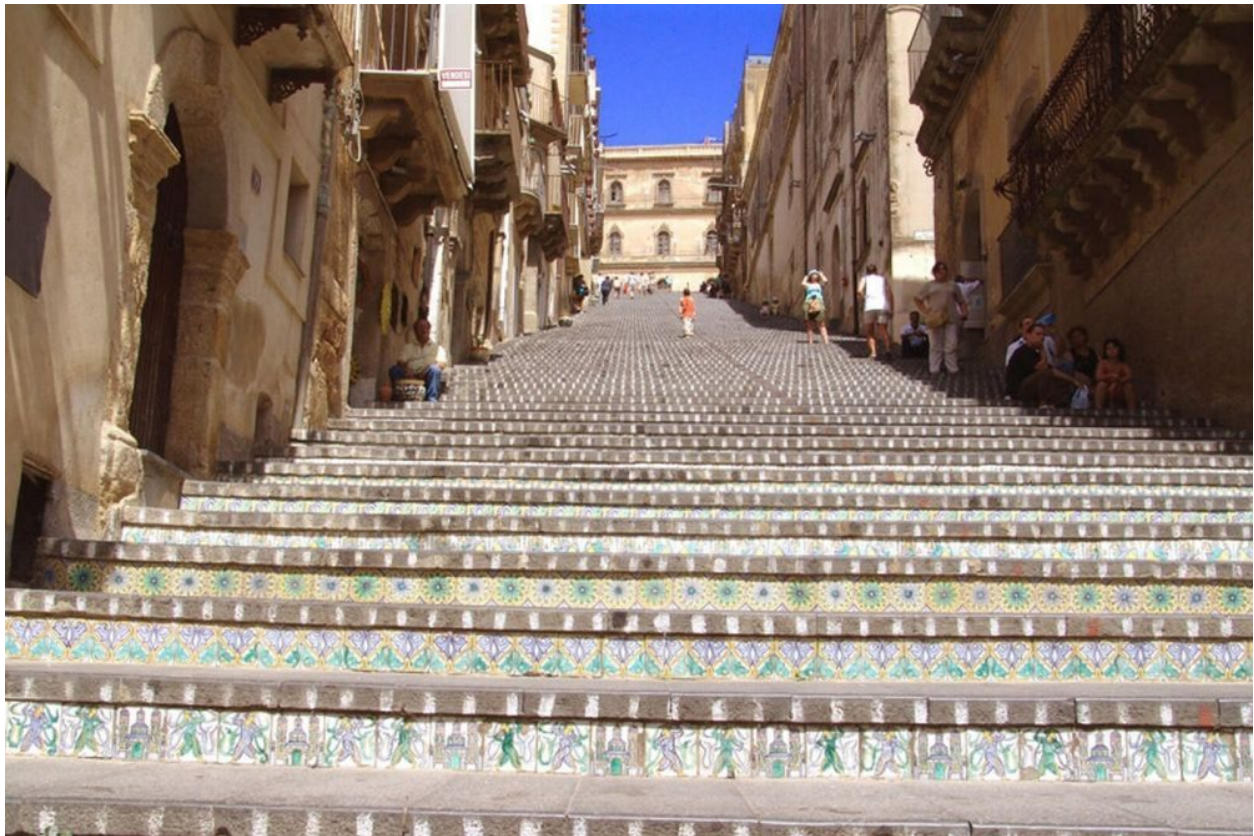


Cerasmus+ Training Curricula

Initial and Continuing VET



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Document information

Document title	Cerasmus+ Training Curricula
Document information	Curricula for I-vet and C-vet
Project title	Cerasmus+
Project number	2017-1-IT01-KA202-006158
Document recipients	Project partners
Confidentiality status	Schools
Delivery Date	17/12/2019
Status version	Final
Authors	Viola Emaldi
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Disclaimer

This project has been funded with support from the European Commission. This deliverable reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

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Introduction

Nowadays the crafts sector, ceramics included, faces several issues such as the fierce global competition of cheaper products, loss of skills and traditions, difficulties of getting into the market, losing customer appeal of traditional crafts' products, lack of financial resources and economic capacity, as the sector is mostly dominated by micro-enterprises, self-employed or hobby-based establishments.

It is therefore necessary to face the new challenges of the ceramics craft sector, which needs updated competences and skills based on the actual needs of productive environment. According to the European perspective, WBL (Work Based Learning) can meet the twin goals of improving individuals' employability and increasing economic competitiveness in the ceramics craft sector: Member States and social partners already committed themselves in the Bruges Communiqué, the European agenda for cooperation in vocational education and training (VET), to the objective of including work-based learning in all initial VET courses. Given this context, it is really important, on one hand, to protect the EU traditional heritage, on the other hand to strengthen and modernize the ceramic sector value through the introduction of new work-based learning models, of production techniques which keep together tradition and innovation, of methodologies for enhancing networking between VET and ceramic craft industry.

Cerasmus+ presents 6 specific curricula including initial and continuous VET, focused in work based learning, aimed at letting ceramics professionals gain transversal and professional competences for the improvement of sector "value chain".

Work-Based Learning (WBL)

The acquisition of knowledge, skills and competences through action-based or reflective learning in a vocational or occupational context

Work-based learning, or WBL, means different things to different people. Whilst encompassing a broad range of activities and activity types, however, it is accepted that each has a similar goal that centres on 'the acquisition of knowledge, skills and competences through action-based or reflective learning in a vocational or occupational context'.

From a strategic perspective, the provision of high-quality work-based learning lies at the heart of current education and training policy, with education-industry collaboration regularly prioritised (at national and European levels) and work-based learning increasingly recognised as a means of ensuring that learners of all ages are provided with the knowledge, skills and competences required by a future labour market.

In terms of delivery, work-based learning can take place onsite, in a company or organisation, or within a more traditional learning environment such as a classroom or training centre, the latter targeting learning that is vocationally or occupationally relevant and which centres on meeting the needs or expectations of a particular industry or profession.

Noteworthy is the fact that work-based learning extends across all areas of education, training and employment and can include:

- pupils in primary and secondary education undertaking work-oriented projects (or visits) that involve local companies or industries;
- vocational students undertaking a period of work-practice or work experience as a part of their training course or programme;
- apprentices aligning the day to day requirements of their job with related learning theory;
- higher education students complementing learning theory with an understanding of labour market expectations, often through project-based or work-oriented learning activities;



- adult learners within (or looking to enter) the labour market, taking part in continuous learning and skills development activities with a view to improving their employment or career progression prospects;
- young people and adults gaining occupational and soft skills through undertaking (formal or informal) voluntary work or voluntary activity in a workplace or work environment.

In this respect, work-based learning can form part of initial education and training programmes, at all levels, or can be a part of a programme or continuing education and training, the latter allowing for the upskilling of staff and supporting personal and professional development and career progression.

