing technology has faced the primary needs of its multiple markets. Machines are now available at extremely fast print speeds to match the old analog rotary machines. Digital printing is not analog. Color stability is an industry standard, and printer, ink, and fabric suppliers try to overcome any limitations. Although digital color management in the clothing industry has been in place for many years, only in recent years have commercial systems provided comprehensive solutions linking all parties involved in the supply chain, such as designers, buyers and technologists.

The course intends to introduce students into the basic principles of print design and to provide the appropriate skills to undertake the transfer of practical printing techniques to fabric by digital means.

In the laboratory part of the course, students are familiar with the use of appropriate software and equipment to develop printing ideas and techniques and apply them to the base fabric as placement and reprinting printouts to create original creative work projects.

After attending the course, students should be able to:

Describe, interpret and use the technology of digital textile printing in the development of design techniques for printing processes.

Examine different printing methods and their application to their designs

Analyze and apply knowledge about printing techniques, including raw material options to solve design and production problems

Develop and produce print designs reflecting sampling, quality standards and technical specifications

General Skills

Implementation and creative adoption of a body of theoretical and technical knowledge and skills in design and fashion technology.

Recognition and implementation of relevant technologies in the fashion and manufacturing industries

Research and creative work in solving fabric design-related problems

Identification, analysis and thinking of fashion technology at local and/or global level

3. MODULE CONTENT

Traditional and technological techniques in modern fabric design

- Stationary and embossed printing
- Stencil technique
- Monochrome, Silkscreen Printing, Image Transfer, Marbling Methods
- Flattened and colored printing, stained resistant
- Traditional and technological techniques in modern fabric design

Development and progress of digital textile design

- New directions in fabric design
- The origin of digital printing technologies
- Thermal Transfer - Sublimation
- Spray Printing and Fabric
- Printing large fabric surfaces and digital format
- Significant industry reports on the digital printing of fabrics

- Industrial site visits
- Presentation of sophisticated fabric design software

Digital Colour Management

- Color communication
- Play color behavior on special equipment
- ICC color management advantages and disadvantages
- Color Separation

Digital Printing and mass- customisation

- Limitations, Time, Technology and Connectivity
- Product Lifecycles

Textile design in the digital era

- New Local Language
- Digital surface design and photo
- Graphic and Graphic Style Case Studies
- Pattern and pattern based on data
- Pattern Repeat Systems
- Size and type of recurrence
- Drawing Styles

Design Development in Illustrator & Photoshop

- Complex color blends
- Create a color palette
- Expand flower patterns
- Miscellaneous Effects & Filters
- Photo editing
- Texture Effects

Future Trends Μελλοντικές τάσεις

- Rebuilding a fabric plan and innovation using neural networks
- New design idea: from 3D to 2D fabric design for clothing applications
- Case Studies (Basso & Brooke, Philippa Brock, James Bullen, Malcolm Cocks, Philip Delamore, Eley
- Kishimoto, Tomoko Hayashi, Casy Reas, Mary Katrantzou κα)

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHODOLOGY	Lecturing with discussion and students' active participation. During class, share of powerpoint presentation. Use printing equipment for direct printing on clothing and specialized software. Laboratory measurements
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Self-evaluation e-exercises (Quizes) Communication via e-mail, course moodle and RSS feeds.
TEACHING PLAN	

Activity	***Semester Workload*** ***(25 h Semester Workload / CU)***
Lectures	26
Writing lab reports and projects	14
Self study	85
Total	**125**

STUDENT EVALUATION	The final grade of the course shall be determined by the student's performance in both the theoretical and the laboratory parts, provided that the student has been assessed with a passing grade in each part of the course. The evaluation of the course as regards the theoretical part shall be based on a written final examination. 1. The written final examination of the theoretical part shall include: ● Multi-Select Questions ● Troubleshoot problems in applying acquired knowledge. ● Benchmarking of theory data. 2. The examination of laboratory exercises shall include the evaluation of laboratory skills acquired through examination of laboratory exercises, where laboratory equipment is used. Projects may also be contracted out with the industry, in collective or individual stages

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- Manavis A., Minaoglou P., Eukolidis N, Kyratsi P., Product Design Tools, 2nd Edition, A. TZIOLA & Sons S.A. Book [112692019]
- Perivoliotou, M., (2004). The Art of Fabric II - Weaving, Interweaving. Ion Book Code in Eudoxos: [14581]
- Vasilakos, A., (2008). Digital Forms of Art. TZIOLA Publications, Book Code in Eudoxos: [18549065

- Complementary Bibliography

- E. Papachristou, Digital Fabric Design - Theory Notes and Slides, Kilkis.
- E. Papachristou, Digital Fabric Design - Laboratory exercises, Kilkis.
- Clarke Braddock, S., & Hariis, J., (2012) Digital Visions for Fashion + Textiles made in code, Thames and Hudson Ltd
- Doe, T., (2015) Textile Design in the Digital Age, Goodman Books
- Jackson, P., (2018). How to Make a Repeat Pattern: A Guide for Designers, Architects and Artists. Laurence King Publishing
- Clothing and Textiles Research Journal

14.3.6 PRINCIPLES OF MARKETING IN CLOTHING

1. GENERAL

SCHOOL	Design Sciences		
DEPARTMENT	Creative Design and Clothing		
LEVEL OF STUDIES	Undergraduate		
MODULE CODE	306	**SEMESTER**	3
MODULE TITLE	Principles of Marketing in Clothing		

TEACHING METHODS AND ACTIVITIES	**LEARNING HOURS PER WEEK**	**CREDIT UNITS**
Lectures	3	**4**
TOTAL		

MODULE TYPE	Compulsory, Background Module, General Foundation Module
PREREQUISITE MODULES:	
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS	YES (Project assignments in English)
MODULE WEB PAGE (URL)	

2. LEARNING OUTCOMES

Learning Objectives

The aim of this module is to help students understand the principles, philosophy and applications that characterize marketing in clothing. More specifically, the purpose of the course is to present the contribution and function of marketing in the field of apparel organizations. Through the study to be carried out, the student will be able to:
Understand the role of the Marketing Information System and Marketing Research in supporting clothing marketing decisions
Understand the parameters used to segment the markets.
Identify the elements of the Marketing mix to be used to design a Marketing strategy in clothing.
Explore the electronic tools that facilitate marketing communications in the clothing industry.
The case study tool is used for problem solving and decision making
Key functions related to the modern management of marketing analysis in the field of clothing organizations
Methodological approaches and design interventions to effectively monitor the factors affecting their performance in clothing organizations in order to measure the resulting benefits (in the broader social, economic, environmental context).
Academic contribution and approach of the subject

General Skills

Search, analyze and synthesize data and information using the necessary technologies.
Working in an international environment.
Adaptation to new situations.
Promote free, creative and inductive thinking.
Decision making.
Teamwork.
Respect for diversity and multiculturalism

3. MODULE CONTENT

This course will introduce students to current principles in clothing organizations.
The classes (in Greek and English) focus specifically on the following topics:
Historical development of Marketing. Introduction to its basic functions.
Marketing environment in clothing.
The importance of marketing research.
Target market definition, clothing market segmentation, product / clothing brand placement.
Marketing Mix: The Strategy of the product.
The pricing strategy in clothing.
The system strategy distribution in clothing.
The strategy of communication and promotion in clothing. International Marketing. Strategies in Clothing.
New forms of Marketing.
Digital Marketing (e-marketing) in clothing.
Launch, develop and achieve a marketing plan goal

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHODOLOGY	Face to face (lectures, power point presentations and class discussions, case studies).
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Computer, multimedia projector, Internet, e-mail, moodle platform.
TEACHING PLAN	

Activity	***Semester Workload*** ***(25 h Semester Workload / CU)***
Lectures	40
Field exercises	35
Asynchronized autonomous study	25
Total	**100**

STUDENT EVALUATION	Written final exam (70%) that includes development and comparative evaluation of theory with emphasis on the clothing industry Individual assignments (30%) concerning the consumer and clothing brands

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- Kotler-Keller "Marketing Management", Klidarithmos, 15th US edition, 2016.
- Siomkos, G. "Strategic Marketing", Broken Hill Publishers Ltd., 5th edition, 2018.
- Konstantinos Tzortzakis, Alan Charlesworth, MARKETING - Including Digital Marketing

- Complementary Bibliography

- Solomon M. et al. "Marketing", Tziola Publications, 10th edition, 2020; Kotler-Keller "Marketing Management", Klidarithmos Publications, 15th US edition, 2016.
- Armstrong G. & Kotler P., (2009) Introduction to marketing. Epikentro Publications, Thessaloniki, Greece.
- Journal of Fashion Marketing and Management
- Journal of Global Fashion Marketing
- Journal of marketing
- European Journal of marketing
- Journal of marketing management
- Journal of Retailing and Consumer Services

Useful Links:

- https://www.ama.org/
- https://www.wtamu.edu/~sanwar.bus/otherlinks.htm
- http://www.elam.gr/
- Academy of Marketing: http://www.academyofmarketing.info/
- Academy of Marketing Science: http://www.ams-web.org/
- AIEST (International Association of Scientific Experts in Tourism): http://www.aiest.org/
- American Marketing Association: http://www.marketingpower.com/
- Association for Consumer Research: http://www.acrweb.org/
- Association for Qualitative Research: http://www.aqr.org.uk/
- Association Française du Marketing: http://www.afm-marketing.org/
- Chartered Institute of Marketing: http://www.cim.co.uk/
- Direct Marketing Association: http://www.the-dma.org/
- e-Marketing Association: http://www.emarketingassociation.com
- European Marketing Academy: http://www.emac-online.org/associations/emac/index.asp
- European Society for Opinion & Marketing Research (ESOMAR): http://www.esomar.org
- Ελληνικό Ινστιτούτο Μάρκετινγκ: http://www.eede.gr/i_eim_about.htm
- Federation of European Direct Marketing: http://www.fedma.org

14.4 4th Semester Courses

14.4.1 CONCEPTION AND DEVELOPMENT OF DESIGN IDEA

1. GENERAL

SCHOOL	Design Sciences		
DEPARTMENT	Creative Design and Clothing		
LEVEL OF STUDIES	Undergraduate		
MODULE CODE	**401**	**SEMESTER**	4
MODULE TITLE	Conception and Development of Design Idea		

TEACHING METHODS AND ACTIVITIES	**LEARNING HOURS PER WEEK**	**CREDIT UNITS**
Lectures	2	**5**
Studio Work	3	
TOTAL	**5**	

MODULE TYPE	Compulsory, Science Field Module, Specialty Module
PREREQUISITE MODULES:	
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS	yes (English)
MODULE WEB PAGE (URL)	https://elearning.cm.ihu.gr/course/view.php?id=666

2. LEARNING OUTCOMES

Learning Objectives

The course focuses on the production of design knowledge that is required in the phases of Conceptual Design (conceptualization phase). The aim is to learn conceptual tools for capturing design ideas (Concept Design and Development) related to different categories of Garments and the techniques required.

Sub-objectives of the course are: Methodological design with emphasis on the implementation of design objectives, design through understanding the needs and requirements of users, introduction to conceptual design with emphasis on functionality, usability, aesthetic quality and technical perfection, capture of design ideas in portfolio. Evaluation of design ideas.

After attending the course students should be able to:

- Understand the concept of conceptual design using creative and methodological tools.
- Be able to adequately handle and produce a set of tools and methods for the development and design of clothing products.
- Realize the role of multiple functions in creating a new product.
- Present and defend their design ideas.
- Be able to independently manage knowledge and adapt to complex and unclear design problems.

General Skills

- Search, analysis and synthesis of data and information, using the necessary technologies
- Decision making
- Production of new research ideas
- Exercise criticism and self-criticism
- Promoting free, creative and inductive thinking
- Project design and management

3. MODULE CONTENT

Theoretical & Studio course. Design methodology with emphasis in accomplishing design goals. Understanding the consumers' needs & requirements. Creating a concept with a focus on functionality, usability, aesthetics quality & technique adequacy. Developing ideas through concept boards, evaluating design process & ideas.

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHODOLOGY	Development, execution & monitoring of individual work. Group discussion and review of works.
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Communication with students through the e-learning platform
TEACHING PLAN	

	Activity	Semester Workload (25 h Semester Workload / CU)
	Lectures	25
	Studio Work	55
	Personal study/research	45
	Total	**125**
STUDENT EVALUATION	The evaluation of the course includes the skills acquired through a final examination of a related topic and evaluation of the whole studio projects	

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- Karl T. Ulrich, Design: The Design of Objects In Modern Society, Book [86200864]
- Kyratsi Panagiotis, Manavis Athanasios, Eukolidis Nikolaos Product Design Methodologies, Book [94689158]
- McKelvey Kathryn (2005). Fashion Research - 1600 Ideas. Ion
- Ulrich, K. DESIGN-Creation of Artifacts in Society
- Frings, G.S. (1991). Fashion from Concept to Consumer. New Jersey: Prentice-Hall Inc.
- Garnham, A. & Oakhill, J. (1994). Thinking & Reasoning. Oxford: Blackwell Publishers.
- Fiore, Anne Marie, & , Kimle, Patricia Anne, 1997. Understanding Aesthetics for the Merchandising & Design Professional. New York: Fairchilds Publications, Inc

14.4.2 DESIGN & TECHNOLOGY OF CLOTHING PROTOTYPES II

1. GENERAL

SCHOOL	Design Sciences		
DEPARTMENT	Creative Design and Clothing		
LEVEL OF STUDIES	Undergraduate		
MODULE CODE	402	**SEMESTER**	4
MODULE TITLE	Design & Technology of Clothing Prototypes II		

TEACHING METHODS AND ACTIVITIES	**LEARNING HOURS PER WEEK**	**CREDIT UNITS**
Lectures	2	**6**
Applied exercises	4	
TOTAL	**6**	

MODULE TYPE	Compulsory, Science Field Module, Specific Foundation Module
PREREQUISITE MODULES:	
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS	yes (English)
MODULE WEB PAGE (URL)	

2. LEARNING OUTCOMES

Learning Objectives

The course aims to provide the student wit basic knowledge and skills of making and processing patterns for woven garments. The interest is focused on understanding the pattern design techniques of drafting and using basic blocks for creating new designs.
Upon successful completion of the course the student should be able to:
Recognize the peculiarities of the patterns for knitted garments
Apply the methodologies for drafting trousers and knitted blocks.
Create pattern designs from basic blocks or modification of existing patterns.
Apply the methodologies for drafting simple and complex knitted patterns such as raglan sleeve, swimwear, underwear, twisted, knotted, oversized ect.
Apply the methodologies for drafting simple and complex trousers patterns such as slim, flared, cargo, buggy, cowl, tulip, ect.
Combine techniques for constructing models of various designs.
Implement clothing prototypes
Adopt all the above techniques, applying them in complicated trousers and knitted designs

General Skills

Individual work
Skills Development
Search, analysis and synthesis of data and information, using the necessary technologies
Adaptation to new situations

3. MODULE CONTENT

Lectures/Theory:
Block construction and manipulation for creating a wide range of trousers and jersey garment designs. The specifications of the garment and the measurements for the accuracy of the design. Creating specification sheets.
Lab/Practice:
Pattern cutting of simple and complex designs of trousers (e.g. high and low waist, yokes, pleats, flared, harem, baggy, cowl, jumpsuit, overall) with details such as pockets, turn ups, pleats, etc and knitted garment based on the properties of the fabric (e.g. t—shirts, body, leggings, swimwear, underwear, twisted, knotted, wrapped, oversized) applying methods and techniques in scale and real size. Pattern design and projects implementation.

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHODOLOGY	Lectures with presentation of methodology. Laboratory Exercise with presentation and practice individually. Monitoring and on-site correction of progress
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Communication via e-mail.

TEACHING PLAN	

Activity	***Semester Workload*** ***(25 h Semester Workload / CU)***
Lectures	51
Studio Work	52
Atelier	26
Self-oriented research	21
Total	**150**

STUDENT EVALUATION	The final grade of the course is formed by evaluating the students both in theory and in lab, provided that in each part of the course a passing grade have been secured. The evaluation of the theoretical part consists of a written examination which includes: Short answer questions The evaluation of the laboratory consists of a final drafting a pattern design from a technical flat or projects

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- Haggar Ann, Design and cutting of lingerie, swimwear and sportswear, Book [14725]
- Cooklin Cerry, Design and cutting for oversized women's clothing, Book [14537]
- Aldrich Winifred, Designing and cutting for loose-fitting garments, Book [14726]
- Aldrich Winifred, Design and cutting for children's and baby clothes, Stella Parikos & Co., 1st ed./2006
- Eukolidis Nikolaos, Manavis Athanasios, Kyratsi Panagiotis, Design and Prototyping of Products, Publications A. Tziolas & Sons S.A., 1st/2021
- Aldrich, W. (1990) Metric Pattern Cutting for Menswear: Including Unisex Casual Clothes and Computer Aided Design.
- Watkins, P. (2011). garment pattern design and comfort.
- Watkins, P. (1999) Design For Movement: Block Pattern Design For Stretch Performance Wear.
- Watkins, P. (2011). designing with stretch fabrics.
- Yoon, J., & Lee, M. (2006) Design Analysis and Apparel Patternmaking of Lingerie Look. Journal of the Korean Society of Costume, 56, 152-166.

14.4.3 STYLE SEMIOLOGY

1. GENERAL

SCHOOL	Design Sciences		
DEPARTMENT	Creative Design and Clothing		
LEVEL OF STUDIES	Undergraduate		
MODULE CODE	403	**SEMESTER**	4
MODULE TITLE	Style Semiology		

TEACHING METHODS AND ACTIVITIES	**LEARNING HOURS PER WEEK**	**CREDIT UNITS**
Lectures	3	**4**
TOTAL	**3**	

MODULE TYPE	Compulsory, Science Field Module, Specific Foundation Module
PREREQUISITE MODULES:	
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS	yes (English)
MODULE WEB PAGE (URL)	https://elearning.cm.ihu.gr/course/view.php?id=190

2. LEARNING OUTCOMES

Learning Objectives

The course seeks a semantic approach to the predominance of a style and aims through the study of 20th century designer style to enable students to recognize the elements that structure it and reproduce it through its technical and aesthetic details. Upon successful completion of the course students should:

- Understand modern costume approaches and interpret them
- Recognize the clothing elements that characterize a style
- Describe this style in detail
- Reproduce a costume proposal with an emphasis on maintaining style
- Approach a stylistic phenomenon with a critical spirit

General Skills

Research and sources analysis.
Presentation and highlighting of individual issues.
Teamwork.

3. MODULE CONTENT

Theory. A study on styles that appeared in Art and Fashion and were followed by different designers: from Bauhaus' minimalism to the 60s futurism. From the 80s Androgyne & Unisex to the a-gender generation. The grunge through the Belgian designers' of the 90s. Fashion Deconstruction. Historical Maximalism. Folclore & Ethnic. From Metabolists to style Bio. The Japanese style.

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHODOLOGY	Theoretical teaching with powerpoint presentations, research in bibliography sources, issues development.
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Theoretical teaching with powerpoint presentations, research in bibliography sources, issues development.
TEACHING PLAN	

Activity	***Semester Workload*** *(25 h Semester Workload / CU)*
Lectures	50
Project	25
Personal study	25
Total	**100**

STUDENT EVALUATION	The final grade of the course comes of the performance of the students in the theoretical part. The evaluation of the course in terms of the theoretical part acquires ● compulsory work / presentation & ● written final exam. The written final examination of the theoretical part includes: - development questions.

