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Politecnico Calzaturiero learning model

Resumen
Informe sobre los resultados obtenidos de cada una de las fases y evaluación de la implementación de esta experiencia piloto.

Descripción de la metodología de aprendizaje basada en el trabajo utilizado en Politecnico Calzaturiero, incluyendo metodologías, materiales, programas, diseño de currículo y implementación de nuevos cursos.

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BACKGROUND

Politecnico Calzaturiero is a company founded in 2001 in the Veneto Region thanks to the initiative of the Associazione Calzaturifici Riviera del Brenta, the Associazione Nazionale Calzaturifici Italiani, Bodies of Research and Innovation and the Financial Institutions of the Veneto Region. The company works in the sectors of education, research and technological innovation and it realizes services of rapid prototyping, quality control of materials, workplaces’ safety and machineries’ supervision.

Politecnico Calzaturiero is the heir of Riviera del Brenta footwear tradition, started in 1923 when the School of Arts and Jobs was created; the “School of Arts and Jobs” has become the “School of Design and Technique of shoe”, where participants study with the aim of becoming patternmakers. The School is still active and has more than 150 students. Politecnico is also one of the three national centers of excellence, identified by the National Association of Italian Footwear Manufacturers (ANCI). It represents a diamond-point in Italy and around Europe thanks to its traditional experience and competence; teachers are entrepreneurs, designers, modelers, engineers and industry consultants from the footwear sector and they make available their knowledge to the Regional, National and European stakeholders.

The activities of Politecnico Calzaturiero are focused on the development of the following areas:

- Specialized and Managerial Training
- Expert Advice Service for companies
- Activities of Research and Technological Innovation, in order to develop technologies and methodologies for a quick response to the market on a National and an International level.
- Participation in projects aimed at the development of machineries and at the improvement of production processes, in order to increase safety in the workplace and to reduce the environmental impact,

Concerning training activities, Politecnico has the purpose to promote young orientation, to provide graduates’ training and to sustain a lifelong learning education of companies in order to develop the footwear sector in collaboration with schools, universities and business stakeholders.

Every year Politecnico Calzaturiero organizes a large number of training activities; during the weekend students attend:

The School of Design and Technique of shoe and bag. These courses aim to provide scholars with the competences required for designing and realizing products. The 95% of the learners are employed by Riviera del Brenta District’s companies at the end of the studies.

Additionally, Politecnico promotes professional training in the area of industrialization, communication and marketing, CAD 3, business administration for the footwear industry; it supports technical education through hand cutting, assembling and patternmaking courses.

Moreover, Politecnico participates in Regional projects that promote education and practical knowledge for unemployed people and it works in collaboration with local temp agencies.

Furthermore, Politecnico guarantees vocational training for employees and managers and it fosters international collaborations with the Nigerian Government and the Parsons the New School for Design locating in New York, organizing annual Summers Schools for international students.

In regard to research and innovation activities, Politecnico promotes and participates in numerous research initiatives and in the technology transfer of systems, processes, products and innovative materials on the Italian and the International level.
It cooperates with universities and research centers and with the main machineries and technologies producers.

The main aim of Politecnico Calzaturiero is to support the growth and the development of the Veneto Footwear Industry through the advancement of new methodologies and technologies designed to show an active product to customers.

The Expert Advice Services for companies are designed in order to offer an answer to the footwear companies’ needs; expert advice activities include standardized and personalized interventions in companies, like, for example, the quality control of materials, the rapid prototyping and the control of the safety in the workplace.

The Politecnico’s strategy is directed to sustain the development of footwear companies not only in the Veneto Region but at a National level and abroad; Politecnico promotes organizational and technological activities in order to facilitate the integration and the internationalization of the Footwear Sector. The internationalization process represents a fundamental step in order to find new opportunities for the company’s growth in foreign markets; it is important for sharing ideas and skills in a scenario characterized by the globalization and the consequent progressive increase in competition, which places every day the company in front of stimulating and complex challenges. The internationalization process allows to exchange services, skills, different ideas and competence with other international realities.

For all the reasons listed above, Politecnico is involved in various type of projects:

1. System projects with the aim of making research directed to:
   1. develop applications with innovative technologies, in order to be more competitive and to make the Politecnico experience available for the global scenario;
   2. promote the transfer of innovations developed for other productive sectors.
Where we are

We are in the middle of the Riviera Brenta district.

The Industrial District of Riviera Brenta is characterized by the production of luxury footwear with private labels and for the most important international brands.

It covers an area between the provinces of Padua and Venice, a very large geographic area with the presence of several industrial and commercial SMEs of footwear sector.

The Riviera del Brenta District in numbers:

- 520 companies (shoe manufacturers and sub-contractors, the most of them SMEs)
- 19,415 million pairs of shoes produced (95% for women, 5% for men)
- 10,032 workers/employees
- 92% export quota worldwide
POLITECNICO CALZATURIERO MAIN PRODUCT, THE SCHOOL OF DESIGN AND TECHNIQUE OF SHOES AND BAGS.

Since 1923 Politecnico Calzaturiero has represented a model at a National and an International level thanks to some important characteristics; our teachers design and produce the most famous shoe brands in the world; their experience and professionalism permit an every updated teaching plan. The School has developed a strong relationship with the companies of the footwear sector; this synergy permit to our students to find easily an internship and a job at the end of the study.

Politecnico Calzaturiero has received numerous national and international awards and it works in a network which includes Schools, Universities, International Institutes; the School has developed different partnership agreements with some International Institutions, such as the Nigerian Government, the Parson School of New York, the Guangzhou Panyu Polytechnic and many other European partners involved in EU funded projects. Our future strategies aim to make Politecnico a recognized worldwide school, a Riviera del Brenta District resource of innovation, an internationalization driver, a place of industrial tourism, an incubator of new business.

The school is an amazing model, because:

- It is a private school
- «teachers» are all «employed» working in the factories
- «students» will be all employees
- In the school, you can see the whole process of "creating a shoe"
- Companies participate at the school activities It is a model at a National, European and International level.

The school of Design and Technique of Shoes and Bags in number:

- 100 young unemployed people
- 187 students of the school (school year 2016/2017)
- Youth Guarantee
- 70 Headquarters stage companies
- 50 Teachers

The educational program and courses offered are encuadrados within the Continuing Education and Adult Education (hereinafter "EAEC"), for which do not require any security and there is no age limit. Vocational training is managed at regional level, but funding may be public or private, or a combination both. If the funds come from public funding courses pose no cost to participants, who are often unemployed with the specific goal of finding a job or change careers.

The main objective of this model lifelong learning and adult education remain the same as at the beginning: to create an environment of learning by doing, you can qualify young people for starting or completing general or vocational education or to enter the market directly work within the scope of skills and abilities in the footwear sector.

The main objective of the formation of Pol. Calzatureiro is to create an environment for practical learning to be able to train young people or adults (second-chance) so they can begin or complete general or vocational education, or they can access the labor market within the footwear sector to meet the specific needs of companies.

One of its main features is that all trainers are workers highly regarded companies in the sector, so that the teaching of the courses is done during weekends (Saturdays), although it has carried out an intensive program that performs Tuesday and Thursday.

Thus students in the school have the opportunity to develop professional, social and personal skills through practical work in production jobs and to get individual counseling. It is the combination of a school and workplace. For this, the center has all the materials and the latest
technology necessary for the proper formation process. In addition, the training process is accompanied by specializing in areas such as marketing, communication, quality, etc and visits to companies, to deepen the knowledge acquired seminars.