To ensure successful delivery, work-based learning involves a wide variety of actors, ranging from those employed in more traditional learning environments such as schools, colleges, Universities and training centres (teachers; trainers; tutors; classroom assistants) to managers and others in the workplace (human resources personnel; individual staff taking the role of mentors or advisors).

(Source: <https://www.wbl-toolkit.eu>)

Involvement of companies into VET Curricula

The cooperation between VET providers and actors from the world of work is essential to ensure good quality work-based learning opportunities and ensure smooth transitions from school to work because effective work-based learning experiences promote the development of relevant technical and social skills significantly increasing the employability of learners involved. Work-based learning is proving to be a successful model to ease the students' and apprentices' access to the labour market. Furthermore the work-based learning approach makes VET more labour-market-oriented by combining practical and theoretical learning so as to qualify skilled workers in a practical way and better prepare them for the requirements of the labour market: in this perspective the related learning opportunities trigger positive effects on all the actors involved. Students take advantage of the knowledge of real productive processes and working environments while being in touch with the labour market demands is crucial for education institutions as well as for companies that effectively contribute to shaping their future workforce. VET curricula will develop cooperation models and tools supporting a dialogue involving all relevant stakeholders; the training curricula are defined through an organised cooperation involving education and training Institutions and enterprises or the related representation bodies (e.g. chambers, social partners etc.).

Assessment of training needs in the ceramic sector

The CERASMUS+ training curricula has been conceived considering the necessary skills for a ceramic professional (see Cersmus+ Needs assessment). Here a synthesis of the needs from the most to the less valued:

- **Artistic and craft skills**, related to the art, history and tradition of ceramics.

All skills have been highly scored but design skills have been valued less than the others. This shows that producing artistic pieces is more important than usability.

Craft skills; Artistic and cultural skills; Design skills.

- **Transversal skills**, those that relate to different, transversal and multidisciplinary skills.

All transversal skills gained a high score. The assessment put the focus on the ability to maintain an active business.

Effective communication; Flexibility; Teamwork (considered very important for all countries and especially valued in the industry sector); Service orientation.

- **Professional skills**, the abilities required to perform a position in the ceramic sector.

Technical skills; Creativity and innovation skills; 3D skills; Graphic skills; Tradition related skills; Technological innovation related skills.

- **Functional skills**, defined as those that relate to specific professional functions.

Relationship management; Planning and organization; Working under pressure; Mentoring; Pedagogical management; Information analysis and management (less important for all countries).

- **Management skills**, the skills of those who exercise leadership or supervision roles.

Leadership; Result orientation (relevant skill).

The results of the Transnational report show that all groups of abilities have been highly scored and the more valued one is the “Artistic and craft skills” one. This confirms that the skills and abilities selected by the partnership are very close to the professional profile ceramic stakeholders and key actors are looking for.

Main Training needs

All technical and working with pressure skills are included in the group scoring more than 4; none of the technological and innovation related skills, pedagogical management skills, information analysis and management one is included in the group.

As a general summary of skills, the ten most valued for each activity sector have been (Transnational report on the Needs Assessment, Annex 4):

Number	Description of the skill	Average rate / 5
1	Carrying out ceramic firing according to the technical specifications and materials of the project.	4,37
2	Knowledge of the work tools (potter's wheel, wire drawing, clay extruder, etc.)	4,35
3	Manual and sculptural skills and competence	4,33
4	Assuming responsibility in fulfilment of commitments acquired.	4,30
5	Interpreting the requirements, referring both to the process and the product ordered and selecting the most appropriate and useful procedures for the realisation.	4,29
6	Practice and experience in laboratory and workshops	4,29
7	Defining the formal, functional, plastic, technical and material specifications of a given project or assignment.	4,26
8	Recognising mistakes and/or failures and learning from them.	4,26
9	Formulating compositions and preparing pastes, enamels and ceramic colours, qualitatively and quantitatively appropriate to the specifications of the project.	4,23
10	Contributing to the development of ideas, sharing best practices based on previous experience and personal contributions as a result of their research.	4,18

The results define a **highly qualified professional**, with a high level of professional performance expected but also with a high level of non-specific (functional, transversal and managing) skills.

About the professional skills, it is remarkable the importance given to the **ability to define the product the client is asking for**, highly scored for all sectors and countries.

Of course, all the skills related to the **production of a quality product** should be included in the training plan. Moreover, it is worth to notice the importance given to the **creative solution of problems**.

The preferred functional skills are highly dependent on the sector. All sectors agree on the importance of **fulfilling commitments**. Education, artistic and handicraft sectors do not give the same importance to **organizing, planning and teamwork** than the others, that consider very important to manage a business.

The transversal and management skills, especially the **teamwork** and **service orientation**, have been appreciated by all sector reinforcing the importance of meeting client expectations already detected in professional skills.

According to the assessment needs questionnaire, the **most valued skills** are “Artistic and Craft” (report p.12) and between these skills, the most valued are the “Craft skills”; among the “Professional skills”, the most valued are “Technical skills” (report p.13); “Relationship management” are the top scored skills among “Functional Skills” (report p.15).

The most valued transversal skills pointed out are: “Focus on the ability to maintain an active business”; “Relevance of taking care of relationships with suppliers and customers”; “Communication and Teamwork, importance of cooperation”.

All “Technical” and “Working with Pressure” skills scored more than 4 out of 5. None of the “Technological” and “Innovation related” skills, “Pedagogical management” skills, “Information analysis” and “Management” scored more than 4 out of 5.

International online meeting to discuss the training needs

AEuCC held an international online meeting, in December 2018, to discuss the results of the needs assessment, keeping into consideration that the following skills were highly valued in the assessment needs questionnaire:

- The ability to define the product the client is asking for;
- The skills related to the production of a quality product;
- The importance of the creative solution of problems;
- The abilities of Teamwork and Service orientation.

The three topics discussed were:

- Topic 1 - Tradition and Innovation;
- Topic 2 - Urban environment;
- Topic 3 - Business start-ups.

The participants in the online meeting were:

- Giuseppe Olmeti (AEuCC)
- Viola Emaldi (AEuCC)
- Oriol Calvo (AeCC)
- José Luis Silva (AptCC)
- Monika Gass (former Director of Keramikmuseum Westerwald)



Topic 1 - Tradition and Innovation

Objective: to keep together tradition and innovation (i.e. 3D printing, Photoshop for industrial tiles lines).

From the assessment of training needs emerged that Innovation skills (such as 3D printing for both plastic and ceramics; Photoshop etc.) are not considered a priority. What are your considerations about this point? What is the use that you do of these innovative tools? To what extent do you use innovative tools in your work?