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- Stuart Hall , The work of representation, Book [68388528]
- Baudrillard Jean, On Enchantment, Book [77119888]
- Roland Barthes, Elements of Semiotics, Book [41962841]
- Roland Barthes, (2016).Blue is in fashion this year. PLETHRON LTD.
- Dick Hempnitz, (1988). Sub-culture: The meaning of style. Knowledge
- B Koutsu, Notes and presentations, Semantics of style
- Craik, J. (2009). fashion, aesthetics and art. In J: The basic concepts (pp. 171-198). Oxford, GBR: Berg.
- Davis, F. Fashion, culture and identity, Chicago: University of Chicago Press.
- Loschek, I. (2009). does fashion need a theory? In I. Loschek, When clothes become fashion: Design and systems of innovation. Oxford: Berg. Murray, M. P. (1989). Changing Styles in Fashion: who, what, why. New York: Fairchild.
- Vinken, B., & Hewson, M. (2004). Comme des Garçons: Ex Oriente Lux. In B. Vinken, & M. Hewson, Fashion Zeitgeist: Trends and Cycles in the Fashion System (pp. 99-108). Oxford, GBR: Berg.
- Vinken, B., & Hewson, M. (2004). In B. Vinken, & M. Hewson, Fashion Zeitgeist: Trends and Cycles in the Fashion System (pp. 139-151). Oxford, GBR: Berg.

14.4.4 TEXTILE PROCESSING

1. GENERAL

SCHOOL	Design Sciences		
DEPARTMENT	Creative Design and Clothing		
LEVEL OF STUDIES	Undergraduate		
MODULE CODE	**404**	**SEMESTER**	4
MODULE TITLE	Textile Processing		

TEACHING METHODS AND ACTIVITIES	**LEARNING HOURS PER WEEK**	**CREDIT UNITS**
Lectures	3	**6,5**
Applied exercises	2	
TOTAL	**5**	

MODULE TYPE	Compulsory, Science Field Module, Specific Foundation Module
PREREQUISITE MODULES:	No
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS	yes (English)
MODULE WEB PAGE (URL)	e-learning platform (cdc.ihu.gr)

2. LEARNING OUTCOMES

Learning Objectives

After successfully attending the course students will have:

• Knowledge of basic processes for fibers, yarns, fabrics, clothes for the qualitative and aesthetic upgrading of textile products with emphasis on clothes.

• Knowledge of preparation, dyeing, printing, finishing and the quality requirements of textiles are the subject of a theoretical and experimental investigation.

After successfully attending the course, students should be familiar with the machines, materials, and technology for:

- Preparation for dyeing of textiles.
- How to dye different fibers and fabrics.
- The technique and types of prints.
- Ways and types of finishing.
- Be aware of the qualitative assessment of the above processes and environmental requirements / impacts

General Skills

General competences that the degree-holder will acquire:

- Search for, analysis and synthesis of data and information, with the use of the necessary technology.
- Respect for the natural environment.
- Production of free, creative and inductive thinking.
- Working independently.
- Team work.

3. MODULE CONTENT

Theoretical part:

Preparation of fabrics for dyeing (machines, materials and technology for the most representative textile fibers). Dyeing. Apply selected dye groups for the most common applications in fabrics and ready-to-wear clothes, with exhaustive and continuous techniques. The operation of dyeing and knitting machines, woven fabrics and special products. Materials and factors affecting the dyeing, parameters of the dyeing process and its control. Types. Chemical and mechanical properties. Methods and machines for printing (cylinders, stacks, inkjet). Batik and Tie-dye styles. Innovative applications and alternative printing methods. Stiffening mechanism. Errors and checks of prints.

Finishes. Mechanical and chemical finishing of knitted and woven fabrics. Processes and finishing materials. Techniques and effects. Innovative materials, requirements in the clothing industry. Qualitative and quantitative assessment of the results of dyeing and finishing treatments. Environment and ecological requirements.

Laboratory part:

Experimental implementation regarding:

- The preparation and cleaning of textile products
- Dyeing treatments by type of fabric and corresponding dyeing.
- Printing applications with flat-panel, ink-jet and transfer techniques.
- Finishing process applications

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHODOLOGY	Face-to-face
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Use of ICT in teaching, laboratory education, communication with students
TEACHING PLAN	

Activity	***Semester Workload*** ***(25 h Semester Workload / CU)***
Lectures	50
Laboratory practice	40
Team work	30
Educational visits	10
Self-study	32,5
Total	**162,5**

STUDENT EVALUATION	**In theory** Written final exam comprising: ● Short-answer questions ● Combination judgment questions ● Comparative evaluation of theory data **In the laboratory** Written examination comprising: ● Short answer questions ● Combination judgment questions ● Problem solving

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- D. J. Hill, M. E. Hall, D. A. Holmes, M. Lomas, K. Padmore, Dyeing and Finishing Technology, Translated by Th. Pepa, S. Vassiliadis, Athens 2003
- G. Karagiannidis, E. Sideridou, Chemistry and Polymers, Ziti Publications, 2006
- I. Eleftheriadis, E. Tsatsaronis, N. Nikolaidis, Chemistry and Technology of Colour, KALLIPOS Publications e-book
- Giles, C. H. A., Laboratory Course in Dyeing, 4th edition, The Society of Dyers and Colourists, Bradford, 1990
- D. M. Lewis, Wool Dyeing, Society of Dyers and Colourists, Bradford, 1992.
- R. Donald, Colour physics for industry, Soc. of Dyers and Colourists, Bradford, 1987
- B. Meyer, H. R. Zollinger, Colorimetry, Sandoz, Basle, 1989
- L. W. C. Miles, Textile Printing, Dyers Company Publication Trust, Bradford, 1981
- E. D. Stiebner, Drucktechnik heute, Novum Press, Münche, 1990
- M. Peter, H. Rouette, Grundlagen der Textilveredlung, Spohr Verlag, 13 Auflage, Frankfurt / Main, 1980
- Tensidtaschenbuch, H. Stache, Carl Hanser Verlag, München, Wien, 1981
- 9. G. Turner, Paint Chemistry, 2th edition, Chapman & Hall, London, NY, 1980.

- Complementary Bibliography

- Giles, C. H. A., Laboratory Course in Dyeing, 4th edition, The Society of Dyers and Colourists, Bradford, 1990
- D. M. Lewis, Wool Dyeing, Society of Dyers and Colourists, Bradford, 1992.
- 3 R. Donald, Colour physics for industry, Soc. of Dyers and Colourists, Bradford, 1987
- B. Meyer, H. R. Zollinger, Colorimetry, Sandoz, Basle, 1989
- L. W. C. Miles, Textile Printing, Dyers Company Publication Trust, Bradford, 1981
- E. D. Stiebner, Drucktechnik heute, Novum Press, Münche, 1990
- M. Peter, H. Rouette, Grundlagen der Textilveredlung, Spohr Verlag, 13 Auflage, Frankfurt / Main, 1980
- Tensidtaschenbuch, H. Stache, Carl Hanser Verlag, München, Wien, 1981
- 9. G. Turner, Paint Chemistry, 2th edition, Chapman & Hall, London, NY, 1980.

14.4.5 STATISTICS FOR TEXTILE AND CLOTHING INDUSTRY

1. GENERAL

SCHOOL	Design Sciences		
DEPARTMENT	Creative Design and Clothing		
LEVEL OF STUDIES	Undergraduate		
MODULE CODE	405	**SEMESTER**	4
MODULE TITLE	Statistics for Textile and Clothing Industry		

TEACHING METHODS AND ACTIVITIES	**LEARNING HOURS PER WEEK**	**CREDIT UNITS**
Lectures	3	**4**
TOTAL		

MODULE TYPE	Compulsory, Background Module, Specific Foundation Module
PREREQUISITE MODULES:	
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS	yes (English)
MODULE WEB PAGE (URL)	http://moda.teicm.gr/DEF1947B.el.aspx

2. LEARNING OUTCOMES

Learning Objectives
The course aims at acquiring basic knowledge on the concepts and principles of Statistics, the ability to understand a study that contains statistical analysis and finally the ability to use statistical methods in business problems. After successfully completing the course, students will be able to understand basic methods of qualitative and quantitative data analysis and their role in making business decisions. Combined with computer use, students acquire practical skills in how to present information, draw conclusions from large populations by sampling, and realize the possibility of reliable predictions for different financial quantities
General Skills
The course aims at acquiring basic knowledge on the concepts and principles of Statistics, the ability to understand a study that contains statistical analysis and finally the ability to use statistical methods in business problems. After successfully completing the course, students will be able to understand basic methods of qualitative and quantitative data analysis and their role in making business decisions. Combined with computer use, students acquire practical skills in how to present information, draw conclusions from large populations by sampling, and realize the possibility of reliable predictions for different financial quantities

3. MODULE CONTENT

Introduction & Descriptive Statistics, Variables – Values - Observations, Types of Variables, Position Measures, Dispersion Measures, Coefficient of Variation, Asymmetry and Kurtosis, Graphs (Histogram & Box Plot) Introduction to Probability & Distributions of Discrete Random Variables, Mean and Variance of Discrete Random Variable, Bernoulli Distribution, Binomial Distribution, Poisson Distribution Continuous Random Variables Distributions, Probability Functions of Continuous Random Variables, Normal Distribution, t-Student Distribution, x2 Distribution, F Distribution Central Limit Theorem, Confidence interval for mean and ratio, Confidence interval for mean value differences, Confidence interval for pairwise observations, Confidence interval for difference of ratios

Sampling, Simple random sampling (error estimation & size of a sample), Systematic sampling, Stratified, Cluster sampling, Multilevel or multistage sampling.

Hypothesis tests, Significance test for mean value, Significance test for ratio, Significance test for difference between two mean values, Significance test for comparison of mean values (paired observations, Significance check for comparison of two ratios, Independence test of two categorical variables (X2) Linear correlation - Linear regression, Covariance, Linear correlation coefficient, Simple regression, Regression errors, coefficient of determination, Standard estimation error

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHODOLOGY	Face to face lectures in class and e-learning support
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Teaching support through course webpage, students contact electronically Use of Excel

TEACHING PLAN	

Activity	***Semester Workload*** ***(25 h Semester Workload / CU)***
Lectures	20
Tutoring	13
Self study	61
Total	**100**

STUDENT EVALUATION	Final Exam (100%), containing problem solving and/or short answer questions.

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- Zafeiropoulos Kostas, Introduction to statistics and probability, Book [59368069]
- -Related scientific journals:
- Hlouverakis G., "Introduction to Statistics - Descriptive Methods and Applications", Ed. "Hellenic Graphics, "Hellenic Graphics and Graphics Engineering", 2012.
- Valaristos A., "Statistics of Textiles and Clothing", Notes, Kilkis 2010.
- Drossos G., "Statistics & Data Analysis", Anikoula Publications, Thessaloniki 2006.
- Chalikias I., "Statistics - Methods of Analysis for Business Decisions", Athens, Rosili Publications, 2003.
- Zacharopoulou H., 'Statistics - Methods - Applications', Volume A, Thessaloniki, Zygos Publishers, 2001.
- Ioannidis D., "Statistical Methods", Volume I, Thessaloniki, Ziti Publications, 2001.
- Halkos G., "Statistics, theory - applications & use of statistical programs on computers", Athens, Typothetio Publications - Giorgos Dardanos, 2000.
- Karapistolis N., "Business Statistics", Thessaloniki, Anikoula Publications, 2001.
- Hovardas V., "Business Statistics", Macedonian Publications, 1996.

14.4.6 COMMUNICATION AND PROMOTION STRATEGIES

1. GENERAL

SCHOOL	Design Sciences		
DEPARTMENT	Creative Design and Clothing		
LEVEL OF STUDIES	Undergraduate		
MODULE CODE	406	**SEMESTER**	4
MODULE TITLE	Communication and Promotion Strategies		

TEACHING METHODS AND ACTIVITIES	**LEARNING HOURS PER WEEK**	**CREDIT UNITS**
Lectures	3	**5**
TOTAL	**3**	

MODULE TYPE	Compulsory, Background Module, Specific Foundation Module
PREREQUISITE MODULES:	
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS	YES (Project assignments in English)
MODULE WEB PAGE (URL)	

2. LEARNING OUTCOMES

Learning Objectives

The aim of this module is to help students understand the importance of promotion and communication strategies, as determining factors in shaping the promotional mix, in the operation of the clothing organizations. More specifically, it aims to learn the techniques and methods applied by the promotional mix for the analysis of business problems and the formulation of a comprehensive communication marketing strategy in terms of products or services offered. Through the study to be carried out, the student will be able to:
Understand the role of the individual components of a Communication and Promotion (C&P) program and how they work together / complement each other.
Design Marketing research in clothing and apply the findings
Select the target audience and develop strategies for the (C&P) program
Understand how (C&P) Strategies help build clothing brand identity, brand relationships and brand value.
Select (C&P) mixes to achieve the communication goals and consumer behavior of the campaign in clothing.
Monitor the process of developing an advertising strategy.
Measure and critically evaluate the communication results of an (C&P) campaign in clothing, to determine its success.
Contribute academically and approach the subject

General Skills

Search, analysis and synthesis of data and information
Respect for diversity and multiculturalism
Respect for the natural environment
Adaptation to new situations
Decision making
Autonomous work
Work in an interdisciplinary environment
Work in an international environment
Demonstration of social, professional and moral responsibility and sensitivity to gender issues
Exercise criticism and self-criticism
Promoting free, creative and inductive thinking
Respect for diversity and multiculturalism

3. MODULE CONTENT

The role of Communication and Promotion Strategies:

- In the marketing plan: how they enhance the "brand value" of clothing and cultivate customer / consumer - brand relationships.
- In the promotion of new clothing products in the market: segmentation, goals, placement, communication creating, sending and receiving clothing brand messages

Communication tools in clothing

- Advertising
- Sales promotion
- Personal sale

- Public Relations and Promotion of the Clothing Brand
- Direct Marketing (databases, email)
- Events, sponsorships and customer service

Types of media:

- Print media
- TV
- Radio
- Outdoor media (posters, banners etc)
- Internet

Communications programming for the clothing brand:

- Selection of the target audience
- Development of a strategy for the media
- Selection of the media
- Differences in the approach of the consumer (B2C) (eg samples, coupons, privileges) and industrial (B2B) (e.g. discounts, bonuses, joint advertising) market)

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHODOLOGY	Face to face (lectures, power point presentations and class discussions, case studies).
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Computer, multimedia projector, Internet, e-mail, moodle platform.
TEACHING PLAN	
STUDENT EVALUATION	Written final exam (70%) that includes development and comparative evaluation of theory with emphasis on the clothing industry Individual assignments (30%) concerning the consumer and clothing brands

Activity	***Semester Workload*** ***(25 h Semester Workload / CU)***
Lectures	50
Field exercises	35
Asynchronous autonomous study	25
Total	**100**

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- Belch, G.E. and Belch, M.A. (2018). Advertising and Promotion (10th ed.). Thessaloniki: Tziola Publications.
- Kavoura Androniki Communication, Advertising and Marketing in the Digital Environment and the Role of Social Media, Book [102075875]:
- Zotos, G. (2018) "Advertising" (6th ed.), Thessaloniki: University Studio Press
- Zabkar, V. - Eisend, M. "Advances in advertising research VIII", HEAL-Link Springer ebooks, 2017.

- Complementary Bibliography

Suggested Scientific Journals

- Journal of Advertizing
- Journal Advertizing research
- International Journal of Advertizing
- Journal of Fashion Marketing and Management
- Journal of Global Fashion Marketing
- European Journal of Advertizing
- Journal of marketing management
- Journal of Retailing and Consumer Services

Useful Links:

- https://www.ama.org/
- www.aaaa.org (American Association of Advertising Agencies)
- www.ipa.co.uk (British Institute of Practitioners in Advertising)
- www.instituteforpr.com (Institute for Public Relations)
- www.ipra.org (International Public Relations Association)
- www.eaca.org (European Association of Communications Agencies)
- Academy of Marketing: http://www.academyofmarketing.info/
- Academy of Marketing Science: http://www.ams-web.org/
- AIEST (International Association of Scientific Experts in Tourism): http://www.aiest.org/

- American Marketing Association: http://www.marketingpower.com/
- European Marketing Academy: http://www.emac-online.org/associations/emac/index.asp

14.5 5th Semester Courses

14.5.1 DESIGN & TECHNOLOGY OF CLOTHING PROTOTYPES III

1. GENERAL

SCHOOL	Design Sciences		
DEPARTMENT	Creative Design and Clothing		
LEVEL OF STUDIES	Undergraduate		
MODULE CODE	501	**SEMESTER**	5
MODULE TITLE	Design & Technology of Clothing Prototypes III		

TEACHING METHODS AND ACTIVITIES	**LEARNING HOURS PER WEEK**	**CREDIT UNITS**
Lectures	2	**5**
Laboratory exercises	4	
TOTAL	**6**	

MODULE TYPE	Compulsory, Science Field Module, Specific Foundation Module
PREREQUISITE MODULES:	No
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS	yes (English)
MODULE WEB PAGE (URL)	

2. LEARNING OUTCOMES

Learning Objectives

The course aims to provide the student with basic knowledge of making and processing patterns of woven (fixed) garments. The interest is focused on the understanding of the pattern design technique using bases / standards both at the theoretical level and at the application level, for the creation of new clothing product designs.
Upon successful completion of the course the student should:

- Have developed skills in handling design tools for making garment patterns.
- Be able to clearly describe the methodology of making the garment
- Accurately identify concepts related to the topic, such as clothing lines.
- Be able to design, apply, use, and handle all clothing line techniques.
- Have organized a personal design system for the development and construction of skirt, corsage & dress design templates.

General Skills

- Autonomic work
- Skills Development
- Search, analysis and synthesis of data and information, using the necessary technologies
- Adaptation to new situations
- Exercise criticism and self-criticism

3. MODULE CONTENT

Theoretical part: Study and adaptation of bases for the creation of complex clothes, jacket and coat. The contact with new technological materials and their management in the creation of templates Study and applications of specific template designs (Chanel jacket, Blazer, smoking, spencer, etc.). Study to create the desired line.
Workshop part: Construction of complex clothing designs and combinations with a common line. Style and line rendering. Applications in different somatometric data. Physical deformities. Study of the technical details of the clothes (finishes, seams, accessories). Development of personal methodology for designing patterns of complex garments (jacket, trench coat, jacket, etc.). Applications in technological fabrics

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHODOLOGY	Theoretical (face to face) teaching with presentation of methodology.

USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Laboratory Exercises. Presentation and then execution of individual work. Monitoring and on-site correction of works.
TEACHING PLAN	<table><tr><th>***Activity***</th><th>***Semester Workload*** ***(25 h Semester Workload / CU)***</th></tr><tr><td>Lectures</td><td>26</td></tr><tr><td>Laboratory Exercises</td><td>52</td></tr><tr><td>Atelier</td><td>26</td></tr><tr><td>Independent Study</td><td>21</td></tr><tr><td>***Total***</td><td>**125**</td></tr></table>
STUDENT EVALUATION	The final grade of the course is formed by the performance of the students in both the theoretical and the laboratory part, provided that the student has been evaluated with a passing grade in each part of the course. The evaluation of the course in terms of the theoretical part is formed by a written final examination of the theoretical part which includes: ● Short answer questions ● Written work through a bibliographic review with a percentage on the final score 2. The examination of the laboratory exercises includes the evaluation of the laboratory skills acquired through a final examination of a related topic or laboratory work, optional.

