MSc Biosystems Engineering

Engineering a green future with agrotechnology

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MSc Biosystems Engineering

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Ellis van de Laak, first year MBE student

BEST UNIVERSITY KEUZEGIDS 2022

Wageningen best university in the Netherlands!

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Our challenge

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What do we need?

- Food
- Feed
- Flowers
- Fuel
- Fibres
- Fish
- ....

Fun, feelings & funny unexpected things

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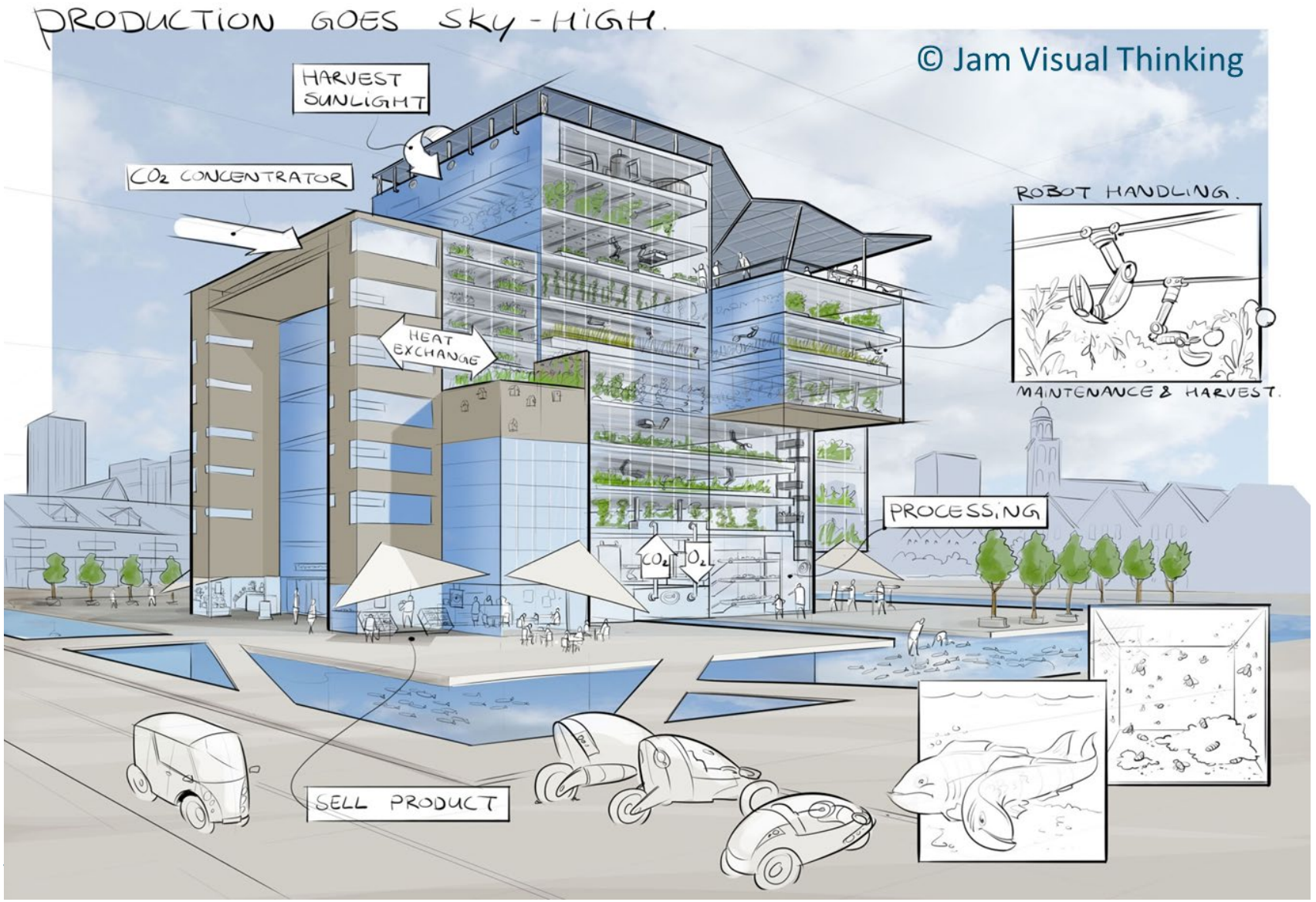
Engineering in the future