Everyone agreed on the importance of handmade. Monica Gass added the idea of Storytelling, communicating the importance of handcraft. Tell the experience of the production. Teach how to make and edit videos, make a CV, a portfolio, social media pages, Wordpress. Know how to present oneself and one's production. Digital innovation is helpful for promotion and marketing, through tourism.

Topic 2 - Urban Environment

Objective: to improve the valorisation of urban environment through ceramics craft with reference to methodologies for enhance networking between VET and ceramic craft industry.

Urban environment can be considered as the first big example of tradition updated with innovation. Because we have an high request for functionality and technical competences (e.g. because of weather, environmental sustainability etc.), and on the other side it provides a strong identity to the community. Working on the urban environment is also playful for pedagogical projects, as the design part can be done at school, and the production and application can be done by the industry (you project a prototype at school by VET and then translated industrially). It is also very challenging for students and new potters to think new functional elements for the city, new ways of living our outdoor spaces, because we are more and more outside our homes, so we need more and different tools, not just benches or lamps, but for example modular elements to define a space, an activity.

Special attention could be given to people with fewer opportunities (e.g. reduces sight).

Another function of ceramics in urban environment is the one applied to architecture (functional elements of decorative elements), in the way that traditionally, ceramics has been part of an architectural style that marks most part of our cities in Europe (e.g Portugal, Poland, Romania etc.). Ceramics has always been part of the urban environment. So we can also work in this way, renewing tradition thanks to contemporary design and technologies that allow us to conceive and produce a great variety/range of ceramics elements, crafted or produced Industrially.

It's interesting as every country has a different way of making ceramics for the urban environment. Portugal has Azulejos, Germany has glazed gres for external environment.

Topic 3 - Business (start-ups and innovation for professionals)

Objective: to improve the support for ceramics craft business start-up with reference to the protection of the EU traditional heritage, and of the strengthening and modernization of the ceramic sector value.

Let's consider firstly that the investment needed for a start-up changes between works of services and production. Ceramics is both and requires, for the production, an equipped space (machinery, deposit, packaging storage, rubbish) and for the services (design, communication, marketing etc.).

We can have 2 start-ups types:

- Ceramic designer only (outsourcing production). If you have a high knowledge of the whole process then you can design and commission your pieces without directly producing them, or only making a prototype (design thinking method);
- Ceramic designer and producer (ceramist). Nowadays the possibilities for a young ceramist are to open his own brand new studio potter; to take over the studio of another ceramist; to cooperate with an existing studio for defined/special production; to activate the start-up inside an equipped coworking space.

In Germany there are many coworkers, but if they are outside city center people don't use them. There are too many artists. People outsource production. In Portugal they have workshops and Coworking that go well. In Spain they have coworking spaces, which are used to share the expenses. Also, there are schools that host ceramists to work.

Training Curricula

On the basis of the Transnational report data, including the results of the assessment of training needs in the ceramic sector at European level, here is presented a model including specific curricula and reference educational resources for initial and continuous VET, focused in work based learning, aimed at letting ceramics professionals gain transversal and professional competences for the improvement of sector “value chain”, of models and means for valorization of urban environment, and for supporting business start-up.

The model is referred both to I-VET and C-VET, so it is going to address the needs for growth and development of ceramics craft both with reference to those who are going to work in the sector in a few years, and with reference to the actual craftsmen. This, so to provide a systemic approach including specific activities based on WBL to enable and support step by step ceramics craft businesses to protect the EU traditional heritage, strengthen and modernize the ceramic sector value through the introduction of new learning models, of production techniques which keep together tradition and innovation, of methodologies for enhance networking between VET and ceramic craft industry.

The curricula are based on work-based learning, with special attention in involving companies, as well as stimulating innovation and entrepreneurship.

The I-VET and C-VET purposed curricula will be held In school-based contexts, where teachers will play an important role, being responsible for the content and also for working with companies and their trainers. Cooperation between schools and enterprises serves to improve teachers’ knowledge of current work practices and improve trainers’ general pedagogical skills and competences. Employers and company technicians will go to schools for a short period to teach and, in this way, to get a better understanding concerning the world of school.

How to use the Training Curricula

The following curricula, for Initial and continuing VET in the 3 topics of the project (Tradition and Innovation; Urban environment; Business start-ups), are to be modified according to the specific needs of the country/region/city/school willing to use them.

For this purpose, please check the Annex 1: “CVet - Urban Environment - Manises”. The file is an example of how a school can adapt one of the trainings (in this case, Urban Environment for Continuing VET) for its needs.

We propose 21 units, related to the 3 topics and on the abilities that have scored higher in the assessment needs, composed in the 6 training curricula.

The partners' implementation

The project partners have implemented a curriculum in summer-autumn 2019, covering all the three topics, and giving feedback to complete and adjust the original draft of the training.

Specifically, here is a list of the trial implementations:

- EASCM - Escuela de Arte y Superior de Cerámica de Manises - Spain: Urban environment for C-VET.
- Istituto Superiore Secondario “V. Calò” - Italy: Tradition and Innovation for I-VET.
- Forssan ammatti-instituutti - Finland: Urban environment for I-VET.
- Masarykova střední škola Letovice, příspěvková organizace - Czech Republic: Tradition and Innovation for C-VET.
- ZSOiZ - Zespół Szkół Ogólnokształcących i Zawodowych - Poland: Business start-up for I-VET.
- Kecskeméti Kortárs Művészeti Műhelyek - Hungary: Tradition and Innovation for C-VET.

The main results of the trial implementation are:

- Urban environment for C-VET needs more hours for 3D and ceramics body and technology materials;
- Urban environment for I-VET need a unit about sustainability of the process;
- Business start-ups needs the topic of fundraising methods;
- Tradition and Innovation for C-VET need to be shorter and the topics should be high temperature firing, sustainability, circular ecology and wood firing, glazes (low and high temperature), molds.