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- Cooklin Cerry, Design and cutting for oversized women's clothing, Book [14537]
- Aldrich Winifred, Designing and cutting for wide garments, Book [14726]
- Aldrich Winifred, Design and cutting for children's and baby clothes, Stella Parikos & Co., 1st ed./2006
- Aldrich Winifred Design and cutting of men's clothing, Book [14728]
- Haggar Ann, Design and cutting of underwear, swimwear and sportswear, Stella Parikos & Co., 1st ed./2006
- Manavis A., Eukolidis N., Kyratsi P., Product Design Tools, A. Tziolas & Sons S.A., 1st/2020
- Aldrich, W. (1990) Metric Pattern Cutting for Menswear: Including Unisex Casual Clothes and Computer Aided Design.
- Aldrich, W. (1977). Metric Pattern Cutting.
- Almond, K. (2009) Inspiring Creative and Innovative Pattern Cutting, Association of Fashion and Textile Courses.
- Antoine, D., & Cabrera, R. (2015). classic tailoring techniques for menswear: a construction guide.
- Cooklin, G. (1994). pattern cutting for women's outerwear.
- Park, S., & Lee, E. (2013). pattern making method and design of power shoulder jackets, The Journal of the Korea Contents Association, 13, 131-140.
- Shoben, M., & Ward, J. (1990). pattern cutting and making up for outerwear fashion: the light clothing approach.

14.5.2 AESTHETIC THEORIES

1. GENERAL

SCHOOL	Design Sciences		
DEPARTMENT	Creative Design and Clothing		
LEVEL OF STUDIES	Undergraduate		
MODULE CODE	502	**SEMESTER**	5
MODULE TITLE	Aesthetic Theories		

TEACHING METHODS AND ACTIVITIES	**LEARNING HOURS PER WEEK**	**CREDIT UNITS**
Lectures	3	**5**
Applied exercises		
TOTAL	**3**	

MODULE TYPE	Compulsory, Science Field Module, Specific Foundation Module
PREREQUISITE MODULES:	
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS	No
MODULE WEB PAGE (URL)	

2. LEARNING OUTCOMES

Learning Objectives

Students will be able to think critically about the ideas of beauty and ugliness and discover the relation with senses, emotions, and perceptions.
Students will be introduced to the terms of truth and ethics.
Students will discover how specific philosophers and theorists approach a range of aesthetic theories and also issues from classical antiquity to the modern times

General Skills

- Individual assignments
- Teamwork
- Research, analysis and synthesis of information, use of various technologies, exercising criticism and self-criticism

3. MODULE CONTENT

The Platonic problem
Art and imitation
Beauty
The Aristotelian answer to Plato
The approach of art in Hellenistic and Roman times.
The philosophical system of the Stoics
Aesthetics according to Plotinus
Medieval aesthetics St. Augustine
The problem of interpretation and the first theories of interpretation
Rebirth
Neoplatonism during the Renaissance
Leon Batista Alberti
Aesthetic Theories in the 17th and 18th centuries
The Kantian problematic for the aesthetic crisis
The aesthetic theory of Romanticism
The aesthetics of emotion
The Frankfurt School and the sociology of art
The "art for art" movement
The "school" of Hamburg and the anthropology of art

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHODOLOGY	Lectures in class include discussion, presentations, fashion case studies and students' active participation.
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Communication with students through emails, e-learning website and RSS feeds.
TEACHING PLAN	

	Activity	Semester Workload (25 h Semester Workload / CU)
	Lectures	45
	Independent Study	80
	Total	**125**
STUDENT EVALUATION	The final grade of the course is formed by the performance of the students in both the theoretical and the laboratory part, provided that the student has been evaluated with a passing grade in each part of the course. The evaluation of the course in terms of the theoretical part is formed by a written final examination of the theoretical part which includes: ● Short answer questions ● Written work through a bibliographic review with a percentage on the final score 2. The examination of the laboratory exercises includes the evaluation of the laboratory skills acquired through a final examination of a related topic or laboratory work, optional.	

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- Luc Ferry, Homo Aestheticus, Book [50662611]
- Denis Dutton, The Artistic Interest, Book [68373197]
- Dewey, John, Art as Experience, Capricorn Books, New York, 1958.
- Gadamer, Hans-Georg, Philosophical Apprenticeships, The M.I.T. Press, Cambridge, Mass., 1985.
- Gombrich, E. H., Art and Illusion: A Study in the Psychology of Pictorial Representation, Second Edition, Revised, Pantheon Books, New York, 1961.
- Stern, Raphael, Rodman, Philip and Cobitz, Joseph, (eds.), Creation and Interpretation, Haven Publications, New York, 1985.
- Venturi, Lionello, Storia della critica d'arte, Einaudi, 2000

14.5.3 COSTING METHODS

1. GENERAL

SCHOOL	Design Sciences		
DEPARTMENT	Creative Design and Clothing		
LEVEL OF STUDIES	Undergraduate		
MODULE CODE	503	**SEMESTER**	5
MODULE TITLE	Costing Methods		

TEACHING METHODS AND ACTIVITIES	**LEARNING HOURS PER WEEK**	**CREDIT UNITS**
Lectures	3	**5**
Applied exercises	3	
TOTAL	**6**	

MODULE TYPE	Compulsory, Science Field Module, Specific Foundation Module
PREREQUISITE MODULES:	
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS	yes (English)
MODULE WEB PAGE (URL)	https://elearning.cm.ihu.gr/course/view.php?id=346

2. LEARNING OUTCOMES

Learning Objectives

The course aims to provide knowledge of concepts related to costs, types of costs, ways of calculating costs, adapting the types of costs to the requirements of a cost model, applications with examples of general and specific nature, issues related to costing practices and cost research. It also offers the study of basic software of simple cost forms.

Upon successful completion of the course students will have acquired knowledge about costs and types of costs, will be familiar with the purpose and method of cost research, will know how to evaluate and control inventories, key cost factors and special cost cases (breakeven level, equivalent numbers). They will also be able to carry out a costing plan to implement a budget or accounting costing and will be aware of the factors that affect the cost of producing garments.

General Skills

Data search, analysis and synthesis using the necessary

- Technologies
- Decision making and Autonomous work
- Work in an interdisciplinary environment
- Application of knowledge in practice
- Promoting free, creative and inductive thinking

3. MODULE CONTENT

Costing, Definitions, Scope, objectives and significance of costing theory and methods, business decisions and its relationship with financial accounting and management accounting, Cost Objects, Cost centers and Cost Units, Elements of cost, Classification of costs, Calculation of industrial cost of clothing production including direct materials, direct labor, and direct overhead costs, Factors of production, cost analysis, breakeven point, equivalent numbers. Inclusion of general production costs and determination of the total production cost.

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHODOLOGY	Face-to-face in classroom and online support
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Software (Excel) Learning process support through the course website
TEACHING PLAN	

Activity	***Semester Workload*** ***(25 h Semester Workload / CU)***
Lectures	26
Tutoring	13
Individual study	86
Total	**125**

STUDENT EVALUATION	Final exam (100%) that contains solution of exercises and/or short-answer questions.

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- Petropoulou G. & Asvesta S., "Cost Theory Practical Applications", Ed. Γ. Petropoulou, 2010.
- Savvidis G., "Costing of ready-made garments", Notes, Kilkis 2011.
- Karaiordanidou A., "Costing of Production", Ed. OEDB, 2005.
- Pangeios I.K., 'Cost Theory', Stamouli Publishers, 1993.
- Varvakis K., "Costing and costing organization", Ed. Papazisis, 2013.
- Bogas G., "Costing", Pub. Bogas G., 2015.
- Pomonis N.S., "Costing theory and practice", Stamoulis Publishers, 2009.

Bibliography in English:

- Horngren et al, "Introduction to Management Accounting", Pearson Prentice Hall
- P Jagolinzer, “Cost accounting – an introduction to cost management”

14.5.4 QUALITY CONTROL I

1. GENERAL

SCHOOL	Design Sciences		
DEPARTMENT	Creative Design and Clothing		
LEVEL OF STUDIES	Undergraduate		
MODULE CODE	504	**SEMESTER**	5
MODULE TITLE	Quality Control I		

TEACHING METHODS AND ACTIVITIES	**LEARNING HOURS PER WEEK**	**CREDIT UNITS**
Lectures	3	**5**
Applied exercises	2	
TOTAL	**5**	

MODULE TYPE	Compulsory, Science Field Module, Specific Foundation Module
PREREQUISITE MODULES:	
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS	yes (English)
MODULE WEB PAGE (URL)	e-learning platform (cdc.ihu.gr) http://moda.teicm.gr/407E57FB.el.aspx

2. LEARNING OUTCOMES

Learning Objectives

The scope of the course is the introduction of students into the importance of the quality of the textile products. The course includes the analysis of physical properties of textile materials with emphasis on the fibres and yarns which are the raw materials for the fabric and influence their basic mechanical properties.

The course analyses the basic concepts of quality and general quality management systems as well as their necessity and dependence to quality control in order to perform their function. Through laboratory practice students can build their experimental and technological knowledge on the official procedure of quality control protocols, understand the behavior of textile structure properties of both fibre and yarn, as well as the basic characteristics of fabric constructions.

Completing the course the students will be able to

Develop the necessary knowledge for the evaluation process of the properties and technical specifications of textile products and in general, determine the quality characteristics of yarns and both woven and knitted fabrics, articles which are the basic raw material for garment making.

Develop basic knowledge for the establishment of quality management systems in a firm through the application of the quality control.

Develop knowledge for the certification procedure of a firm as regards to the QMS and understand the importance of maintaining its operation

General Skills

General competences that the degree-holder will acquire:
Application of knowledge in actual conditions
Production of creative, inductive and free thinking.
Private study
Teamworking
Critical thinking

3. MODULE CONTENT

Theoretical part:

The evolution of the quality control. Introduction into the concepts of quality, customer requirements and the need of physical testing in the quality of textile products. Explanation of the theoretical and technical quality. The need for quality control tests, protocols and the need for calibration of apparatus. The quality production model of 5M and the seven tools which are used for the control of quality during production. Analysis of the basic concepts of the quality management systems, requirements, conformation and the importance of quality control for the implementation and maintenance of the system. The stages for the certifications and audits of QMS.

The influence of the atmospheric conditions in the apparatus and measurements of textile materials. The need and definition of the standard textile conditions in the laboratory. Material behavior and specifications tolerances. Sampling techniques for fiber, yarn and fabrics. Fiber identification in yarns and fabrics, qualitive and quantitative analysis of blends by natural and chemical methods. Basic characteristic testing of fabric as length, width, mass density, thread density and weave pattern.

Determination of fatigue. Determination of the surface density, cover factor and difference between theoretical and actual weight. Tensile testing of the mechanical properties and the influence of viscoelastic properties, time duration of testing, textile creep and sample length. Crease resistance testing of fabrics. Change of appearance of fabrics during wear and pilling (pilling and snagging method). Resistance to abrasion using Martindale apparatus. Appearance evaluation using color light cabin, grayscales and spectrophotometer. Colorfastness of dyed fabrics to washing and to perspiration. Color rub fastness in wet and dry conditions. Testing of fabric hydrophobic and oleophobic coatings. Thermal and electrical Insulation capacity of fabrics, heat of wetting, air-permeability and resulting comfort of garments.

Practice Sessions:

The practice of quality control procedure for the testing of quality characteristics of the fabrics include the following:

Determination of the basic fabric structural characteristics

Determination of the difference between the theoretical and actual weight as well as calculation of the fabric surface density and cover factor.

Determination of the yarn title removed from fabric.

Evaluation using grayscale and spectrophotometer.

Crease resistance of fabrics

Colorfastness to wet and dry rubbing.

Tensile strength evaluation of fabrics

Determination of the propensity to pilling (ICI and Martindale method)

Determination of the abrasion resistance of fabrics

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHODOLOGY	Live (Face-to-face presence)
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Use of ICT in teaching, educational learning platform and modern communication (forums, chats, asynchronous and live platforms) with students. Use of textile laboratory and textile testing apparatus
TEACHING PLAN	

Activity	***Semester Workload*** ***(25 h Semester Workload / CU)***
Lectures	65
Practical Sessions	25
Self-study	35
Total	**125**

STUDENT EVALUATION	**A. In theory** 1. Voluntary group project and presentation which reassures 20% of the final grade and 10% from the quizes during attendance of the presentations. 2. Written final exam comprising: ● Short-answer questions ● Combination judgment questions **B. In the Practical sessions** Laboratory Reports (mini projects) which in the case of excellence can provide waive of exams and comprise: ● short answers to questions ● judgment questions ● problem solving 2. Written final exam comprising: ● Short-answer questions ● Combination judgment questions ● problem solving

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- Bona M., (2005), Quality & Quality Control of Textiles, , Peppas Th Vassiliadis S, Athens

- Complementary Bibliography

- Booth J., (1986), Principles of Textile Testing, Heywood Books, London
- Morton, W.E., Hearle, J.W.S.,(2008), Physical Properties of Textile Fibres: Fourth Edition, The Textile Institute, UK
- Amutha K, (2016), A practical guide to textile testing
- Saville B.P.(1999), Physical Testing of Textiles, Woodhead Publishing, UK

- Jinlian HU,(2008), Fabric testing, The Textile Institute, Woodhead Publishing, UK
- Sheraz A., Abher R., Ali A, Faheem A.,(2017), Advanced Textile Testing Techniques, CRC Press
- Kefis V,N,, Total Quality Management. Theory and Standards, 2nd Edition, Kritiki SA, Athens, Greece
- Taylor MA, (1993), Technology of textile properties
- Baba M., Manolaki M., Tsouchaios A., "Laboratory Guide Quality Control of Fabric" OEDB, Athens, Greece
- ASTM – “Annual book of standαrds”
- BS – “Hαndbook of textiles”
- ISO- Internαtίonal Standαrds Orgαnizαtίon
- https://www.oeko-tex.com/gr/business/business_home/business_home.xhtml
- https://cottonmadeinafrica.org/en/
- https://global-standard.org/
- https://www.sedex.com/

14.5.5 BRAND MANAGEMENT

1. GENERAL

SCHOOL	Design Sciences		
DEPARTMENT	Creative Design and Clothing		
LEVEL OF STUDIES	Undergraduate		
MODULE CODE	505	**SEMESTER**	5
MODULE TITLE	Brand Management		

TEACHING METHODS AND ACTIVITIES	**LEARNING HOURS PER WEEK**	**CREDIT UNITS**
Lectures	2	**5**
Applied exercises	2	
TOTAL	**4**	

MODULE TYPE	Compulsory, Skills Development Module, Speciality Module
PREREQUISITE MODULES:	
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS	yes (English)
MODULE WEB PAGE (URL)	

2. LEARNING OUTCOMES

Learning Objectives
The course aims to enable students to watch and manage a portfolio of clothing brands.
General Skills
Search, analyze and synthesize data and information. Respect for diversity and multiculturalism Respect for the natural environment Adaptation to new situations Decision making Autonomous work Work in an interdisciplinary environment. Working in an international environment Exercise criticism and self-criticism Promoting free, creative and inductive thinking Teamwork Project Planning and Management

3. MODULE CONTENT

Consumer focused New Product Development in the clothing sector. Creativity and idea generation (brainstorming). Market research and consumer research. Global market and consumer trends and megatrends. Innovation strategies. Strategic planning, product quality, intrinsic/extrinsic cues and product elements. Product development cycle and Product Life Cycle. Product Identity: Defining the parameters – Product standards and specifications. Planning and developing a product range (collection) for a clothing firm.
History of Branding and its role in Marketing Strategy. Clothing brand image - Brand Development in Clothing - The role of Design in the creation of a Clothing Brand. Legal protection for brands. Brand Equity. Clothing Brand extensions. Globalisation of clothing brands: Control issues in manufacturing and distribution. Market research and trend analysis. Brand Management and the promotional mix (VM, trade fairs, organizing of events etc.).

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHODOLOGY	Theoretical part teaching with discussion and active participation of students. Power point presentations are made during the course. Laboratory exercises. Individual and group projects.
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Search scientific literature through HEAL-Link & Google Scholar. Communication with students via e-mail, the course website and the Facebook page.

TEACHING PLAN	

Activity	***Semester Workload*** ***(25 h Semester Workload / CU)***
Lectures	35
Laboratory Exercises	45
Self-Study	45
Total	**125**

STUDENT EVALUATION	The final grade of the course is formed by the performance of the students in both the theoretical and the laboratory part, provided that the student has been evaluated with a passing grade in each part of the course. The evaluation of the course in terms of the theoretical part is formed by a written final examination with development and comparative evaluation of theory elements. The examination of the laboratory part includes laboratory exercises and a written final examination.

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- Keller L. Kevin, Swaminathan Vanith, Strategic Brand Management, Book [98785203]
- Dhar, BRAND MANAGEMENT 101 [electronic resource], Book [91714678]
- Kapferer, J.N. "Διοίκηση Μάρκας", 2012, Εκδόσεις Rosili
- Jin, B. – Cedrola, E. "Fashion Branding & Communication", 2017, HEAL-Link Springer ebooks.
- Carr, H., & Pomeroy, J. (1992). Fashion Design and Product Development. London: John Wiley & Sons.
- Gobe, M., & Zyman, S. (2002). Emotional Branding: The New Paradigm for Connecting Brands to People. Allworth.
- Holt, D. (2004). How Brands become Icons: The Principles of Cultural Branding. Harvard Business School Press.
- Johnson, M. (2000). Apparel Product Development (2θ εκδ.). Prentice Hall
- Kahn, K. (2004). The PDMA Handbook of New Product Development (2θ εκδ.). John Wiley & Sons.
- Lindstrom, M. (2005). Brand Sense: How to build powerful Brands through touch, taste, smell, sight and sound. Kogan Page.
- Markides, C., & Geroski, P. (2004). Fast Second: How smart companies bypass radical innovation to enter and dominate new markets. Jossey Bass Wiley.
- Schmitt, B., & Simonson, A. (1997). Marketing Aesthetics: The Strategic Management of Branding, Identity and Image. Simon & Schuster.
- Solomon, M., & Rabolt, N.(2002). Consumer Behaviour: In Fashion. NewYork: Prentice Hall.
- Tungate, M. (2005). Fashion Brands: Branding Style from Armani to Zara. Kogan Page.
- Tungate, M. (2009). Luxury World: The Past, Present and Future of Luxury Brands. Kogan Page.
- Ulrich, K., & Eppinger, S. (2004). Product Design and Development (3θ εκδ.). New York, NY: McGraw-Hill.
- Wredden, N.(2002).Fusion Branding: How to Forge your Brand for the Future. Accountability Press.

14.5.6 HAUTE COUTURE PRACTICES IN FASHION

1. GENERAL

SCHOOL	Design Sciences		
DEPARTMENT	Creative Design and Clothing		
LEVEL OF STUDIES	Undergraduate		
MODULE CODE	506	**SEMESTER**	5
MODULE TITLE	Haute Couture Practices in Fashion		

TEACHING METHODS AND ACTIVITIES	**LEARNING HOURS PER WEEK**	**CREDIT UNITS**
Lectures	2	**5**
Applied exercises	4	
TOTAL	**6**	

MODULE TYPE	Elective Compulsory, Skills Development Module, Speciality Module
PREREQUISITE MODULES:	
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS	yes (English)
MODULE WEB PAGE (URL)	

2. LEARNING OUTCOMES

Learning Objectives

Removing the garment from the Fashion market, the course explores through the study of various Haute Couture costume designs, the possibilities of creating original techniques and volumes and their integration in the prototype design process.

