Innovation Management
Master Program

Welcome event

February 6, 2017
Welcome!

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Frontline Service and Innovation  
Program Manager  
Innovation Management  
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J.J.L.Schepers@tue.nl  
Twitter: @jeroenschepers  
www.jeroenschepers.nl
Agenda

• Introduction & Welcome
• Short Overview of the MSc Innovation Management Program
• Important contact information
• Quiz
• Presentation Industria
• Presentation Alumnia
Technological heart of the Netherlands

Brainport
High-tech campus
ASML, DAF, VDL...

Design-focused and entrepreneurial

Entrepreneurial hotspot (Forbes, Techcrunch)
Dutch Technology Week
Glow Festival
Dutch Design Week
Eindhoven Maker Faire

• 4,973 BSc students (4% international)
• 3,238 MSc students (16% international)
• 11 three-year Bachelor’s programs (BSc)
• 22 two-year Master’s degree programs (MSc)
• 1 Innovation Management Master Program
The need for Innovation Managers

• Innovation is essential for the competitive position of companies
  • win new customers
  • strengthen loyalty of existing ones
• start-ups help address customer needs in entirely new ways

\[
\text{PROFIT} = \text{REVENUE} - \text{COST}
\]

TO INCREASE THIS... ...
INCREASE THIS...
... OR DECREASE THIS...
The need for Innovation Managers

- Innovation is essential for the competitive position of companies
  - win new customers
  - strengthen loyalty of existing ones
  - start-ups help address customer needs in entirely new ways
- However, many new products and businesses fail
- The competitive environment is dynamic and unstructured, which magnifies wrong managerial choices

The Innovation Management program teaches quantitative and qualitative theories, tools, and techniques to make businesses and entrepreneurs more innovative as well as more successful in their innovation activities.
Product and Service Innovation

- **NPD**: portfolio management and strategic decision-making
- **HRM**: selecting talent, matching skills and tasks, incentivizing, managing teams
- **Entrepreneurship**: idea generation and opportunity identification
- **Entrepreneurship**: finance and intellectual property rights
- **Marketing**: launch tactics, sales strategies, after-sales service
- **Marketing**: market research, customer co-creation
- **Information Systems**: business intelligence, big data analytics
- **Business strategy**: Alliances, networks, eco-systems, open innovation
- **Operations research**: supply chain mgmt
Innovation Management building blocks

Content

- New product development
- Strategic marketing
- Sales and after-sales service management
- Human resource management
- Business intelligence
- Open innovation
- Entrepreneurship

Methodologies and tools

- Multivariate statistics
- Structural equation modeling
- Data mining
- Computational intelligence
- System dynamics modeling
- Design science methodology
- Calculus; differentiation & integration
- MatLab
- Neural & evolutionary computation
- Meta-heuristics for optimization of operational processes
- Econometric valuations
- Real option analysis
- Data Modeling (UML)
- Process Modeling (BPMN)
# Program: Year 1

<table>
<thead>
<tr>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1ZM16 Management of Product Development</td>
<td>Track Elective</td>
<td>1ZM11 Marketing and Innovation</td>
<td>1ZM100 / 1ZM110 Design project</td>
</tr>
<tr>
<td>1JM06 Human Aspects of Innovation</td>
<td>Track Elective</td>
<td>1BM56 Business Intelligence</td>
<td>Track Elective</td>
</tr>
<tr>
<td>1ZM31 Multivariate Statistics</td>
<td>Track Elective</td>
<td>1ZM50 Design Science Methodology</td>
<td>Track Elective</td>
</tr>
</tbody>
</table>

Track = Set of courses on same theme. Select at least 5 out of 9.
Two tracks

Business and Product Creation

Managing Innovation Processes
Two tracks

Three

Business and Product Creation

Excellence Track (Top 10%)

Managing Innovation Processes
<table>
<thead>
<tr>
<th>Idea Development</th>
<th>Concept Development</th>
<th>Concept-to-Launch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discovery</td>
<td>Scoping</td>
<td>Build Business Case</td>
</tr>
<tr>
<td>Development</td>
<td>Testing &amp; Validation</td>
<td>Launch</td>
</tr>
</tbody>
</table>