Practical work and production is the foundation of the Polytechnic Calzatureiro, and based on this all develops other aspects.

This type of learning provides education based on practical work and production, to acquire an experience that can determine their future training - and their chances in the labor market. In fact 95% of students are employed by companies in the Riviera del Brenta at the end of the studies.

**Development and competency assessment**

In principle recipients of learning are employed and unemployed persons interested in acquiring the basic knowledge needed to design footwear models, although not require any qualification, it is recommended to have a good ability and skill to design and basic knowledge of technical issues on footwear. Access is not restricted, but it is preferred to people with experience in the footwear industry or fashion.

From a theoretical point of view, the proposed training modules is to create a dynamic and different environment for young people who need new perspectives that help them acquire skills and knowledge in design and manufacturing work footwear. The training focuses on the development of professional, social and personal skills, it was found that almost all young people have great abilities and learning resources provided are developed under appropriate conditions (methods, teachers and appropriate means).

Work in workshops also offers students training in matters related to the fashion industry, such as marketing, communication, editing, etc. under the premise that learning a profession without using personal and social skills is not successful, resulting in possible subsequent job opportunities, because to enter the labor market is basic also develop social and personal skills. For that reason, it is important to provide students of other skills to work their social skills.

The development of social and personal skills occurs largely along with the development of professional skills, which also occurs outside the workshop through visits to leading companies in the sector to reinforce their learning.

Theoretical learning and instruction are integrated as much as possible in the practical work of the workshops and production. The theoretical instruction must be extensive and must be integrated into all kinds of workshops to implement the knowledge acquired.

At school the theoretical basis of each module is understood as intellectual knowledge of a subject (the profession). The theory and practice are interrelated, one can’t exist without the other. In the workshops, trainers include theoretical aspects with practical work, in order to explain or explore other options or solutions to a problem, or serve as inspiration for other subjects. For most students, the isolated theory of practical problems meaningless. It is at work in workshops where students realize the importance of theory to solve practical problems when (as with mathematics).

The number of students per teacher in schools is less than the production of professional education allowing more individual attention. The classroom teaching focuses on practical problems in the workshop.

As for student assessment, mainly it based on several tools, class attendance, grades of cuts in oral and written examinations and presentation of a student portfolio or collection.

The record of the evolution of students takes many forms and is complemented by other methods that adapt to the school and the student. Orientation and evaluation take place continuously in the workshops. The law of production schools requiring students to meet with their school counselor at least once every three months. Also it requires the school to track student progress through an individual plan. It is not only an educational program, but also a personal program, which takes into account the personal and social development of students as well as professional.
The aim of the individual plan is to describe and clarify the learning process of students who have doubts regarding educational or vocational choices.

A portfolio can be an aid in the production school because the student can keep all your products, references, etc. A portfolio is a systematic collection of work and student experience, but can also serve to showcase their efforts, progress and achievements.

Finally, the result on paper - because the real is the student himself when fully developed their skills - documentation and evaluation, which continually occurs during the stay in production schools, is the Certificate of Competence. Production school gives a Certificate of Competence student when studies illustrating skills acquired within each specific area ends.

**The role of the trainer**

Polytechnic trainers are professionals in their field, who have had or have a job related to the professional field shoemaking before being former school. It is important that students know that trainers are dedicated to their profession. They are people with abilities and skills and who devote their time trying individually to all students in the workshop.

The close professional and personal relationships that form between the trainer and students are essential to learning and skills development are achieved simultaneously.

Given the type of Students arriving, the trainer takes its pedagogical tools and tries to instruct the appropriate tasks for each person. As in this type of program is not just about training, but also of social and personal training, the trainer must use their personal and professional skills.

The professional hierarchy is still in the fact that the former is the "master" and students are "apprentices". Professional and social skills are paramount. The role of trainers is developed in such a way that is comparable to the master with the apprentice or boss with the employee to bring students to the working world, with the difference that the trainer must invest more in interpersonal relationships for with their students.

Trainers can obtain qualifications through educational courses.

**Funding model**

Regarding the financing model it is based on the sum of both state formation as part of private funding. The following tables shown how these loans are distributed.

### privately Held

- Participants are in charge of the course fees;
- Costean business training (eg through their interprofessional funds.);
- Employment Agencies (through a common fund called Formatemp);
- The company or the employment agency decide the curriculum, skills and teaching method (eg. Time spent in the classroom, in practical work in workshops or company).

### public funding

- The funds usually come from the European Social Fund (ESF) through the national, regional and local government;
- The call normally defines both training target participants (selection criteria) as the professional profile of the formation;
- The training center must be accredited by the region.
DESCRIPTION OF THE WORK-BASED LEARNING METHOD

Structure of the School of Design and Technique of Shoes

1st year
BASIC CLASSICAL PATTERN-MAKING
Duration: 240 hours
School time: Saturday

or

1st year
INTENSIVE CLASSICAL PATTERN-MAKING COURSE
(Basic Classical Pattern-Making + Advanced Classical Pattern-Making )
Duration: 480 hours - School time: Tuesday and Thursday

IInd year
ADVANCED CLASSICAL PATTERN-MAKING
Duration: 240 hours
School time: Saturday

IInd year
SPORT AND FREE TIME PATTERN-MAKING
Duration: 240 hours
School time: Saturday

IIIrd year - Specialization Courses Access:

Footwear Technician Patternmaker
Certificate
Specialisation Courses Access:

IIIrd year - Specialization Courses:
CONCEPTUAL DESIGN
Duration: 240 hours
School time: Saturday

IIIrd year - Specialization Courses:
INDUSTRIAL MODELS AND TECHNICAL STRUCTURES
Duration: 240 hours
School time: Saturday

IIIrd year - Specialization Courses:
CAD 2D/3D
Duration: 120 hours
School time: Saturday

IIIrd year - Specialization Courses:
LUXURY HANDMADE FOOTWEAR COURSE
Duration: 240 hours School time: Saturday

Specialization Diploma
The Pattern-Making Courses provide students with the basic knowledge needed to work like pattern-makers and technicians in a footwear company.

There are two educational paths: a first common year of Basic Classical Pattern-Making and a second year, where they can choose between: Classical pattern-making or Sport and free time pattern-making.

Applicants: Employed and unemployed people interested in acquiring the basic skills needed to design footwear models. The basic course requires good dexterity design ability and a basic understanding of technical subjects.

Here the details of each year.

1st year - BASIC CLASSICAL PATTERN-MAKING

Objective of the course: to provide students with the technical basic competences needed to work in the design and industrial fields of footwear. At the end of the training the students will be able to draw on paper and on the last; they will learn to develop the below models studied during the years: décolleté – buttoned shoe – oxford – derby – moccasin – low boot – sandal.

Also, he/she acquires the knowledge about the structure and the organization of the footwear sector and about the different typologies of the products, materials and components used.

Course Duration: 240 hours.

Contents

❖ STYLISTIC DESIGN

The aim of this content is to provide the student of the basic knowledge of the drawing techniques, volumes, color effects, orthogonal projection, free hand and last design, foot anatomy, lasts proportions, design of different footwear models.