Upon successful completion of the course the student should:

Approach the creation of a suit with a more free and personal style.

- Be able to create imaginative techniques using unconventional materials.
- Be able to explain the concept of Conceptual Fashion
- Know how to choose specialized sewing, cutting and decoration techniques in the creation of the garment.
- Have developed a system of integration of Haute Couture techniques in the basic design of standards.

General Skills

Autonomous work
Skills Development
Search, analysis and synthesis of data and information, using the necessary technologies.
Adaptation to new situations
Exercise criticism and self-criticism

3. MODULE CONTENT

Studio course. Through a variety of High Fashion looks & Theater costumes we approach couture techniques & developing ideas in a “costume” spirit. A study on Moulage & Origami, Volumes & Draping through the work of iconic designers.

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHODOLOGY	Theoretical (face to face) teaching with presentation / case study. Laboratory Exercises. execution of individual and / or teamwork. Creating a final project
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	e-learning platform
TEACHING PLAN	

Activity	***Semester Workload*** ***(25 h Semester Workload / CU)***
Lectures	13
Laboratory Work	39
Atelier	39
Personal work	34
Total	**125**

STUDENT EVALUATION	The final module grades are formed by: The final grade of the course comes from ● the combination of written work & presentation with ● the completion of the work assigned during the atelier work Students will submit a relevant portfolio, written report and presentation of the topic they have chosen to develop.

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- Edwin A. Peraza Hernandez / Darren J. Hartl / Dimitris C. Lagoudas, Active Origami [electronic resource], ed 1st/2019, HEAL-Link Springer ebooks
- Bell Julian, Mirror of the World: A New History of Art, Book [24154]
- Duburg A., Tol van der R. (2008). Draping: Art and craftsmanship in fashion.
- Maynard L. The Dressmaker's Handbook of Couture Sewing Techniques: Essential Step-by-Step Techniques for Professional Results
- Shingo Sato, (2011) draping: art and craftsmanship in fashion design transformational reconstruction. Center for Pattern Design.
- Canto, C.; Faliu O. (1993). The History of the Future: Images of the 21st Century. Flammarion.

14.5.7 MANAGEMENT OF CLOTHING PRODUCTION PROCESSES

1. GENERAL

SCHOOL	Design Sciences		
DEPARTMENT	Creative Design and Clothing		
LEVEL OF STUDIES	Undergraduate		
MODULE CODE	507	**SEMESTER**	5
MODULE TITLE	Management of Clothing Production Processes		

TEACHING METHODS AND ACTIVITIES	**LEARNING HOURS PER WEEK**	**CREDIT UNITS**
Lectures	2	**5**
Applied exercises	3	
TOTAL	**5**	

MODULE TYPE	Elective Compulsory, Science Field Module, Speciality Module
PREREQUISITE MODULES:	
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS	yes (English)
MODULE WEB PAGE (URL)	e-learning platform (cdc.ihu.gr)

2. LEARNING OUTCOMES

Learning Objectives

The Scope of the current course is the development of knowledge and ability for students to organize and manage operation process of clothing manufacturing systems.
Attending the course the students will:

- have the adequate knowledge on the manufacturing operation processes of several types of textile and clothing manufacturing companies and be able to distinguish the advantages and disadvantages of each operation system
- learn how to organise and manage processes to achieve the ultimate flow of operation for garment manufacturing.
- understand the methodology for work study, method study and work measurement so they can plan the production system and calculate the system's capacity output and the necessary resources for it
- develop the basic knowledge for information systems and applications to control and manage the processes for garment manufacturing operation systems
- learn to develop management quality systems for the operations of textile and garment manufacturing
- learn the certification procedure of a garment manufacturing company with a quality control system as well as to understand the importance and the advantages of running such systems in the garment manufacturing processes.

General Skills

General competences that the degree-holder will acquire:

- Search for, analysis and synthesis of data and information, with the use of the necessary technology.
- Decision making
- Application of knowledge in actual conditions
- Production of creative, inductive and free thinking.
- Teamwork
- Interdisciplinary Project
- Critical thinking

3. MODULE CONTENT

Theoretical part:

The evolution of productions systems. Types and definition of production systems. Planning and managing operations in continuous flow production and assembly lines and batch systems. Discontinuous systems order, job and project-based production systems. Introduction into production cells in garment manufacturing.
Definition and analysis of the company subsets as incoming and outgoing logistic, supplier evaluation, operations and operation planning, material handling, machinery maintenance, quality control, quality control chars, marketing and sales etc. Operation management of garment manufacturing and quality control using basic quality tools. Work Study: Method Study, production flow diagrams, development and planning of the operation in production systems. Work measurement and evaluation of total production time (standard minute value), by continuous observation, sampling method and estimation technique. Production capacity planning (demand and production capacity estimating models). Plan making, evaluation and implementation. Required resources for a particular stage and successive stages in production line, balanced systems. General operation strategy planning,

by short-term medium and long-term planning. Motivation schemes. Introduction into quality control systems and into basic definition of processes, procedures and work instructions, documents and records, Responsibility, Requirements, traceability, measuring and monitoring, continuous development of quality and total quality systems. Introduction and analysis of the clauses of the quality control systems.

Practice Sessions:

Discussion of case studies, practice in problem solving and application of the theory and methodology presented in the theoretical part of the course using modern technologies. Creating document and record keeping of quality control systems, supplier (supplier evaluation), control and management of resources, operation control and traceability, customer agreements, customer satisfaction measurement and quality system control and evaluation. Introduction into modern technologies and applications of operation management, control and planning in garment production systems (Marker making and cutting, MRP-PLM etc.)

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHODOLOGY	Live (Face-to-face presence)
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Use of ICT in teaching, educational learning platform and modern communication (forums, chats, asynchronous and live platforms) with students
TEACHING PLAN	

Activity	***Semester Workload*** ***(25 h Semester Workload / CU)***
Lectures	50
Practical Sessions	35
Self-study	40
Total	**125**

STUDENT EVALUATION	Language of the evaluation methods: Greek In theory Written final exam comprising: ● Short-answer questions ● Combination judgment questions ● In the Practical sessions ● Discussion and role simulation ● Report making comprising: ○ short answers to questions ○ judgment questions ○ Problem solving

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- Dervitsiotis, K., Production Management, Edition: 4th edition /2006
- Kenneth c. Laudon, jane p. Laudon, Management Information Systems, Klidarithmos, ed. 11th, 2014,
- Psoinos, D., Factory Organization and Management, 1990
- Psoinos, A., (1997), "Quantitative Analysis", Volume P, Ziti
- Carr, H. and Latham, B., Technology of Clothing Manufacture,
- 2000 Chuter, A., Introduction to Clothing Production Management,1999
- Stevenson W., Production Operation Management, 1998
- Martinich J., Production and Operations Management, 1998
- Shim, J., Siegel J., (2002), "Operation Management", Klidarithmos
- Pappis, K., (1993), "Production Management, Production Systems Design", Stamoulis
- Tsiotras, G., (1995), "Production Management", Volume 2, Benou Publications
- Papadimitriou, S., Schinas, O., (2002), "Introduction to Logistics", Stamoulis
- Spanos, A., (1993), "Total Quality", Gileos
- Grigoroudis, V., Siskos, G., (2000), "Service Quality and Customer Satisfaction Measurement", New Technologies Publications
- Verzuh, E., (2002), "Introduction to Project Management", Klidarithmos
- Burke, K., (2002), "Project Management, Project Management, Planning and Control Techniques", Kritiki
- Kefis V.N. "Total Quality Management, Theory and Standards", Kritiki Publications 2014
- Folinas Dimitrios, Mantho Vassiliki, Vlachopoulou Maro, Integrated Information Systems for Enterprise Resource Management, 2006

14.5.8 CORPORATE MARKETS IN RETAIL TRADE

1. GENERAL

SCHOOL	Design Sciences		
DEPARTMENT	Creative Design and Clothing		
LEVEL OF STUDIES	Undergraduate		
MODULE CODE	508	**SEMESTER**	5
MODULE TITLE	Corporate Markets in Retail Trade		

TEACHING METHODS AND ACTIVITIES	**LEARNING HOURS PER WEEK**	**CREDIT UNITS**
Lectures	3	**5**
Applied exercises	2	
TOTAL	**5**	

MODULE TYPE	Elective Compulsory, Science Field Module, Specialty Module
PREREQUISITE MODULES:	
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS	yes (English)
MODULE WEB PAGE (URL)	http://moda.teicm.gr/5204552B.el.aspx

2. LEARNING OUTCOMES

Learning Objectives

The course aims to enable students to understand and work in the international apparel retail environment, applying the principles of sales, sourcing and merchandising.
Monitor the development strategies of international retailing.
Describe the retail process using traditional (retail store with physical presence) or non-traditional (e.g. online store) methods.
Understanding the work of the fashion buyer, with the main elements of the purchasing cycle, order planning, sourcing and merchandising

General Skills

Search, analysis and synthesis of data and information
Respect for diversity and multiculturalism
Respect for the natural environment
Adapt to new situations
Decision-making
Working autonomously
Working in an interdisciplinary environment
Working in an international environment
Demonstrate social, professional and ethical responsibility and gender sensitivity.
Exercise of criticism and self-criticism
Promotion of free, creative and deductive thinking

3. MODULE CONTENT

Introduction to the clothing retail environment. Consumer demographics and consumption trends. Retailing techniques and factors affecting modern retailing. Sales policies of the apparel industry. Globalisation of clothing retailing.
Principles of sales: business-to-business (b2b) and business-to-consumer (b2c) sales process. Buyer-seller communication elements. Legal and ethical issues in sales. Psychology of clothing sales. Direct selling. Franchising in clothing.
The clothing buyer in retailing: Organizational structure in retail sourcing, internal and external sources of buyer information, basic principles of successful sourcing and the role of the buyer in apparel purchasing planning. Evaluation and purchasing from domestic or foreign markets. Introduction to merchandising: the buying cycle. Timelines. Building the clothing collection and range.
Future trends in e-tailing in apparel retailing.

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHODOLOGY	Theoretical face-to-face teaching with discussion and active participation of students. Power point presentations are given during the course.

USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	The search of scientific literature via HEAL-Link & Google Scholar. Communication with students via e-mail, course website and Facebook page.
TEACHING PLAN	

Activity	***Semester Workload*** ***(25 h Semester Workload / CU)***
Lectures	45
Laboratory exercises	35
Self-Study	45
Total	**125**

STUDENT EVALUATION	I. Written final examination (70%) including development and comparative evaluation of theoretical elements with emphasis on the clothing industry II. Individual Assignment (30%) dealing with the retail strategy of apparel firms

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- Papavasiliou N. - Baltas G. "Retail & Wholesale Marketing" (2003) Rosili Edotiki, Book [7325]
- Georgios Baltas, Polina Papastathopoulou, Consumer Behavior, 3rd Edition, Book [102073292]
- Kostas Tzortzakis, The Retail Sale in Greek Business, Book [50659996]

- Complementary Bibliography

- Hebrer, M. “Fashion Buying and Merchandising: From mass-market to luxury retail” (2015) CreateSpace Independent Publishing Platform
- Tepper, B. “Mathematics for Retail Buying”, Bloomsbury Academic USA; 7th ed. edition (2015)

14.6 6th Semester Courses

14.6.1 COMPUTER AIDED DESIGN SYSTEMS FOR GARMENT PROTOTYPING

1. GENERAL

SCHOOL	Design Sciences		
DEPARTMENT	Creative Design and Clothing		
LEVEL OF STUDIES	Undergraduate		
MODULE CODE	601	**SEMESTER**	6
MODULE TITLE	Computer Aided Design Systems For Garment Prototyping		

TEACHING METHODS AND ACTIVITIES	**LEARNING HOURS PER WEEK**	**CREDIT UNITS**
Lectures	2	**5**
Laboratory exercises	3	
TOTAL	5	

MODULE TYPE	Compulsory, Science Field Module, Specific Foundation Module
PREREQUISITE MODULES:	
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS	yes (English)
MODULE WEB PAGE (URL)	

2. LEARNING OUTCOMES

Learning Objectives

The fashion industry is the most specialized labor-dependent industry, and any cost savings through new computer technology design (CAD) have become a precondition for obtaining competitive advantage. CAD (Computer Aided Design) systems enable quick design creation and customization as quickly as possible without reducing creativity and provide better communication and integration between product development systems. They have helped to reduce production times, improve the accuracy and availability of clothing products in retail stores much closer to the time consumers need

In the laboratory part of the course, students are familiar with the use of appropriate software in conjunction with the assignment of real problem resolution (development of patron models with examples from industry). Aware of the whole process of developing the original/sample within a clothing business, students learn to understand and transform design specifications into technical requirements and requirements for production.

After attending the course, students should:

- Know and understand the process of designing and developing a garment collection for the fashion industry.
- Be able to analyze a sketch and/or model from the design side and the technical parameters for its construction so that they can convert it into a digital prototype
- Be able to develop computer software application and hardware device management capabilities to create clothing models
- Be able to accurately identify concepts relevant to the subject, such as CAD/CAM, PGS, PDS, Marker, 3D, simulation of garments and clothing models, 3D body scanners
- Be able to develop a design tech pack with all the information necessary to produce a model/garment collection.
- Be able to classify and archive digital patterns and technical documents

General Skills

- Putting knowledge into practice
- Searching, analyzing and synthesizing data and information using the necessary technologies
- Stand-alone work
- Group Work

- Promoting free, creative and inductive thinking

3. MODULE CONTENT

- **Prototype development process in the context of collection development for the fashion industry**
  The Fashion Cycle, the Consumer, the Collections (trends, forecasting, job planning, prototyping, production)
  The importance of the draft specifications for production
  Design analysis based on technical construction parameters
  Use basic patron standards and convert them to the desired model
  Future trends
- **Introduction in digital design of clothing prototype**
  Basic principles of the development of clothing patterns
  Clothing balance
  Size tables
  Grading
  Electronic Systems Made-to-measure
  Major technological developments in the construction of pattern
  Applications/deployments in CAD clothing systems
  Future trends
  Sources of further information and advice
- **Block Editing for prototype development in CAD systems**
  Digitizing
  Insert Points, Names, Grain Line, Cut Line, Edit Curves, Cut, Measures, Draw Lines, Motifs, Purify, Interlines,
  Insert Seams
  Darts, Pleats,, Gathers
  Pattern analysis to determine grading
  Extraction of grading rules from dimensional and technical specifications
  Calculate grading rules
  Apply grading rules
  Control
  Save
  Create a model for a cutting plan

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHODOLOGY	Face to face theoretical teaching (lectures, discussion) with students' active participation. PowerPoint presentations. Laboratory exercises. Use of commercial and specialized software for clothing pattern development and grading.
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Specialized software. Self-assessment quizzes. Electronic communication with students via email, webpage and RSS feeds.
TEACHING PLAN	

Activity	***Semester Workload*** ***(25 h Semester Workload / CU)***
Lectures	26
Laboratory practice	14
Essay writing	0
Self-study	85
Total	**125**

STUDENT EVALUATION	The final grade of the course shall be determined by the student's performance in both the theoretical and the laboratory parts, provided that the student has been assessed with a passing grade in each part of the course. The evaluation of the course as regards the theoretical part shall be based on a written final examination. . The written final examination of the theoretical part shall include: - Multi-Select Questions - Troubleshoot problems in applying acquired knowledge. - Benchmarking of theory data. 2. The examination of laboratory exercises shall include the evaluation of laboratory skills acquired through examination of laboratory exercises, where laboratory equipment is used.

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- Bilalis, N., Maravelakis, E., CAD/CAM systems and 3D modelling - New revised edition, Kritiki Publications, Book Code [41955474]
- Eukolidis Nikolaos, Tzotzis Anastasios, Kyratsi Panagiotis, Construction and Analysis of Products with the Help of Computers, 1/2021, Epikentro Publications S.A., Book [102072433]

Textbooks distributed through the University or the course's webpage

- E. Papachristou, Electronic Systems Design Template.- Theory notes and slides, Kilkis.
- E. Papachristou, Electronic Systems for Prototyping - Laboratory exercises, Kilkis.

Supplementary suggested bibliography

- Wang, B., & Ha-Brookshire, J. E. (2018). Exploration of digital competency requirements within the fashion supply chain with an anticipation of industry 4.0. International Journal of Fashion Design, Technology and Education, 1-10.
- Beazley, A and Bond, T (2003) Computer-aided pattern design and product development, Blackwell Publishing, Oxford.
- Bond, T (2000) An overview of technological developments in CAD/CAM, Journal of Fashion Marketing and Management, 4 (2), 188-190.
- Bond, T and Agrafiotes, K (2000) Modularisation and mass customisation: How companies will compete and co-operate in the next millennium. In 80th World Conference of the Textile Institute, Manchester, UK, 17 April.
- Burke, S., Sinclair, R., (2015), Computer-Aided Design (CAD) and Computer-Aided Manufacturing (CAM) of Apparel and other textile products pp.671-703 in Textiles and Fashion- Materials , Design and Technology, Woodhead Publishing
- Carr, H and Latham, B (2000) Technology of Clothing Manufacture, 3rd edn, Blackwell Science, Oxford.
- Ma, G, Otieno, R, Bond, T and Vronti, P (2004) Lost and found on the virtual catwalk: A comparison of experiences on provision of virtual fit and 3D testing of fit. Paper presented at the Eurasia-Tex Conference on 3D Body Scanning and Virtual Try-on Systems, Athens, 24-25 November.

- Complementary Bibliography

- Polypattern www.polytropon.com
- Crea Solutions https://www.creasolution.it/
- Tukatech https://tukatech.com/
- Optitex. https://optitex.com/
- Gerber Technology. http://www.gerbertechnology.com
- Lectra. http://www.Lectra.com
- Textile/Clothing Technology Corporation [TC]2. http://www.techexchange.com

14.6.2 MODERN ART & DESIGN

1. GENERAL

SCHOOL	Design Sciences		
DEPARTMENT	Creative Design and Clothing		
LEVEL OF STUDIES	Undergraduate		
MODULE CODE	602	**SEMESTER**	6
MODULE TITLE	Modern Art & Design		

TEACHING METHODS AND ACTIVITIES	**LEARNING HOURS PER WEEK**	**CREDIT UNITS**
Lectures	4	5
Laboratory exercises	0	
TOTAL	4	

MODULE TYPE	Compulsory, Science Field Module, Specific Foundation Module
PREREQUISITE MODULES:	
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS	yes (English)
MODULE WEB PAGE (URL)	

2. LEARNING OUTCOMES

Learning Objectives

Upon successful completion of the course students should:
- Have the necessary knowledge to understand basic concepts of aesthetics, contemporary art, design and fashion
- Be able to understand the importance of reworking and evolving in the light of the modified original idea by himself and others as a result of discussion, criticism and influence
- Be able to express and communicate verbally, using appropriate terminology

General Skills

- Independent work
- Skills Development
- Research, analysis and synthesis of data and information, using new media technologies
- Adaptation to alternative situations and challenges
- Exercise criticism and self-criticism

3. MODULE CONTENT

The understanding of concepts, the development of ideas with potential in modernity and postmodernity through a series of presentations that improve - evolve at regular intervals, with the theme of contemporary art and design, contemporary art and fashion. Movements of contemporary art of the 20th century until today. What is happening in all these fields today in a rapidly changing society. Project, research, topic elaboration, laboratory experimental exercises-approaches, final topic performance and presentation, with theoretical support.

