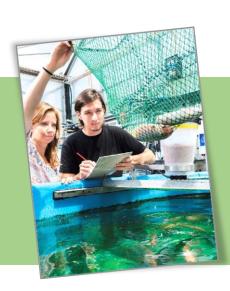# AQU@TEACH

OUTPUT 6:
ENTREPRENEURIAL SKILLS
MODULE GUIDE FOR STUDENTS

AQU@TEACH:

Innovative educational techniques to promote learning among European students using aquaponics

Erasmus+

Main author:

Sarah Milliken

Main author's institution:

University of Greenwich

Contributing authors:

University of Greenwich: Shelley Mosco, Benz Kotzen

Zurich University of Applied Sciences: Ranka Junge, Boris Pasini

University of Ljubljana: Tjaša Griessler Bulc, Andrej Ovca, Darja Istenič

Technical University of Madrid: Morris Villarroel

University of Maribor: Maja Turnšek Hančič

ENTREPRENEURIAL SKILLS CURRICULUM

Overview

The Entrepreneurial Skills Curriculum introduces the main processes involved in developing a business idea into a start-up company – business models, customer segmentation, value proposition, marketing and pricing, and financing. It builds on knowledge which you have already gained through completing the 15 modules of the Aquaponics Curriculum.

The majority of the activities involve team work, in order to reflect the reality of setting up a business – this is rarely a solo endeavor, and most successful start-ups have between 3 and 5 team members. The teams will be assigned by your tutor.

Topic	Total student workload (hours)
1. Introduction	6 h
2. Lean start-up methodology	8 h 10'
3. St Gallen Business Model Navigator	10 h
Interim Quiz	15'
4. Business Model Canvas	6 h 40'
5. Marketing and pricing	15 h 5'
6. Funding your start-up	13 h 20'
Final Quiz	30'
	60 hours

Objectives and competences

The main objective of the Entrepreneurial Skills module is to introduce the necessary entrepreneurial and transversal skills for setting up an aquaponics business.

Competences:

1. Understand the factors that can cause start-ups to either thrive or fail
2. Understand the different stages involved in developing a business idea
3. Understand the different types of business model
4. Know how to design a business model
5. Understand the importance of customer segmentation and value proposition
6. Know how to develop marketing and pricing strategies
7. Understand the different ways of financing a start-up
8. Have developed your transversal skills through critical thinking, problem solving, communication and team work

Assessment

Successful completion of the Entrepreneurial Skills Curriculum will result in the award of 2 ECTS. Assessment of the e-learning course consists of three elements:

1. The end of module multiple choice quiz, with 1 mark awarded for each correct answer, will comprise 20% of the final grade.

2. The e-portfolios, which comprise 30% of the final grade, will be assessed according to the following criteria:

   - Work uploaded for all sections of the module (maximum 10 marks)
   - Structured presentation (maximum 10 marks)
   - Quality of material submitted (maximum 10 marks)

3. Active engagement with the various teaching and learning tools in Moodle (glossary, wiki, forum, workshop, database) will comprise 50% of the final grade.

Grading will be done according to achieved total percentage:

Achieved %	Grade
>90%	Excellent
>80% - 90%	Very good
>70% - 80%	Good
>60% - 70%	Pass
<60%	Fail

Activities

1. Introduction

Watch − 50 minutes

Watch the video on Aquaponic business ideas. Make notes on the ideas that you think are interesting.

Read − 40 minutes

Read section 1.1 of your textbook and make notes.

Discuss − 30 minutes

As a team you need to agree on an idea for an aquaponics business. It may be a commercial farm, a consultancy service for the design and build of commercial farms, the supply of specialist equipment, domestic systems for restaurants, schools or the general public, or something else altogether. Use the Moodle Forum to discuss and agree on an initial idea.

Watch and read − 90 minutes

Watch the video on PESTEL analysis explained. Then read sections 1.2 to 1.4 of your textbook and make notes on the macro-environmental factors that might affect the profitability of a new commercial aquaponics enterprise.

Investigate and collaborate − 120 minutes

Use the internet to research the political, economic, social, technological, environmental and legal factors that might affect the viability of your team's business idea. Write these up as a series of bullet points for each factor, and upload your work to the Moodle Workshop. In the second phase of the Workshop you will evaluate the work of your team members.

Discuss − 30 minutes

Based on the results of the PESTEL analysis, use the Moodle Forum to revise or refine your business idea.

2. Lean start-up methodology

Watch − 30 minutes

Watch the video of Steve Blank explaining the difference between business plans and business models, start-ups and companies. Then watch The lean start-up summary and make notes.

Read and collaborate − 100 minutes

Read chapter 2 of your textbook and add at least two terms to the general glossary.

Discuss and produce − 120 minutes

Download the 5 Bold Steps Vision Canvas. Use the Moodle Forum to discuss your shared vision (where do we want to go?), and the five bold steps you will take to achieve it (how will we get there?). What supports your vision, and what may challenge it? When you have reached a consensus, write this up in a Word document with a separate heading for each block of the canvas, and upload it to your e-portfolio.