Duration: 46 hours

Detailed program of the content (and related training hours)

- The last; as we observe it; schematization; introduction; program (2 h)
- Decolletè: bases of design, orthogonal projections, correction and axonometries (4 h)
- Decolletè straight tip and outside counter, three-dimensionality, introduction to color (2 h)
- Buttoned shoe: orthogonal projection and three-dimensionality, introduction to pastel, theory of shadows (4 h)
- Oxford smooth (man last): shadow theory, pastel (2 h)
- Oxford - tip and outside counter: man, woman, pastel (2 h)
- Smooth Derby: pastel (2 h)
- Derby, tip and outside counter: pastel, man, woman, project (4 h)
- Moccasin with clamp: stylization, watercolor techniques, other techniques (4 h)
- Review and mid-year exam
- Boot: basis, variants, watercolor techniques, trends (8 h)
- Low boot with elastic: basis (2 h)
- Low boot: variants, marker, project (4 h)
- Low boot and sandal: list and little upper, marker (2 h)
- Sandal: various models, marker (4 h)
- Ballerina Sneaker: maker (2 h)
- Free design (6 h)
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BY HAND TECHNICAL PATTERN-MAKING

The aim of this content is the development of upper, lining and reinforcement moulds of basic models, and the technical documents preparation.

Duration: 120 hours

Detailed program of the content (and related training hours)
- Check of the materials, tools, practice exercise of cutting on cardboard (4 h)
- Wrap the last with the paper, realization of the basis of the model (4 h)
- Correction of the basis of the model (4 h)
- Decolletè: realization and correction (8 h)
- Decolletè tip/outside counter: realization and correction (8 h)
- Buttoned shoe: realization and correction (8 h)
- Oxford: realization and correction (8 h)
- Derby: realization and correction (8 h)
- Moccasin: realization and correction (8 h)
- Mid-year exam
- Basis of the boot: realization and correction (8 h)
- Boot: realization and correction (8 h)
- Low boot: realization and correction (8 h)
- Sandal: realization and correction (8 h)
- Oxford Duilio tip/outside counter: realization and correction (8 h)
- Derby tip/outside counter: realization and correction (8 h)
- Review (4 h)

PROCESSES/MATERIALS TECHNOLOGIES

The aim of this content is to learn the basic knowledge of footwear structure, components, materials and processes of design and production.

Duration: 62 hours

Detailed program of the content (and related training hours)
- Structure of a shoe: parts, components and materials (2 h)
- Supply chain and shoes manufacturing organization and main processes (2 h)
- The last (2 h)
- Visit to the last factory (2 h)
- Leather (4 h)
- Visit to the tannery (4 h)
- Reinforcements, tips and counters (2 h)
- Visit to tips and counters company (2 h)
- The insole (2 h)
- Visit to insole factory (2 h)
- The heel (2 h)
- Visit to the heel factory (2 h)
- Review and mid-year exam
- The leather sole (2 h)
- Visit to the sole factory (2 h)
- Consumption assessment and cost sheet + exercise (2 h)
- The fabrics (2 h)
- Podiatry (2 h)
- Technical sheets: last, sole, insole, heel (2 h)
- Adhesives and glues for the footwear industry (2 h)
- Models development in sizes + development in sizes with CAD system, with locked developments (2h)
- Steps and processes of footwear realization. Cutting: organization, documentation and problems (2h)
- Visit to leather cutting factory (2 h)
- Steps and processes of footwear realization. Stitching: organization, technologies, documentation and problems (2h)
- Steps and processes of footwear realization. Lasting and finishing: organization, technologies, documentation and problems (2 h)
- Visit to shoe factory (2 h)
- General review (2 h)

*Final exam*: written - 8 hours – all contents

*Admission Conditions for the second year*: 85% course attendance - Passing mark in all subjects

**II^rd Year - ADVANCED CLASSICAL PATTERN-MAKING**

*Objective of the course*: To provide students with technical basic competences needed to work in the design an industrialization of shoe. At the end of the training the student will be able to design some shoes basic models’ variations drawing on paper and on last and developing models parts by hand.

*Course Duration*: 240 hours.

*Contents*

[v] **STYLISTIC DESIGN and PROFESSIONAL DESIGN**

The aim of the stylistic design content is to learn more about techniques, colors application, graphic studies of components and accessories. Whereas, the aim of professional design is to learn advanced techniques to technically draw variations to man/woman basic models on paper and on last, in order to acquire skills needed to build a mini-collection.

*Duration*: 58 hours

*Detailed program of the content (and related training hours)*

Stylistic design and professional design of:

- Decolleté (2 h)
- Variant of decolleté (4 h)
- Decolleté, tip and outside counter (2 h)
- Variant of the split decolleté (2 h)
- Buttoned shoe (2 h)
- Variant of buttoned shoe (2 h)
- Oxford (2 h)
- Variant of Oxford (2 h)
- Real moccasin (2 h)
- Variant of moccasin (2 h)
- Derby (2 h)
- Variant of derby (2 h)
- Boot (2 h)
- Variant of boot (2 h)
- Mid-year exam
- Ballerina – personal version 1 (2 h)
- Ballerina – personal version 2 (2 h)
- Model on heel 100 – personal version 1 (2 h)
- Model on heel 100 – personal version 2 (2 h)
- Boot or Low boot – personal version 1 (2 h)
- Boot or Low boot – personal version 2 (2 h)
- Model related to a project with soles company – version 1 (2 h)
- Model related to a project with soles company – version 2 (2 h)
- Sneaker – personal version 1 (2 h)
- Sneaker – personal version 2 (2 h)
- Sandal – personal version 1 (2 h)
- Sandal – personal version 2 (2 h)
- Wedge Sandal – personal version 1 (2 h)
- Wedge Sandal – personal version 2 (2 h)

**BY HAND TECHNICAL PATTERN-MAKING**

The aim of this content is the development of upper, lining and reinforcement moulds of the mini-collection models, technical documentation planning.

*Duration:* 112 hours

*Detailed program of the content (and related training hours)*

- Review on the creation of a basis of a model (4 h)

Realization of the moulds of:

- Decolleté (4 h)
- Variant of decolleté (4 h)
- Decolleté, tip and outside counter (4 h)
- Variant of the split decolleté (4 h)
- Buttoned shoe (4 h)
- Variant of the buttoned shoe (4 h)
- Oxford (4 h)
- Variant of Oxford (4 h)
- Real moccasin (4 h)
- Variant of moccasin (4 h)
- Derby for men (4 h)
- Variant of derby (4 h)
- Boot (4 h)
- Mid-year exam
- Variant of boot (4 h)
- Ballerina – personal version 1 (4 h)
- Ballerina – personal version 2 (4 h)
- Model on heel 100 – personal version 1 (4 h)
- Model on heel 100 – personal version 2 (4 h)
- Boot or Low boot – personal version 1 (4 h)
- Boot or Low boot – personal version 2 (4 h)
- Model related to a project with soles company – version 1 (4 h)
- Model related to a project with soles company – version 2 (4 h)
- Sneaker – personal version 1 (4 h)
- Sneaker – personal version 2 (4 h)
- Sandal – personal version 1 (4 h)
- Sandal – personal version 2 (4 h)
- Wedge Sandal – personal version 1 (2 h)
- Wedge Sandal – personal version 2 (2 h)
❖ PROCESSES TECHNOLOGIES

The aim of this content is the analysis of production processes (cutting, binding, lasting, finishing) of a specific shoe model defined by the teacher.

Moreover, there are some seminar with external professionals related to marketing, innovation and technologies.

