Course Syllabus
ME2621 Business Opportunity Development (7,5 credits)

KTH Royal Institute of Technology

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Course description and main content

ME2621: Business Opportunity Development for Technology-Based Ventures

This course explores how technology-driven business concepts are formulated, developed, and transformed into viable opportunities. It goes beyond traditional lectures by combining cutting-edge **micro-skills training**, **micro-learning modules**, and **AI-powered teaching support** to give students a hands-on, future-oriented learning experience.

Opportunity development is treated as a **discovery process**—a dynamic journey of idea generation, refinement, and evaluation that leads to innovative and sustainable ventures. These ventures may take the form of independent startups, internal corporate projects, or social impact initiatives.

The course emphasizes **active, experiential learning** through a unique combination of:

- **AI Teaching Assistants** that translate theory into practical, personalized learning support.
- **AI Business Coaches** that help students practice real-world entrepreneurial problem solving.
- **AI Simulations** that immerse students in realistic stakeholder interactions (customers, investors, co-founders, and others).
- **Micro-learning and Micro-skill development** so students build entrepreneurial competence step by step, practicing the skills that matter most in venture creation.

Key themes and tools explored include:

- Advanced **idea generation and creativity tools**
- **Market segmentation** and opportunity recognition
- **Industrial dynamics** as a source of business opportunities
- **Product development** (products, services, and hybrid solutions)
- **Creative and critical thinking for entrepreneurs**
- **Hands-on discovery processes** for opportunity validation

The course format blends lectures, seminars, workshops, and guest sessions with **AI-augmented experiential learning**, making ME2621 one of the most **innovative and forward-looking entrepreneurship courses** in higher education today.

Intended learning outcomes
After passing the course, the students should be able to:

1. Describe and analyze the challenges when formulating and developing technology-based business concepts.
2. Choose and apply conceptual tools and models to create and evaluate technology-based business concepts.
3. Choose and apply conceptual marketing tools and models to analyze and evaluate target customers and segment markets.
4. Choose and apply conceptual tools and models to formulate and evaluate product concepts (goods and/or services).

5. Create preconditions for and apply methods for creative work processes in connection with the development of technology-based business concepts.
6. Identify and describe technological changes and other changes in society and among users and explain how these create preconditions for new technology-based business concepts.

Course structure
This course unfolds over six distinct modules, each providing a unique perspective on the development of entrepreneurial opportunities. Embedded within the course structure are an individual assignments (INL2) and two collaborative group projects (PRO3; PRO4), each executed in partnership with a real-world company.

Digital Support (Canvas)
Additional, course-related, material and information will be made available in a Canvas course room for students registered on the course. This includes a literature list in canvas under *Modules > Links and other important information > Literature.*

AI Usage & Support
This course uses the power of AI to create our learning environment. Specifically, we use custom GPTs created specially created for this course in three areas as – Teaching **Assistants**, **Business Coaches**, and **Simulations**. The simulations and these custom GPTs use ChatGPT in the background. All are accessible for free; however, I would **strongly suggest** using at least a Plus account. The course does not require you to purchase any textbooks or other course materials, which would be far more costly than a ChatGPT account. Additionally, you are free to use other LLMs like Gemini, Claude, etc.

These Teaching Assistants, Coaches, and Simulations are listed in the Appendix.

Language
The course language is English. This means that lectures, workshops, course literature and material, student presentations and reports is to be delivered in English.

Teaching Philosophy
The teaching philosophy is that of *learner-centered teaching*, which means:

- The teacher is facilitator and guide.
- It not what we do, but rather what you learn
- Learners take responsibility for their own learning.
- Content is used and not just covered.
- Students teach others what they have learned.
- Students participate in self-assessments.

Participants' responsibilities

- Every student is expected to provide an input of not less than 160 working hours for this course.
- Students are expected to study related chapters and selected cases in advance.
- Learning to work in a team is both important and necessary. Individual students are responsible for, and expected to, do their part within their respective team's activities. Failing to participate in team activities will affect your grade!
- Plagiarism will be dealt with in accordance with the University rules. Any

copying or unethical use of sources may lead to severe disciplinary actions.
- Students are required to engage and actively participate during the lectures and seminars.

Confidentiality and NDA Policy. There are no Non-Disclosure Agreements (NDAs) for startup ideas in this course. By participating, you agree to act with integrity and discretion, and you agree not to disclose or distribute information received from other students unless you receive explicit permission from them to do so. You should be able to complete all assignments without disclosing any sensitive intellectual property for your startup idea(s).

Examination

- INL2 – Individual assignment, 4,0 credits, grading scale: A, B, C, D, E, FX, F
- PRO3 – Group project, 2,0 credits, grading scale: P/F
- PRO4 – Group project, 1,5 credits, grading scale: P/F

Examination adapted to students with special needs
The following applies for students with functional variations who have a statement from KTH's FUNKA unit on recommended support measures during examination:

- Support measures under code R (i.e. adjustments relating to space, time, and physical circumstances) are granted by the examiner.
- Support measures under code P (i.e. pedagogical measures) are granted or rejected by the examiner after the examiner has been contacted by the student in accordance with KTH's rules. Normally, support measures under code P will be granted.

More information is available on KTH's website.