Position Biosystems Engineering

Government

Society

Primary production

Resources

Consumers

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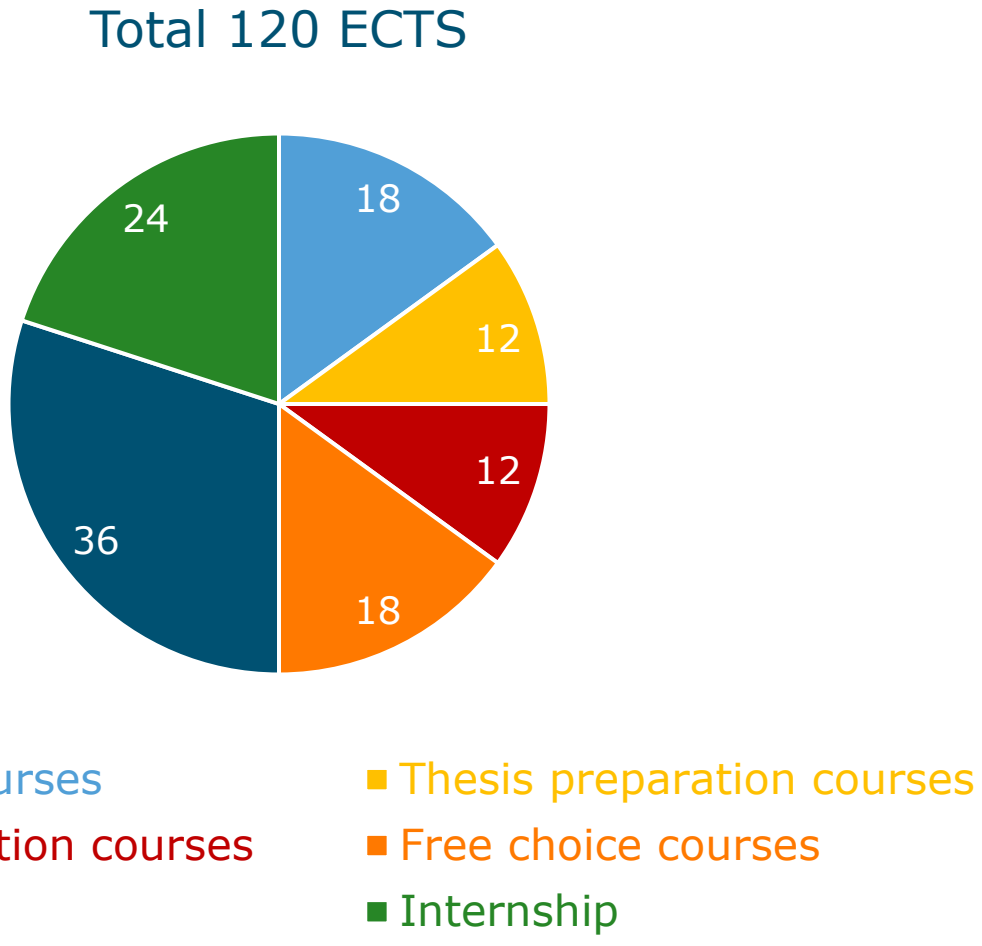
Engineering: **System thinking**

Study Research	Understand Model	Optimize Control	Innovate Design
Existing system & structures ↓ Functions	Relations between entities & environment	Manage system state variables & Output ↓ Experiment	Needs & requirements ↓ Functions ↓ New structures & systems

Study programme

- Duration: 2 years
  - One year courses
  - One year thesis/ internship
- Tailor made programme
  - Thesis oriented
  - Based on your competences and ambitions