Collaborate and produce − 120 minutes

Download the Context Map Canvas. As a team, use the Moodle Wiki to brainstorm the various blocks of the canvas. Some of these can be completed fairly easily based on the PESTEL analysis you completed previously, while others will require more research, such as competition, customer needs, and uncertainties. Remember that these are external factors that might shape your business, not just now but also in the future. When you have reached a consensus, write this up in a Word document with a separate heading for each block of the canvas, and upload it to your e-portfolio.

Discuss − 30 minutes

Download the Riskiest Assumption Canvas. Use the Moodle Forum to discuss your assumptions about your business idea. What are the things you are not sure about? The assumptions that

absolutely must be true for your idea to work go at the bottom of the stack. Rank your assumptions in terms of risk. Which are the riskiest ones?

Produce and collaborate — 90 minutes

As an individual activity, design experiments to test and measure your team's riskiest assumptions in a quantitative way. For each one, specify a clear, falsifiable hypothesis (the expected outcome) and indicate how you would quantify your predictions. The metrics you define need to be actionable (they need to directly relate to the hypothesis) and accessible (you would need to be able to see the results). Upload your work to the Moodle Workshop. In the second stage of the Workshop you will evaluate the work of the other members of your team.

3. St Gallen Business Model Navigator

Watch — 10 minutes

Watch the video on What is business model innovation? and make notes.

Read and collaborate — 180 minutes

Read sections 3.1 to 3.3 of your textbook and add at least two terms to the general glossary.

Collaborate — 120 minutes

Examine the list of 55 business models in section 3.3.2 of your textbook. In collaboration with your team, use the Moodle Wiki to compile a list of all the different business models that could be applied to your business idea, with a brief explanation for each one of how it could be applied.

Produce and collaborate — 120 minutes

As an individual activity, choose **one** business model from the Wiki list and identify WHO, WHAT, HOW, and WHY/VALUE. Upload your work to the Moodle workshop, and evaluate the work of the other members of your team.

Discuss — 30 minutes

As a team, use the Moodle Forum to decide on **one** business model to take forward.

Watch — 10 minutes

Watch the videos on Swot makes Netflix so successful anyway? and Starbucks SWOT analysis.

Read — 10 minutes

Read section 3.4 of your textbook.

Collaborate and produce — 120 minutes

As a team, use the Moodle Wiki to brainstorm the strengths, weaknesses, opportunities, and threats related to your business model. When you have reached a consensus, write up the results of the SWOT analysis in a Word document, and upload it to your e-portfolio.

4. Business Model Canvas

Watch − 10 minutes

Watch the video on Business Model Canvas and make notes.

Read − 110 minutes

Read sections 4.1 and 4.2 of your textbook.

Watch − 10 minutes

Watch the Sketch out your hypothesis video in which Alexander Osterwalder explains the Business Model Canvas of Nespresso.

Produce − 60 minutes

Read the description of Swish fish. Download the Business Model Canvas template and complete it for Swish fish. Upload your work to Moodle to receive feedback from your tutor.

Produce and collaborate − 90 minutes

In section 4.2 of your textbook you read about the Business Model Canvas of Edelkrebs AG (EKAG). For some reason the owners of EKAG have decided to innovate their business. Make a proposition for a business innovation that changes 3 out of 4 basic aspects of the St Gallen Business Model (WHO, WHAT, HOW, and WHY/VALUE). Use the template to modify the existing EKAG Business Model Canvas accordingly. Upload your canvas to the Moodle Workshop. In the second stage of the Workshop you will evaluate the canvas of one of your team.

Collaborate and produce − 120 minutes

Download the template for the Business Model Canvas. As a team, use the Moodle Wiki to brainstorm the different blocks of the canvas for your business model. When you have reached a consensus, write this up in a Word document with a separate heading for each block of the canvas, and upload it to your e-portfolio.

5. Marketing and pricing

Read and watch − 25 minutes

Read sections 5.1 and 5.2 of your textbook. Then watch the following short video on Porter's five forces model.

Produce – 90 minutes

Using the template provided, identify each actor in the five forces you can think of for your business model, and rank the power of each actor on a scale of 1 to 5. Write a short summary (max. 500 words) explaining who has the most power over your type of business, and why? Upload both the template and the summary to your e-portfolio.

Read and discuss – 40 minutes

Read section 5.3 of your textbook. Use the Moodle Forum to discuss ideas for how to include experience in what you are proposing to offer your customers.

Read and watch – 20 minutes

Read Six thinking hats and then watch the video.

Produce – 90 minutes

Think with six different hats about your business model. Summarise the outcomes of the exercise in a Word document and upload it to your e-portfolio.

Read and collaborate – 100 minutes

Read section 5.4 of your textbook and add at least two terms to the general glossary.

Read – 30 minutes

Read How to develop a unique (and memorable) brand identity in 2020.