Gate 0 | Gate 1 | Gate 2 | Gate 3 | Gate 4 | Gate 5
<table>
<thead>
<tr>
<th>Business and Product Creation Track</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Focus</strong></td>
</tr>
<tr>
<td>Front-end of the innovation process, where individuals think about setting up their own business, and where established companies start the development of new and innovative products</td>
</tr>
<tr>
<td><strong>Key words</strong></td>
</tr>
<tr>
<td>Creative idea generation, opportunity identification, entrepreneurial actions, breakthrough projects, radically new products, exploration, new business models, start-ups</td>
</tr>
<tr>
<td><strong>Typical jobs</strong></td>
</tr>
<tr>
<td>Product developer, innovation strategist, innovation manager, strategy consultant, business developer, business engineer, entrepreneur (CEO), project manager</td>
</tr>
<tr>
<td><strong>Competencies</strong></td>
</tr>
<tr>
<td>Creativity, ability to cope with uncertainty, qualitative research skills</td>
</tr>
</tbody>
</table>
Managing Innovation Processes Track

<table>
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<th>Idea Development</th>
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</tbody>
</table>

Gate 0  Gate 1  Gate 2  Gate 3  Gate 4  Gate 5

$ £ € ¥
## Managing Innovation Processes Track

<table>
<thead>
<tr>
<th>Focus</th>
<th>Larger innovation projects (in terms of budget) and decisions that managers have to make to move new products through the development stages and finally launch it on the market, including the monitoring and continuous improvement of product/service performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key words</td>
<td>Marketing research, marketing strategy, process management, product lifecycle management, big data intelligence, sales and after-sales service management, product quality and reliability</td>
</tr>
<tr>
<td>Typical jobs</td>
<td>Business analyst, marketing manager/consultant, key account manager, sales manager, service manager, manager R&amp;D department, project manager, strategic buyer, purchasing and supply chain manager</td>
</tr>
<tr>
<td>Competencies</td>
<td>Planning and optimization, systematic, quantitative research skills</td>
</tr>
</tbody>
</table>
Excellence Track: Dual Degree

- Top 10% students are eligible for excellence programs in research and design (PDEng) or dual-degree programs
- Dual degree program
  - Suggested by student
  - Minimum 165 ECTS, max 180 ECTS
  - Satisfies minimum demands of two Master programs
  - Thesis
    - 45 ECTS
    - Features topic on intersection of the two Master programs
    - Two mentors, one from every Master program in the dual degree
## Excellence Track: Dual Degree

- **Minimum requirements IM**
  - 6 core courses: 30 ECTS
  - 4 track elective courses: 20 ECTS
  - 1 track design science project: 5 ECTS

- **Thesis**: 45 ECTS

- **Available for courses from other master program**:
  \[180 - 100 = \text{max. 80 ECTS}\]
**Program: Year 2**

<table>
<thead>
<tr>
<th>Q1</th>
<th>Q2</th>
<th>Q1</th>
<th>Q2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Free Elective (may be international)</td>
<td>Free Elective (may be international)</td>
<td>Free Elective (may be international)</td>
<td>Free Elective (may be international)</td>
</tr>
<tr>
<td>Free Elective (may be international)</td>
<td>Free Elective (may be international)</td>
<td>Master thesis</td>
<td></td>
</tr>
<tr>
<td>Free Elective (may be international)</td>
<td>Free Elective (may be international)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Program Scenario: Enrollment in Q3

<table>
<thead>
<tr>
<th>Q3</th>
<th>Q4</th>
<th>Q1</th>
<th>Q2</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Free Elective</td>
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<td>Master thesis</td>
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<tr>
<td>Free Elective</td>
<td>Free Elective</td>
<td>Free Elective</td>
<td>Free Elective</td>
</tr>
</tbody>
</table>
Certificate
Technology Entrepreneurship and Management

Course code: 1TEMM9
Two variants

1. **CTEM broad**: offers the opportunity to *broaden your knowledge* in entrepreneurship and management.