Study programme



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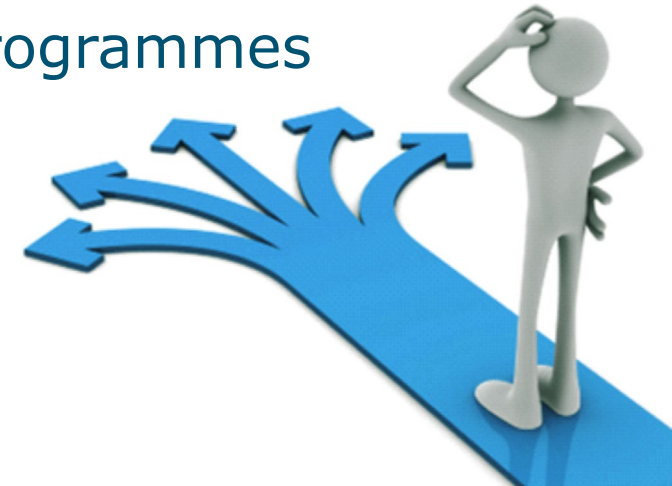
See the study handbook for more details

Compulsory courses

- Three courses
  - Biosystems Design
  - Modelling of Biobased Production Systems
  - Quantitative Analysis of Innovative Biosystems
- These three courses give an overview of Biosystems Engineering

Career preparation courses

- Research Master Cluster
  - Preparation PhD
  - Write your research proposal
- Academic Consultancy Training
  - Real life questions from companies
  - Students from different WUR programmes



Seven thesis tracks

- Biobased Chemistry and Technology
- Environmental Technology
- Farm Technology
- Geo-Information & Remote Sensing
- Information Technology
- Mathematical & Statistical Methods
- Operations Research & Logistics

Within all tracks possibility for Entrepreneurial track

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MSc Track Entrepreneurship

- Develop your entrepreneurial skills!

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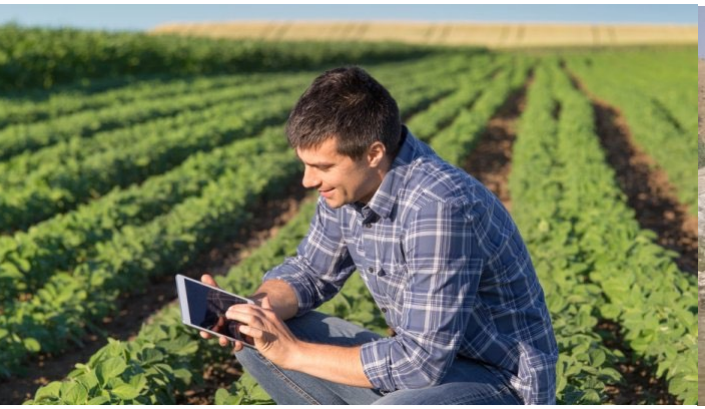
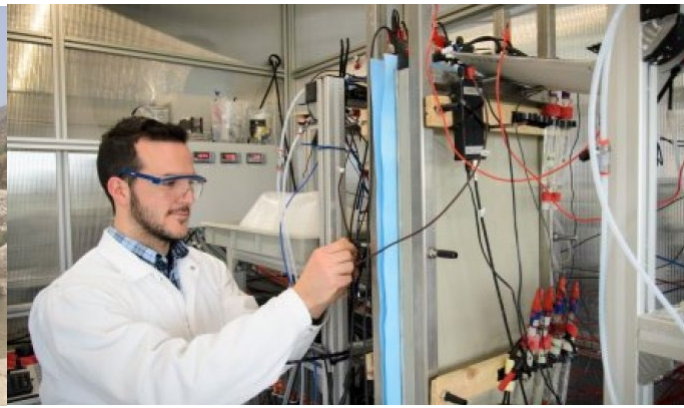
Thesis





- 6 months of thesis research and report writing
- Usually fits into on-going research
- Other research subjects can be discussed

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Academic Internship

- 4 months outside the university
- Put knowledge and skills into practice
- Professional setting
- In The Netherlands or elsewhere

Future career Biosystems Engineer

- Diverse career prospects:
  - Product engineer
  - Systems engineer
  - Research and education
  - Entrepreneur
  - Consultant

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Biosystems Engineering

What we do/are

- Technology
- Multidisciplinary approach
- Design & Innovation
- Living environment

What we don't/aren't

- Only technology
- Only biology
- Livestock farming
- Plant sciences

→ Systems approach!