Assignments

INL2 – individual assignment (related to ILO 1-6, from the perspective of an entrepreneur): Building and Refining a Tech-based Business Concept

The INL2 individual portion of the course is made of four components:

- Business and Management Basic Course (Pass/Fail)
- ILO Module Diagnostics (Pass/Fail)
- The Simulation Series (Graded)
- Final Oral Exam (Graded)

Business and Management Basic Course Description:
This mini-course on Business and Management is designed to provide students with a fundamental understanding of the core concepts of business creation and operation. By the end of this course, you will have a working knowledge of key principles, from developing an initial idea to implementing management and marketing strategies.

This curriculum is organized to guide you through the initial stages of business development and the functional areas of an organization. You will gain a basic understanding of:

- **Business Foundations**: Learn the building blocks of a business, including different forms of ownership and
- **Ideation**: Learn the process of generating and evaluating new business ideas.

- **Business Models**: Explore how businesses create, deliver, and capture value. This section provides an introduction to the key components that define a successful business model.
- **Management & Organization**: Understand the essential principles of effective management, including the roles of managers and how to structure a team to achieve organizational goals.
- **Marketing**: Get introduced to the fundamentals of reaching your target audience. You will learn about market channels, basic marketing analysis,
- **Strategy**: and strategic thinking to help your business thrive.
- **Finance**: Grasp the foundational financial concepts necessary to understand a business's health and make informed decisions.

At the end of each section there is a diagnostic quiz. Each quiz consists of 20 objective questions. To PASS, you must successfully complete each quiz with the score of 100%, in other words all the questions answered correctly. You may take each quiz multiple times; however, if you fail more than two (2) time, you must speak with Professor Brown before your third attempt. You will have until **October 5th** to complete the basic course.

Module Diagnostics Description:
The course has six modules that correspond to the course learning objectives:

- **Module 1** of the Opportunity Development Course (Terrence): Introduction to technology-based business concepts
- **Module 2** of the Opportunity Development Course (Terrence): Conceptual tools and models for creating and evaluating technology-based business concepts
- **Module 3** of the Opportunity Development Course (Anna-Maria): Marketing tools and models
- **Module 4** of the Opportunity Development Course (Adam): Tools and models for formulating and evaluating product concepts
- **Module 5** of the Opportunity Development Course (Anna-Maria): Creative work processes in connection with the development of technology-based business concepts
- **Module 6** of the Opportunity Development Course: (Niklas): Technological changes and other changes in society and among users

Each will be described in great depth later in this document. However, it is important to note that each module has a diagnostic quiz attached. Each quiz consists of 20 objective questions. To PASS, you must successfully complete each quiz with the score of 80%. You may take each quiz multiple times; however, if you fail more than two (2) time, you must speak with Professor Brown before your third attempt. You will have until **October 5th** to complete the all six diagnostics.

The Simulation Series Description:

Purpose

These roleplay simulations build practical and conceptual skills in:

- Customer discovery
- Co-founder alignment
- Expert validation

- Regulatory awareness
- Investor communication

You'll hold a focused, 15-minute conversation with a customize GPT persona, then submit a reflection using the **Universal Simulation Reflection Sheet**. All simulations use the **Universal Grading Rubric**. Both Documents are included in this document and available in Canvas.

Which simulations do I complete?

There are 5 simulations

1. Alex *(B2B Customer)* **or** Sam *(B2C Customer)*
2. Taylor *(Co-Founder)*
3. Riley *(Industry Expert/Mentor)*
4. Sophia *(Regulator/Gatekeeper)*
5. Jordan *(Investor)*

Follow the syllabus schedule, but the instructions, rubric, and reflection sheet are identical across simulations.

How each simulation works

1. **Before**: Review the persona. Prepare open-ended questions.
2. **During (≤15 min)**: Have a natural conversation. Focus on discovery. No pitching unless the scenario says so.
3. **After**: Complete the **Universal Simulation Reflection Sheet** and submit.
4. **Grading**: Based on a cumulative score of all five simulations.

Final Oral Exam Description:

What is an Oral Exam?

An **oral exam** (sometimes called a viva, viva voce, or oral defense) is a face-to-face evaluation between a student and the professor. Instead of writing answers on paper, the student responds verbally to questions, reflections, and prompts. In this format, the student demonstrates their understanding by **explaining, reasoning, and applying concepts in real time**.

In this course, the oral final exam will last about **15 minutes per student** and will include three main parts:

1. **Discussion of the simulations** you experienced.
2. **Reflection on your role and contributions** in the group project.
3. **Big-picture learning**—what you take away from the course overall.

Why Oral Exams Are Used

Oral exams are a long-standing method in higher education, particularly in graduate and professional programs. They are used because they allow the professor to:

- **Assess depth of understanding.** Unlike written exams where answers may be memorized, oral exams reveal how well you can think through problems, explain reasoning, and adapt concepts to new situations.
- **Check for clarity of thought.** You must communicate your ideas clearly, logically, and concisely. This mirrors the skills needed when pitching ideas to investors, persuading stakeholders, or leading teams.
- **Encourage reflection.** The format invites students to articulate not only what they know, but also how they have grown, what challenges they faced, and how they connect theory to practice.
- **Engage dynamically.** If an answer is vague, the professor can follow up immediately with probing questions. This ensures understanding is genuine and not just rehearsed.