2. **CTEM in-depth**: offers the opportunity to *deepen your knowledge* in the area of (technology) entrepreneurship.
CTEM in academic year 2016-2017: 25 ECTS

Certificate

CTEM project

Assessment

Technology Entrepreneurship course (1ZV20; 5 ECTS)

Electives (10 ECTS)

CTEM project (10 ECTS) / or two obligatory courses (10 ECTS)

‘on top of’

CTEM in academic year 2016-2017: 25 ECTS

Certificate

CTEM project

Assessment

Technology Entrepreneurship course (1ZV20; 5 ECTS)

Electives (10 ECTS)

CTEM project (10 ECTS) / or two obligatory courses (10 ECTS)

‘on top of’
https://educationguide.tue.nl/broadening/certificates/technology-entrepreneurship-and-management-msc/
CTEM: Kick-off meeting

Tuesday, February 7

13:45-17:00

Connector building, room 0.12
CTEM: Information & Contact

Dr. Myriam Cloodt
Tel: 040-2475242
Mail: m.m.a.h.cloodt@tue.nl

Zoscha Droog
Tel: 040-2472170
Mail: ctem@tue.nl
Diagnostic test of professional skills
Each new Master student receives an invitation by e-mail to do a Diagnostic Test of Skills. This invitation will be sent by TU/e student administration.
2. Summary Competencies

Below you find your results in an overview. Your results have been compared with a norm/reference group. The norm group with which you have been compared is given below the graph. You can see whether you score low, average or high in relation to this norm group.

The personality fit on the right shows the extent your personality matches this competency. When the match is high, it means that your personality supports and encourages (the development of) this competency. When this match is low, it means that your personality does not match well with this competency, development is still possible but it will take more energy.

If you score low on a particular competency development tips are shown for this competency.

<table>
<thead>
<tr>
<th>Domain</th>
<th>Competency</th>
<th>Low</th>
<th>Middle</th>
<th>High</th>
<th>Personality fit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analysing and Developing</td>
<td>Creativity</td>
<td></td>
<td></td>
<td></td>
<td>High</td>
</tr>
<tr>
<td>Communication</td>
<td>Oral Communication</td>
<td></td>
<td></td>
<td></td>
<td>Average</td>
</tr>
<tr>
<td></td>
<td>Written Communication</td>
<td></td>
<td></td>
<td></td>
<td>Average</td>
</tr>
<tr>
<td></td>
<td>Contact Orientation</td>
<td></td>
<td></td>
<td></td>
<td>Average</td>
</tr>
<tr>
<td></td>
<td>Sensitivity to Others</td>
<td></td>
<td></td>
<td></td>
<td>Average</td>
</tr>
<tr>
<td>Realising</td>
<td>Planning and Organizing</td>
<td></td>
<td></td>
<td></td>
<td>Average</td>
</tr>
<tr>
<td></td>
<td>Perseverance</td>
<td></td>
<td></td>
<td></td>
<td>Average</td>
</tr>
<tr>
<td>Personal Competencies</td>
<td>Initiative</td>
<td></td>
<td></td>
<td></td>
<td>Average</td>
</tr>
<tr>
<td></td>
<td>Flexibility</td>
<td></td>
<td></td>
<td></td>
<td>High</td>
</tr>
<tr>
<td></td>
<td>Handling Stress</td>
<td></td>
<td></td>
<td></td>
<td>Average</td>
</tr>
<tr>
<td></td>
<td>Guiding your Self-Development</td>
<td></td>
<td></td>
<td></td>
<td>Average</td>
</tr>
<tr>
<td></td>
<td>Sensitivity to the Organization</td>
<td></td>
<td></td>
<td></td>
<td>Low</td>
</tr>
<tr>
<td>Evaluating</td>
<td>Reflecting</td>
<td></td>
<td></td>
<td></td>
<td>Average</td>
</tr>
<tr>
<td>Team role</td>
<td>Contribution to the team</td>
<td>Pitfall</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------</td>
<td>-----------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thinker</td>
<td>Solves difficult problems. Sees a complex issue as a challenge. Comes up with original ideas. This role is especially important in the start-up phase of a project.</td>
<td>Keeps coming up with new ideas. Does not make decisions. Makes interesting plans but does not implement them.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organizer</td>
<td>Translates plans into concrete activities. Doer and entrepreneur. Implements and organizes, good at tasks with the emphasis on responsibility. This role is especially important in the implementation phase of a project.</td>
<td>Wants to set to work too quickly, too impulsively. Pushes through.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monitor</td>
<td>Good at weighing the pros and cons. Keeps the team from making wrong decisions. Cautious. Makes an objective analysis. Critical. This role is especially important in the assessment phase of a project.</td>
<td>Is too critical. Sees problems everywhere. Places undue emphasis on details.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Team player</td>
<td>Sees to it that there is a pleasant atmosphere. Able to listen. Is cooperative. Strives for unity and team spirit.</td>
<td>Is easily influenced. Avoids conflicts.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conscience</td>
<td>Guards norms and values. Has a great sense of justice. Shows himself/herself to be morally upright.</td>
<td>May uphold his/her values too rigidly.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leader</td>
<td>Is assertive and decisive. Is self-assured and persuasive. Wants to achieve good results.</td>
<td>Has a high work pace, as a result of which decisions are made too quickly and without sufficient support. Is too dominant. Does not listen sufficiently.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
How can you find us?