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Admission

- Possible start: September and February
  - Start September is recommended
- Online application
  - How to apply for a master's programme?
  - Application and admission - Biosystems Engineering

  Add **ALL** requested documents
    - Exception BSc certificate
- Admission Committee decides: yes, no, after a premaster

Application and admission - Biosystems Engineering

- Relevant BSc. Degree
- At least 60 credits in BSc. of subjects such as engineering, mathematics, physics, modelling, programming, design
- GPA of 70%
- Average mark of at least 7.0
- Fluency in English
- Possibility for Dutch HBO students: minor during HBO and/or linkage (premaster) programme

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English

- All master courses are given in English
- All applicants must provide recent evidence of their spoken and written command of English
- English language proficiency MSc – WUR

Thank you for your attention

Any questions? Contact us via email: MBE.msc@wur.nl

Randy
Möwes

Suzanna
Overtoom

your study advisors

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Biosystems Engineering Open Day

28 April 2022

My student life in Wageningen and how its going so far

Ellis van de Laak

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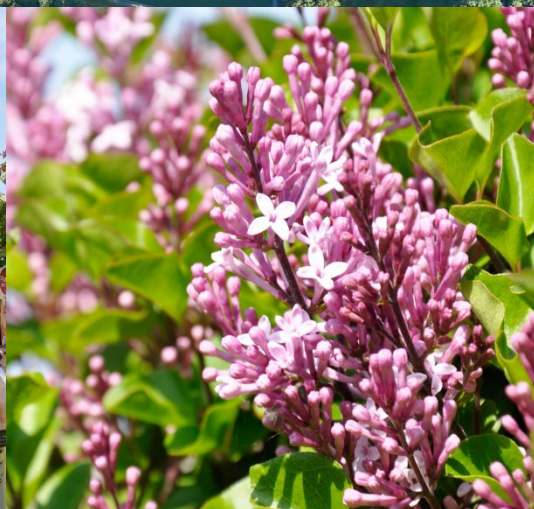
Who am I?

- Born in the south of the Netherlands
- Grown up in a small village on a roses and lilac nursery
- Bachelor in Molecular Life Sciences at Wageningen University



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How did I end up at Biosystems Engineering?

- Great experience with Wageningen University and the city of Wageningen in my BSc
- Wanted to work on something more directly involving the world around us
- Enjoy doing a technical study
- Involved in and passionate about agriculture due to my family background
- Biosystems Engineering perfect fit for me

What have I been doing in my study so far?

- ¾ of my 1st year
- Compulsary courses in design, programming and modelling
- Free courses in farm technology, remote sensing and informatics
- Focus on modelling and analysing biosystems

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What have I been doing in Wageningen so far?

- Making a lot of new friends
- Part of the korfball association (typical Dutch sport)
- Joining activities of study association HeerenXVII
- Enjoying the Rhine river during summer

What I like about

Biosystems Engineering

The nice atmosphere among students

- Excursion week

The teachers

The knowledge and expertise

Many tracks to discover

Freedom and flexibility of the university

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What isn’t so great

- Many hours in front of my laptop
- Lots of group work which can be frustrating sometimes
- Almost nothing!

Should you do your masters in Biosystems Engineering?

- Technical study focusing on improving sustainable food production
- Interest in agriculture
- Affinity with programming and modelling
- Enjoy having contact with other students

- ... lets talk about it afterwards!

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