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHODOLOGY	Theoretical teaching based on visual presentation. Powerpoint presentations and case-studies are presented during the course. Studio Exercises. Presentation and implementation of individual/team work. Innovative creation of artefact prototypes.
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Communication with students via e-mail, module website and interaction within a closed social network group.
TEACHING PLAN	

Activity	***Semester Workload*** ***(25 h Semester Workload / CU)***
Lectures	50
Studio Work	40
Creativity	25
Eclass	10
Total	**125**

STUDENT EVALUATION	The final module grades are formed by: A written assignment & presentation & A project work derived from the Studio work that follows the theoretical assignment. Students will submit a relevant portfolio (written essay, concept analysis, colors, special techniques and design prototypes that they wish to explore and develop).

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- B. Fiorevantes (editor), New Anthropology and Modern Art, Ziti Pelagia & Sia I.K.E., 2014, Athens, Book [41960119]
- Kertemelidou Paraskevi, The dialectic of artistic creation with the industrial utilitarian object, Edition: 1/2021, Epikentro Publications S.A. Book [102124936]
- Demosthenes Davetas, Fashion and contemporary art, 2011, Eurasia Publications
- R.Arnheim, Art and Visual Perception, Themelio Publications, 2005, Athens, Athens, Greece
- Argan, G. Carlo, Modern Art, Foundation for Research and Technology-Hellas - University Publications, 2008, Heraklion
- Mario De Micelli, The Pioneers of Twentieth Century Art, Vibliopolis, Athens, Greece
- B. V. Kandinsky, On the Spiritual in Art, Duvitsas and Co.2010, Athens, Athens, Greece

14.6.3 VIRTUAL PROTOTYPE

1. GENERAL

SCHOOL	Design Sciences		
DEPARTMENT	Creative Design and Clothing		
LEVEL OF STUDIES	Undergraduate		
MODULE CODE	603	**SEMESTER**	6
MODULE TITLE	Virtual Prototype		

TEACHING METHODS AND ACTIVITIES	**LEARNING HOURS PER WEEK**	**CREDIT UNITS**
Lectures	2	5
Laboratory exercises	2	
TOTAL	4	

MODULE TYPE	Compulsory, Science Field Module, Specific Foundation Module
PREREQUISITE MODULES:	
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS	yes (English)
MODULE WEB PAGE (URL)	

2. LEARNING OUTCOMES

Learning Objectives

The fashion industry is heading towards an ever-accelerating fashion that delivers its products more quickly, cheaply and more than ever before. This requirement results in the search for new techniques which will provide the product development process. The course aims to study and accept virtual prototypes as a means of communicating and shortening product development time without problems, reducing the technological gap and production time, while increasing the creativity and prompt visualization of clothing and its application.

In the laboratory part of the course, students are familiar with the use of appropriate software for visual and virtual modeling of the clothing as well as the appropriate techniques for creating, developing, editing and exporting virtual original files in different interfaces.

After attending the course, students should:

- Know and understand the basic principles of design in three dimensions.
- Know and understand the basic principles of functioning of modern technology solutions for the virtual modeling of clothing.
- Edit the dimensions and aesthetic characteristics of virtual avatars to suit the virtual patterns
- Analyze and design basic clothing prototypes
- Simulate basic techniques of stitching pieces of clothing to create the virtual original
- Understand the importance of the right mechanical configuration of fabric materials, accessories and other forms on the virtual model
- Recognize the challenges, advantages and disadvantages of adopting the 3D virtual original in clothing
- Understand the change in the traditional clothing development process through the virtual prototype and the way it helps the mass personalization of clothing
- Develop the right skills already required by the modern clothing product development department in virtual environments
- Be able to apply this knowledge to actual case studies and application exercises.

General Skills

- Searching, analyzing and synthesizing data and information using the necessary technologies.
- Group Work.
- Project Planning and Management.
- Promoting free, creative and inductive thinking.

3. MODULE CONTENT

- **Digit**al Transformation of the clothing industry

The fashion between industrial revolutions

Term I 4.0

Fashion Integration Model in Industry 4.0

Ingredients & Principles

- **Digital Prototype in New Dimension η**

Traditional method of a digital clothing sample development

Problems facing the industry today

Approach to the problem
Basic differences between 2D and 3D processes
Implementation of 3D and upcoming changes in the traditional process
3D visualization and 3D prototyping
The future of the natural original
Natural or virtual prototype?
The future of 2D CAD systems

- **Virtual Prototype as part of Fashion Product Development**
  Advantages/Benefits
  Disadvantages
  Objectives
  Difficulties and obstacles in adopting 3D technology in the creative clothing process
  Challenges
  Optical Digitization of Materials
  Need for total integration
  Anthropoid (Avatars)
  Personalize clothes through the virtual original
  Interdisciplinary cooperation at all stages of the development process
  Necessary skills
  Designer of the future
  The Future Expert
  Case studies (successes/failures)
- **Presentation of popular software in creating a virtual prototype**
  V-Sticther/Lotta
  Clo3D
  Tuka3D
  Audaces4D
  Optitex3D
  Modaris3D
- **Future Trends**
  Smart Factory & Micro Factory
  Technologies VR/XR/AR & enhancement of virtual prototype
  Digital/Virtual Mannequins-Models
  Virtual Prototype as part of a new sustainable supply value chain

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHODOLOGY	Lecturing with discussion and students' active participation. During class, share of powerpoint presentation. Use printing equipment for direct printing on clothing and specialized software. Laboratory measurements
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Self-evaluation e-exercises (Quizes) Communication via e-mail, course moodle and RSS feeds.
TEACHING PLAN	

Activity	***Semester Workload*** ***(25 h Semester Workload / CU)***
Lectures	26
Writing lab reports and projects	14
Self study	85
Total	**125**

STUDENT EVALUATION	The final grade of the course shall be determined by the student's performance in both the theoretical and the laboratory parts, provided that the student has been assessed with a promotional grade in each part of the course. The evaluation of the course as regards the theoretical part shall be based on a written final examination. 1. The written final examination of the theoretical part shall include: • Multi-Select Questions • Troubleshoot problems in applying acquired knowledge. • Benchmarking of theory data.

	2. The examination of laboratory exercises shall include the evaluation of laboratory skills acquired through examination of laboratory exercises, where laboratory equipment is used. Projects may also be contracted out with the industry, in collective or individual stages

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- Bilalis, N., Maravelakis, E., CAD/CAM systems and 3D modelling - New revised edition, Book Code in Eudoxos: 41955474, Kritiki Publications
- The syllabi distributed through the University or the course's webpage
- E.Papachristou, Virtual Prototype in Clothing - Theory notes and slides, Kilkis.
- E.Papachristou, Virtual Prototype in Clothing - Laboratory exercises, Kilkis.
- Supplementary suggested bibliography
- Journal of Fashion technology & Textile Engineering
- Journal of Textile Science & Engineering
- Journal of Textile Engineering & Fashion Technology
- www.browzwear.com, www.clo.com, www.tukatech.com www.audaces.com

14.6.4 QUALITY CONTROL II

1. GENERAL

SCHOOL	Design Sciences		
DEPARTMENT	Creative Design and Clothing		
LEVEL OF STUDIES	Undergraduate		
MODULE CODE	604	**SEMESTER**	6
MODULE TITLE	Quality Control II		

TEACHING METHODS AND ACTIVITIES	**LEARNING HOURS PER WEEK**	**CREDIT UNITS**
Lectures	2	5
Laboratory exercises	2	
TOTAL	4	

MODULE TYPE	Compulsory, Science Field Module, Specific Foundation Module
PREREQUISITE MODULES:	
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS	yes (English)
MODULE WEB PAGE (URL)	e-learning platform (cdc.ihu.gr) **http://moda.teicm.gr/407E57FB.el.aspx**

2. LEARNING OUTCOMES

Learning Objectives

The course intends to develop advanced knowledge about the importance of the quality of textile products which are used in garment making. Introduction into the theory of sampling and statistical quality control, quality control diagrams and acceptance plans. Analysis of the interrelation of quality control with the modern textile quality management systems which include environmental and sustainability issues, fair trade etc. The students can develop the knowledge and understanding of the science of textile structure and several important properties of fabrics for garments. In addition, an analysis on the defects seen in fibres, yarns and fabrics, and their periodical occurrence explains the cause of their origin and the potential problems in the resulting garment quality.

After the successful completion of the course the students are able to:

- Develop knowledge about the evaluation of the technical specifications of the garments and the importance which the row materials have in the garment production and the final quality.
- Develop the basic knowledge of specific textile quality management systems which include environmental and sustainability issues, fair trade etc. in the integrity of the chain of textile manufacturing.
- Are in a position to recognize, analyze defects in garments and in fabrics and understand their cause. Based on their technological knowledge they can communicate with the supplier for a collaborative solution to the problem

General Skills

General competences that the degree-holder will acquire:

- Application of knowledge in actual conditions
- Production of creative, inductive and free thinking.
- Private study
- Teamworking
- Critical thinking

3. MODULE CONTENT

Theoretical part:

Introduction into their requirements of quality control. The cost of quality and the statistical quality control by sampling. The concept of random sampling technic and the use of the statistical hypothesis in quality control and production. The tools of the hypothesis testing, quality charts and acceptance plans in quality control of fabric specifications. Critical points of implementation of quality control in garment manufacturing. The analysis of the basic concepts of the quality management systems and system requirements. The analysis of the specific textile quality management systems EcoLabel, Oekotex 100, GOTS (Global Organic Cotton), Cotton made in Africa and Sedex.

The mechanical deformations and the elastic behavior of materials. Bending, shearing, torsional deformation and the phenomenon of buckling during stitching of garments. The importance and determination of the rigidity and formability of fabrics in garment manufacturing. The influence of elastic behavior in the determination of bending

length and drape coefficient of fabrics. The determination of tear resistance using the ballistic pendulum and bursting strength of fabrics. The fabric and garment stability during domestic laundering.
The physicochemical mechanism of the fabric behaviour during washing, humidity regain and thermal stability. The analysis of the phenomenon of the fabric and garment twist during washing as well as treatments for controlling body twist. The seam strength testing and the seam slippage of yarns. The quality and care label usage. The lightfastness of fabrics. The determination of the flammability of fabrics. The needle penetration force through fabric and sewability of fabrics. The defects in fibres, yarns and problems caused by their periodical occurrence in fabrics and resulting garment quality. The analysis of the most frequent woven and knitted fabric faults. The problems and defects during cutting and stitching of garments.

Practice Sessions:

The practice of quality control procedure for the testing of quality characteristics of the fabrics include the following:

- Fabric fault evaluation systems and quality acceptance plans
- Determination of bending rigidity through bending length and calculation of formability of fabric
- Determination of the drape of the fabric by Cusick
- Determination of the tear resistance by the ballistic method of Elmendorf
- Determination of the bursting strength of fabric
- Lightfastness of fabric and garment
- Dimensional stability of the fabric during domestic laundering
- Dimensional stability and change in the appearance of garments (body twist)
- Seam strength and seam slippage
- Quality and care labels
- Defect in fibers and their periodical occurrence
- Defects in woven fabrics and evaluation systems
- Main defects of needed fabrics and their cause
- Problems and defects during cutting and stitching of garments
- Determination of the needle penetration force of the fabric and its sewability

4. TEACHING AND LEARNING METHODS - EVALUATION

<table>
<tr><td>TEACHING METHODOLOGY</td><td>Live (Face-to-face presence)</td></tr>
<tr><td>USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES</td><td>Use of ICT in teaching, educational learning platform and modern communication (forums, chats, asynchronous and live platforms) with students.
Use of textile laboratory and textile testing apparatus</td></tr>
<tr><td>TEACHING PLAN</td><td>
<table>
<tr><th>Activity</th><th>Semester Workload
(25 h Semester Workload / CU)</th></tr>
<tr><td>Lectures</td><td>65</td></tr>
<tr><td>Practical Sessions</td><td>25</td></tr>
<tr><td>Self study</td><td>35</td></tr>
<tr><td>Total</td><td>125</td></tr>
</table>
</td></tr>
<tr><td>STUDENT EVALUATION</td><td>Language of the evaluation methods: Greek
A. In theory
1. Voluntary group project and presentation which reassures the 20% of the final grade and 10% from the quizzes during attendance of the presentations.
2. Written final exam comprising:
● Short-answer questions
● Combination judgment questions
B. In the Practical sessions
1. Laboratory Reports (mini projects) which in the case of excellence can provide waive of exams and comprise:
● short answers to questions
● judgment questions
● Problem solving
2.Written final exam comprising:
● Short-answer questions
● Combination judgment questions
● Problem solving</td></tr>
</table>

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- Bona M., (2005), Quality & Quality Control of Textiles, Pepas T. Vassiliadis S, Athens
- Booth J., (1986), Principles of Textile Testing, Heywood Books, London
- Morton, W.E., Hearle, J.W.S.,(2008), Physical Properties of Textile Fibres: Fourth Edition, The Textile Institute, UK
- Amutha K, (2016), A practical guide to textile testing
- *Saville B.P.(1999), Physical Testing of Textiles, Woodhead Publishing, UK*
- *Jinlian HU,(2008), Fabric testing, The Textile Institute, Woodhead Publishing, UK*
- *Sheraz A., Abher R., Ali A, Faheem A.,(2017), Advanced Textile Testing Techniques, CRC Press*
- *Κέφης Β,Ν,, Διοίκηση Ολικής Ποιότητας. Θεωρία και Πρότυπα, 2η Έκδοση, Κριτική ΑΕ, Αθήνα*
- *Taylor MA, (1993), Technology of textile properties*
- *Μπαμπά Μ., Μανωλάκη Μ., Τσουτσαίος Α., "Εργαστηριακός Οδηγός Ποιοτικός Έλεγχος Υφάσματος" ΟΕΔΒ, Αθήνα*
- *ASTM – "Annual book of standards"*
- *BS – "Handbook of textiles"*
- *ISO- International Standards Organization*
- *https://www.oeko-tex.com/gr/business/business_home/business_home.xhtml*
- *https://cottonmadeinafrica.org/en/*
- *https://global-standard.org/*

14.6.5 DESIGN AND DEVELOPMENT OF FASHION COLLECTIONS

1. GENERAL

SCHOOL	Design Sciences		
DEPARTMENT	Creative Design and Clothing		
LEVEL OF STUDIES	Undergraduate		
MODULE CODE	605	**SEMESTER**	6
MODULE TITLE	Design and Development of Fashion Collections		

TEACHING METHODS AND ACTIVITIES	**LEARNING HOURS PER WEEK**	**CREDIT UNITS**
Lectures	2	5
Studio work	3	
TOTAL	5	

MODULE TYPE	Elective Compulsory, Science Field Module, Specialty Module
PREREQUISITE MODULES:	Fashion Forecast & Design, Capturing and Developing of a design concept.
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS	yes (English)
MODULE WEB PAGE (URL)	e-learning platform (cdc.ihu.gr)

2. LEARNING OUTCOMES

Learning Objectives

This course is orientated to evolve student's abilities, on designing a complete fashion collection that is targeted to a specific consumer profile. The design proposal should be captured according to the selected market's needs and follows the latest fashion trends.

After the successful attendance of this course, students will be capable to:

- Design and classify fashion ranges
- Define the selected target market
- Organize collections contents (fabrics, colors, details) in different concepts
- Evaluate the functionality and the commerciality of the garments
- Research and "manage" fashion trends
- Reflect consumer's style on their designer collections

General Skills

General competences that the degree-holder will acquire:

- Group & Independent project work
- Evolving of design skills
- Research, analysis and combination of information with the use of the essential technology
- Fashion project evaluation and self-evaluation

3. MODULE CONTENT

Theoretical part:

The meaning of capturing a design concept for a fashion collection. Factors that affect the procedure for creating a collection. Evolving a design proposal for the fashion ranges. Maintaining style and restrictions. Functional design. Style adaption of a specific target market. The importance of market research and how to organize it. Fashion forecasting on season's key shapes and textiles. Adjustment of fashion trends according to a variety of different garment categories. Consistency of style. Integration of basic lines in the collection.

Studio classwork:

Research and creation of a consumer profile according to the selected target market. Presentation of fashion trends and concept design boards. Design of the basic key shapes and color management. Developing a color swatch board. Selection of fabrics and details. Evolving multiple garment ranges. Color and trimmings variations. Design technical drawings (flats). Creation of garment's specification sheet.

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHODOLOGY	Lectures in class include discussion, presentations, fashion case studies and students' active participation. Studio classwork exercises. Individual and group projects. Creation of a complete fashion collection.
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Communication with students through emails, e-learning website and RSS feeds

TEACHING PLAN	

Activity	***Semester Workload*** ***(25 h Semester Workload / CU)***
Lectures	26
Studio work	39
Independent Research	60
Total	**125**

STUDENT EVALUATION	Final grade is formed from students' final design portfolio, the project has been assigned during studio classwork. After the completion of lectures and studio classwork, students will present orally and by text a complete fashion design portfolio.

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- Diamod Jay, Diamon Ellen, Clothing, Footwear and Fashion, Stella Parikos & Co., Book [14534]

- Complementary Bibliography

- DANGER, Eric, P,(1987). *The Colour Handbook*. USA: Gower Publishing Co.
- SPROLES, G.B. & BURNS, L. D. (1994). *Changing Appearances. Understanding Dress in Contemporary Society*. USA: Fairchilds Publications.
- FRINGS, G.S. (1991). *Fashion from Concept to Consumer*. New Jersey: Prentice-Hall Inc.
- FIORE , Anne Marie, & , KIMLE, Patricia Anne, 1997. *Understanding Aesthetics for the Merchandising & Design Professional*. New York: Fairchilds Publications, Inc.

14.6.6 INTELLIGENT SYSTEMS FOR CLOTHING

1. GENERAL

SCHOOL	Design Sciences		
DEPARTMENT	Creative Design and Clothing		
LEVEL OF STUDIES	Undergraduate		
MODULE CODE	606	**SEMESTER**	6
MODULE TITLE	Intelligent Systems for Clothing		

TEACHING METHODS AND ACTIVITIES	**LEARNING HOURS PER WEEK**	**CREDIT UNITS**
Lectures	5	**5**
Studio work	0	
TOTAL	5	

MODULE TYPE	Elective Compulsory, Science Field Module, Specialty Module
PREREQUISITE MODULES:	
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS	yes (in English)
MODULE WEB PAGE (URL)	

2. LEARNING OUTCOMES

Learning Objectives

The aim of the course is to introduce basic principles of Artificial Intelligence and applications of different research fields in fashion. Students will learn how intelligent systems such as visual object detection, demand forecasting, trend forecasting, shopping recommendations and stock management are already used in fashion.

By the end of the course the students are expected to:

- Understand the possibilities of different fields of Artificial Intelligence that can be used in fashion.
- Distinguish terms like data, information and knowledge.
- Understand the basic characteristics of an intelligent system.
- Identify when it is feasible to develop an intelligent system.
- Choose the most suitable data mining method.
- Use specialized tools and intelligent systems.

General Skills

- Search, analyze and synthesize data and information, using the necessary technologies
- Adapting to new situations
- Decision making.
- Independent work
- Teamwork
- Work in multidisciplinary environment
- Development of new research ideas
- Project planning and management
- Improvement of open minded, creative and inductive thought.