Benefits of Oral Exams

For students, oral exams provide unique advantages:

- **Demonstrate skills beyond writing.** You can show communication, critical thinking, and reasoning in real time.
- **Personalized feedback.** You receive immediate cues and guidance from the professor during the conversation.
- **Professional preparation.** The format mirrors real entrepreneurial contexts: pitching to investors, interviewing for jobs, or explaining ideas to collaborators.
- **Opportunity for reflection.** It's a chance to integrate what you learned across different parts of the course into a coherent story.

For faculty, oral exams offer:

- **Authentic assessment.** It's harder to fake knowledge in a live discussion than in a written assignment.
- **Flexibility.** The conversation can be tailored to each student's experience in simulations and group work.
- **Insight into learning processes.** Faculty can see not just what the student knows, but how they think, reason, and self-reflect.

PRO3 and PRO4 – group assignment (related to ILO 1-6, from the perspective of the entrepreneurial consultant): Investigative Module Reports & Business Analysis

Assignment Description:
This group assignment, divided into PRO3 and PRO4, requires an in-depth understanding of the module themes and application of this knowledge within a real-world business context. You will partner with a company, investigate six key themes, and develop a comprehensive report with findings, recommendations, and a presentation.

PRO1: Investigative Module Reports
Intended Learning Outcomes for PRO3:

- Understand and articulate the challenges of formulating and developing tech-based business concepts (ILO1).
- Choose and apply conceptual tools and models to create and evaluate tech-based business concepts within a real company (ILO2 & ILO4).
- Identify and describe societal and technological changes and explain how these create preconditions for new tech-based business concepts (ILO6).

Instructions:

1. Choose a Company: As a group, select a company willing to collaborate on this project. The company must agree to at least one interview and provide relevant data for your investigations.
2. Research Questions: Formulate one research question related to each of the six course module themes. The questions should probe the application of theoretical concepts in the company's operations.
3. Investigative Reports: Write six investigative reports (one per module) of approximately 1500 words each. The reports should include a research question that is investigated using insights from course materials, the company interview, and other relevant data.

PRO4: Business Analysis Report and Class Discussion
Intended Learning Outcomes for PRO4:

- Use conceptual marketing tools and models to analyze and evaluate target customers and segment markets in a practical context (ILO3).
- Create preconditions for and apply methods for creative work processes in connection with the development of technology-based business concepts (ILO5).

Instructions:

1. Business Analysis Report: Based on the findings from your investigative reports, compile a comprehensive Business Analysis Report. The report should include:

    - Cover Page: Indicate the report title, your group members' names, the company's name, and the date.
    - Executive Summary: Provide a concise overview of your findings and recommendations.
    - Table of Contents: Outline the report's structure.
    - Introduction: Describe the purpose and structure of the report.
    - The six module reports.
    - Conclusions: Summarize your key findings from the investigative reports and let this correspond to the purpose described in the introduction.
    - Recommendations: Provide actionable suggestions for the company based on your findings.
    - References: Cite all sources used in your investigative reports and Business Analysis Report.
    - Appendix: Include any relevant additional information or data not contained in the body of the report.
    - Finding: Prepare to present your findings in writing, focusing on the conclusions and recommendations for the company. Be prepared to answer questions and engage in a discussion about your work, if necessary.

Grading criteria

Grading Criteria for INL2 Assignments/Components

1. Business and Management Basic Course
Each objective diagnostic quiz will provide your score immediately. You must receive a perfect score 100 to pass each quiz. I would strongly suggest that you take time between attempts to prepare.

2. Module Diagnostics
Each objective diagnostic quiz will provide your score immediately. You **must** receive a a score of 80% to pass each module. I would strongly suggest that you take time between attempts to prepare.

3.The Simulation Series (Graded)

Universal Simulation Grading Rubric

Criteria	Incomplete (0)	Partial (1)	Full Effort (2)
Effort & Engagement	Minimal/no attempt	Attempted but shallow/awkward flow	Fully engaged; natural, purposeful conversation
Quality of Questions	Mostly closed/irrelevant	Some relevant open questions	Multiple strong, adaptive open questions probing depth
Active Listening & Follow-Up (Evidence Required)	No follow-up examples	One vague example	2–3 clear examples of follow-ups tied to what was said
Insight Discovery	No useful insights	Some, but generic/incomplete	Specific, actionable insights on needs, drivers, and barriers
Connection to Course Concepts	No links	One–two weak links	Strong, specific links to multiple relevant concepts

Each simulation has 5 grading criteria with a maximum score of 2 totalling a maximum grade of 10 points for each simulation. However, only the cumulative scores of all five simulations will be converted into an actual grade. If a student receives a F/Fx and resubmits, the only grade available to her or him is PASS (E).

Total: 50 points

Cumulative Simulation Grades

50 - 45	A
44 – 40	B
39 - 25	C
< 25	F

4.Final Oral Exam component

Total: 100 points

Part 1 – Discussion of Simulations (30 points)

- **Excellent (27–30 pts):** Explains key insights from the simulations with depth; connects to theory and practice; demonstrates reflection on decisions, trade-offs, and outcomes.
- **Good (21–26 pts):** Identifies main takeaways from simulations and some connections to course concepts; reflection is present but somewhat limited.
- **Satisfactory (15–20 pts):** Provides a basic description of simulations with minimal analysis; limited or vague reflection.
- **Weak (0–14 pts):** Unable to clearly explain what was learned from the simulations; answers superficial or off-topic.