Duration: 54 hours

Detailed program of the content (and related training hours)

- Design and Industrialization Process: technical operational aspects/Technical documentation for Process Management (2 h)
- Development of the case study (2 h)
- Conceptual Design (2 h) Seminar
- Cutting: technical sheet – filling out of the form + preparation to stitching (skiving) (2 h)
- Stitching: preparation to stitching (skiving) + execution of stitching (4 h)
- Introduction to CAD system in footwear sector + 2D CAD for upper and lining development (2 h) Seminar
- 3D CAD Technologies for last, insole, sole and heel development (2 h) Seminar
- Organization of a shoe factory and main processes (2 h) Seminar
- Commercialization process and Marketing (2 h) Seminar
- Stitching: technical sheet (2 h)
- Design and Industrialization process: organizational aspects (2 h) Seminar
- Stitching: virtual billboard (2 h)
- Mid-year exam
- Lasting: preparation to lasting (tips, counters, over heel) – lasting (2 h)
- Visit to Footwear Museum Villa Foscarini Rossi - Riviera del Brenta (2 h) Seminar
- Finishing: technical sheet – finishing activity (2 h)
- Material quality control and tests (with a specialized company) (2 h) Seminar
- Check of the shoe on foot + compiling od model annotations sheet (2 h)
- Informatics – preparation of final exam presentation (8 h)
- Rubber soles (2 h) Seminar
- Support to the realization of personal technical sheets (6 h)
- Web Marketing (2 h) Seminar

Admission Conditions to the exam: 85% course attendance - Passing mark in all subjects

Final exam: written - 8 hours - all contents

oral - 15 minutes – personal collection
II
d Year - SPORT AND FREE TIME PATTERN-MAKING COURSE

Objective of the course: To provide students with the advanced technical skills needed to work in the area of design and industrial fields of footwear. At the end of the course, the student will be able to technically design and realize the major sport models (football, soccer, tennis, running, basketball, hiking, etc.). In addition, he/she will be able to design and create a small collection of sport shoes.

Course Duration: 240 hours.

Contents

❖ PROFESSIONAL DESIGN

The aim of this content is to learn advanced techniques to design and realize sport shoe models; the student will also learn to produce a small collection based on a trend analysis.

Duration: 66 hours

Detailed program of the content (and related training hours)

- Components of a sport shoe; design of a template of a football shoe (4 h)
- Drawing of a football shoe – design of a sole for free time shoe (4 h)
- Drawing of the basis of a football shoe – design of a sole for free time shoe (4 h)
- Drawing of an indoor shoe – design of a sole for free time shoe (4 h)
- Drawing of the basis of an indoor shoe – design of a sole for free time shoe (4 h)
- Drawing of a running shoe – design of a sole for free time shoe (4 h)
- Drawing of the basis of a running shoe – design of a sole for free time shoe (4 h)
- Start of working on competition, promoted by sole company – finalizing a sole for free time shoe (8 h)
- Competition: reference mood + competition analysis (4 h)
- Competition: plan and design of a sports shoe (8 h)
- Design of a sports shoe (8 h)
- Presentation of the projects (4 h)

❖ BY HAND TECHNICAL PATTERN-MAKING and MATERIAL PROCESS TECHNOLOGIES

The aim of this content is to learn the creation of upper and lining, and the production of technical documentation. Moreover, the student will learn the advanced knowledge of the different types of sports footwear structures, components, materials, design processes and production phases.

Duration: 140 hours

Detailed program of the content (and related training hours)

- Structure and technology of the last, with the size of upper-sole that together create the finished product (4 h)
- The last from 3D to 2D (8 h)
- Technology, structure and components of a football shoe, with subsequent drawing on a 1:1 scale basis (8 h)
- Extrapolation of pieces of the basis that compose the football shoe, and related noticed problems (4 h)
- Technology, structure and components of a derby sport shoe, with subsequent drawing on basis. (4 h)
- Extrapolation of pieces of the basis that compose the derby sport shoe for free time (8 h)
- Technology, structure and components of a technical running shoe and for free time, with drawing on basis. (4 h)
- Extrapolation of pieces of the basis that compose the running and for free time shoe (8 h)
- Technology, structure and components of a tennis shoe and for free time shoe, with drawing on basis with strobel technique (4 h)
- Extrapolation of pieces of the basis that compose the tennis shoe and for free time shoe, with strobel technique of production (8 h)
- Technology, structure and components of a basket high shoe and for free time shoe, with drawing on basis (4 h)
- Extrapolation of pieces of the basis that compose the basket high shoe and for free time shoe (4 h)
- Research and theoretical-mental setting of the working groups that will be made from March (4 h)
- Technology, structure and components of a professional trekking shoe and without bellows tongue (4 h)
- Extrapolation of pieces of the basis that compose the professional trekking shoe and without bellows tongue (4 h)
- Mid-term exam
- Technology, structure and components of a light trekking shoe with inner bellows tongue and full collar (4 h)
- Extrapolation of pieces of the basis that compose the light trekking shoe with inner bellows tongue and full collar (4 h)
- Technology, structure and components of a technical trekking shoe without bellows tongue on the lining (4 h)
- Extrapolation of pieces of the basis that compose the technical trekking shoe without bellows tongue on the lining (4 h)
- Technology, structure and components of a derby technical trekking shoe and for free time (4 h)
- Extrapolation of pieces of the basis that compose the derby technical trekking shoe and for free time (4 h)
- Lesson on particular models or processes (force lasting, strobel, tubular, etc.) (4 h)
- Summary of problems encountered and setting of the groups of footwear for the oral exam (4 h)
- Analysis of the groups and thematic settings, with the realization of sketches in 1:1 scale consistent with the theme (4 h)
- Review of the sketches and realization of the final 1:1 drawings, extraction of the basis and extrapolation from the cardboard (4 h)
- Working on the basis, with extrapolation from the cardboards, stitched upper and lasted shoe (8 h)
- Working on the final shoes and on the presentation book for the final exam (4 h)

**CAD 2D TECHNICAL PATTERN-MAKING**

The aim of this content is the development of shoes models with 2D CAD software use (Teseo – Naxos).

*Duration: 38 hours*

*Detailed program of the content (and related training hours)*

- Presentation of the program and of the software features (4 h)
- Software features (4 h)
- CAD pattern making of 1st model (4 h)
- CAD pattern making of 1st model (4 h)
- CAD pattern making of 1st model (4 h)
- CAD pattern making of 2nd model (4 h)
- CAD pattern making of 2nd model (4 h)
- CAD pattern making of 2nd model (4 h)
- Developments and verification (4 h)
CONCLUSIONS: MAIN ASPECTS OF THE ITALIAN MODEL BY POL CALZATUREIRO.