3. MODULE CONTENT

1. Introduction to Artificial Intelligence:
   a. Data, information, knowledge. Information and decision making.
   b. Expert systems: Architecture, Knowledge representation and coding, Knowledge Editing. Ontologies, conclusions' extraction.
2. Data mining applications. Artificial intelligence techniques for:
   a. Visual object detection.
   b. Demand forecasting.
   c. Trend forecasting.
   d. Relevant shopping recommendations.
   e. Stock management
   f. Optimal price policy determination.
   g. Chatbots

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHODOLOGY	Face to face theoretical teaching (lectures, discussion, problem solving and practice exercises). Powerpoint presentations, analysis of related papers. Introduction to open-source intelligent systems.
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Self-assessment quizzes. Electronic communication with students.
TEACHING PLAN	

Activity	***Semester Workload*** ***(25 h Semester Workload / CU)***
Lectures	10
Exercises	25
Writing laboratory reports and projects	10
Individual Study	80
Total	**125**

STUDENT EVALUATION	1. Final written examination (FE) (50%) which consists of ● Multiple choice questions ● Questions that require analysis of existing intelligent systems ● Questions that require comparative assessment 2. Semester Project (SP) (50%). The project requires literature review about different fields of artificial intelligence. The deliverables are a written essay of 2500-3000 words and a public presentation of 20 minutes duration. The final score of the course (SP*0.5+ FE*0.5) and FE individual score should be at least five (5).

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- Giannakopoulos G., Artificial Intelligence, 1st/2021, Charitos Chr. Panagiotis, Book [68372685]
- Mohammed j. Zaki, Wagner Meira Jr, Data Processing and Analysis: Basic Concepts and Algorithms, Ed. 1/2017, Kleidarithmos Editors LTD, Book [68386089]
- Leanne Luce, Artificial Intelligence for Fashion [electronic resource], HEAL-Link Springer ebooks, Book [91687373]
- Boutalis I., Syracoulis G., (2010) Computational Intelligence and Applications, Bros. Papamarkou. Book [68372685]

Textbooks distributed through the University or the course's webpage

- - Intelligent Systems in Clothing - Theory notes and slides. Kilkis

-Related Scientific journals and books:

- Journal of Textile Science & Engineering
- Decision Support Systems
- Expert Systems with Applications
- Knowledge-Based Systems
- Tsan-Ming Choi, Chi-Leung Hui, Yong Yu, Intelligent Fashion Forecasting Systems: Models and Applications, Springer, Berlin, Heidelberg, 2014.

14.6.7 VISUAL MERCHANDISING

1. GENERAL

SCHOOL	Design Sciences		
DEPARTMENT	Creative Design and Clothing		
LEVEL OF STUDIES	Undergraduate		
MODULE CODE	607	**SEMESTER**	6
MODULE TITLE	Visual Merchandising		

TEACHING METHODS AND ACTIVITIES	**LEARNING HOURS PER WEEK**	**CREDIT UNITS**
Lectures	2	5
Practice Assessments	3	
TOTAL	**5**	

MODULE TYPE	Elective Compulsory, Science Field Module, Specialty Module
PREREQUISITE MODULES:	
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS	yes (English)
MODULE WEB PAGE (URL)	

2. LEARNING OUTCOMES

Learning Objectives

The course aims to enable students to successfully use the environments and elements of Visual Merchandising to shape the space of a clothing store. Understand the importance of Visual Merchandising, which is often overlooked as a factor in the success (or failure) of a clothing retail store. Understand the importance of creating an image for a clothing store. ·Acknowledge the use of Visual Merchandising by the retail store in clothing to encourage the sale of clothing and accessories. · Analysis of the elements of Visual Merchandising: layout of the store, lighting, shelves and hangers, sets, shop windows and presentation inside the store. Monitoring emerging trends in Visual Merchandising.

General Skills

- Search, analysis and synthesis of data and information
- Respect for diversity and multiculturalism
- Respect for the natural environment
- Adaptation to new situations
- Decision making
- Autonomous work
- Work in an interdisciplinary environment
- Work in an international environment
- Exercise criticism and self-criticism
- Promoting free, creative and inductive thinking
- Teamwork
- Project Planning and Management

3. MODULE CONTENT

Lecture component

- History and Evolution of Visual Merchandising: From ‘window dressing’ to visual merchandising.
- Visual Merchandising: The ‘face’ of retail. Store image, positioning and competitive advantage. Types of retail and corresponding VM concepts.
- Visual Merchandising environments: External and internal environments & shop windows – image, atmosphere and ‘theater’.
- Elements of Visual Merchandising: Strategic use of elements for better results. Props, display stands and hangers, mannequins, flora, signage and graphics.
- Principles of Design and Composition: Balance and emphasis. Harmony, proportions and rhythm.
- Color combinations. Visual and sound effects: Light and sound as selling tools. Visual Merchandising: Image and corporate identity.
- Visual Merchandising functions: Store image, brand identity.
- Evaluating Visual Merchandising projects: Planning, budget & cost control in VM.
- Laboratory component

- Color psychology, color systems and combinations.
- Future Trends in Retail and Visual Merchandising: VM strategies.
- Brainstorming techniques.
- Selecting the target consumer; Store image and selection of the 'right' VM elements.
- Creation of mood boards that visualize ideas for window displays.
- Constructing a model of a shop window or shop interior.

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHODOLOGY	Theoretical teaching with discussion and active participation of students. Powerpoint presentations are made during the course. Laboratory exercises. Individual and group projects.
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Search scientific literature through HEAL-Link & Google Scholar. Communication with students via email, the course website and the Facebook page
TEACHING PLAN	

Activity	***Semester Workload*** ***(25 h Semester Workload / CU)***
Lectures	35
Exercises	30
Writing laboratory reports and projects	10
Individual Study	50
Total	**125**

STUDENT EVALUATION	The evaluation of the course in terms of the theoretical part is formed by a written final examination with development and comparative evaluation of theory elements. The examination of the laboratory part includes an individual or group project of study and decoration of a shop window according to a specific profile for the consumer, as well as the latest fashion trends.

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- Colborne, R. "Showcase Decoration and Merchandise Presentation", 2008, Stella Parikou & Co.
- Bailey, S., & Baker, J. (2014). Visual Merchandising for Fashion. Fairchild Books.
- Ebster, C., & Garaus, M. (2011). Store Design and Visual Merchandising: Creating store space that encourages buying. Business Expert Press.
- Morgan, T. (2008). Visual Merchandising: Windows and In-Store Displays for Retail. Laurence King Publishing.
- Morgan, T. (2010). Window Display: New Visual Merchandising. London: Laurence King.
- Pegler, M. (2006). Visual Merchandising and Display (5θ εκδ.). Fairchild Books.
- Portas, M. (1999). Windows: The Art of Retail Display. London: Thames & Hudson.
- Stone, E. (1989). Fashion Merchandising: An Introduction. NY: McGraw-Hill.
- Underhill, P. (2008). Why we buy: The science of shopping. Simon & Schuster.

14.6.8 FASHION COMMUNICATION

1. GENERAL

SCHOOL	Design Sciences		
DEPARTMENT	Creative Design and Clothing		
LEVEL OF STUDIES	Undergraduate		
MODULE CODE	608	**SEMESTER**	6
MODULE TITLE	Fashion Communication		

TEACHING METHODS AND ACTIVITIES	**LEARNING HOURS PER WEEK**	**CREDIT UNITS**
Lectures	4	**5**
Practice Assessments	0	
TOTAL	**4**	

MODULE TYPE	Elective Compulsory, Science Field Module, Specialty Module
PREREQUISITE MODULES:	Style Semiology, Aesthetic Theories
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS	yes (English)
MODULE WEB PAGE (URL)	

2. LEARNING OUTCOMES

Learning Objectives

The Aesthetics of Clothing as a means of communication in the Fashion Market. Its interaction with the consumer and the analysis of codes of understanding by target groups. Constructing a Fashion image, styling, according to the latest market trends. The style update.Upon successful completion of the course students should:

- Understand and analyze the visual "message" of clothes
- Identify the Market to which it is addressed
- To compose an image of "Fashion" using photography and text (fashion editorial)
- Create styling boards

General Skills

- Individual assignments
- Teamwork
- Research, analysis and synthesis of information, use of various technologies
- Exercising criticism and self-criticism

3. MODULE CONTENT

Through lectures / discussions, Fashion Communication will be sought as image and text, through Fashion photography and Fashion journalism. The text & the photo as a tool of the designer in the description / analysis of an aesthetic proposal. The course will be developed through the study of 20th century Fashion photographers and emblematic Fashion photographic illustrations. The "language" of the Fashion text will be studied, with references in English terms and the latest "style" trends of the Market will be analyzed. The students, through the suggestions and the research of the respective material will present a complete proposal of "communication" of one, or a collection of clothes.

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHODOLOGY	Theoretical teaching & conversation with different / explanatory quests.
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Communication with students via e-mail & through a relevant group on social media.
TEACHING PLAN	

Activity	***Semester Workload*** ***(25 h Semester Workload / CU)***
Lectures	52
Exercises	13
Individual Study	60
Total	**125**

STUDENT EVALUATION	The final grade is a result of the successful completion of an assignment. By the end of the semester the student is obliged to present his work orally and deliver a hand out a digital or printed version of it.

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- Hadjitheodorou V., Design Management in Visual Communication, edition 1/2019, Eurasia 1618 e.e. Book [102074679]
- Kohle,Y. and Nolf, N. (1998). *Claire McCardell: Redefining Modernism*. New York: Abrams
- MALOSSI, G. (Ed.). (1998). *The Style Engine*. USA: The Monacelli Press Inc.
- Murray, M. P. (1989).*Changing Styles in Fashion: Who, What, Why*. New York: Fairchild.
- Sherrill, M., and Carey A. K.(2002). *Stylemakers: Inside Fashion*. New York: Monacelli Press.

14.6.9 OPERATIONS RESEARCH

1. GENERAL

SCHOOL	Design Sciences		
DEPARTMENT	Creative Design and Clothing		
LEVEL OF STUDIES	Undergraduate		
MODULE CODE	**609**	**SEMESTER**	6
MODULE TITLE	Operations Research		

TEACHING METHODS AND ACTIVITIES	**LEARNING HOURS PER WEEK**	**CREDIT UNITS**
Lectures	4	**5**
Practice Assessments	0	
TOTAL	**4**	

MODULE TYPE	Elective Compulsory, Science Field Module, Skills Development Module
PREREQUISITE MODULES:	
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS	yes (English)
MODULE WEB PAGE (URL)	https://elearning.cm.ihu.gr/course/view.php?id=163

2. LEARNING OUTCOMES

Learning Objectives

The course aims to provide basic knowledge on the use of quantitative models, mathematical techniques and algorithms targeting the "correct" or "optimal" decision making, concerning issues of organization, resource allocation, management and strategy in general.
Upon successful completion of the course students will be able to understand and use quantitative analysis techniques and procedures to address and solve management problems. Thus, in addition to the criteria for optimizing the operation of a system, it will be possible to understand its future behavior, the performance indicators of its individual components and its behavior under different operating conditions, which are determining factors in the production process.

General Skills

- Data search, analysis and synthesis using the necessary technologies
- Decision making
- Autonomous work
- Work in an interdisciplinary environment
- Project design and management
- Application of knowledge in practice
- Promoting free, creative and inductive thinking

3. MODULE CONTENT

Introduction (origin, history, effects & approach to problem solving), Project Management and Scheduling (network configuration & solution, PERT, CPM), Linear Programming (introduction, mathematical modeling, Simplex method, examples of maximization and minimization problems with several constraints), Transportation problems (initial solutions with north-west corner method, least cost method, Vogel's method), optimal solutions, assignments and transshipment problems, Production systems planning (distribution problem, scheduling of jobs in one, two & three media), Total production planning, Spatial planning of production systems

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHODOLOGY	Face-to-face in classroom and online support
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Software (Excel) Learning process support through the course website

TEACHING PLAN	

Activity	*Semester Workload* *(25 h Semester Workload / CU)*
Lectures	26
Tutoring	13
Individual Study	86
Total	**125**

STUDENT EVALUATION	Final exam (100%) that contains solution of exercises and/or short-answer questions.

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- Kostoglou V., "Operational Research & Organization of Production Systems", Tziola Publications, 2016.
- Kostoglou V., "Operational Research - Methodology - Applications and Problems of Management Information Systems", Tziola Publications, 2004.
- Ypsilantis P., "Business Research, Business Decision Making", Promobos Publications, 2007.
- Paparrizos K., "Linear Programming, Algorithms and Applications", Zygos Publications, 1999.
- Kiochos P.A., Thanos G.A., Salamouris D., "Operational Research", Synchroni Ekdotiki, 2002.
- Miliotis P.A., 'Operational Research', Athens, Stamoulis Publications, 1994.
- Hillier F.S., Lieberman G.J., "Introduction to Operations Research", Papazisis Publications, 1985.
- Taha H.A., "Operations Research an introduction", Macmillan Publishing, 1982.
- Anderson D.R., Sweeney D.J., Williams T.A., Martin K., "Management Science - Quantitative methods for business decision making", Critical Publishing, 2014.

Bibliography in English:

- F S Hiller and G J Leiberman, “Introduction to Operations Research”
- H A Taha, “Operations Research – An Introduction”
- W L Winston, “Operations Research – theory and applications”
- Gupta Prem Kumar and Hira D S, “Operations Research”

14.6.10 CLOTHING SUPPLY CHAIN MANAGEMENT

1. GENERAL

SCHOOL	Design Sciences		
DEPARTMENT	Creative Design and Clothing		
LEVEL OF STUDIES	Undergraduate		
MODULE CODE	610	**SEMESTER**	6
MODULE TITLE	Clothing Supply Chain Management		

TEACHING METHODS AND ACTIVITIES	**LEARNING HOURS PER WEEK**	**CREDIT UNITS**
Lectures	4	**5**
Practice Assessments	0	
TOTAL	4	

MODULE TYPE	Elective Compulsory, Science Field Module, General Foundation Module
PREREQUISITE MODULES:	
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS	yes (English)
MODULE WEB PAGE (URL)	https://elearning.cm.ihu.gr/course/view.php?id=163

2. LEARNING OUTCOMES

Learning Objectives

The course aims to enable students to analyze and manage the supply chain mix in the apparel industry.
Provide :

- Knowledge of the supply chain mix
- Understanding of the characteristics of new theories, currently being developed in the apparel supply chain
- Evaluation of distribution strategies in the international apparel supply chain
- Understanding the basics of apparel inventory management
- Use of New Electronic Communication Technologies in the clothing supply chain

General Skills

- Search, analyze and synthesize data and information
- Respect for diversity and multiculturalism
- Respect for the natural environment
- Adaptation to new situations
- Decision making
- Autonomous work
- Work in an interdisciplinary environment
- Working in an international environment

3. MODULE CONTENT

- Managing the Textiles & Clothing supply chain mix: stock, storage, transportation.
- Relations in the Textiles & Clothing Supply Chain: Quick Response (QR) – Efficient Consumer Response (ECR) – Collaborative Planning, Forecasting and Replenishment (CFPR) – Continuous Replenishment Model (CRM) – Vendor-Managed Inventory (VMI).
- Types of stock – Economic Order Quantity (EOQ) – Push/Pull systems. Procurement and outsourcing in Textiles and Clothing.
- Managing the global Textiles and Clothing Supply Chain. Distribution strategies in Textiles and Clothing. Managing Electronic Communication Technologies in the Textiles and Clothing Supply Chain.

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHODOLOGY	Theoretical part of teaching with discussion and active participation of students. Powerpoint presentations are made during the course.
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Search scientific literature through HEAL-Link & Google Scholar. Communication with students via email, the course website and the Facebook page

TEACHING PLAN	

Activity	*Semester Workload* *(25 h Semester Workload / CU)*
Lectures	45
Tutoring	20
Individual Study	**60**
Total	**125**

STUDENT EVALUATION	Final exam (70%) that includes development and comparative evaluation of theory with emphasis on the clothing industry II. Individual Work (30%) concerning a case study of leading supply chain management of clothing companies

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- Harrison, A. - Van Hoek, R. "Logistics - Management and Strategy", Rosili Publications, 2013.
- Christopher, M. "Logistics and Supply Chain Management", Kritiki Publications, 2017.
- Fernie, J. - Grant, D. "Fashion Logistics: Insights into the Fashion Retail Supply Chain", Kogan Page, 2015
- Berry, L. L. (1999). Discovering the Soul of Services. Free Press.
- Bruce, M., Daly, L., & Towers, N. (2004). Lean or agile: A solution for supply chain management in the textiles and clothing industry? International Journal of Operations & Production Management , 24 (2), çç. 151-170.
- Fiegenbaum, A., & Fiegenbaum, V. (2003). The Power of Management Capital: Utilizing the new drivers of innovation profitability and growth in a demanding global economy. NY: McGraw-Hill Trade.
- Simchi-Levi. (2002). Designing and Managing the Supply Chain.
- Simchi-Levi. (2002). Introduction to Supply Chain Management.
- Simchi-Levi. (2002). Inventory Management and Risk Pooling.
- Ulrich, W. (2004). System Transformation: Revolutionizing Supply Chain Management through Holistic Governance Structures.

Complimentary Bibliography

Students should also keep up-to date with articles from the following academic journals, which are regularly used in class:

- MIT Sloan Management Review .
- International Journal of Operations & Production Management .
- Wall Street Journal .
- International Journal of Logistics Management .
- Harvard Business Review .
- European Management Journal .
- Journal of Business Research .
- Strategy and Business .

14.7 7th Semester Courses

14.7.1 GREEK CULTURE & COSTUME

1. GENERAL

SCHOOL	Design Sciences		
DEPARTMENT	Creative Design and Clothing		
LEVEL OF STUDIES	Undergraduate		
MODULE CODE	701	**SEMESTER**	7
MODULE TITLE	Greek Culture and Costume		

TEACHING METHODS AND ACTIVITIES	**LEARNING HOURS PER WEEK**	**CREDIT UNITS**
Lectures	4	**6**
Practice Assessments	0	
TOTAL	4	

MODULE TYPE	Compulsory, Science Field Module, Specific Foundation Module
PREREQUISITE MODULES:	
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS	yes (English)
MODULE WEB PAGE (URL)	

2. LEARNING OUTCOMES

Learning Objectives

The course seeks, through the study of Greek folk culture, to highlight the elements of creativity and traditional handicrafts that interact with clothing, so that they become a field of knowledge and research of further design approaches. . Upon successful completion of the course students should be able to:

- Know the basic ideologies and social trends that emanate from popular culture.
- Recognize the costume characteristics of the local clothing of different geographical areas.
- Describe the evolution of the Greek traditional costume.
- Reproduce a costume proposal inspired by Greek popular culture.

General Skills

- Search and analyze sources.
- Presentation and highlighting of individual issues.
- Comparative illustration of a subject.
- Teamwork.

3. MODULE CONTENT

In the course a study/research on the most important periods of contemporary Greek art and popular culture will be developed. Reference is made to folk costume and folk culture shaped by folk artists and craftsmen. Ceramics and Textiles are studied regarding their interaction with Clothing. Literature of the “Generation of 1930” as a source/reference to clothing and formulation of a particular "Greek" style of clothing is discussed.
History of textile, production, dyeing, sewing, production and exchange issues are analyzed. The social dimensions of clothing and fashion are explored collectively and individually (psychological/sociological approach) and historical and cultural aspects are interpreted.

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHODOLOGY	Theoretical teaching with powerpoint presentations. Search for individual topics through source research. Discussion, development of issues.
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Communication with students via email, the course website and the course team in a closed social network group.
TEACHING PLAN	

Activity	***Semester Workload*** ***(25 h Semester Workload / CU)***
Lectures	52
Project	13
Individual Study	60
Total	**125**

STUDENT EVALUATION	The final grade of the course is shaped by the performance of the students in the theoretical part. The evaluation of the course in terms of the theoretical part, is shaped by: ● optional work / presentation ● written final exam. The written final examination of the theoretical part includes: - development questions.