Part 2 – Reflection on Group Project Role (30 points)

- **Excellent (27–30 pts):** Clearly articulates personal role, contributions, and learning; reflects on team dynamics and collaboration; links role to broader entrepreneurial concepts.
- **Good (21–26 pts):** Describes role and contributions with some reflection on teamwork; some attempt to link to course themes.
- **Satisfactory (15–20 pts):** Gives a general account of role but with little reflection or connection to course content.
- **Weak (0–14 pts):** Provides minimal or unclear description of role; no meaningful reflection on teamwork or learning.

Part 3 – Overall Learning from the Course (30 points)

- **Excellent (27–30 pts):** Provides thoughtful, integrated reflection on the entire course; demonstrates ability to connect simulations, group project, lectures, and tools into a coherent understanding.
- **Good (21–26 pts):** Identifies key learnings with some integration; reflection shows awareness of multiple course elements.
- **Satisfactory (15–20 pts):** States a few learnings but lacks integration or depth.
- **Weak (0–14 pts):** Provides only superficial or generic statements about course learning.

Part 4 – Communication & Professionalism (10 points)

- **Excellent (9–10 pts):** Communicates ideas clearly and confidently; maintains professionalism in a Zoom setting; responds thoughtfully to follow-up questions.
- **Good (7–8 pts):** Generally clear communication; professional but may show minor hesitations or gaps.
- **Satisfactory (5–6 pts):** Understandable but sometimes unclear or unstructured; professionalism inconsistent.
- **Weak (0–4 pts):** Frequently unclear, unstructured, or unprofessional in communication.

100-90	A
89-80	B
79-70	C
69-60	D
59-50	E
< 49	F

Final INL2 Grade Matrix[1]

		Oral Exam Grade				
Simulation Grade	A	B	C	D	E	F
A	A	A	B	C	C	Fx
B	A	B	C	C	D	Fx
C	B	B	C	D	D	Fx
F	Fx	Fx	Fx	Fx	Fx	Fx

Grading Criteria for PRO3 & PRO4 Assignments:

PRO3: Investigative Module Reports

Pass: The group has successfully met all the requirements of the assignment. All six module reports are complete and each one thoroughly investigates a specific research question related to the module theme. The group demonstrates a clear understanding of the module content, effectively applies theoretical concepts to the company's operations, and produces a cohesive and well-reasoned analysis. The group has properly integrated insights from course materials, the company interview, and other data sources. The reports align with the intended learning outcomes (ILO1, ILO2, ILO4, ILO6) and meet the 1500-word count requirement per report.

Fail: The group has not met all the requirements of the assignment. Some reports may be incomplete, lack depth in the investigation, or not clearly apply the theoretical concepts to the company's operations. The group may not demonstrate a clear understanding of the module themes, or the analysis may not be well-reasoned or cohesive. The reports do not fully align

[1] In the special case that a student fails the simulation series and must resubmits his or her simulation and therefore receives an E for the series, the final grade will be determined in a case-by-case manner.

with the intended learning outcomes (ILO1, ILO2, ILO4, ILO6) or do not meet the 1500-word count requirement per report.

PRO4: Business Analysis Report

Pass: The group has successfully met all the requirements of the assignment. The Business Analysis Report is complete and includes all the required sections: cover page, executive summary, table of contents, introduction, conclusions, recommendations, references, and appendices. The group has effectively synthesized findings from the investigative reports and provides actionable and well-reasoned recommendations for the company. The group's presentation in the class discussion is engaging and demonstrates a strong understanding of the business analysis. They are able to answer questions confidently and facilitate a productive discussion about their work. The report and class discussion align with the intended learning outcomes (ILO3, ILO5).

Fail: The group has not met all the requirements of the assignment. The Business Analysis Report is incomplete or lacks important sections. The group may not have effectively synthesized the findings from the investigative reports or provided actionable and well-reasoned recommendations. Their presentation in the class discussion may not be engaging, lack a clear understanding of the business analysis, or they may struggle to answer questions and facilitate a productive discussion. The report and class discussion do not fully align with the intended learning outcomes (ILO3, ILO5).

Late Assignments:
Each late simulation assignment will incur a one letter grade penalty when grades are calculated. A late group assignment will automatically be awarded an F. Avoid the drama; submit early.

Modules

Module 1 of the Opportunity Development Course (Terrence): Introduction to technology-based business concepts

This module provides an overview of the course and its learning objectives. Students will learn about the key topics covered in the course and what they can expect to gain from it. The module covers the following sub-topics:

- **Overview of the course and its learning objectives**
  Students will learn about the purpose and goals of the course. This includes understanding the intended learning outcomes for students who complete the course. By the end of the course, students should be able to describe and analyze the challenges associated with developing technology-based business concepts, as well as choose and apply conceptual tools and models to create and evaluate these concepts.

- **Characteristics of technology-based business concepts**
  This sub-topic explores the key characteristics of technology-based business concepts. Students will learn about the unique aspects of these types of businesses, including the importance of innovation, intellectual property, and

the rapid pace of technological change. Students will also learn about the role of technology in shaping modern business concepts.