The main aspects of the model that could be implemented in regulated vocational training systems and training for employment in the footwear industry Murcia could be summarized as follows:

- The target group corresponds to the unemployed / unskilled people without a college degree.
- The main objective of this model lifelong learning and adult education is to create an environment of learning by doing, you can qualify young people for starting or completing general or vocational education or to enter the labor market directly, within the scope of skills and abilities in the footwear sector.
- Although the target group is made up of people under 25 unemployed who have not been able to find a job or do not know what academic path you choose, every time especially since the financial crisis has increased the number of elderly people aged 25 years, seeking a second chance in their working lives to travel3s of these training programs.
- Give an alternative to young people and adults, who can’t access curriculum requiring upper secondary education through courses offered in Continuing Education and Adult Education (hereafter "EAEC") do not require any title and there is no age limit. Vocational training is managed at regional level, but funding may be public or private, or a combination both. If the funds come from public funding courses pose no cost to participants, who are often unemployed with the specific goal of finding a job or change careers. The duration is shorter than that of FP, ie, less than a year.
- ECEA in the company or employment agency, as is the case of P. Calzatureiro- decides the curriculum, teaching methods and skills to be acquired. Consequently, it is of great importance to maintain close collaboration with the company or employment agency when implementing the Italian adapted model. It is also very important that the model is implemented in the practical part of the training. You should also seek to work with the right age group to be able to use the machines and technologies in their facilities.
- The professional hierarchy is still in the fact that the former is the "master" and students are "apprentices". Professional and social skills are paramount. The role of trainers in schools is comparable to production with the trainee teacher or boss with the employee with the difference that the former must invest more in the interpersonal relationship to their students.
- It is recommended to adapt this method Pol Calzaturerio jobs for production and design, since the level of these works is the most specialized and students must provide a product with the same level of professionalism that would offer any other company. Based footwear jute Caravaca is known for being high quality shoes, so it is important that students know meet deadlines and quality standards. This also occurs in Pol. Calzatureiro where high Italian footwear range is performed. However, deadlines must be realistic. This means that Pol. Calzatureiro should assess whether the product manufacturing process is slower than normal and if the student requires more training. Nevertheless,
- Theoretical learning through practical activities is the main base model. Students learn best from hands-on experience, which is a good basis for the theoretical trainer and the trainer of the workshop to work together on the development of theoretical assignments that can also develop productive level. The training courses are limited documentation and evaluation. For students to be aware of their progress, it would be beneficial to work with a plank of skills and reflect the latter in a certificate delivered at the end of the course, whether it is new or if an existing one that incorporates the skills of a personal nature and Social.
- By adapting this Italian model, it is important to note to what extent it is possible and advantageous to incorporate innovative methods of training in the Spanish system. In terms of
work and production, the fact that products made by students are made to companies in the footwear sector generates a great educational stimulus.

- To make a proper practical training must have good material and technological resources, lacking a point on the partners responsible for the implementation of the pilot project.
- As we see, this model is focused on lifelong learning that regulated vocational training, so it would be easier to introduce this model system training for employment (where training is included) in vocational training, given the narrowness of education system at the time of preparing the training curriculum.
- That is why it is necessary to create a framework for collaboration between the Ministry of Education and Employment Service and Training of the Autonomous Community of the Region of Murcia, both partners of the project, in order to have a good basis for the implementation of Italian model through pilot implementations conducted by the project partners (IFS GP Chirinios and Calzia through FP and FPE respectively)
THE FIRST MODEL - CASE STUDY OF THE SCHOOL

The déolleté is one of the most executed models of women's shoes, because it is simple in last, easy to make, and it is appropriate to many stylistic solutions.

The design and production process of a shoe is very complex. The process needs the work of many experts; it needs also the exchange of information, prototypes, materials and components, so it is necessary the work of different companies. The main protagonist is the shoe company, which is in contact with the tannery for the raw material, and with the last company, the sole company, the hell and the insole one for the construction of traditional structural elements.

The materials and accessories that can be used for the production of footwear are very numerous (for example: fabrics, buckles, zippers, zips, eyelets, decorations, various small items, etc.).

The shoe factory therefore relates to a variety of suppliers, not just those mentioned above.

The development cycle of the shoe, and in this case of a décolleté, starts from the work of the designer, who, starting from a careful evaluation of the market (fashion trends, evolution of materials and stylistic lines), defines the orientations of the collection and prepare the proposals that can be realized in drawings or prototypes.

In the design and construction of prototypes, the designer needs the collaboration of a number of external suppliers, in particular for the construction of structures and components: last, heels, insoles, soles,.....

DÉCOLLETÉ MODEL

- Wrap the last external part one time (marking the central line, the point B and the heel height, point A);

Drawing I

- With the pencil, to mark the décolleté line on the wrapped last from the height heel, point A;
- Cut on the center line of the front and the back part with the knife.

Drawing I

Drawing II
- On a cardboard trace the half-base last, with the lasting line, the last-profile line, the point B, the A heel height and the center line;
- Trace the centre line;
- Curve the cardboard on the centre line and make a cut on the more external lasting line; cut the heel line, leaving a “little connection bridge” between the external part and the inside one;
- Trim the excesses parts on the lasting allowance (the inside part on the sole of the last and the external part on the waist edge zone);

**Drawing II**

**Drawing III**

- Move away, paying attention, the adhesive paper from the last;
- Past the adhesive paper on the cardboard following the reference points: anterior centre line and p
Drawing IV
- Cut again the center line in the point in which is covered by adhesive paper;
- In case, correct the décolleté line;
- Cut the décolleté line, external side; cut the line of the external part and the centre line from the maximum point of the QUARTER until the heel (with the surplus cardboard we obtain a stencil complementary to the décolleté line);

Drawing V
- Curve the cardboard and take back the décolleté line from the décolleté external part to the internal one checking the overall trend of the décolleté line;
- Correct the internal part increasing of about 3 mm the widest point of the neckline;
- Draw again the décolleté line – internal line, connecting it with the anterior part and the height heel, point A;
- Cut the décolleté – internal part, in continuation with the external one.
UPPER MOULD DÉCOLLETÉ MODEL

Drawing VI

- Mark on a cardboard the contour of the base-model;
- With double pointed compass track the curved allowance of parallel to the line of décolleté;
- Cut the lasting line;
- Cut the external and the inner line of the heel at the same time, with the mold turned down;
- Cut the décolleté line with the turned down allowance;
- Mark a V form notch on the center line on the front, and a semicircle form notch on the inside;

Do the counter lining in the same way like the model realized on the last form.
DÉCOLLETÉ LINING UPPER:
Drawing VII

- on the cardboard draw the centre line, the internal and external lasting line and the line of the counter lining and of the anterior decolletage;
- incise the centre line;
- Curve the mould on the centre line and cut the counter lining line; open the mould and cut the lasting line;
- Curve the mould and draw the V form notch on the anterior centre line;
- Open the mould and draw the semicircle form notch on the inside;
- On the centre line make a cut from 3 mm from the anterior decolletage until the counter lining.

Drawing VII
DÉCOLLETÉ REINFORCEMENT
UPPERSTAY:
Drawing VIII

- On a cardboard, retrace from the mould the model base and trace the centre-line;
- Remove 10 mm from lasting (togliere dal montaggio 10 mm);
- Remove 4 mm in parallel to the décolleté line, with the use of compass;
- Remove 2 mm from the heel with the compass;
- Cut the contour with the Knife;
- Make the V form notch on the end and on the inside part.
DÉCOLLETÉ COURT ANTERIOR REINFORCEMENT:
Drawing IX

- On a cardboard draw the anterior part of the décolleté court and the centre-line;
- Draw, with the compass, parallel to the line just obtained, the width of the reinforcement of 12 mm, starting and ending with a curve at the same height, on the inner and outer part, about 7 cm from the anterior neck.
- Cut on this line and the line of décolleté;

Do the semicircle form notch on the inside;
ANNEX I

Learning method, training materials and resources of Politecnico Calzaturiero
Training and specialization courses, projects aimed at job placement, management training and international collaborations: all the opportunities that young people can find in the district where the most beautiful shoes in the world are produced.

The Riviera del Brenta footwear district is located between Padua and Venice and consists of 538 companies, that employ a total of 10,141 employees and produce about 19 million pairs of high fashion/luxury shoes of which 91% is exported. 52 design studios involved in designing footwear models for the most important companies in the world are also an integral part of the territory.

Today the School of Design and Technique of Shoe and Bag is managed by the Politecnico Calzaturiero, a company founded in 2001 on the initiative of the Riviera del Brenta Footwear Association and that is involved in training, research and technological innovation. It also offers rapid prototyping and quality control services to companies.