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- Hatzimichali A, Hellenic Folklore Costume, vol.A, , Athena Ragia LTD, Book [26210]
- Loukatos D S., Introduction to Greek folklore, 4th edition/2015, Formation Foundation of the National Bank, Book [59389050]
- Papantoniou O. (1996). Greek Local Costumes. Peloponnesian Folklore Foundation
- Collective volume. (1986). Greek Folk Culture II. Protoporia.
- Papantoniou I. (2000), The Greek Costume. From Antiquity to the beginning of the 20th century. Commercial Bank of Greece.

14.7.2 FASHION CONSUMER BEHAVIOUR

1. GENERAL

SCHOOL	Design Sciences		
DEPARTMENT	Creative Design and Clothing		
LEVEL OF STUDIES	Undergraduate		
MODULE CODE	702	**SEMESTER**	7
MODULE TITLE	Fashion Consumer Behaviour		

TEACHING METHODS AND ACTIVITIES	**LEARNING HOURS PER WEEK**	**CREDIT UNITS**
Lectures	3	5
Practice Assessments	0	
TOTAL	**3**	

MODULE TYPE	Compulsory, Science Field Module, Specific Foundation Module
PREREQUISITE MODULES:	
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS	yes (in English)
MODULE WEB PAGE (URL)	

2. LEARNING OUTCOMES

Learning Objectives

Introduction to Consumer Behaviour in Clothing. Consumer Behaviour and Clothing Purchases. Clothing Market Segmentation and Strategy. Personality and Lifestyle influencing choice of Clothes. Identity and Self influencing choice of Clothes. Consumer Motivation/Consumer Participation.
Mood states and Persuasion.
Consumer Perception of Clothing Brand messages.
Consumer Learning and Memory.
Online Communication and Consumer Behaviour towards Clothing.
Implications for Clothing Product Design. Individual Decision Making.
The Buying Process: Problem Identification. Information search. Consumer Choice. Acquisition/Consumption/Disposal.
New Products/Spread of Innovations.
After Sales/Satisfaction.
Reference Groups and Opinion Leaders.
Cultural Processes and Consumption. Social influences-Symbolic Consumption. Family influences.
Subcultures.
Marketing and Social Corporate Responsibility.

General Skills

- Search, analyze and synthesize data and information
- Respect for diversity and multiculturalism
- Respect for the natural environment
- Adaptation to new situations
- Decision making / Autonomous work
- Work in an interdisciplinary environment
- Working in an international environment
- Demonstration of social, professional and moral responsibility and sensitivity to gender issues
- Exercise criticism and self-criticism
- Promoting free, creative and inductive thinking

3. MODULE CONTENT

1. Introduction to Consumer Behavior
2. Study of Clothing Consumer
3. Behavior Clothing Market Segmentation and Strategy

Consumers as Individuals

- Consumer perception
- Consumer Learning and Memory Internet

- Consumer Communication and Behavior
- Consumers in the Decision Making Process Individual Decision Making Purchasing Process / Problem Recognition Information Search Clothing
- Consumer Options Acquisition / Consumption / Rejection New Products / Dissemination of Innovations in clothing
- After Sale / Consumers Satisfaction,
- Culture and Subcultures Influence of Groups and Opinion Guides
- Cultural Processes and Consumption
- Social Influences
- Symbolic Consumption and Clothing Family Influences Subcultures

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHODOLOGY	Theoretical home teaching with discussion and active participation of students. Powerpoint presentations are made during the course.
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Search scientific literature through HEAL-Link & Google Scholar. Communication with students via email, the course website and the Facebook page.
TEACHING PLAN	

Activity	***Semester Workload*** ***(25 h Semester Workload / CU)***
Lectures	45
Individual Study	80
Total	**125**

STUDENT EVALUATION	**Final exam** (70%) that includes development and comparative evaluation of theory with emphasis on the clothing industry **Teamwork** (30%) that gives students the opportunity to research and apply different aspects of the concepts and theories covered in the course.

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- Baltas, G. - Papastathopoulou, P. "Consumer Behaviour", Rosili Publishing House, 2013
- Solomon, M. et al. "Consumer Behaviour", 11th edition, Tziola Publications, 2018
- Ariely, D. "Predictably Irrational: The Hidden Forces That Shape Our Decisions", 2008, HarperCollins.
- Cialdini, R. "Influence: science and practice", 5th ed., Allyn and Bacon, 2008.

14.7.3 DIGITAL MARKETING

1. GENERAL

SCHOOL	Design Sciences		
DEPARTMENT	Creative Design and Clothing		
LEVEL OF STUDIES	Undergraduate		
MODULE CODE	703	**SEMESTER**	7
MODULE TITLE	Digital Marketing		

TEACHING METHODS AND ACTIVITIES	**LEARNING HOURS PER WEEK**	**CREDIT UNITS**
Lectures	4	**5**
Practice Assessments	0	
TOTAL	**4**	

MODULE TYPE	Compulsory, Science Field Module, Specific Foundation Module
PREREQUISITE MODULES:	
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS	yes (in English)
MODULE WEB PAGE (URL)	

2. LEARNING OUTCOMES

Learning Objectives

Internet and digital technologies in general are now key factors in shaping today's markets and creating new data, new opportunities and new marketing tools. The aim of the course is to present these new possibilities, both strategically and regularly, and to connect them with the overall marketing strategy of an organization or company.

General Skills

- Search, analysis and synthesis of data and information using the necessary technologies
- Respect for diversity and multiculturalism
- Respect for the natural environment
- Adaptation to new situations
- Decision making and Autonomous work
- Work in an interdisciplinary environment
- Work in an international environment
- Demonstration of social, professional and moral responsibility and sensitivity to gender issues
- Exercise criticism and self-criticism
- Promoting free, creative and inductive thinking

3. MODULE CONTENT

Topics covered include: marketing strategy in digital era, consumer behavior on the internet and other digital media, value creation, content marketing, pricing issues, means and internet marketing tools (own, paid, earned media), Search Engine Optimization, new intermediaries and alternative networks, electronic business models, forms and capabilities of social networks, web analytics & social media metrics.

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHODOLOGY	In class teaching of theory with discussion and active participation of students. Use of PowerPoint presentations during the course
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Scientific literature search through HEAL-Link & Google Scholar. Communication with students via email, the course website and the Facebook page
TEACHING PLAN	

Activity	***Semester Workload*** ***(25 h Semester Workload / CU)***
Lectures	40
Writing laboratory reports and projects	20
Independent Study	65

	Total	**125**
STUDENT EVALUATION	I. **Written final exam** (70%) that includes development and comparative evaluation of theory elements with emphasis on the Clothing Industry. I. **Individual Project** (30%) on the digital marketing strategies of Clothing Companies	

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- Kotler P, Hermawan K., Setiawan I., Marketing 4.0: The Transition from Traditional to Digital Marketing, Edition 1/2020, Klidarithmos Publications Ltd, Book [94644182]
- Vlahopoulou M., "Digital Marketing", ed. 1/2019 Rosili Publications. Book [86053196]
- Manarioti, A. "Social Media Marketing Guide", 2019, Rosili Publications, Book [86053196]
- Harris, C. "The Fundamentals of Digital Fashion Marketing", 2017, Bloomsbury Visual Arts.
- Zairis A., Lemonakis C., Panagiotakis K., Stamatis G., Business Communication and Marketing Management, 1st ed./2021, Kritiki SA Publications, Book [102072565]

14.7.4 PLANNING AND RESEARCH METHODS

1. GENERAL

SCHOOL	Design Sciences		
DEPARTMENT	Creative Design and Clothing		
LEVEL OF STUDIES	Undergraduate		
MODULE CODE	704	**SEMESTER**	7
MODULE TITLE	Planning and Research Methods		

TEACHING METHODS AND ACTIVITIES	**LEARNING HOURS PER WEEK**	**CREDIT UNITS**
Lectures	3	**5**
Practice Assessments	0	
TOTAL	**3**	

MODULE TYPE	Compulsory, Skills Development Module, General Foundation Module
PREREQUISITE MODULES:	
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS	yes (in English)
MODULE WEB PAGE (URL)	

2. LEARNING OUTCOMES

Learning Objectives

The course aims to provide the appropriate experience in selecting and specializing in scientific research topics, related to bibliography selection methods, research tools and the process of writing a scientific paper. Upon completion of the course students should be able to:

- identify a research topic and know where to seek help and guidance,
- analyze an initial research problem in its important elements and ask questions about what exactly is being researched, what are the alternatives, what are the constraints, what is the situation in relation to the competition, what are the expected results in order to choose the appropriate combination of techniques and methodology to carry out a research
- know alternative research techniques and be able to select the most appropriate methods
- carry out research at all stages, selecting methods, constructing questionnaires, constructing samples, analyzing data e) interpreting results obtained from data analysis.

General Skills

- Data search, analysis and synthesis using the necessary technologies
- Decision making
- Autonomous work
- Work in an interdisciplinary environment
- Project design and management
- Production of new scientific ideas
- Promoting free, creative and inductive thinking

3. MODULE CONTENT

Research methodology and methods, induction to scientific work, research design and implementation, primary and secondary data, quantitative research with structured questionnaire, questionnaire construction, reliability and validity, sampling, quality research methods, working paper, case study, case study formulation results, oral presentation of work.
Extensive use of English will be made in the course.
Presentation of projects in English.

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHODOLOGY	Face-to-face in classroom and online support
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Learning process support through the course website

TEACHING PLAN	

Activity	*Semester Workload* *(25 h Semester Workload / CU)*
Lectures	26
Study and analyzing bibliography	13
Study / group project	86
Total	**125**

STUDENT EVALUATION	• Group project presentation (30%) • Final exam (70%)

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- Zafeiropoulos K., "How to Write a Scientific Paper - Scientific Research and Writing Papers", Kritiki Publications S.A., 2015.
- Liargovas P., Dermatis Z., Komninos D., "Research Methodology and Writing Scientific Papers", Tziola Publications, 2019.
- Saunders M., Lewis P., Thornhill A., "Research Methods in Business and Economics", Dissimulation Publications, 2014.
- Gray D., "Research Methodology in the Real World", Tziola Publications, 2018.
- Chalikias M., Samanta E., "Introduction to Research Methodology for Scientific Papers", Synchronic Publishing Ltd, 2016.
- Isari F., Pourkos M., "Qualitative Research Methodology", Kalippos Repository, 2016.
- Theofilidis H., "The Writing of Scientific Work", Dardanos Publications, 2013.
- Babbie E., "Introduction to Social Research", Kritiki Publications S.A., 2018.

14.7.5 CLOTHING BUSINESS MANAGEMENT

1. GENERAL

SCHOOL	Design Sciences		
DEPARTMENT	Creative Design and Clothing		
LEVEL OF STUDIES	Undergraduate		
MODULE CODE	705	**SEMESTER**	7
MODULE TITLE	Clothing Business Management		

TEACHING METHODS AND ACTIVITIES	**LEARNING HOURS PER WEEK**	**CREDIT UNITS**
Lectures	4	**5**
Practice Assessments	0	
TOTAL	**4**	

MODULE TYPE	Compulsory, General Knowledge Module, General Foundation Module
PREREQUISITE MODULES:	
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS	yes (in English)
MODULE WEB PAGE (URL)	

2. LEARNING OUTCOMES

Learning Objectives

The course aims to enable students to take part in the management of a clothing business by effectively organizing their work/the team they manage. It promotes:

- The acquisition of general knowledge about the world of Textiles and Clothing
- The importance and course of these branches in the global and Greek economy.
- The acquisition of knowledge about the operation and management of clothing businesses.
- Awareness of the importance of New Product Research and Development in Textile Industry
- Getting to know the functions of Business Administration (Planning-Organization-Management-Control).

General Skills

- Search, analysis and synthesis of data and information
- Respect for diversity and multiculturalism
- Respect for the natural environment
- Adaptation to new situations
- Decision making
- Autonomous work
- Work in an interdisciplinary environment
- Work in an international environment
- Demonstrating social, professional and ethical responsibility and sensitivity to gender issues
- Exercise criticism and self-criticism
- Promotion of free, creative and inductive thinking

3. MODULE CONTENT

Historical evolution of the technological and economic development of Textiles/Clothing. Basic concepts and definitions of Management. Types of clothing companies, multinational clothing companies.
Basic planning principles and program preparation process. Organization: division of labor, departmentalization, supervision, organization systems. Centralization – decentralization of authority, organizational charts, staffing, human resources planning, jobs, training, evaluation, compensation.
Management - leadership: concept and theories of leadership, effective leadership, instigation-motivation, team building, formal/informal work groups.
Control function: concept and content, control mechanisms.

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHODOLOGY	Theoretical teaching from the seat with discussion and active participation of the students. Powerpoint presentations are made during the course.
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Scientific literature search via HEAL-Link & Google Scholar. Communication with students via email, the course website and the Facebook page.
TEACHING PLAN	
STUDENT EVALUATION	Final written exam (100%) including development and benchmarking of theory elements with an emphasis on the apparel industry

Activity	***Semester Workload*** ***(25 h Semester Workload / CU)***
Lectures	40
Study and analyzing bibliography	25
Study / group project	60
Total	**125**

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- Bateman, T.S. et al. "Business Administration", ed. 13th/2019, Tziola Publications, Book [77107678]
- Dess, G. et al. "Strategic Management: Theory and Applications", ed. 9th ed. 2019, Tziola Publications.
- Tzortzakis M. K., "Organization and Management", 5th ed. 2019, Rosili Publications, Book [86053199]
- Thind, R. "Strategic Fashion Management", 2017, Routledge Publications.

14.7.6 CREATING COLLECTION & PORTFOLIO

1. GENERAL

SCHOOL	Design Sciences		
DEPARTMENT	Creative Design and Clothing		
LEVEL OF STUDIES	Undergraduate		
MODULE CODE	706	**SEMESTER**	7
MODULE TITLE	Creating Collection & Portfolio		

TEACHING METHODS AND ACTIVITIES	**LEARNING HOURS PER WEEK**	**CREDIT UNITS**
Lectures	6	**5**
Studio Work	3	
TOTAL	**9**	

MODULE TYPE	Elective Compulsory, Skills Development Module, Specialty Module
PREREQUISITE MODULES:	
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS	yes (in English)
MODULE WEB PAGE (URL)	

2. LEARNING OUTCOMES

Learning Objectives

The course aims to enable students to synthesize the knowledge they have acquired overall in the design & manufacture of clothing and to create in the spirit of the studio their personal collection, from design to the creation of the first sample.

Upon successful completion of the course students should be able to:

- Design & complete their personal creations going through all the stages of clothing manufacturing.
- Work as a team in the "environment" of a studio.
- Solve problems related to the different stages of clothing completion (case studies).
- Perfect the first sample.

General Skills

- Autonomic work
- Skills Development
- Search, analysis and synthesis of data and information, using the necessary technologies
- Exercise criticism and self-criticism

3. MODULE CONTENT

Theoretical part: Research and presentation of the topic. Elaboration of the theme and the aesthetic / design possibilities it offers. Presentation and discussion of the proposed personal collections.

Workshop part: Work in the environment of the studio, selection and use of the appropriate a 'and b' materials, development of sewing and cutting techniques, decoration and embroidery, until the completion of the samples. Review, corrections.

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHODOLOGY	Theoretical (face to face) teaching with presentation of methodology. Supervised work in the studio.
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Communication with students via e-mail & through a relevant group on social media
TEACHING PLAN	

Activity	***Semester Workload*** ***(25 h Semester Workload / CU)***
Lectures	40
Studio work	32
Atelier	30
Independent Study	23

	Total	**125**
STUDENT EVALUATION	The final grade of the course concerns the completion of the work assigned during the workshop. At the end of the theoretical lectures and workshops, the student should present a complete portfolio and a complete collection of clothes.	

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- Sflomos K., Varzakas Th., "Research and Development of New Products and Business Plans", ed. 2/2019 , Tstotras AN Athanasios Publications, Book [77271644]
- Palomo-Lovinski, N. (2010). Conceptualists. In N. Palomo-Lovinski, World's most influential fashion designers (pp. 160-185). Huntingdon, GBR: A &C Black.
- Gill, Alison (2016). Deconstruction Fashion: The Making of Unfinished, Decomposing and Re-assembled Clothes.
- Articles
- Lynch, A., & Strauss, M. (2007). *Fashion as performance. In Changing fashion.* Ανακτήθηκε στις 10/10/ 2011, από http://www.bergfashionlibrary.com/view/CHANGFASH/chapter-CHANGFASH00010008.xml
- Quinn, B. (2005). *Chalayan, Hussein.* Ανακτήθηκε στις 15/9/ 2011, από http://www.bergfashionlibrary.com/view/bazf/bazf00121.xml
- Quinn, B. (2002). *Japanese Innovation.* Ανακτήθηκε στις 15/10/ 2011, από http://www.bergfashionlibrary.com/view/TECFASH/chapter-TECFASH0010.xml
- Smith, N. (2010, Νοέμβριος 10). *Chalayan's visual adventure.* Ανακτήθηκε στις 7/11/2011, από http://www.d-talks.com/2010/11/chalayans-visual-adventure/

14.7.7 MODERN APPLICATION IN PRODUCTION MANAGEMENT

1. GENERAL

SCHOOL	Design Sciences		
DEPARTMENT	Creative Design and Clothing		
LEVEL OF STUDIES	Undergraduate		
MODULE CODE	707	**SEMESTER**	7
MODULE TITLE	Modern Applications in Production Management		

TEACHING METHODS AND ACTIVITIES	**LEARNING HOURS PER WEEK**	**CREDIT UNITS**
Lectures	3	5
Laboratory Exercises	3	
TOTAL	6	

MODULE TYPE	Elective Compulsory, Skills Development Module, Specialty Module
PREREQUISITE MODULES:	
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS	yes (in English)
MODULE WEB PAGE (URL)	

2. LEARNING OUTCOMES

Learning Objectives

- To acquire knowledge on the electronic programming, control and management of clothing production processes by using specialized information systems in the clothing sector.
- Once the course has been successfully followed, students should:
- Acquire knowledge of the importance of information management for the manufacture of garments through industrial computing applications and IT clothing systems.
- Gain knowledge of the general structure of information systems in order to understand their use
- Acquire skills to handle specialized information systems in the clothing industry

General Skills

Searching, analyzing and synthesizing data and information using the necessary technologies
Stand-alone work
Group Work
Decision-making

3. MODULE CONTENT

Theoretical Part:
Definition of an information system concept. The importance of the information in the clothing production process. Structural analysis of digital IT systems (Server-Client). Review of types of information systems and systems of customer relationships and data exchange. Analysis of system functional areas. Introduction to the Clothing Production Flow Systems.