- **Challenges in developing technology-based business** concepts
  Developing successful technology-based business concepts presents a number of challenges. This sub-topic explores some of the common challenges, such as identifying the right market, developing a strong value proposition, and managing resources effectively. Students will also learn about the importance of managing risk and dealing with uncertainty when developing technology-based business concepts.

- **Case studies of successful technology-based businesses**
  This sub-topic will showcase a number of case studies of successful technology-based businesses. Students will learn about the strategies and tactics that these companies used to overcome the challenges of developing technology-based business concepts. Through analysis of these case studies, students will gain insights into what makes these businesses successful and what strategies they can apply to their own projects.

Overall, Module 1 provides a foundational understanding of technology-based business concepts, setting the stage for the rest of the course. By the end of this module, students should have a good grasp of what technology-based business concepts are, what challenges they present, and what strategies can be used to overcome these challenges.

Module 2 of the Opportunity Development Course (Terrence): Conceptual tools and models for creating and evaluating technology-based business concepts

This module introduces the conceptual tools and models that are commonly used in the development and evaluation of technology-based business concepts. Students will learn about the following sub-topics:

- **Introduction to conceptual tools and models**
  This sub-topic provides an overview of the various conceptual tools and models that are used in the development and evaluation of technology-based business concepts. Students will learn about the different types of models, such as business models, marketing models, and product development models, and how they can be applied in the context of technology-based businesses.

Here are some of the top conceptual tools and models for creating and evaluating technology-based business concepts that are commonly used in the development and evaluation of such concepts (*these tools may or may not make the final cut*):

1. Avatar – semi-fictional person who has the same needs, pain points, and wants as the customer you want to serve.
2. SWOT analysis - A tool used to assess the strengths, weaknesses, opportunities, and threats of a technology-based business concept.
3. Validation – Concepts and tools used to increase your ideas chances of success.
4. Value Proposition Canvas - A tool used to identify customer needs and create value propositions for technology-based business concepts (in brief).

5. Lean Startup Methodology - An iterative approach used to develop and test technology-based business concepts with minimum resources.
6. Design Thinking - A human-centered approach used to ideate, prototype, and test technology-based products and services.
7. Disruptive Innovation Theory - A theory that describes how new technology-based business concepts can disrupt existing industries and create new markets.
8. Blue Ocean Strategy - A strategy used to create uncontested market space for technology-based business concepts by making competition irrelevant.

Overall, these conceptual tools and models provide a framework for developing and evaluating technology-based business concepts, and can be used in combination or individually to achieve the desired outcomes.

- **Case studies and practical exercises to apply these tools and models**
  To reinforce the concepts covered in this module, students will engage in case studies and practical exercises. These exercises will allow students to apply the tools and models covered in the module to real-world scenarios. Through these exercises, students will gain hands-on experience in using these tools and models to develop and evaluate technology-based business concepts.

Overall, Module 2 provides students with a toolkit of conceptual tools and models that can be used in the development and evaluation of technology-based business concepts. By the end of this module, students should have a good understanding of how to use these tools and models to create and evaluate business concepts.

Module 3 of the Opportunity Development Course (Anna-Maria): Marketing tools and models

This module introduces the conceptual tools and models that are commonly used in marketing. In this module, students will learn about the following topic:

- **Introduction to marketing tools and models**
  This sub-topic provides an overview of the marketing tools and models that are commonly used in the development and evaluation of technology-based business concepts. Students will learn about the different types of marketing models and how they can be applied in the context of technology-based businesses.

This marketing module centers around the following marketing tools and models:

1. PESTEL-analysis – A model that shows the business environment.
2. Competition analysis – A model to compare the own brand/product/service with competitors.
3. Customer Journey Map - A visual representation of the customer's experience with a product or service across multiple touchpoints.
4. Market Segmentation - Dividing a larger market into smaller subgroups based on similar characteristics or needs.
5. Targeting - Selecting specific market segments to focus marketing efforts on.

6. Buyer Decision Process - A model that describes the stages a customer goes through before making a purchase.
7. Psychographic Segmentation - Dividing a market based on personality traits, values, attitudes, interests, and lifestyles.
8. Demographic Segmentation - Dividing a market based on age, gender, income, education, and other demographic factors.
9. Behavioral Segmentation - Dividing a market based on consumer behavior, such as usage rate, brand loyalty, and purchasing habits.
10. Unique Selling Proposition/Point (USP) – a marketing statement that differentiates a product or brand from its competitors.
11. Marketing Mix - The set of controllable tactical marketing tools - product, price, place, and promotion - that a business blends to produce the response it wants in the target market.

Overall, these marketing tools and models provide a framework for analyzing and evaluating the business environment, the competitors, target customers and segment markets, as well as the own the own brand/product/service. They can be used in combination or individually to achieve the desired outcomes.

- **Case studies and practical exercises to apply these tools and models**
  To reinforce the concepts covered in this module, students will engage in case studies and practical exercises. These exercises will allow students to apply the marketing tools and models covered in the module to real-world scenarios. Through these exercises, students will gain hands-on experience in using these tools and models to develop effective marketing strategies for technology-based business concepts.

Module 4 of the Opportunity Development Course (Adam): Tools and models for formulating and evaluating product concepts

This module focuses on the tools and models used to formulate and evaluate product concepts. Students will learn about the following sub-topics:

- **Introduction to product development tools and models**
  This sub-topic provides an overview of the product development tools and models that are commonly used in the development and evaluation of technology-based business concepts. Students will learn about the different types of models.