The training activities are the main mission of Politecnico Calzaturiero, which provides guidance for young people, technical training courses for graduates and continuous training initiatives for executives and technicians of companies.

As part of the research, in collaboration with universities, innovation centers and technology producers, it promotes and participates in numerous initiatives both at Italian and international level on innovative systems, processes, products and materials.

Consulting services include standardized catalog activities and customized interventions in the company. The services for the quality control of materials and rapid prototyping belong to the first category, while the analysis and consultancy activities aimed at the reorganization of the main processes are carried out in a personalized way.

The distinctive elements of the school are: collaboration with shoe companies and entrepreneurs who participate in numerous work groups by stimulating the design of new training and research activities; the composition of the teaching staff: entrepreneurs, stylists, pattern-makers, technicians of fashion companies that contribute to a continuous updating of the teaching programs; synergies with other activities carried out by the structure that make available to students unique technologies and laboratories at Italian and European level.
The training offer is wide and diversified, and together with the traditional School of Design and Technique of Shoe and Bag, divided into a three-year course aimed at the training of designers, pattern-makers and footwear technicians, proposes a series of intensive medium and short-term courses, realized to allow companies to address the structural, organizational and technological changes that have affected the sector in the last decade.

Medium-term specialization courses are aimed at young graduates who wish to acquire the skills to enter the world of work and, in particular, in the areas of product design, production and sales.

Short-term paths, on the other hand, are aimed at updating the skills of entrepreneurs, managers and technicians working in the sector.

Politecnico Calzaturiero looks to the past to formalize and transfer to young people the artisan know-how that make the footwear product unique in the Riviera del Brenta and it's projected into the future because it teaches how to use the most modern technologies to communicate, design and produce.
Numbers of the Footwear District

- Area of the district: 400 km²
- 522 companies, of which:
  - 130 production companies
  - 290 companies producing components and accessories
  - 56 design studies
  - 46 companies that deal with the marketing of products/components/accessories
- 19.424 million of produced shoes (95% women’s shoes – 5% men’s shoes)
- System revenue 1.86 mld. of euros, of which finished product 1.27 mld. Euros, export rate 91%
- 10.043 employees, of which:
  - 6.779 employees in production companies
  - 1.695 employees in companies producing components and accessories
  - 290 employees in design studies
  - 190 employees in companies who work to market products/components/accessories
  - 1.085 among entrepreneurs and members
ACTIVITIES/METHODOLOGIES OF POLITECNICO CALZATURIERO

Politecnico Calzaturiero, as a training organization, implements its training offers and courses according to different levels of final recipients, with different objectives and using different types of funding - economic supports.

**School of Design and Technique of Shoe and Bag**

Some numbers related to the School, the main private course of Politecnico, already analyzed by the project partners and described in the previous Derivable D1.1.

- More or less 180 students each year
- 50 teachers
- 3200 hours of training
- 20 companies involved in the realization of the teaching projects
- 95% employed in the companies of the district at the end of 3 years

**ITS Cosmo - Higher Technical Institute**

ITS are post-diploma technical specialization courses, referring to the areas considered as priorities for the economic development and competitiveness of the Country, realized according to the organizational model of the Foundation of participation in collaboration with companies, universities/scientific and technological research centers, local authorities, scholastic and educational system.

ITS offer numerous courses related to different technological areas, for training in harmony with the aspirations of young people and with national production needs.

The mission of ITS:

- to acquire, after the diploma, a high technological specialization essential for a qualified entry into the world of work;
- to train Higher Technicians able to enter the strategic sectors of the economic-productive system of the Country;
- to develop methods for innovation and technology transfer to small and medium-sized enterprises;
- to privilege an experiential teaching where learning is realized through the action and experimentation of situations, tasks, roles faced in situations of uncertainty and complexity, similar to everyday working reality. Orient young people and their families towards technical professions.

At least 30% of the duration of the courses is held in the company, immediately establishing a very strong link with the production world through internships abroad.

At least 50% of the teaching staff comes from the world of work.

Work experience in the company can be carried out under an apprenticeship, ensuring greater integration between training and work, to reduce the misalignment between supply and demand of figures and professional skills mismatch skills.

The courses conclude with final exams, conducted by committees made up of representatives of the school, university, vocational training and experts from the world of work.
Politecnico experience:

- 25 students enrolled in the course "Higher Technician for the coordination of the design, communication and marketing processes of the fashion clothing/footwear product" in the two-year period 2014-2016
- 20 students enrolled in the "Fashion Shoe Coordinator" course in the two-year period 2017-2019
- 25 students of the "Fashion Shoe Coordinator" course in in the two-year period 2018-2020
- 1200 hours of training in classroom + 400 hours of training in the company (internship) provided in each edition
- 70 companies involved as an internship venue
- 95% hired by the companies of the district at the end of the course

**Training Courses for Unemployed**

There are financed plans in which Politecnico implements its training projects.

Youth Guarantee is the European plan for the fight against youth unemployment. With this objective, funding has been provided for Member States with unemployment rates of over 25%, which will be invested in active guidance, education and training policies and work placement, to support young people who are not engaged in an activity work or included in a school or educational path (Neet - Not in Education, Employment or Training). The recipients are precisely boys and girls who do not work, do not study and do not form. To take advantage of the measures provided for by the program they must have enrolled in the same, which is free, and they must be between the ages of 15 and 29 years.

Work Experience is a funded line conceptually similar to the Youth Guarantee, but intended for unemployed over 30 years old, beneficiaries and not of income support. The initiative aims to promote job placement through the strengthening of professional skills and the valorization of traditional jobs following the positive results obtained in similar work placement projects.

As Politecnico:

- Regional Decree 701 – Work Experience – Course for assembling technicians and CAD pattern-makers: 18 students trained, 920 hours of training + 4 months of stage, 18 companies involved, 98% hired at the end of the stage.
- Regional Decree 1064 – Young Guarantee – Course for assembling technicians: 6 students trained, 200 hours of training + 6 months of stage, 6 companies involved, 90% hired at the end of the stage.
- Regional Decree 2747 – Young Guarantee Campania Region: 8 students trained, 120 hours of training
- Regional Decree 2747 – Young Guarantee Veneto Region: 120 unemployed trained, 2,508 hours of training, 120 companies involved, more or less 21 courses.
- Courses with Umana (employment agency): 35 students trained, 612 hours of training, 24 companies involved.
Continuing Training for Employees and Managers

- **FSE (European Social Funds) – Veneto Region**

  The main objective of FSE is to support employment, help people find better jobs and ensure fairer job opportunities for all by encouraging education, training, work placement and social inclusion. The planning of the Veneto Region (where Politecnico is placed) foresees in fact concrete interventions for the benefit of the citizens: young people, workers, unemployed people, disadvantaged people.

  The actions implemented with the support of the European Social Fund are aimed at strengthening productivity and competitiveness and promoting economic growth and sustainable development.

  FSE finances actions aimed at achieving the following priorities:
  
  - increase the adaptability of workers, businesses and entrepreneurs to optimize and anticipate economic changes;
  - improve access to employment, prevent unemployment, encourage active aging and prolong working life;
  - enhancing the social inclusion of disadvantaged people, encouraging their integration into the world of work and combating all forms of discrimination;
  - to increase human capital through education and training that are qualitatively adequate and consistent with the demands of the labor market;
  - promote partnerships, pacts and initiatives at transnational, regional and local level to promote reforms in the employment and labor market integration sectors.

