EQ-WOOD

CURRICULUM

INNOVATION ADVISOR

WP5 – Methodological and Learning Content Development

Learning outcomes – units of competences

Detailed curriculum, based upon the defined competence units with all partners.

Units of competences:

I.   Design thinking, concepting, prototyping

II.   Innovation / Innovation management

III.   Design, trend & innovation research

IV.   Project management

V.   Professional development, networking & intercultural skills

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I.   DESIGN THINKING, CONCEPTION, PROTOTYPING

Goal

*At the end of the course "*Design thinking, conception, prototyping*":*

- The student knows tools and methodologies for:
  - Stimulating the design thinking and fan-out of innovative ideas
  - Conception and mapping of innovative ideas
  - Validating ideas and Implementing solution of fast prototyping
- The student knows how to lead in a professional manner a brainstorm for the stimulation of innovative ideas, starting from a specific brief
- The student knows how to map the ideas raised from the brainstorm through some digital tools of mind mapping
- The student knows how to evaluate the ideas through the relationship between potential and feasibility
- The student knows how to lead a process of fast ideas validation (f.e. AGILE approach)
- Student knows the process and the most important tools of rapid prototyping / 3D printing

Related Skills, Knowledge and Competences

Skills

- Can manage of complex information: understanding, processing, analysing, synthesis, integration, innovation, conceptualization, judgement and editing
- Can translate ideas into practical applications;
- Can manage of teams and meetings (team work cooperation and networking)
- Can encourage the creativity of the team involved in innovation
- Can experiment with the main tools and methods to promote creativity and innovation
- Can lead a brainstorming through the post-it methodology
- Can evaluate the proposed solutions towards the original target group;
- Can evaluate the ideas through the matrix potential feasibility
- Can validate innovative ideas through the AGILE approach
- Can lead a rapid prototyping process
- Can make decisions during the innovation process
- Can report efficiently on complex issues.

Knowledge

- Knowledge of the Principles of additive manufacturing and automation/digitization in manufacturing;
- Knowledge of brainstorming methodology

- Knowledge of mind-mapping tools

- Knowledge of AGILE approach
- Knowledge of 3D printing

Competences
- Autonomous in (own) work and responsibility for it
- Large interests on innovation, ecology, in all subparts etc…, intellectual curiosity, creativity
- Business sensitive, managing and organizing business activity related to innovation
- Flexible and reactive, problem solving and compassion, adaptation, responsive, initiative, future-oriented
- Critical and logical Thinking
- Thinking outside the box
- Open-minded

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II. INNOVATION & INNOVATION MANAGEMENT

Goal

At the end of the course "Innovation management ":

- The student knows the basic concepts, insights and success factors related to innovation;
- The student understands that the organization of innovation depends on the context and the preconceived goals;
- The student knows to establish a plan step-by-step (lean canvas) and can apply this to a concrete case;
- The student can organize an innovation project in a professional manner within a team;
- In addition, the student can apply the knowledge, skills and attitudes acquired in other courses of the curriculum.

Related Skills, Knowledge and Competences

Skills

- Can think analytically and handle data on abstract level;
- Can translate ideas into practical applications;
- Can establish a plan step-by-step (lean canvas) and can apply this to a concrete case;
- Can organize an innovation project in a professional manner within a team (organisational skills)
- Can use the business model canvas;
- Can apply the building blocks of a lean canvas (target audience, issue and solution, USP, costs, …);
- Can evaluate the proposes solutions towards the original target group;
- Can make decisions during the innovation process;
- Can report efficiently on complex issues.

Knowledge

- Good technical knowledge of the wood and furniture sector;
- Knowledge of the principles of innovation: the basic concepts, insights and success factors related to innovation;
- Principles of additive manufacturing and automation/digitization in manufacturing;
- Knowledge of new materials and the technical specifications of materials;
- Knowledge of product development techniques and design programs;
- Knowledge of innovation models and types of innovations;
- Knowledge of business model canvas;
- Knowledge of the building blocks of a lean canvas (target audience, issue and solution, USP, costs…);
- Knowledge of customers' roles and involvement.
- Knowledge of ecological design concepts, environment awareness, zero-waste design…

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Competences
- Autonomous in (own) work and responsibility for it. Drive for excellence
- Good at vision and mission sharing
- Large interests on innovation, ecology, in all subparts etc…, intellectual curiosity, creativity
- Customer focus: client problems are put centrally
- Business sensitive, managing and organizing business activity related to innovation
- Flexible and reactive, problem solving and compassion, adaptation, responsive, initiative, future-oriented
- Creativity

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III. DESIGN, TREND AND INNOVATION RESEARCH

Goal

At the end of the course "Design, trend and innovation research" The student

- knows the aspects to be considered in order to do or interpret market studies and information sources (stats, Internet, etc.).
- knows the aspects to be considered in order to do or interpret the analysis of the customers.
- knows the aspects to be considered in order to do or interpret the analysis of the product trends.
- knows the advantages of generating a competitive surveillance system.
- knows the advantages of generating a technology surveillance system.
- is able to make decisions about the aspects related to the establishment of an environmental analysis system.
- is able to identify threats and opportunities of the competitive environment.