Here are some of the top tools and models used to formulate and evaluate product and service concepts (*these tools may or may not make the final cut*):

1. Value Proposition Canvas - A tool used to identify customer needs and create value propositions for product or service concepts.
2. Product-Market Fit - A model that describes the alignment between a product or service and the needs and preferences of a specific market segment.
3. Kano Model - A model used to identify and prioritize customer requirements for a product or service.
4. Stage-Gate Model - A model used to manage the development of a product or service through different stages, from idea generation to launch.

5. Agile Development - An iterative approach used to develop and test a product or service with continuous feedback and improvement.
6. Business Model Canvas - A visual tool used to describe, design, challenge, and pivot a business model, which includes the product or service.
7. Three Horizons Model - A model that describes the different stages of innovation in a business, from incremental improvements to disruptive innovations.

Overall, these tools and models provide a framework for formulating and evaluating product and service concepts, and can be used in combination or individually to achieve the desired outcomes.

• Case studies and practical exercises to apply these tools and models
To reinforce the concepts covered in this module, students will engage in case studies and practical exercises. These exercises will allow students to apply the product development tools and models covered in the module to real-world scenarios. Through these exercises, students will gain hands-on experience in using these tools and models to formulate and evaluate product concepts for technology-based business concepts.

Overall, Module 4 provides students with a toolkit of product development tools and models that can be used to formulate and evaluate product concepts. By the end of this module, students should have a good understanding of how to use these tools and models to create and evaluate product concepts for technology-based business concepts.

Module 5 of the Opportunity Development Course (Anna-Maria): Creative work processes in connection with the development of technology-based business concepts

This module focuses on the creative work processes that are used in the development of technology-based business concepts. Students will learn about the following sub-topics:

• Introduction to creative work processes
This sub-topic provides an overview of the creative work processes that are commonly used in the development of technology-based business concepts. Students will learn about the importance of creativity and innovation in the development of these concepts, and the different types of creative work processes that can be used.

• Brainstorming and ideation techniques
Brainstorming and ideation techniques are used to generate new ideas and concepts. This sub-topic will explore how brainstorming and ideation techniques can be applied in the context of technology-based business concepts. Students will learn about different types of brainstorming and ideation techniques here are some of the top tools and models used for creative work processes in connection with the development of technology-based business concepts:

1. Brainstorming - A group ideation technique used to generate a large number of ideas in a short period of time.
2. Mind Mapping - A visual tool used to organize and connect ideas.

3. SCAMPER - A tool used to generate new ideas by asking questions about an existing idea or product, such as "what can we substitute?" or "what can we combine?"
4. Reverse Brainstorming - A technique used to identify potential problems with an idea or product, and then generate solutions to those problems.
5. Design Thinking - A human-centered approach used to understand and solve problems, and to create new ideas and concepts.
6. TRIZ - A problem-solving methodology used to solve complex problems by identifying and solving contradictions.
7. Synectics - A problem-solving methodology that involves using analogies and metaphors to generate new ideas and concepts.

Overall, these tools and models provide a framework for creative work processes in connection with the development of technology-based business concepts, and can be used in combination or individually to achieve the desired outcomes.

• **Case studies and practical exercises to apply these methods**
To reinforce the concepts covered in this module, students will engage in case studies and practical exercises. These exercises will allow students to apply the creative work processes covered in the module to real-world scenarios. Through these exercises, students will gain hands-on experience in using these processes to generate new ideas and concepts for technology-based business concepts.

Module 6 of the Opportunity Development Course: (Niklas): Technological changes and other changes in society and among users

This module focuses on the technological changes and other changes in society and among users that affect the development of technology-based business concepts. Students will learn about the following sub-topics:

- **Introduction to technological and societal changes**
  This sub-topic provides an overview of the technological and societal changes that are affecting the development of technology-based business concepts. Students will learn about the importance of staying up-to-date with these changes and how they can impact the success of a technology-based business concept.

- **Understanding emerging technologies and trends**
  Emerging technologies and trends have the potential to disrupt existing industries and create new opportunities for innovation. This sub-topic will explore how to identify and understand emerging technologies and trends that are relevant to the development of technology-based business concepts. Students will learn about different methods for tracking emerging technologies and trends, such as trend analysis and technology scouting.

- **User-centric design and innovation**
  User-centric design and innovation involves understanding the needs and preferences of users and designing products and services that meet those needs. This sub-topic will explore how user-centric design and innovation can be applied in the context of technology-based business concepts. Students will

learn about different methods for gathering user feedback, such as surveys and user testing, and how to use that feedback to improve the design of technology-based products and services.

- **Case studies and practical exercises to apply these concepts**
  To reinforce the concepts covered in this module, students will engage in case studies and practical exercises. These exercises will allow students to apply the concepts covered in the module to real-world scenarios. Through these exercises, students will gain hands-on experience in identifying and understanding emerging technologies and trends, and in using user-centric design and innovation to develop technology-based business concepts.

Overall, Module 6 provides students with an understanding of the technological changes and other changes in society and among users that are relevant to the development of technology-based business concepts. By the end of this module, students should have a good understanding of how to identify and understand emerging technologies and trends, and how to use user-centric design and innovation to develop successful technology-based business concepts.