Training 1: Tradition and Innovation I-VET

INFORMATION ON THE CONTENTS AND RESULTS GAINED	
Mode of Study	<p>Attendance methodology: full-time attendance for lectures and laboratory classes (average of 30 hours a week for educational activities).</p> <p>Educational methods: lectures, study and discussion of cases, case study, problem solving, practice exercises in laboratory, group work, educational trips, project work, company visit at school, simulations.</p> <p>WBL Method with Teachers coming from companies, university and school.</p>

Unit n.	Title	Hours
1	Team working, Conflict resolution and Problem-Solving	3
7	Technical English (ceramic sector)	3
19	Trend watching and trend research	8
13	Ceramic Design	16
9	Computer design for ceramic digital decoration	12
17	Computer Design for 3D prototyping & rendering	12
14	Ceramic bodies / Dough Laboratory	18
15	Glaze Laboratory	18
	Total amount of hours:	90

Training 2: Tradition and Innovation C-VET

INFORMATION ON THE CONTENTS AND RESULTS GAINED	
Mode of Study	<p>Attendance methodology: full-time attendance for lectures and laboratory classes (average of 30 hours a week for educational activities).</p> <p>Educational methods: lectures, study and discussion of cases, case study, problem solving, practice exercises in laboratory, group work, educational trips, project work, company visit at school, simulations.</p> <p>WBL Method with Teachers coming from companies, university and school.</p>

Unit n.	Title	Hours
11	Ceramic technology	8
14	Ceramic bodies / Dough Laboratory	10
15	Glaze Laboratory	10
16	Prototyping Laboratory (shapes, models, molds and 3D printer)	22
22	Environment and circular economy	10
	Total amount of hours:	60

Training 3: Urban Environment I-VET

INFORMATION ON THE CONTENTS AND RESULTS GAINED	
Mode of Study	<p>Attendance methodology: full-time attendance for lectures and laboratory classes (average of 30 hours a week for educational activities).</p> <p>Educational methods: lectures, study and discussion of cases, case study, problem solving, practice exercises in laboratory, group work, educational trips, project work, company visit at school, simulations.</p> <p>WBL Method with Teachers coming from companies, university and school.</p>

Unit n.	Title	Hours
1	Team working, Conflict resolution and Problem-Solving	3
7	Technical English (ceramic sector)	6
18	History of Design	9
21	Urban regeneration	12
12	Ceramic Design methodology	12
8	Computer Design Basic	12
11	Ceramic technology	10
22	Environment and circular economy	10
16	Prototyping Laboratory	12
	Total amount of hours:	86

Training 4: Urban Environment C-VET

INFORMATION ON THE CONTENTS AND RESULTS GAINED	
Mode of Study	<p>Attendance methodology: full-time attendance for lectures and laboratory classes (average of 30 hours a week for educational activities).</p> <p>Educational methods: lectures, study and discussion of cases, case study, problem solving, practice exercises in laboratory, group work, educational trips, project work, company visit at school, simulations.</p> <p>WBL Method with Teachers coming from companies, university and school.</p>

Unit n.	Title	Hours
10	Computer design for digital decoration (tiles)	12
13	Ceramic Design	12
17	Computer Design for 3D printing and rendering	12
21	Urban regeneration	12
22	Environment and circular economy	10
16	Prototyping Laboratory	20
19	Trend-watching & Trend-research	8
	Total amount of hours:	86

Training 5: Business (Start-Ups) I-VET

INFORMATION ON THE CONTENTS AND RESULTS GAINED	
Mode of Study	<p>Attendance methodology: full-time attendance for lectures and laboratory classes (average of 30 hours a week for educational activities).</p> <p>Educational methods: lectures, study and discussion of cases, case study, problem solving, practice exercises in laboratory, group work, educational trips, project work, company visit at school, simulations.</p> <p>WBL Method with Teachers coming from companies, university and school.</p>

Unit n.	Title	Hours
1	Team working, Conflict resolution and Problem-Solving	8
7	Technical English (ceramic sector)	8
3	Communication Methodology	12
5	Marketing and Merchandising	12
2	Business organization and job market	12
20	Business models and fundraising	18
	Total amount of hours:	70

Training 6: Business (Innovation for professionals) C-VET

INFORMATION ON THE CONTENTS AND RESULTS GAINED	
Mode of Study	<p>Attendance methodology: full-time attendance for lectures and laboratory classes (average of 30 hours a week for educational activities).</p> <p>Educational methods: lectures, study and discussion of cases, case study, problem solving, practice exercises in laboratory, group work, educational trips, project work, company visit at school, simulations.</p> <p>WBL Method with Teachers coming from companies, university and school.</p>

Unit n.	Title	Hours
1	Team working	3
7	Technical English (ceramic sector)	3
6	Business and integrated communication for ceramics	18
20	Business models and fundraising	20
4	Business communication methodology - graphic design	20
5	Marketing and Merchandising	10
19	Trend watching and trend research	16
	Total amount of hours:	90

Unit 1: Team working, Conflict resolution and Problem-Solving

<p>Skills</p>	<p>Transversal skills (flexibility, <u>finding creative solutions</u>, teamwork, service orientation)</p> <p>Functional skills (Relationship management)</p>
<p>Content</p>	<p><u>Team work</u>: The potentials. The critical elements. The birth of a group. Group dynamics. Group work. Work groups. Meetings as a tool for working groups. Informative, preliminary, decisional and animative meetings. Work groups involved in a project. The vital worlds and work processes in group work. Group, work groups, team.</p> <p><u>Conflict management</u>: Study and analysis of the dynamics of the negotiation process, in particular the competitive negotiation and collaborative negotiation. Deepening of negotiation strategies, starting from the pre-negotiation phase up to the implementation of the agreements taken. The transformation of conflicts into opportunities. How to prevent emotional dynamics from taking precedence over objective ones. Communication and anticipation of conflicts.</p> <p><u>Problem Solving</u>: Models and approaches to problem solving The definition of the concept of problem and of the various phases to deal with it and solve it. Analysis of the emotional components that hinder the resolution of problems and strategies to overcome them. In particular, tools will be offered to turn a problem into an opportunity. Creativity, open mind and how to deal with problems in an innovative way. Explanation and application of the brainstorming technique and other techniques useful for finding new approaches to problem situations (splitting, random stimulation, the six hats for thinking).</p>
<p>Learning Outcomes</p>	<p>Managing work environments, with particular reference to the working groups and their dynamics, conflict resolution. Assume and maintain a proactive role in the work group. Cooperate to produce solutions and collective results. Evaluate the quality of personal and collective services and seek solutions to improve them. Concert, negotiate and develop activities in working groups to address problems, propose solutions, help produce, order and evaluate collective results. Choose and use effective conflict management, mediation and consultation strategies. Use differentiated negotiation styles, in relation to objectives, context, resources and the constraints present. Effectively manage interpersonal, intra-group and inter-group conflict. Prepare an action plan to deal with an organizational problem and technique, identifying objectives, constraints, resources, possible</p>

	<p>alternative actions in the context organizational reference. Prepare action plans to deal with social and interpersonal problems. Decide on a strategy of action among several alternatives, evaluating one's degree of involvement-level of responsibility. Assess the effectiveness and efficiency of a adopted coping strategy. Addressing work problems using specific problem solving techniques.</p>
<p>Methods/Tools</p>	<ul style="list-style-type: none"> ● Tutorials, classroom discussions and simulations ● Skills verification on work organization ● Reading tips ● Frontal lessons ● Simulations ● Case analysis ● Discussions and group work among the participants ● Project work

