



Minor

Biobased Technology & Business Development - Sustainable Entrepreneurship



Jappe de Best



This presentation

avans
hogeschool

- Why this minor?
- Focus of the minor
- Content of minor
- This semester
- Experiences so far
- Wish list



Why this minor



- Multidisciplinary is a focus point of Avans University
- In companies employees have to work together with people with different backgrounds
- Clients for minor projects often come up with projects that require both technical and financial expertise



Focus of the minor

- Focus on the possibilities and restrictions to switch to a more sustainable and biobased (circular) economy
- Looking at different aspects: : **technical** – **economic** – **social**
- Students with a mixed background: **technical** – **economic** -**business**
- International Focus (in English)
- Cooperation between different academies (ATGM – ASIS – AMBM)
- Cooperation with Centre of Expertise Biobased Economy

ATGM

ASIS

AMBM

Centre of expertise
Biobased Economy

Research group
Biobased
Energy

Research Group
Biobased
products



Minor program



General Program

- Project Biobased Chains
- Course sustainable challenges
- Course Lean Start-up
- Course Business to business marketing
- Elective

Students with technical background

- Course Energy analysis
- Course Advanced biomass conversion technology
- Course Investment decisions

Students with economic background

- Course Introduction biomass conversion technology
- MOOC Biobased economy
- Course Financial management
- Course E-commerce & E-business + Social Media Marketing



Project Biobased Chains



Projects to choose from this year:

1. Businesscase for bioplastics (PHA) from residues (*Waterboard Brabantse Delta*)
2. Re-use of woody biomass from Waardlanden (*Energy cooperation De Knotwilg*)
3. Contribution of Biobased technologies to an energy neutral region
Alblasserwaard Vijfheerenlanden (*Stichting Blauwzaam*)
4. Interreg project Natural Green (*research group Biobased Energy – CoE BBE*)
5. Re-use of fire hoses or extinguishing powder (*Kling brandbeveiliging*)



Social Feasibility

- Sustainable challenges
- Business to business marketing
- Lean Start-up
- Social Media Marketing



Economic Feasibility

- Financial management
- Investment decisions
- E-commerce & E-



Technical Feasibility

- Energy analysis
- Biomass conversion technology
- MOOC Biobased economy





Electives

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Course Dutch



Biobased battle Netherlands - Brazil





This semester



Lecturers



marketing



finance

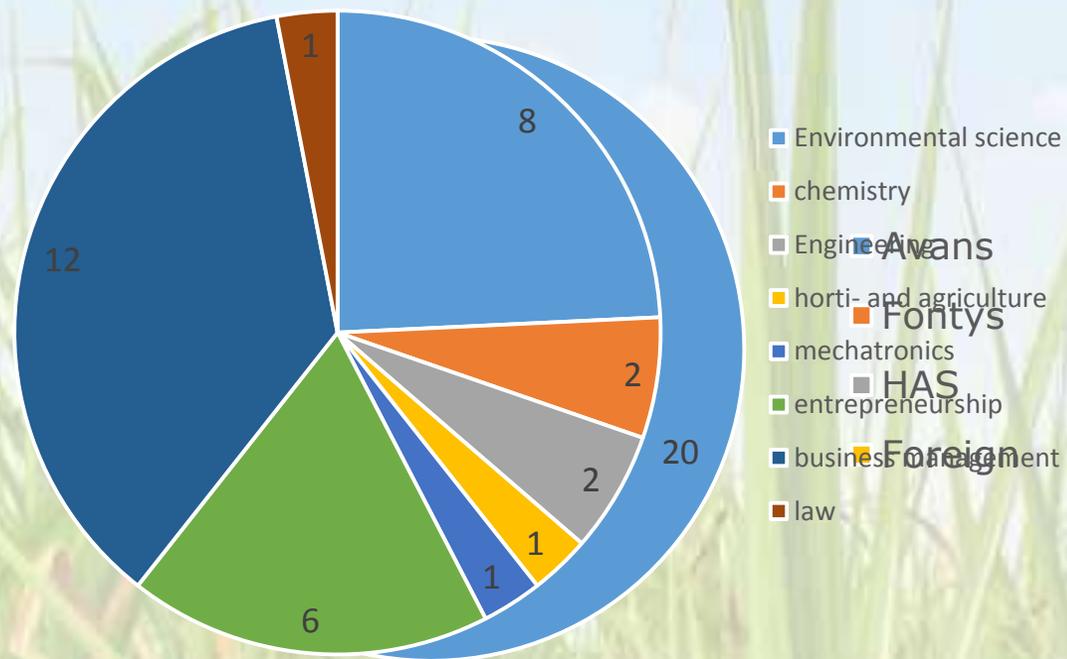


technical



CoE BBE

Students



- Environmental science
- chemistry
- Engineering
- horti- and agriculture
- mechatronics
- entrepreneurship
- business management
- law