Course schedule

Note:

- Students are expected to attend lectures and seminars.
- When in need of extra guidance contact the specific teacher.
- Locations subject to change

Week /Day	Date	Location	Time	Content	Activity
35 Mon	**25 Aug**	**Q22**	**10:00-12:00**	**Introduction to course Module 1**	**Characteristic Exercise (TB)**
35 Wed	**27 Aug**	**V32**	**10:00-12:00**	**Module 1**	**Challenge Exercise (TB)**
36 Mon	**01 Sep**	**Q22**	**08:00-10:00**	**Module 2**	**Detective Brief (TB)**
36 Wed	**03 Sep**	**Q15**	**08:00-10:00**	**Module 2**	**Avatar Exercise (TB)**
36 Wed	**03 Sep**			**Group Formation Due**	
37 Mon	**08 Sep**	**Q22**	**15:00-17:00**	**Module 3**	**Lecture (AMN)**
37 Wed	**10 Sep**	**V21**	**08:00-10:00**	**Module 3**	**Seminar (AMN)**
38 Mon	**15 Sep**	**U31**	**08:00-10:00**	**Module 4**	**Lecture(AU)**
38 Wed	**17 Sep**	**U33**	**15:00-17:00**	**Module 4**	**Lecture (AU)**
38 Wed	22 Sep		23:59	Deadline: Feedback Draft PRO3/PRO4	Deadline PRO3/PRO4
38 Mon	**22 Sep**	**E52**	**13:00-15:00**	**Module 5**	**Lecture (AMN)**
39 Wed	**24 Sep**	**Q17**	**10:00-12:00**	**Module 5**	**Seminar (AMN)**
39 Mon	**29 Sep**	**U61**	**13:00-15:00**	**Module 6**	**Lecture (NA)**
40 Wed	**01 Oct**	**V21**	**08:00-10:00**	**Module 6**	**Lecture (NA)**
40 Sun	05 Oct		23:59	Deadline: All Simulations Due	All Simulations Due
41 Mon	**06 Oct**	**Virtual Zoom**	**09:00-12:00**	**Oral Exams**	**Exam (TB)**
41 Wed	**08 Oct**	**Virtual Zoom**	**09:00-12:00**	**Oral Exams**	**Exam (TB)**
41 Fri	**10 Oct**	**Virtual Zoom**	**09:00-12:00**	**Oral Exams**	**Exam (TB)**
42 Mon	**13 Oct**	**Virtual Zoom**	**09:00-12:00**	**Oral Exams**	**Exam (TB)**
42 Wed	**13 Oct**	**Virtual Zoom**	**09:00-12:00**	**Oral Exams**	**Exam (TB)**
42 Fri	**13 Oct**	**Virtual Zoom**	**09:00-12:00**	**Oral Exams**	**Exam (TB)**
42 Fri	14 Oct		23:59	Deadline: Final version PRO3 & PRO4	Deadline PRO3 & PRO4

APPENDIX

Business and Management Basic Course

BUSINESS AND MANAGEMENT

Business Education - Introduction to Business Part 1
https://youtu.be/40fZyPZgiRw

Business Education - Introduction to Business Part 2
https://youtu.be/xmh1Luvwjqc

Business Education - Forms of Ownership Part 1
https://youtu.be/v2qAiCDOPuk

Business Education - Forms of Ownership Part 2
https://youtu.be/sSOfWGqZGkk

Business Education - Introduction to Managing Part 1
https://youtu.be/rUbipOD9ATc

Business Education - Introduction to Managing Part 2
https://youtu.be/vuVlXAlP4RI

Business Education - Organization Structure Part 1a
https://youtu.be/EEYgVlJJnx0

Business Education - Organization Structure Part 2
https://youtu.be/MKUtSojYUsQ

MARKETING

Business Education - Introduction to Marketing
https://youtu.be/j73RsyGh2HA

Business Education - Market Channels Part 1
https://youtu.be/qd21Nd2Xu-w

Business Education - Market Channels Part 2
https://youtu.be/0G40hMD5_Jo

Business Education Marketing Analysis and Strategy Part 1
https://youtu.be/UqqJTpY6KEY

Business Education- Market Analysis and Strategy Part 2
https://youtu.be/yuw9i9Dlmbs

Business Education - Market Analysis and Strategy Part 3
https://youtu.be/Q_1gRvaA4qY

FINANCE

Business Education - Financial Statements Part 1
https://youtu.be/yAaDU6cRrik

Business Education - Introduction to Financial Statements Part 2
https://youtu.be/Yn3oc5nEQ6Q