Skills Assessment
http://educationguide.tue.nl/skills-assessment

SkillsLab Website
http://educationguide.tue.nl/skillslab

SkillsLab Facebook
http://www.facebook.com/tueskillslab
Registration for courses via OASE

- At TU/e, you need to register in the system OASE for each individual course you plan to take.
- Go to http://education.tue.nl/Activiteiten/Pages
- How to register? Follow instructions given at https://educationguide.tue.nl/programs/graduate-school/masters-programs/innovation-management/important-dates/registration-for-courses/
- Deregister from the course if you decide to drop the course (as a courtesy to the professor and your fellow students)

Note: OASE will close down from February 28 onwards. From March 13 it will be replaced by OSIRIS.
Registration for exams via OASE

Also, register for the exam of each course:

- Via OASE
  http://education.tue.nl/Activiteiten/Pages
- Taking exam without being registered: exam will not be graded
- Withdraw exam registration if you decide not to take the exam (otherwise a no-show will appear on your grade list)
- Except if there is no written exam

Note: OASE will close down from February 28 onwards. From March 13 it will be replaced by OSIRIS.
## Registration deadlines

Ultimate registration dates for courses and examinations are:

<table>
<thead>
<tr>
<th>Quartile</th>
<th>Start quartile</th>
<th>Registration starting from</th>
<th>Registration courses up to and including</th>
<th>Registration examinations up to and including</th>
<th>Withdraw up to and including</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>05-09-2016</td>
<td>01-06-2016</td>
<td>18-09-2016</td>
<td>23-10-2016</td>
<td>5 working days before examination</td>
</tr>
<tr>
<td>2</td>
<td>14-11-2016</td>
<td>01-06-2016</td>
<td>20-11-2016</td>
<td>15-01-2017</td>
<td>5 working days before examination</td>
</tr>
<tr>
<td>3</td>
<td>06-02-2017</td>
<td>01-06-2016</td>
<td>19-02-2017</td>
<td>26-03-2017</td>
<td>5 working days before examination</td>
</tr>
<tr>
<td>4</td>
<td>24-04-2017</td>
<td>01-06-2016</td>
<td>30-04-2017</td>
<td>18-06-2017</td>
<td>5 working days before examination</td>
</tr>
<tr>
<td>interim</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5 working days before examination</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>06-08-2017</td>
<td>5 working days before examination</td>
</tr>
</tbody>
</table>
Important contact information

- **Question on course contents, electives, study program, regulations, homologation courses, consult on personal issues with regard to study, etcetera**
  
  Ir. Anja C.J. Kirkels, Study Advisor Master IM  
  Pav. C 15, tel.: (040 247) 2428, a.c.j.kirkels@tue.nl

- **Questions on course registrations, grades, exam dates, course scheduling (e.g. time slots), etcetera**
  
  Educational administration IE  
  Pav. B09, tel. (040 247) 2190, Onderwijsadministratie-IEIS@tue.nl
• Questions on mentor matching and educational policy
  Marjan Vrijnsen - de Corte, Vice director of education IE
  m.vrijnsen@tue.nl

• Questions on tracks and mentor procedure:
  Come and join the information session on March 16 at 15.45hrs in Pav. U46

• All other questions and/or suggestions: contact me!
Recap of all today’s information and more details on:
https://educationguide.tue.nl/programs/graduate-school/
masters-programs/innovation-management
And now:
The Innovation Management Quiz!

- Please make teams of 5 people, this is the maximum number of players on a team
- Grab some lunch
- Sit down together at a table
- Make sure you keep a safe distance from competitor teams
- Please stow away all telephones, tablets, laptops and other devices; you can only have a pen on the table
- We will start in 5 minutes!