Investigate and collaborate – 60 minutes

Search the internet for images of packaging of aquaponic produce, and share them in the Moodle Database.

Discuss – 30 minutes

Analyse the package designs – how do these companies use it to draw their customers to their brand identity? What type of customer do you think are they trying to attract? Share your thoughts in the Moodle Forum.

Produce – 90 minutes

Define your brand identity, and sketch some ideas for conveying it to your customers. Upload your work to your e-portfolio.

Watch – 15 minutes

Watch the following short videos:

- Value Creation Through the Marketing Mix

- Crossing the chasm: marketing and selling disruptive products to mainstream customers

- Value proposition canvas explained

Collaborate − 60 minutes

Download the Persona Canvas. As a team, use the Moodle Wiki to brainstorm your customer segments. What are their needs, fears and hopes? What positive and negative trends do they experience in their lives?

Produce and collaborate − 180 minutes

Download the Value Proposition Canvas template. The first five slides of the template illustrate the process, with two completed examples. Use the sixth slide to build your own canvas, save it as a pdf, and upload it to the Moodle Workshop. In the second stage of the Workshop, evaluate the canvases submitted by your team. Based on the feedback you receive, make any necessary changes to your canvas, and upload the final version to your e-portfolio.

Watch − 5 minutes

Watch the following video:

- The Elaboration Likelihood Model Explained

Read − 10 minutes

Read section 5.5 of your textbook.

Investigate and collaborate − 60 minutes

Search online to find as many prices as you can for:

- Competitor products

- Substitute products

Share the web pages in the Moodle Database.

6. Funding your start-up

Watch − 10 minutes

Watch the video on The art of start-up finance: your business model formula and make notes.

Read and collaborate − 140 minutes

Read chapter 6 of your textbook and add at least two terms to the general glossary.

Watch − 5 minutes

Watch the video on How to fund your start-up and make notes.

Discuss − 30 minutes

Study the investor matrix model in section 6.2 of the textbook. Use the Moodle Forum to discuss where your start-up would be positioned, and what funding path you might adopt in order to scale your business.

Read − 30 minutes

Read Why business angels do not invest and make notes.

Investigate and discuss − 45 minutes

Study the crowdfunding pages of three aquaponics start-ups, two of which were successful in raising their target funding (Smart Greens UK and GrowUp), while the third was unsuccessful (WeGrow). What factors do you think might have contributed to the relative success of the three start-ups? Share your thoughts with your team and your tutor in the Moodle Forum.

Investigate and produce − 120 minutes

Search the Indiegogo platform for more crowdfunding campaigns that have tried to raise funds for projects related to aquaponics, and analyse their degree of success in relation to their story and the types of rewards they were offering. Design a campaign page that explains the nature of your start-up and your growth plans, and specify the rewards you would offer. Upload your work to your e-portfolio.

Collaborate and produce − 30 minutes

Your team needs to prepare a pitch to an investor. Download the Storytelling Canvas template and use it to frame your pitch – what is your team's story, and what do you want to achieve by telling it? Use the Moodle Wiki to brainstorm your ideas for each block of the canvas. When you have reached a consensus, write this up in a Word document with a separate heading for each block, and upload it to your e-portfolio.

Watch − 60 minutes

Watch the video of the 2019 SeedInvest Start-up Pitch Competition and make notes on the positive and negative comments from the jury for each of the six start-ups.

Read − 30 minutes

Read How to pitch a start-up – 17 things you need to know.

Collaborate and produce − 120 minutes

Download the Pitch Canvas, which is a useful tool for brainstorming your ideas to help you structure and visualise your pitch on one page. If you have a 3-minute pitch, you would need to leave out some blocks, so you would choose the areas where you are strongest. However, if you are focused on winning investment, then Pain, Product, What's Unique, Customer Traction, Business Model, Investment and Team are all essential.

For the purposes of this exercise, as a team use the Moodle Wiki to brainstorm as many ideas as you can for the following blocks of the Canvas: **Pain**, **Product**, **What's Unique** and **Business Model**. When your ideas start to dry up, take a step back, focus on the really important ideas that you don't want people to forget, and discard the rest. When you have reached a consensus, write this up in a Word document with a separate heading for each block, and upload it to your e-portfolio.

Produce and collaborate − 180 minutes

Download the Pitch Deck template, and study it to see an example of slides for a start-up pitch. For the purposes of this exercise, you can either modify this template, or create your own PowerPoint slides from scratch. As an individual activity, use your completed Storytelling Canvas and Pitch Canvas from the previous exercises to start developing your script and your slides for a 10 minute start-up pitch. Make sure that your slides and your script cover your key ideas from the **Pain, Product**, **What's Unique** and **Business Model** blocks of your Pitch Canvas. Record your script for each slide [Slide show / Record slide show / Start recording from current slide] and upload your presentation to the Moodle Workshop. Each student and the tutor will choose their top pitch on the basis of the quality of the presentation.

Practice − 30 minutes

10 question multiple choice quiz. The results will be recorded and will count towards your final grade.