Business Education - Introduction to Finance Part 1
https://youtu.be/uGEi6WLZ3PI

Business Education - Introduction to Finance Part 2
https://youtu.be/vUxEy3DRjYw

Business Education - Introduction to Finance Part 3
https://youtu.be/c6CI66wvPDg

STRATEGY

Business Education - New Venture Strategy Part 1
https://youtu.be/plMpfkxbCaQ

Business Education - New Venture Strategy Part 2
https://youtu.be/vATUQcJAgZw

Business Education - New Venture Strategy Part 3
https://youtu.be/ZZaY8olW1U4

Business Education - New Venture Strategy Part 4
https://youtu.be/m166gUX34JI

IDEATION

Business Education - Ideation Introduction Part 1
https://youtu.be/IXkoUseVHQw

Business Education - Ideation Introduction Part 2
https://youtu.be/HtsCSbP8JEs

Business Education - Ideation Introduction Part 3
https://youtu.be/a5NfWLSCd0M

Business Education - Lateral Thinking
https://youtu.be/0SJ7M3w9V0k

Business Education - Customer Space Part 1
https://youtu.be/BlFplanU9TU

Business Education - Customer Space Part 2
https://youtu.be/4HJCUEiCddo

Business Education - Customer Space Part 3
https://youtu.be/0MfSKe2W96A

Business Education - Customer Space Part 4
https://youtu.be/NoCXZ7-xPR4

Business Education - Customer Space Part 5
https://youtu.be/XuZIHRvJ9fs

Business Education - Market Space Part 1
https://youtu.be/SpU7Zv1rkhI

Business Education - Market Space Part 2
https://youtu.be/-REmvZbUKr8

Business Education - Market Space Part 3
https://youtu.be/EfZAVFKP4PU

Business Education - Market Space Part 4
https://youtu.be/NFzBcl7Nnyk

BUSINESS MODELS

Business Education - Introduction to Business Models Part1
https://youtu.be/ZFLspOjJ9Fs

Business Education - Introduction to Business Models Part 2
https://youtu.be/-yDzRqRd0Gk

Business Education - Introduction to Business Models Part 3
https://youtu.be/EfxANRvwQGg

Business Education - Introduction to Business Models Part 4
https://youtu.be/Utfa3shy4cg

Business Education - Introduction to Business Models Part 5
https://youtu.be/WRrGH-He0eM

Business Model - Visual Thinking
https://youtu.be/7UYA0W7ThO0

Business Model - Storytelling
https://youtu.be/9Df1Qslw5iA

Business Model - Reinventing for business model
https://youtu.be/nW40KWDACEw

Business Model - Business Model Opportunities and Barriers
https://youtu.be/puKdtTbhd5M

Custom GPTs

In addition to the simulations, this course has several customized GPTs that act as coaches, teaching assistants and advisors. The simulations and these custom GPTs use ChatGPT in the background. All are accessible for free; however, I would strongly suggest using at least a Plus account. The course does not require you to purchase and textbooks or other course materials, which would be far more costly than a ChatGPT account. Additionally, you are free to use other LLMs like Gemini, Claude, etc.

Teaching Assistants

ME2621 Administrative TA

https://chatgpt.com/g/g-68870ef21eb481918e761daaf2c5a377-me2621-administrative-ta

Prof. Brown's Prompt Bot

https://chatgpt.com/g/g-685d46fb27e081919fccdeaf183c3654-prof-browns-prompt-botLinks to an external site.

Prof. Brown's Writing Feedback Assistant

https://chatgpt.com/g/g-685d351014548191a4eb50ed5ba19c0e-prof-browns-writing-feedback-assistantLinks to an external site.

Business Coaches

ME2621 Practice Buddy

https://chatgpt.com/g/g-6887117eaa048191b405406f09af7f08-me2621-practice-buddy

Prof. Brown's Creativity Catalyst

https://chatgpt.com/g/g-685d6d744aec819181b157b2034bb03f-prof-browns-creativity-catalystLinks to an external site.

Prof. Brown's Marketing Mapper

https://chatgpt.com/g/g-685d9090b01881918f5be5193c5d6762-prof-browns-marketing-mapperLinks to an external site.

Prof. Brown's Model and Framework Matchmaker

https://chatgpt.com/g/g-685d22bac7d48191badb07728734d9b8-prof-browns-model-and-framework-matchmakerLinks to an external site.

Prof. Brown's Product Development Partner

https://chatgpt.com/g/g-685d8f0039e08191892c359806fc9a90-prof-browns-product-development-partner

Prof. Brown's Startup Ecosystem Explorer

https://chatgpt.com/g/g-685d24aee53c81918c8991aa7889716e-prof-browns-startup-ecosystem-explorer

Prof. Brown's - Team Dynamics Debugger

https://chatgpt.com/g/g-685d48093a688191aefa7bccd40f7171-prof-browns-bonus-3-team-dynamics-debuggerLinks to an external site.

Simulations

Simulation Hub GPT

https://chatgpt.com/g/g-688725f6290081919c6483f66443a002-simulation-hub-gpt-all-simulations-start-here

This GPT will guide you through; however, you can reach each simulation directly. The links are available in Canvas.

Universal Simulation Reflection Sheet

(Type answers below each prompt. Handwritten submissions are not accepted.)

Name: _____ Date: _____ Persona Used: _____

1) Effort & Engagement

How did you prepare? How did you keep the conversation natural and focused?

2) Quality of Questions

List **3–5 open-ended questions** you used and why they were chosen.

3) Active Listening & Follow-Up — *Evidence Required*

Provide **2–3 examples**:

- Persona statement (quote/paraphrase) → Your follow-up question.

4) Insight Discovery

What specific needs, motivations, decision factors, or constraints did you uncover? Which mattered most?

5) Connection to Course Concepts

Which frameworks/tools did you apply? How did they guide your approach?

6) Hypothetical Product / Next Step

What solution or action fits what you learned? What would you do next?

7) What You'd Do Differently

How will you improve your questioning or listening next time?