Unit 2: Business organization and job market

Skills	<p>Functional skills (Relationship management)</p> <p>Transversal skills</p>
Content	<ul style="list-style-type: none"> ● Organization, system, business ● The reference scenario ● Organizational role ● Organizational identity: strategy, behavior, culture and organizational climate ● Group, work groups, team ● Power, authority, leadership and management ● Speak in public (and communicate yourself) ● Problem Solving
Learning Outcomes	<p>Knowing the main forms of business organization. Knowing, analyzing, applying and monitoring, in specific contexts, models of management of production processes of goods and services.</p> <p>Knowing the legal status of the worker and master the methods of approach to the labor market.</p>
Methods/Tools	<ul style="list-style-type: none"> ● Tutorials, classroom discussions and simulations ● Reading tips

Unit 3: Communication Methodology

Skills	<p>Transversal skills (effective communication, creative solutions)</p>
Content	<ul style="list-style-type: none"> ● Lessons on key topics of the discipline ● Technical lessons on the basic methods for the production of communicative products ● Group exercises and discussions on research topics proposed by the teacher involving existing ceramic companies <p>Main topics:</p> <ul style="list-style-type: none"> ● Visual communication: theoretical models and practical examples. Signs, symbols, icons ● Use and symbolism of color. Images and stereotypes. Perception and composition ● Typography, lettering, layout ● Communication: history and technology ● Mass communication. Advertising ● Communication in new media
Learning Outcomes	<p>Learning to analyze contemporary visual communication to develop a communication method adapted to new technologies. In addition, students will develop the ability to provide coherent and creative solutions to graphic and multimedia communication problems.</p>
Methods/Tools	<ul style="list-style-type: none"> ● Frontal lectures with video projector, web lab activities. ● Company visit (experts at school) ● Teachers are professionals of the ceramic sector / industry

Unit 4: Business communication methodology - Principles of graphic design

<p>Skills</p>	<p>Transversal skills (effective communication, creative solutions)</p> <p>Professional skills</p>
<p>Content</p>	<p>Principles of graphic design for coordinated communication. Use of tools for brands in the ceramic world. The importance of the logo in communication. Definition and analysis of the graphic elements that make up a logo (signifier, meaning, perception, characters, color). Viewing and commenting on important logos. Difference between brand and logo, between the use of the logo for a ceramic brand and a non-ceramic brand. Examples of logo design and commentary: Design of a new logo (briefs, objectives, values to be transmitted) and redesign (how to make contemporary a logo without changing its values and perceived identity). Principles of graphic design for communication. Color theory. Visual perception. Use and choice of typefaces. What the sign consists of. Hypothesis of launching a ceramic product and how to structure the catalog. Actions to be taken and examples. Examples of catalogs with important storytelling. The creative process: From the brief to the naming process. Analysis of some ceramic collections of various brands and choice of the weakest logo. Logo analysis of values, characteristics, peculiarities.</p>
<p>Learning Outcomes</p>	<p>Transmit to the students the role of graphic design and understand the languages and principles that it determine. Understanding the importance of the logo and the creation of a catalog. Merchandising as tools for a product launch. Peculiarities of tools for ceramic companies. Learning to redesign of a logo for a ceramic collection.</p>
<p>Methods/Tools</p>	<ul style="list-style-type: none"> ● Lectures and laboratory classes ● Company case study ● Classroom comments and evaluations ● Company expert visit (graphic designer and communication expert) ● Computer Lab ● Teachers are professionals of the ceramic sector / industry

Unit 5: Marketing and Merchandising

<p>Skills</p>	<p>Transversal skills (effective communication, creative solutions, service orientation) Ability to maintain an active business Suppliers and customers Ability to define the product the client is asking for</p> <p>Artistic and Craft skills Craft skills Design skills</p>
<p>Content</p>	<p>The marketing techniques applied to design, with particular reference to the strategic planning. Approach to operational marketing. Merchandising, relationship with social media. Visual / interactive approach to product communication systems. Insight: <u>Marketing classics</u>: Marketing 1.0, 2.0, 3.0, Marketing mix, the "4 P" of the marketing mix: product, price, place and promotion (product, price, distribution and communication). Marketing audit, Branding. <u>Digital marketing</u>: digital customer journey, R.A.C.E Model, Website, Inbound and outbound Marketing, Search engine optimization SEO, Social media Marketing SMM, email marketing, customer experience, customer engagement. <u>Storytelling & Pitch</u>. <u>Personal branding</u>: Curriculum vitae et studiorum (europass CV), reasonable letter, LinkedIn profile. <u>Design Thinking</u> Design Management.</p> <p>Design Thinking workshop: Logical-creative approach oriented to problem solving. Method: Inspiration, Ideation, Implementation. Process: Empathise, Define, Ideate, Prototype, Test.</p>
<p>Learning Outcomes</p>	<ul style="list-style-type: none"> ● Knowing, analyzing, applying and monitoring, in specific contexts, models of management of production processes of goods and services ● Acquiring the skills useful to realize a ceramic product, in the context of a defined production and market scenario. Learning the main marketing techniques and strategies ● Ability to maintain an active business ● Suppliers and customers ● Ability to define the product the client is asking for ● Creative solutions to the problems



<p>Methods/Tools</p>	<ul style="list-style-type: none">• Active learning with lectures, video• Computer lab practice• Company visit. Group work and presentation• Teacher are professionals / university professors• Company for Design Thinking workshop• Ceramics companies will be involved, manufacturing and industrial companies
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Unit 6: Business and integrated communication (ceramic sector)

Skills	<p>Professional skills <i>Technical skills</i></p>
Content	<p>What is Business Communication. The role of business communication. The activities of a firm that deals with business communication aimed at the ceramic sector. The tools used in the market to launch ceramic products and services. Hypothesis of launching a ceramic product and how to structure the catalog. Actions to be taken and examples to be commented together. The fundamental role of storytelling. Setting the ceramic product. How to do it.</p> <p>Communication Workshop with Company: Analysis of some catalogs and existing tools. Choice of a catalog to be redesigned between some presented by Ceramic companies. Designing of a CATALOG from the beginning to the end, highlight the typical actions of communication: History, Texts, Graphic Design, Uses and settings of the product (rendering) Development of the theme Catalog / classroom exercise. Presentation to Companies and verification of the project.</p>
Learning Outcomes	<p>Knowledge of how it is structured a contemporary ceramic company (small and large) and the important role that communication for its development. The student will know how to deal with the communication level, being able to work at the launch of a ceramic collection, designing a Catalog from the beginning to the end, highlighting the typical actions of communication.</p>
Methods/Tools	<ul style="list-style-type: none"> ● Lectures and Laboratory classes ● Classroom comments and evaluations ● Workshop ● Company case study ● Company visit ● Public presentation to companies ● Computer Lab (Adobe Indesign/ Illustrator) ● Teacher from the world of work/university ● Company for Design Thinking workshop ● Ceramics companies will be involved, manufacturing and industrial companies