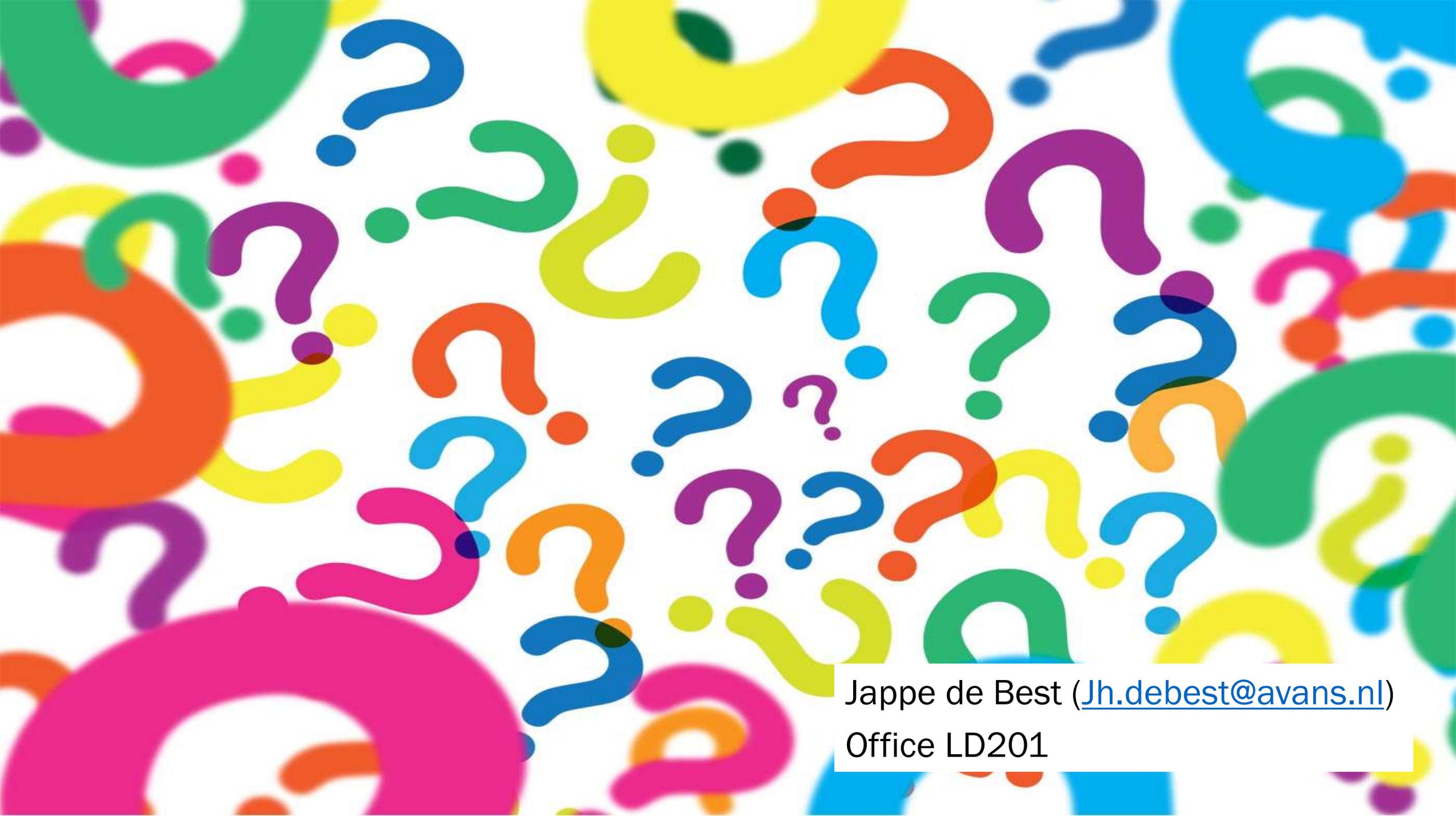
Experiences so far

- Students are very enthusiastic about mixed population and cooperation in projects
- Cooperation between students with different backgrounds is going well but takes some extra time (understanding each other, project approach & experience)
- Kick-off week gives a boost to atmosphere in minor group
- Cooperation and joined ownership between different academies is not easy
- Working with a customized program for students is not easy (available hours, courses in English, different set-up program at different academies)



Our wish list

- More diversity in projects (in cooperation with lectoraten & CoE BBE)
- International projects
- More specialist back-up for projects (technical – economic – social)
- Cooperation with other universities of applied science (student exchange)
- Minor twice a year (on two different universities)



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