  As Politecnico:
  
  o Regional Decree 448 - Fashion sector: building a competence chain for a better integration between the school/training system and the working system: a total of 3.325 training hours to mixed students (employed/unemployed), 700 students trained, 50 companies involved
  
  o Regional Decree 361 – Change to win: innovation and development through training: 178 training hours, 15 people trained
  
  o Regional Decree 784 – Digital Industry 4.0: companies network for the innovation in the fashion/footwear sector – 1.656 training hours, 76 companies involved, 160 trained people.
  
  o Regional Decree 785 – New competencies for the development of innovation of companies’ processes: 194 training hours, 3 companies involved, 20 people trained

□ **Fondimpresa**

Fondimpresa is the Interprofessional Fund for Continuing Education of Confindustria, Cgil, Cisl and Uil. It finances the training of workers in the member companies and promotes the culture of training as an essential tool for innovation, development, employment protection, and the valorization of human capital.

It is open to companies of all sectors and sizes; thanks to the high number of member companies and activities carried out, it is by far the first of the Interprofessional Funds in Italy.
The main purpose of Fondimpresa is to make the use of training, which increases skills, business and employment opportunities and the quality of work, simple and accessible to companies and workers. For this reason, it offers flexible tools that allow each company to build its own tailor-made training or to rely on external professional skills to identify and implement the best growth paths.

Fondimpresa offers all participating companies three opportunities to manage economic resources dedicated to training:

EDUCATION ACCOUNT
Each member company has its own account that can be used directly to train its employees, with timing and in the way, it deems most appropriate.

ADDITIONAL CONTRIBUTION
It is a tool designed to give small and medium-sized businesses more chances to use their Training Account. In fact, by participating in these notices, companies can use additional resources to implement their training plan.

SYSTEM ACCOUNT
It is a collective account designed to support training in member companies, especially small ones. It is used to finance, through the publication of notices, projects that group several companies based on common training needs by territory or sector.

As Politecnico:
- Notice 4 - The Italian footwear system
- Notice 4 - Shoes Cluster Intelligent Factory
- Notice 1 - The culture of health and safety: 2,000 training hours, 60 companies involved, 400 people involved
- Last year: 4 projects presented on the system account
  - Notice n. 3 - Innovation
  - Notice n. 5 - Competitiveness - footwear sector
  - Notice n. 5 - Competitiveness - clothing sector
  - Notice n. 5 - Competitiveness - Chanel group

**Training in the field of Health and Safety at work**

Politecnico promotes courses aimed at acquiring the theoretical and practical knowledge necessary to continuously improve the professionalism of the company and the practice of the rights and duties of the employees.

The courses offered are aimed at specialists who work in the company as the Head of the Prevention and Protection Service, as a Representative of Workers for Safety and as Head of the Prevention and Protection Service.

Furthermore, the basic courses foreseen by the State-Regions Agreement of December 2011 for the training of Workers, Officers and Executives and the specialized courses for the training of First Aid and Fire Prevention Advisors are organized.
As Politecnico:

- 2 editions per year
- 24 training and upgrading courses
- More than 150 people trained
- 60 companies involved
- Courses organized:
  - first aid operator
  - first aid operator update
  - fire prevention operator - low risk
  - fire prevention operator - medium risk
  - fire prevention upgrade - low risk
  - fire prevention upgrade - medium risk
  - course for R.S.P.P. - employers
  - update for R.S.P.P.
  - Worker Safety Course - R.L.S
  - update for R.L.S
  - in charge
  - in charge - update
  - senior executives
  - senior executives - update
  - basic training for workers
  - basic worker update
  - course for the management of self-propelled industrial trucks with driver on board

It is important to underline that Politecnico, in addition to all the various safety training courses listed above, also offers a wide range of services dedicated to companies. The environment and safety services can be financed with some of the project lines previously illustrated or paid privately by the company.

Some of the services offered are:
- Inspection visit with documentation diagnosis and final report draft noise risk assessment
- Drafting of the general risk assessment document (DVR)
- Evaluation of chemical risk
- Evaluation of vibration risk
- Fire risk assessment
- Evaluation of risk for pregnant women
- Drafting emergency plan
- Plans for emergency plan (from CAD file provided by the Company)
- Single risk assessment document for interfering risks
- Risk assessment work related stress
Evaluation of electromagnetic fields (EMF) risk
Conformity assessment of equipment and machinery
Evaluation of carcinogens risk
Optical radiation risk assessment (ROA)

Training courses - private for a fee

Always in the context of the training of individuals, continuous or otherwise, Politecnico has a catalog of paid courses, which are usually activated every six months, or even higher if the number of requests is large.

In order to favor also those who work, courses are usually held during the week in the evening after work hours (19-22), once or twice, and possibly also on Saturday mornings. Just to remember that also most of the teachers are workers in the companies during the days of the week.

The latest release of the catalog includes the following courses:

- **DESIGN COURSES**
  - Graphic design: Bitmap software
  - Graphic design: Vector software
  - 2D CAD Design - Model Development
  - Basic 2D and 3D CAD Design - Structural development
  - Advanced 2D and 3D CAD design - Structural development
  - Rapid Prototyping

- **COURSES HISTORY OF FOOTWEAR**
  - History of Footwear
  - Main fashion phenomena of the 20th century

- **MANUFACTURING PRODUCTION COURSES**
  - Cutting operator
  - Hemming operator
  - Assembling operator
  - Finishing operator

- **QUALITY COURSES**
  - Quality of products and processes in the footwear industry
  - Quality control and product and material testing
  - Product safety footwear and international regulations

- **COMMUNICATION AND MARKETING COURSES**
  - Image promotion
  - Marketing: Digital Strategy

- **LANGUAGE COURSES: Technical English**

Here an example of the courses we propose:
INTERNATIONAL COLLABORATIONS

Politecnico Calzaturiero - as part of the strategies implemented for the development of the Footwear District of the Riviera del Brenta - intends to support and strengthen relations with the main design schools and large companies, both nationally and internationally.

It is believed, in fact, that the creation of stable connections with these subjects can, on the one hand bring benefits to businesses, on the other allow our young people to get in touch with international excellences, a link that can lead to the development of future collaborations and of new companies.

Some examples of this activities:

**Nigerian Government** (2014)

Educational retraining program for students from Nigeria. Following an agreement between the Italian and Nigerian governments, a course for learning footwear knowledge and skills was established. 1,200 hours of training to 25 students.

**Parsons The New School for Design – New York**

The #ShoePoliProject represents one of the most important initiatives, started in 2009. The main actors of this project are the students of the School of Design and Technique of Shoes and Bags of Politecnico and the undergraduates of the Parsons New School of Design of New York.

Parsons School of Design in New York is the first institute in the United States to offer programs in fashion design, advertising, interior design and graphic design and, to date, it offers 13 programs of bachelor's degree and 17 of master's degree.

The project aims to create shoes that will be used for the final Fashion Show in New York at the headquarters of Parsons the New School of Design, in May. A total of 40 pairs of shoes are realized.

The 40 pairs are so articulated: 1 models for each of the 10 Parsons students for a total of 10 models; every one of these 10 models are reproduced in 4 variants (colours, materials etc.).