Unit 7: Technical English (Ceramic sector)

Skills	Functional Skills (Relationship management)
Content	<p>The technical terminology of the sector. English terms commonly used in the areas of ceramic production.</p> <p>The acronyms and their meaning.</p> <p>The professional figures. Job hunting. The terminology used to navigate the global labor market</p> <p>Specific insights:</p> <p>Marketing: the action or business of promoting ceramic products to the public or other businesses.</p> <p>Advertising: the action or business of the promotion through public announcements in newspapers.</p> <p>Brand: a type of product made by a particular company.</p> <p>Launch: to introduce a new product, with advertising and publicity.</p> <p>Consumer.</p> <p>Campaign: a planned and organized series of action intended to promote a product or services.</p> <p>Position: to affect the way a product is presented to the public and how people think about that product.</p>
Learning Outcomes	<ul style="list-style-type: none"> ● Deepen the knowledge of the English language. ● Address the production of oral and written texts. ● Identify the most used words in the ceramic sector. ● Define a technique for reading technical manuals, catalogues and informative material from the ceramic sector.
Methods/Tools	<ul style="list-style-type: none"> ● Active learning ● Watch video in English ● Conversations ● Production of documents and texts in technical English ● Mother tongue teacher from the ceramic sector (professional / university)

Unit 8: Computer design Basic

Skills	<p>Professional skills Graphic skills Technical skills Technological innovation related skills</p> <p>Artistic and Craft skills Design skills</p>
Content	<p>Working area. Document layout. Text management. Classification and anatomy of the character. Unit of measure. Spacing, approach, rightness, line spacing, alignment. Graphic composition. Style and editing rules. Essential components of a publishing project. Design of a logo. The patterns. Images and illustrations. Management of colors and profiles. Implementation of fundamental graphics packages.</p>
Learning Outcomes	<p>Providing students with a cognitive basis of computer tools that can be used for design.</p>
Methods/Tools	<ul style="list-style-type: none"> ● Frontal lessons and exercises in the computer lab ● Adobe Suite - current release ● Teacher from the world of work

Unit 9: Computer design for digital decoration (Photoshop)

<p>Skills</p>	<p>Professional skills <i>Technological skills</i> <i>Graphic skills</i> <i>Technical skills</i> <i>Technological innovation related skills</i></p> <p>Artistic and Craft skills <i>Design skills</i></p>
<p>Content</p>	<p>Digital image acquisition. Rgb scanners and systems. Spectral image acquisition, theory and operation. Practical test of subject acquisition through the two most important acquisition systems. The assembly. Format study. Starting from small format and pattern method. Overlapping pieces (oriented) and assembled with sheet or sheet, creating multiple faces.</p> <p>Processing of a digital process: Study of the operating process variables (system, inks, support, cooking). Traditional colorimetric methods. Creation of an ICC profile, spectral methods. Creating a spectral model.</p> <p>Modifications and adjustments: Comparison between original and prototype. Study of equipment channels. Modification through Adjustments (curves and levels on channels and brightness and contrast selections). Change through the merger methods. Edit using filters (Photoshop).</p> <p>Photo editing tools (stamp, patch and patch, burn / fencing, fades / contrasts).</p> <p>Color study. Creation of complete projects with color variables through the use of Photoshop and the spectral system. Actions: Shortcuts, Complex and conditional actions. Droplet and Batch, faster productivity. Reverse method: From traditional ceramics (screen or roller) to inkJET ceramic printing, Alternative working methods to profiling or modeling. Demapping. Device Link.</p> <p>Digital storage: Archiving problems Saving files and changes, creating a coherent database and creating technical data sheets for digital.</p>
<p>Learning Outcomes</p>	<p>The training unit aims to provide students with a knowledge base of the main digital processes for the design and production of ceramics. Understanding of the operation of the most advanced industrial technologies for two-dimensional and 3D digital printing. Acquire the skills to be able to manage the entire digital printing process for industrial, craft and design ceramics.</p>
<p>Methods/Tools</p>	<ul style="list-style-type: none"> • Frontal lessons and exercises in the computer lab



	<ul style="list-style-type: none">• Adobe Suite - current release. Photoshop• Part of the Unit will be inside ceramic industrial company• Prototyping inside an Industrial tile industry or tableware industry
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Unit 10: Computer design for digital decoration (tiles)

<p>Skills</p>	<p>Professional skills <i>Graphic skills</i> <i>Technical skills</i> <i>Technological innovation related skills</i></p> <p>Artistic and Craft skills <i>Design skills</i></p>
<p>Content</p>	<p>Photoshop (Adobe suite).</p> <p>Urban surfaces. Marbles, natural stones and other surfaces. Study and research of the urban territory. Tile countertyping, sketches, images, project customization. Acquisition: The starting and printing format, a practical method of acquiring an idea with a smartphone.</p> <p>Assembly: Study of the format, assembly and sizing of the shots taken on the concept chosen through the manual and automatic photoshop tools, creation of the starting RGB file. Tools: The clone stamp, the patch and the corrective brush, the tools to work on the pixels. Aesthetic modifications: Eliminate or retouch the peculiarities and aesthetic defects of our prototype. Colours: The creation of complete projects with color variables through the use of Photoshop and the spectral system. Creation of the digital process: Study of process operating variables (system, inks, support, firing), Traditional colorimetric methods. Creation of an ICC profile, spectral methods. Creation of a spectral model. Scientific analysis of the reproducibility of a digital subject on available printing processes (Ceramic Industry) or relative to a precise printing process.</p> <p>Prototyping: Application of the spectral profile to the previously acquired concept and print through the plotter of the subject. Setting-up: Comparison between original and prototype - Study of equipment channels - Modification through Adjustments (Curves and Tonal values, channel mixer on channels and selections.</p>
<p>Learning Outcomes</p>	<p>The training unit aims to provide students with a knowledge base of the main digital processes for the design and production of ceramics. Understanding of the operation of the most advanced industrial technologies for two-dimensional and 3D digital printing. Acquire the skills to be able to manage the entire digital printing process for industrial, craft and design ceramics.</p>
<p>Methods/Tools</p>	<ul style="list-style-type: none"> • Frontal lessons and exercises in the computer lab



	<ul style="list-style-type: none">• Adobe Suite - current release. Photoshop• Part of the Unit will be inside ceramic industrial company• Prototyping inside an Industrial tile industry or tableware industry
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Unit 11: Ceramic technology