Laboratory Part:
Analysis and laboratory practice in modern industrial computing applications in the manufacture of garments (layer-cutting, placement, 3D presentation, etc.), with practical exercises. Analysis and training in a real environment of specialized information systems for the production of clothing

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHODOLOGY	In class for the Theoretical part and in the ICT LAB for the Laboratory Exercises
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Use of digital optical media for theory Use of computers to create forms and procedures for quality management systems at the K/S Laboratory

TEACHING PLAN	

Activity	*Semester Workload* *(25 h Semester Workload / CU)*
Lectures	50
Studio work	50
Laboratory Exercises	25
Total	**125**

STUDENT EVALUATION

Theory

- Progress Reviews with Development questions to assess the degree of understanding of clothing production systems and applications eligible for exemption in part of final examinations in the event of successful promotion of reports
- Final examination (100%) comprising:
  - Performing computer exercises clerk:

Laboratory

- Laboratory clothing exercises with the right to an exemption part of final examinations in the event of successful promotion of reports
- Final examination (100%) involving performance of computer exercises

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- Reid D. R., Sanders N. R. (Authors) - Chatzoglou P., Drossos D. (Eds.), Business Operations Management, 2nd/2022, Kritiki SA Publications, Book [112692283]
- Slack N., Brandon-Jones A., Johnston R., Betts A., Management of Production and Business Processes, ed. 4th English/2019, Klidarithmos Publications Ltd. Book [86055861]
- Wallace P. (Authors) - Chatzoglou P., Tsiakis Th. (Eds.), Management Information Systems, 2nd edition/2019, Tsotras AN Athanasios Publications, Book [112692289]
- "Manufacturing Execution Systems", Digital Applications International, DAI Solutions, 2001
- CAM Polyorganise V5.2 System Manual, Polypropon, 2001
- Giannakopoulos D., Papoutsis I., Administrative Information Systems, Synchroni Didactiki, Athens, 2012
- RUNAWAY System Manual, Designer, Otpitex, 2003

14.7.8 PRODUCT DEVELOPMENT IN CIRCULAR ECONOMY

1. GENERAL

SCHOOL	Design Sciences		
DEPARTMENT	Creative Design and Clothing		
LEVEL OF STUDIES	Undergraduate		
MODULE CODE	708	**SEMESTER**	7
MODULE TITLE	Product Development in Circular Economy		

TEACHING METHODS AND ACTIVITIES	**LEARNING HOURS PER WEEK**	**CREDIT UNITS**
Lectures	3	**5**
Laboratory Exercises	3	
TOTAL	**6**	

MODULE TYPE	Elective Compulsory, Science Field Module, Specific Foundation Module
PREREQUISITE MODULES:	
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS	yes (in English)
MODULE WEB PAGE (URL)	

2. LEARNING OUTCOMES

Learning Objectives

This course intents to promote the students' ability

- to monitor and manage the development of new products considering the concepts of circular economy
- to cooperate into the process of development of new sustainable products in the means of Innovation Strategy of the garment business
- to evaluate the alternative scenarios for development of new products for the consumer of clothing goods.

General Skills

General competences that the degree-holder will acquire:

- Research, analysis and data processing for information extraction
- Respect in the diversity and multiculturalism
- Respect to the natural environment
- Adapting to novel circumstances
- Decision making
- Private study
- Work in a interdisciplinary environment
- Work in international environment
- Critical thinking and self-evaluation
- Production of creative, inductive and free thinking.
- Team working
- Planning and project management

3. MODULE CONTENT

The development of new clothing products with added value and respect to the environment.
Creativity and brainstorming. Market research targeting the consumer. International market and consumer trends for the clothing sector. Textile recycling process. Eco materials.
Innovation strategy. Strategic planning, product quality, internal/external stimulus and product specifications. Product life cycle. Product identity: Definition of the basic elements– Standards and product specifications. Eco labeling and certification. The process of planning and development of garment collection. Cradle to cradle.

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHODOLOGY	Lectures of theory using powerpoint presentations with group discussion. Laboratory practices. Individual and group projects
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Research of scientific bibliography through HEAL-Link & Google Scholar services. Communication with the students through emails, the course's website and Facebook site.
TEACHING PLAN	

Activity	*Semester Workload* *(25 h Semester Workload / CU)*
Lectures	35
Project and Laboratory report writing	10
Laboratory Exercises	35
Independent Study	45
Total	**125**

STUDENT EVALUATION	The final course grade is estimated by taking into account the student's performance on the theoretical as well as the laboratorial practices with the restriction of having to obtain a passable grade in both parts of the course. In the theoretical part of the course the evaluation is performed by a written term examination. The student is asked to compose and critically evaluate, based on the knowledge presented in the theoretical lectures. The exams of the laboratorial practices Include individual or group project on the innovation of textiles and clothing over the circular economy

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- Ulrich, K. & Eppinger, S. "Product Design and Development" (2015) Tziola Publications
- Regenesis Group "Regenerative Development and Design" (2016) HEAL-Link Wiley e-books
- James, "Sustainability Footprints in SMEs" (2015) HEAL-Link Wiley e-books
- Sflomos K., Varzakas Th., "Research and Development of New Products and Business Plans", ed. 2nd/2019, Chotras AN Athanasios Publications, Book [77271644]
- Stahel W.R., Circular Economy, Nature. 531 (2016) 435-438
- Lieder M., Rashid A., Towards Circular Economy Implementation: a Comprehensive Review in the Context of Manufacturing Industry, Cleaner Production, Volume 115, 1 March 2016, Pages 36-51

14.8 8th Semester Courses

14.8.1 RAPID PROTOTYPING SYSTEMS

1. GENERAL

SCHOOL	Design Sciences			
DEPARTMENT	Creative Design and Clothing			
LEVEL OF STUDIES	Undergraduate			
MODULE CODE	801	**SEMESTER**	8	
MODULE TITLE	Rapid Prototyping Systems			
TEACHING METHODS AND ACTIVITIES		**LEARNING HOURS PER WEEK**		**CREDIT UNITS**
Lectures		4		**5**
Applied exercises				
TOTAL		**4**		
MODULE TYPE	Elective Compulsory, Science Field Module, Specialty Module			
PREREQUISITE MODULES:	No			
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek			
COURSE OFFERED TO ERASMUS STUDENTS	yes (English)			
MODULE WEB PAGE (URL)				

2. LEARNING OUTCOMES

Learning Objectives

Designers can experiment with their new ideas without limiting their creativity in the use of the new technology of rapid prototyping. Especially in the fashion industry, where design and creativity are the two most important features, products seen resulting from 3D Printing attract attention. The course aims to introduce students to modern techniques of prosthetic fabric for clothing and jewelry, using direct and indirect methods of additive manufacturing.

After attending the course students should:

Know and understand the most well-known Additive manufacturing technologies and the basic applications for prototyping.

Know and understand the process of making pieces with additive manufacturing as well as the various forms of the raw material used.

Be able to identify clothing products and accessories that resulted from the 3D printing process

Know the preparatory work and the STL files as well as the preparatory work of processing and preparing the model for the final use.

General Skills

Search, analyze and synthesize data and information, using both necessary technologies.

Teamwork.

Project Planning and Management.

Promoting free, creative and inductive thinking.

3. MODULE CONTENT

Introduction to rapid prototyping

- Definition
- History of rapid prototyping
- Data Formats
- STL files
- Information flow
- Accuracy of Methods
- Classification of methods

Rapid Prototyping Technologies

- Stereolithography- SLA
- Selective Laser Sintering- SLS
- Selective Heat Sintering - SHS

- Laminated Object Manufacturing- LOM
- Fused Deposition Modeling - FDM
- Inkjet Printing
- Comparison of Methods

Design for additive manufacture of clothing products & accessories

- Design for production and assembly
- The unique capabilities of additive manufacturing
- Exploring creative design
- CAD tools for additive manufacturing clothing products & fashion accessories
- Design synthesis methods

Applications of additive manufacturing technologies in the clothing industry

- Case studies
- Advantages
- Disadvantages
- Challenges - Concerns
- Consumer perception towards construction through additive manufacturing
- Mass personalization (customisation) through additive manufacturing or a gap with this new technology;
- Possible future directions, plans, processes
- Sustainability - Zero Waste & 3D Printing for Fashion industry

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHODOLOGY	Theoretical teaching with discussion and active student participation. During the lesson
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Power Point presentations are made. Live 3D printing of student patterns with FDM and SLA machines.
TEACHING PLAN	

Activity	***Semester Workload*** ***(25 h Semester Workload / CU)***
Lectures	40
Self-study	85
Total	**125**

STUDENT EVALUATION	The final grade of the course is formed by student performance in the theoretical part. The evaluation of the course is formulated in a written final exam as well as from participation in group work in the form of a project. 1. The written final examination of the theoretical part includes: ● Multiple choice questions ● Solving problems by using the application of the knowledge acquired. ● Comparative evaluation of theory elements. 2. Group work is optional, given at the beginning of the semester and is completed at the end of the lectures with presentation of the results by its students team in the classroom

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- Gibson, I., Rosen, D., & Stucker, B. (2017). Prosthetic Manufacturing Technologies. Kritiki SA Publications
- Bilalis, N., Maravelakis, E., CAD/CAM systems and 3D Modelling New Revised Edition, Kritiki Publications

- Complementary Bibliography

- Notes and slides on Theory,, Kilkis.
- Plate, K., (2017). Printed to the Nines: Why 3D-Printing will transform the Fashion Industry. New Degree Press
- Bitonti, F., (2019). 3D Printing Design: Additive Manufacturing and the Materials Revolution. Bloomsbury Visual Arts
- Alyson Vanderploeg, Seung-Eun Lee & Michael Mamp (2017) The application of 3D printing technology in the Fashion Industry, International Journal of Fashion Design, Technology and Education, 10:2, 170-179, DOI: 10.1080/17543266.2016.1223355
- Rapid Prototyping Journal
- International Journal of Advanced Manufacturing Technology
- J. of Materials Processing Technology

14.8.2 SCIENCE AND TECHNOLOGIES OF ADVANCED MATERIALS

1. GENERAL

SCHOOL	Design Sciences		
DEPARTMENT	Creative Design and Clothing		
LEVEL OF STUDIES	Undergraduate		
MODULE CODE	802	**SEMESTER**	8
MODULE TITLE	Science and Technologies of Advanced Materials		

TEACHING METHODS AND ACTIVITIES	**LEARNING HOURS PER WEEK**	**CREDIT UNITS**
Lectures	4	**5**
Applied exercises		
TOTAL		

MODULE TYPE	Elective Compulsory, Science Field Module, Specialty Module
PREREQUISITE MODULES:	No
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS	yes (English)
MODULE WEB PAGE (URL)	e-learning platform (cdc.ihu.gr)

2. LEARNING OUTCOMES

Learning Objectives

After successfully attending the course students will have:

- Knowledge and understanding of the composition and properties of advanced textile materials
- Knowledge and understanding of new technologies in manufacturing smart textiles.
- Knowledge and understanding of new technologies in the manufacture of cosmetic textiles (cosmetotextiles)
- Knowledge of special purpose finishes
- Experience in searching for bibliography, writing essays and presenting them

General Skills

General competences that the degree-holder will include are:

- Search for, analysis and synthesis of data and information, with the use of the necessary technology.
- Respect for the natural environment.
- Production of free, creative and inductive thinking.
- Working independently.
- Team work.

3. MODULE CONTENT

- Special Purpose Fibers
- Elastomeric fibers
- Fibers resistant to heat, fire, chemicals
- Optical fibers
- Ceramic fibers
- Aesthetic finishes
- Special purpose finishes
- Composite materials
- Fibers used in the manufacture of composite materials
- Composite materials in the manufacture of protective clothing and anti-ballistic equipment
- Smart materials and fabrics and their applications
- Cosmetotextiles-Fabrics with cosmetic properties

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHODOLOGY	Face-to-face
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Use of ICT in teaching, laboratory education, communication with students

TEACHING PLAN	

Activity	***Semester Workload*** ***(25 h Semester Workload / CU)***
Lectures	50
Team work	30
Essay writing	20
Self-study	25
Total	**125**

STUDENT EVALUATION	Language of the evaluation methods: Greek • Written Essay • Report • Oral examination • Public Presentation

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- Ashby M, Johnson K, Materials and Design, ed. 3rd American/2019, Klidarithmos Publications Ltd, Book [86195857]
- Hill D. J., Hall M. E., Holmes D. A., Lomas M., Padmore K., Dyeing and Finishing Technology, Translated by Peppa Th., Vasileiadis S., Athens 2003
- Chemistry and Technology of colorEletheriad, I. i, Tsatsaroni E., Nikolaidis N., Publications Kallipos e-book
- Stoppa M. and Chiolerio A., Wearable Electronics and Smart Textiles: A Critical Review, Sensors 2014, 14(7), 11957-11992
- Roshan P., Factional Finishes for Textiles, A Volume in Woodhead Publishing in Textiles, 2015
- McCann J., Bryson D., Smart Clothes and Wearable Technology, 2009.
- Medical Textiles and Biomaterials for Healthwear, 2004
- Kadolph S. J., Textiles I, Fiber and Yarn Technology, Ion Publications, 2010
- Kadolph S. J., Textiles II, Fabric Technology, Dyeing and Finishing, Ion Publications, 2010
- Tao X., Smart Fibres, Fabrics and Clothing, Woodhead Publishing Ltd (2001)
- Heywood D., Textile Finishing, The Society of Dyers and Colourists (2003)
- 1. M Raheel: Protective Clothing Systems and Materials, Marcel Dekker, Inc., 1994.
- Online bibliography renewed on an annual basis. Annually updated online bibliography

- Complementary Bibliography

14.8.3 LIFE CYCLE AND RESOURCES MANAGEMENT SYSTEMS

1. GENERAL

SCHOOL	Design Sciences		
DEPARTMENT	Creative Design and Clothing		
LEVEL OF STUDIES	Undergraduate		
MODULE CODE	803	**SEMESTER**	8
MODULE TITLE	Life Cycle and Resources Management Systems		

TEACHING METHODS AND ACTIVITIES	**LEARNING HOURS PER WEEK**	**CREDIT UNITS**
Lectures	4	**5**
Applied exercises		
TOTAL	**4**	

MODULE TYPE	Elective Compulsory, Science Field Module, Specialty Module
PREREQUISITE MODULES:	
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS	yes (English)
MODULE WEB PAGE (URL)	

2. LEARNING OUTCOMES

Learning Objectives

The aim of the course is to introduce basic principles of CAM information systems in fashion (ERP, CRM και e-Business). By the end of the course the students are expected to:
Understand and control information related to product lines (season and fabric management).
Understand and control information related to strategic level choices (production commands, command analysis per order and customer life cycle).

General Skills

- Search, analyze and synthesize data and information, using the necessary technologies
- Individual work
- Decision making and Teamwork

3. MODULE CONTENT

Introduction and practice with information systems that are used in fashion. Introduction to system's interface. System menus (Fabrics, standards, samples, customers, suppliers, warehouses, employers, fixed assets, finance). Products, partners, orders, resources, finance documents, payroll management. Analysis of various system tools (filters, statistics). Warehouse tools (Product weight, balances, specification tree and dimensions). Management forms (basic, secondary and search forms). Commands. Image management and editing. Order and production commands management.

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHODOLOGY	Face to face theoretical teaching in class and laboratory.
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	DVD for theory
TEACHING PLAN	

Activity	***Semester Workload*** ***(25 h Semester Workload / CU)***
Lectures	50
Production management processes execution or p/c	75
Total	**125**

STUDENT EVALUATION	Final exam (100%) which consists of - Production management processes execution - Order management simulation

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- Giannakopoulos D., Papoutsis I., Management Information Systems, Synchroni Didaktiki, Athens, 2012
- Fitsilis Panagiotis, Modern Business Information Systems ERP-CRM-BPR, ed. 2/2018, Broken Hill Publishers LTD, Book [77111049]

- ERP system manual, Computer Life, 2001
- Touloumtzidou I, Karypidis M., Applied Example of Order Management through ERPe-Plexis, Kilkis, 2012

14.8.4 ENTREPRENEURSHIP AND INNOVATION

1. GENERAL

SCHOOL	Design Sciences		
DEPARTMENT	Creative Design and Clothing		
LEVEL OF STUDIES	Undergraduate		
MODULE CODE	804	**SEMESTER**	8
MODULE TITLE	Entrepreneurship and Innovation		

TEACHING METHODS AND ACTIVITIES	**LEARNING HOURS PER WEEK**	**CREDIT UNITS**
Lectures	4	**5**
Applied exercises		
TOTAL		

MODULE TYPE	Elective Compulsory, Science Field Module, Specialty Module
PREREQUISITE MODULES:	
LANGUAGE OF TEACHING / EXAMS LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS	yes (English)
MODULE WEB PAGE (URL)	

2. LEARNING OUTCOMES

Learning Objectives

Learning Outcomes

The learning outcomes of the course are described here, the specific knowledge, skills and abilities of an appropriate level that students will acquire after the successful completion of the course. Consult Appendix A.

- Description of the Level of Learning Outcomes for each course according to the Qualifications Framework of the European Higher Education Area
- Descriptive Indicators of Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Annex B.
- Summary Guide for writing Learning Outcomes

The course aims to cultivate students' entrepreneurial mentality, encourage innovation and develop a philosophy more friendly to entrepreneurship and innovation.
In this frame, it will help in

- the development of the business impulse,
- training students for the skills required to start a business and manage its growth;
- the development of business capacity and in identifying and seizing entrepreneurial opportunities.

Case studies from the field of clothing companies, in Greece and worldwide, will also play an important role.
After completing the course, the student will be able - among other things - to develop his or her own business idea or cooperate with a third-party business idea, contributing in the success through innovation, as well as being aware of copyright issues of their work.

General Skills

General Abilities
Taking into account the general skills that the graduate must have acquired (as are listed in the Diploma Supplement and are listed below), each of them is intended for the course.
Search, analysis and synthesis of data and information, using the necessary technologies
Adaptation to new situations
Decision making
Autonomous work
Teamwork
Working in an international environment
Work in an interdisciplinary environment
Generation of new research ideas
Project design and management
Respect for diversity and multiculturalism
Respect for the natural environment
Demonstration of social, professional and moral responsibility and sensitivity to gender issues
Exercise criticism and self-criticism
Promoting free, creative and inductive thinking

3. MODULE CONTENT

The concept and content of Entrepreneurship and Innovation, Innovation as a strategy and as a competitive advantage, concept and characteristics of Innovation Systems, Innovation and Competitiveness, Innovation as a Management Process, Business Clusters, Medium-sized Enterprises and Innovation, Knowledge Management as the perquisite for successful business activity, the Greek reality, Case Studies of Clothing Companies, Intellectual Property and Copyright Management.

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHODOLOGY	Face to face in class
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Media Learning Process Support through the website
TEACHING PLAN	

Activity	***Semester Workload*** ***(25 h Semester Workload / CU)***
Lectures	52
Study and analysis of literature	12
Study/ Teamwork	61
Total	**125**

STUDENT EVALUATION	Teamwork presentation (30%) Written Final Exam (70%)

5. RECOMMENDED BIBLIOGRAPHY

- EUDOXUS System suggested Bibliography:

- Whittington D., "Digital Innovation and Entrepreneurship", 1st/2022, Haritos H. Panagiotis, Book [112702231]
- Karagiannis E.G. –Bakouros IL, “Innovation and Entrepreneurship. Theory-Practice”, Sofia Publications, 2010.
- Piperopoulos, GP "Entrepreneurship, Innovation & Business Clusters", Stamouli Publications, 2008.
- Hatzikonstantinou G., Goniadis, H., "Entrepreneurship and Innovation", Gutenberg Publications, 2009.
- Bessant J. - Tidd J., "Entrepreneurship and Innovation", Tziola Publications, 2018.
- Kotsios P., "Entrepreneurship, Innovation: conception, design, implementation and operation", Kotsios Publications, 2015.
- Fayolle A., “Theory and Practice. Practical Applications to Learn Business ", Propompos Publications, 2019.