The initiative has also the following specific objectives:

- to allow Parsons School students to understand the logic and the planning of specific processes of design and manufacture of shoes;
- to permit Politecnico Calzaturiero students to get in touch with the complexities of the international design world and to be able to translate the idea into a concrete product;
- to allow the companies of the Riviera del Brenta footwear District to get in touch with the young designers that in the future may work together for the realization of projects for the international market.
- to allow parts and components companies to experiment new techniques realization aimed to produce complex prototypes.

bout 2017/18 Edition:

- 15 Politecnico students and 10 Parsons students
- 80 hours of design and pattern-making in Politecnico
- 80 hours of prototyping and production
- 20 companies involved
- 48 pairs of shoes in the Fashion Shoe in NY

**Gore Tex Private Course (2015)**

Personalized course for an employee of Gore Tex group, coming from USA. A total of 120 training hours, mixed between classroom lessons and laboratories, all in English language. Experience repeated starting from May 2018.

**BASF Italia S.p.A**

Politecnico Calzaturiero in collaboration with BASF Italia S.p.A. promotes for 12 years a competition for the students of the School, called "The Polyurethane in the footwear industry". The competition is open to students of the second classes of advanced classic pattern-making and sports pattern-making courses. Students are invited to carry out a shoe project using the sole proposed by the School, a professional designer and the BASF group.

Every year about 60 different prototypes are produced, and the best ones are chosen by BASF to use them as a promotion of the sole produced, in the major fairs and at its customers worldwide.
COMUNICATION AND MARKETING

At the basis of the numerous courses provided, the large pool of users reached, the many local, national and international collaborations and the many projects of innovation and research that Politecnico incorporates, there is a broad communication policy directed at all stakeholders, with the aim of maintaining a constant level of activities, of worldwide contacts and also improving the operation of the structure.

Some examples of Politecnico actions:

**EXPO 2015 – COLLABORATION with SCHOOL OF ARTS AND JOBS - COLOGNI FOUNDATION**

Creation of a "made-to-measure" shoe, realized by the students of a Politecnico course, exhibited in an EXPO pavilion for 1 month.

**FAIRS**
- Semestral Edition of The MICAm Fair - Milano
- Semestral Edition of Linea Pelle Fair - Milano
- JobOrienta – Verona: the biggest national exhibition of orientation, school, training and work.
- CreaModa Fair - Bologna
- Jobbando Event – Firenze
- Fashion Graduate – Milano

**VENICE CARNIVAL**
- Art Workshop in San Marco Square – during Carnival period
- Production of luxury footwear
- An artisan teacher
- 7 students of the Handmade Luxury Course
INTERNATIONAL DELEGATIONS VISITING POLITECNICO

Politecnico, by appointment, organizes guided tours to its structure: after an initial introduction on the history of the District and of Politecnico, and a broad illustration of the various activities carried out, the staff proceed with a visit of the classrooms and laboratories, also with animation by the students and teachers/technicians.

Some of the groups and events that Politecnico has welcomed:

- Chinese government delegation and Chinese Footwear Polytechnic
- Korean delegation
- Visit Parsons School of New York – Director and teachers of Design course
- Google Conference
- Social Media Marketing convention
- REACH regulatory convention
- Visit of Croatian teachers for an Erasmus+ European project
- Conference on safety in the footwear company
- Visit of Chinese press delegation for Expo (in 2015)
- Nigerian parliamentary delegations
- Visit of Australian students
- Meeting with Gore Tex group - New York
- Visit of French School of Design
- Latin American delegates visiting Veneto Region
- Dutch students in Erasmus exchange with School Ettore Majorana (Venice)
- Delegation of new recruits in Formin - Confindustria
• High Schools of Rovigo country
• Visit of Brazilian students - Cuoa Foundation
• ONU Delegation - from Ecuador
• Japan/Korea buyers
• Final conferences of FSE Projects - Veneto region
• European Community and Veneto region surveillance commission
• Digital Meet – series of conference
• Product safety conference
• Conference: Traceability and certification of footwear made in Venice
• Shoe cluster seminar
• Conference: A journey with the professionals of the fashion - Footwear system
• "Carli" technical institute with German twinning
• Northampton University

Fig. 1 - Visit of French group

Fig. 2 – Exhibition in a fair
orientation activities to young people

Politecnico Calzaturiero, in collaboration with other Institutes and territorial realities, will carry out a project in autumn 2018 in response to a regional decree dedicated to the educational orientation for students in secondary schools of I and II degree and for families.

The goal is to raise awareness of the world of training and work in the area linked in particular to the fashion and footwear sector.

The orientation path is divided into several activities, some of which are structured in digital form and will be implemented through platforms that will allow students, guided by teachers or independently, to have a vision of both the school environment in the fashion industry, but also to have a photograph of the working world that comes after the training of secondary schools.

The work will be structured in 3 parts:

**Activity A1**

Orientation workshops aimed at students attending secondary schools in the form of virtual experience, relating to lessons, perspectives and organization of the ways available for the continuation of the education/training path (Grade II and I-VET Schools).

The platform will contain in-depth training modules that can be used in two different ways:

1. With the presence of a teacher in a single two-hour solution with the students. The contents will include information on the sector of excellence of the territory and its historical path/futuristic development, which can also be accessed through images and videos.

   The most requested professional figures in the sector, in addition to the various figures operating in the sector and the training courses necessary to achieve the minimum necessary skills. A test, also articulated as a game, with which students can try their hand at assessing their level of understanding of the issues carried out.

2. With a path of study to be carried out in several moments within the school coordinated by the teachers, in which the students will have to play a part autonomously and a part guided in the laboratory. The contents will include information on the sector of excellence of the territory and its historical path/futuristic development, which can also be accessed through images and videos.

   In-depth content on the sector, its development, history and the main realities operating in the various markets. Content designed to allow independent research by students. The most requested professional figures in the sector, in addition to the various figures operating in the sector and the training courses necessary to achieve the minimum necessary skills.

**Activity A3**

Guidance workshops for students attending secondary schools in the form of a virtual experience at universities, ITS Academy or companies.

The platform will contain in-depth training modules that can be used in two different ways:

1. With the presence of a teacher in a single two-hour solution with the students. The
contents will include information on the sector of excellence of the territory and its historical path/futuristic development, which can also be accessed through images and videos. The career opportunities in companies, the most Requested professional figures in the fashion sector, the training courses to increase their skills or to broaden their training path.

A test, also organized as a game, for students who are evaluating whether to stop or continue their studies, and possibly how, in addition to the knowledge acquired in the field with which students can try their hand to assess their degree of acquisition of content and areas of interest.

2. With a path of study to be carried out in several moments within the school coordinated by the teachers, in which the students will have to play a part guided in the laboratory for two hours and some other parts independently.

The contents will include information on the sector of excellence of the territory, as footwear system is, and its historical path/futuristic development, which can also be accessed through images and videos. Information on professional training courses at university and higher levels.

The professional outlets and the different figures most requested, to be defined if even with a view also extra territorial.

In-depth content on the fashion sector, their development, history and the main realities operating in the various markets. Content designed to allow independent research by students. A test, also organized as a game, for students who are evaluating whether to stop or continue their studies, and possibly how, in addition to the knowledge acquired in the field with which students can try their hand to assess their degree of acquisition of content and areas of interest.

**E2 - On-line self-assessment services**

It is the digital section of the platform dedicated to self-assessment by students who do not access the physical structure of Politecnico.

The contents will be intended to create a knowledge for the student of four areas of self-awareness, related to:

- Study method
- Attribution styles - self-efficacy - motivation
- Skills - training - work
- Interests- values- passions

For each of these issues will then be made of questionnaires, through which the boys will get a self-assessment feedback.