<p>Skills</p>	<p>Professional skills <i>Technical skills</i> <i>Graphic skills</i> <i>Creativity and innovation skills</i> <i>Tradition related skills</i> <i>Technological skills</i></p> <p>Artistic and Craft skills <i>Craft skills</i> <i>Tradition related skills</i></p>
<p>Content</p>	<p>Definition and classification of ceramic products. Chemical and physical characteristics of ceramic products and sectors of use. Phases of the ceramic process. Pastes(Body); function in raw and fired of plastic and complementary raw materials. Shaping: overview of the different techniques. Plaster molds and other materials. Drying: phenomenology. Firings: chemical-physical transformations in porous and compact mixtures. The firing cycle. Single firing, double firing and third firing. Oxidizing and reducing atmosphere. Temperature control. Classification of ovens. Evolution of cooking systems. Firing. Coverings (Rivestimenti), case studies. Function of individual oxides in the composition of glass coatings. The frits. Additives. Formulation (methods for expressing the composition: Seger calculation, centesimal formulas). Preparation and application. Defects. Decorative Techniques, case studies. Traditional and synthetic pigments. Decorative effects related to the composition and method of application of the coatings. Interventions on the surface. Characteristics and scheme of the production process of the various technological types (terracotta, faences, pottery, stoneware, porcelain, refractory materials). Outline of the history of technology. Overview of alterations and degradations of ceramic products.</p>
<p>Learning Outcomes</p>	<p>Acquiring the basic technological knowledge needed to manage the primary ceramic production processes.</p> <p>Knowing how to recognize the different types of ceramic products and coatings.</p> <p>Knowing how to recognize the function of individual raw materials in a mixture and in a coating. Knowing how to orientate oneself in the choice of the most suitable materials and techniques for the realization of productive projects.</p> <p>Knowing how to solve ordinary defect problems.</p>



Methods/Tools	<ul style="list-style-type: none">• Lectures with the support of the Ceramic bodies/Dough Laboratory and the Glaze Laboratory.• Case study
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Unit 12: Ceramic Design methodology

Skills	<p>Professional skills Graphic skills Technical skills related skills</p> <p>Artistic and Craft skills Craft skills Design skills</p>
Content	<p>Theoretical and practical path that runs through the main concepts that are the basis of project planning. Concepts as creativity, research, project, model, measure and method are founding tools of the discipline. The intention is to follow one or more planning itineraries that present a limited number of variables. Themes that introduce the "material" variable and with this the technologies are assigned, also experimenting with application extensions.</p>
Learning Outcomes	<p>Acquiring a first capacity of operativity into the project, with reference to the supply chains and furnishings.</p>
Methods/Tools	<ul style="list-style-type: none"> ● Lectures, video, discussions and exercises in the computer lab ● companies, fairs, event visit ● Adobe Suite - current release ● Part of the Unit will be inside ceramic craft company

Unit 13: Ceramic Design

<p>Skills</p>	<p>Professional skills <i>Graphic skills</i> <i>Technical skills</i> <i>related skills</i></p> <p>Artistic and Craft skills <i>Craft skills</i> <i>Design skills</i></p>
<p>Content</p>	<p>Theoretical and practical path that runs through the main concepts that are the basis of project planning. Concepts as creativity, research, project, model, measure and method are founding tools of the discipline. The intention is to follow one or more planning itineraries that present a limited number of variables. Themes that introduce the "material" variable and with this the technologies are assigned, also experimenting with application extensions.</p>
<p>Learning Outcomes</p>	<p>Thinking about the aesthetic features and ways of using objects by designing attractive products that go beyond the shape-function relationship.</p>
<p>Methods/Tools</p>	<ul style="list-style-type: none"> ● Lectures, video, discussions and exercises in the computer lab ● Companies, fairs, event visit ● Adobe Suite - current release

Unit 14: Ceramic bodies / Dough Laboratory

<p>Skills</p>	<p>Professional skills <i>Technical skills</i> <i>Graphic skills</i> <i>Creativity and innovation skills</i> <i>Tradition related skills</i></p> <p>Artistic and Craft skills <i>Craft skills</i> <i>Tradition related skills</i></p>
<p>Content</p>	<ul style="list-style-type: none"> ● Rules for the use of materials and machinery in safety ● Identification of ceramic products ● Testing of the relationship between raw materials and dough characteristics. Formulation and preparation of an artificial dough ● Development of mixtures in the plastic state and casting slips. Drying mode ● Method of use the kiln (ceramic firing method) ● Experimentation of various ceramic bodies ● Dosage and preparation of pigments based on oxides
<p>Learning Outcomes</p>	<p>Learning, through basic experiences the concepts for research and develop searching and development of coatings for ceramic bodies, both in craft workshop and inside industrial laboratories.</p>
<p>Methods/Tools</p>	<p>Laboratory and workshops</p>

Unit 15: Glaze Laboratory

<p>Skills</p>	<p>Professional skills <i>Technical skills</i> <i>Graphic skills</i> <i>Creativity and innovation skills</i> <i>Tradition related skills</i></p> <p>Artistic and Craft skills <i>Craft skills</i> <i>Tradition related skills</i></p>
<p>Content</p>	<ul style="list-style-type: none"> ● Formulation, preparation and cooking of earthy and glassy coatings ● Method of checking coatings materials, creating standards ● Preparation of glass coverings ● Grinding and sieving ● Preparation of glazing supports ● Glazing by immersion, sprinkling, spraying. Finishing of glazed objects ● Application of more coatings ● Traditional and territorial decorative techniques (see VET host country) ● Serial decoration techniques ● Other decorative techniques
<p>Learning Outcomes</p>	<p>Capacity for executive autonomy on glazes and decorations in production contexts.</p>
<p>Methods/Tools</p>	<p>Laboratory and workshops</p>

Unit 16: Prototyping Laboratory (shapes, models, molds and 3D printer)

<p>Skills</p>	<p>Professional skills <i>Technical skills</i> <i>Creativity and Innovation</i> <i>Tradition related skills</i> <i>Three dimensional skills</i> <i>Technological innovation related skills</i></p> <p>Artistic and Craft skills <i>Craft skills</i></p>
<p>Content</p>	<ul style="list-style-type: none"> ● Practice of the fundamental ceramic modeling and prototyping processes ● Realization of objects without undercuts and relative plaster mold Realization of a flat object with undercuts and realization of plaster mold with plugs. Creation of models and molds for casting forming, press with plastic mixture ● Preparation of casting slips ● Vacuum casting techniques and between two gypsum ● Casting exercises: shaping, demoulding, sformatura) finishing, sealing, drying, cooking ● Realization of models in plastic materials: traditional prototypes and rapid prototyping. 3D prototyping
<p>Learning Outcomes</p>	<p>Learning and experiencing the fundamentals basics, necessary for the execution of molds and models for serial production. Practice and experience in Laboratory and workshops.</p> <p>Ability to pass from the preliminary sketch to the three-dimensional representation and to the prototype, through phases of verification of the heuristic path, with the right instrumental techniques.</p>
<p>Methods/Tools</p>	<p>Laboratory. Workshops with experts from craft companies or master ceramist.</p>