Related Skills, Knowledge and Competences

Skills

- Skill to interpret the results of a market research and to apply them to practical cases
- Skill to visit sectorial fairs and obtain strategic results related to the product and market for the enterprises.
- Can establish strategies to innovate;
- Can propose innovative solutions in opposition to the competence
- Can establish actions according to the customers' demand
- Is able to analyse the sector evolution and to apply it to a particular enterprise

Knowledge

- Technology Surveillance
- Strategy
- Brand development
- Techniques of market analysis
- Materials
- Concepts of design and their evolution
- Circular Economy and Eco-design
- Principles of the circular economy
- Trends
- Business models
- Information management

Competences

- Autonomous in (own) work and responsibility for it. Drive for excellence
- Good at vision and mission sharing
- Large interests on innovation, ecology, in all subparts etc…, intellectual curiosity, creativity
- Customer focus: client problems are put centrally
- Leadership
- Flexible and reactive, problem solving and compassion, adaptation, responsive, initiative, future-oriented
- Creativity
- Teamwork

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IV.   PROJECT MANAGEMENT

Goal

At the end of the course the student is *"able to manage a project"* from the very beginning to the end.

He/She knows tools and methodologies to plan, coordinate and control the complex and diverse activities of modern industrial and commercial projects and how to embody ideas and activities.

Related Skills, Knowledge and Competences

Skills

- Able to coordinate the work
- Able to motivate team member
- Able to communicate the goals
- Able to manage the phases of the project: initiation, planning, realization, monitoring, evaluation, closing)
- Can translate ideas into practical sollutions;
- Can manage of teams and meetings (team work cooperation and networking)
- Can make decisions during the project
- Can report efficiently on complex issues.

Knowledge

- Knowledge of what a project is?
- Characteristics of a project
- Life cycle and phases of a Project (initiation, planning, realization, monitoring, evaluation, closing)
- Duties of a Project Manager
- Knowledge of basic communication techniques and change management

Competences

- Autonomous in (own) work and responsibility for it
- Flexible and reactive, problem solving and compassion, adaptation, responsive, initiative,
- logical Thinking
- Thinking outside the box
- Open-minded
- Basic leadership

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V.   PROFESSIONAL DEVELOPMENT, NETWORKING & INTERCULTURAL SKILLS

Goal
- The students become aware of the importance of soft skills and acquire the necessary basics to further develop their own professional competences.
- They become resourceful communicators in networking and intercultural relations.
- They also become competent in advising the executive management of a company on setting up an effective training and skills development plan for their staff.

How?
Introductory course plus specific additional training sessions

Together with the tutor, students choose 3-4 additional crash courses from the following options.

- Innovation audit and competence mapping of your company
- Business models for industry 4.0 and how to do the transition
- Corporate training plan for continued development of your staff
- Leadership, Team management and Project coordination
- Creativity techniques
- Problem solving techniques
- Business communication including intercultural competency
- Technical English (furniture / manufacturing)
- Business English

Related Skills, Knowledge and Competences

Skills
- Strong communicator, convincing speaker
- Critical mind, can question established concepts and think out of the box
- Good at reading peoples' skills, strengths and weaknesses
- Good team leader and flexible team player
- Good facilitator, can guide people to leave their comfort zone
- Solutions-oriented & pragmatic in finding creative approaches to challenges

Knowledge
- Understanding the role of HRD for company transition
- Solid knowledge of project planning and management
- Basics of corporate training didactics
- Awareness of cross-cultural communication and business relations
- Good level of Business English

Competences
- Proficient coordination of innovation project teams
- Solid assessment of staff competences during internal innovation audit of a company
- Lead the establishment of a thorough HRD plan
- Strong in networking with potential partners and clients
- Intercultural sensitivity, interest in other cultures and foreign languages

Defined general skills, knowledge and competences for all units compiled

Skills

- Analytical thinking and handling of data on abstract level
- Project management
- Creating the "innovation compass": ability to use R&D and design as part of firm's strategy
- Able to deal easily with new concepts
- Management of complex information: understanding, processing, analysing, synthesis, integration, innovation, conceptualisation, judgement and editing, the ability to manage structures allowing versatility both at the level of human resources and technological
- Translating ideas into practical applications
- Transformational leadership: management of teams and meetings: team work, cooperation and networking, collecting and raising awareness of the team as regards the challenge of innovation, encouraging the creativity of the teams involved in innovation, challenging people and organizations
- Experimenting with the main tools and methods to promote creativity and innovation, accompanying changes related to the paradigm shift favoured by innovation
- Efficient reporting of complex issues (idea generation, changes…), to colleagues and superiors/management
- Managing professional development of individuals and groups (Life Long Learning)
- Problem solving
- Applying ecological design concepts, environment awareness, zero-waste design…
- Organisational skills
- Commercial skills: being able to communicate the strengths and values of the companies

Knowledge

- Effective information gathering and market research techniques
- Knowledge of targets and markets
- Different relevant private and public stakeholders, research institutes, academic institutes and their affinity with practical research
- Good technical knowledge of the wood and furniture sector
- Principles of additive manufacturing and automation/digitization in manufacturing
- Knowledge of new materials and the technical specifications of materials
- Knowledge of product development techniques
- Controlling cost efficiency
- Strategic management
- Environmental management
- Change management, models tools and processes

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- Knowledge of other languages (English…)
- Knowledge of design programs
- Knowledge op production planning

Competences
- Autonomous in (own) work and responsibility for it. Drive for excellence
- Ambition, self-confidence, energy and enthusiasm
- Good at vision and mission sharing
- Business sensitive, managing and organizing business activity related to innovation
- Integrity, respect and collegiality (teamplayer), motivational
- Flexible and reactive, problem solving and compassion, adaptation, responsive, initiative, future-oriented
- Large interests on innovation, ecology, in all subparts etc…, intellectual curiosity, creativity
- Customer focus: client problems are put centrally
- Good oral and written communication (with modern techniques, ICT; listening skills…)
- Languages → ENGLISH
- Resilience
- Assertivity
- Creativity