Unit 17: Computer Design for 3D prototyping & rendering

<p>Skills</p>	<p>Professional skills <i>Technical skills</i> <i>Creativity and Innovation</i> <i>Three dimensional skills</i> <i>Technological innovation related skills</i></p> <p>Artistic and Craft skills <i>Craft skills</i></p>
<p>Content</p>	<p>Study of systems and the most widespread vectorial graphic software for the realization of two-dimensional images and the synthesis of three-dimensional objects aimed at design themes.</p> <p>Basic course for the study of CAD elements with the Rhino modeler or other software for 3D printing and rendering.</p>
<p>Learning Outcomes</p>	<p>Basic competence in the use of CAD package for Rhino 3D objects synthesis.</p>
<p>Methods/Tools</p>	<ul style="list-style-type: none"> • Lectures and exercises in the computer lab • Workshops with experts from 3D printer companies, experts • Teacher are professionals of the ceramic sector

Unit 18: History of Design

Skills	<p>Professional skills <i>Creativity and innovation skills</i></p> <p>Artistic and Craft skills <i>Artistic and cultural skills</i> <i>Design skills</i></p>
Content	<p>The course provides general historical outlines of Design in a perspective not limited to the modern formulation of industrial design but extended to the broader concept of the projects, addressing the main junctions of the discipline as they emerged in the various Countries from the second half of 1800 up to the experiences of contemporaneity. The student will acquire knowledge of aesthetic phenomena and creative dynamics connected to the culture of the project in order to develop the aptitude for the recognition of innovative solutions in order to favor and encourage an autonomous reworking of the acquired knowledge.</p>
Learning Outcomes	<p>Equipping students with historical-critical awareness of Design sufficient to actively participate in the design/project aspects of the ceramic supply chain and, more generally, of the furnishings/interior design.</p>
Methods/Tools	<ul style="list-style-type: none"> • Lectures, active learning with videos, frontal lessons • Museum visit if possible

Unit 19: Trend watching & Trend research

<p>Skills</p>	<p>Professional skills <i>Creativity and innovation skills</i></p> <p>Artistic and Craft skills <i>Artistic and cultural skills</i> <i>Design skills</i></p> <p>Management skills <i>Result orientation</i></p>
<p>Content</p>	<ul style="list-style-type: none"> ● Define a trend ● Trendsetters and cities ● Types and methods of research and analysis ● On field analysis and on desk analysis ● The relationship between trend, marketing and design ● From Design Trend Research to genesis of surfaces: From trend to business ● Fairs and events ● <u>Case study</u>: analysis of trends 2021 and the evolution of taste ● <u>Case study</u>: large surfaces in interior design and architecture ● <u>Case study</u>: the importance of Made in Europe in the international communication of ceramic products.
<p>Learning Outcomes</p>	<p>Learning to read with critical awareness the production scenarios of contemporary ceramic supply chain (production) with particular regard to the trends and the evolution of taste.</p>
<p>Methods/Tools</p>	<ul style="list-style-type: none"> ● Lectures, active learning with videos, frontal lesson with slides powerpoint ● Case study (Company involved) ● Teacher from the world of work (ceramic industry – tile or colours)

Unit 20: Start-up and business models

<p>Skills</p>	<p>Professional skills <i>Creativity and innovation skills</i> <i>Transversal skills</i> <i>Teamwork, Maintain active business</i></p> <p>Functional skills <i>Relationship management</i></p>
<p>Content</p>	<ul style="list-style-type: none"> ● Business Model Canvas ● Growth Hacking ● Fundraising ● Legal forms and taxation (VET host country) ● Trademarks and patents
<p>Learning Outcomes</p>	<p>Ability to work in the innovative start-up sector, having the initial/basic necessary knowledge to evaluate whether or not to invest in a specific business idea.</p>
<p>Methods/Tools</p>	<ul style="list-style-type: none"> ● Lectures, videos, discussions ● Group works ● Teachers are ceramics professionals (ceramic industry – tile or colours)

Unit 21: Urban regeneration

<p>Skills</p>	<p>Transversal skills (flexibility, <u>finding creative solutions</u>, teamwork, service orientation)</p> <p>Professional skills Creativity and innovation skills</p> <p>Artistic and Craft skills Artistic and cultural skills Design skills</p>
<p>Content</p>	<p>The role of culture in the fight against degradation. The different needs of abandoned areas, suburbs and inland areas and policies for their regeneration. Legislative aspects. Channels and sources of financing. Partners and collaborators. Main planning and budgeting techniques. Intervention simulation - VET host city Translation of community needs in project hypotheses. identification of spaces and functions for ceramic design.</p> <p>Workshop Territorial culture and identity (VET host Country)</p>
<p>Learning Outcomes</p>	<p>Design ceramic interventions (functional or decorative objects, modular elements, tiles etc.):</p> <ul style="list-style-type: none"> ● in places of aggregation, culture and social cohesion ● adopting transparency and responsibility behaviors in dialogue with citizens and administrations ● using technical skills in order to imagine and design and create solutions that can meet the needs of citizens ● expressing competence and creativity
<p>Methods/Tools</p>	<ul style="list-style-type: none"> ● Lectures ● Simulations ● Case analysis ● Discussions and group work among the participants ● Visit of expert (architects) ● Institutions, companies visits ● Teachers from university/company/institutions

Unit 22: Environment and circular economy

<p>Skills</p>	<p>Transversal skills (flexibility, <u>finding creative solutions</u>, teamwork, service orientation)</p> <p>Professional skills Creativity and innovation skills Technical skills</p> <p>Artistic and Craft skills Design skills</p>
<p>Content</p>	<p>Studio practices with an awareness of environmental sustainability. Introduction of green issues in studio ceramics, devising, enacting, and posting solutions. How to create an environmentally responsible ceramic practice. Students will participate in a system set up to capture glaze waste, combine them with recycled clay. The glaze waste recycling system. Ways to reduce the environmental impacts in ceramic processes (crafts and industry). Waste conservation and ways to work towards reducing waste.</p> <p>Workshop Clay and glaze recycle</p>
<p>Learning Outcomes</p>	<p>Recycled materials, reuse of ceramic and environmental sustainability interventions:</p> <ul style="list-style-type: none"> ● in places of aggregation, culture and social cohesion ● adopting transparency and responsibility behaviors in dialogue with citizens and administrations ● using technical skills in order to imagine and design and create solutions that can meet the needs of citizens ● expressing competence and creativity
<p>Methods/Tools</p>	<ul style="list-style-type: none"> ● Lectures ● Simulations ● Case analysis ● Discussions and group work among the participants ● Visit of expert (reuse, recycle) ● Institutions, companies visits ● Teachers from university/company/institutions