

Research into Universities

JADs & Tilburg University



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Introduction

This document is based on research into university of interest after completing my bachelors. I have chosen two universities that fit my interest which is JADS and Tilburg University for there data science master programs. In this research I will be looking into what each program offers, the criteria to be let in, what I will have to do before being admitted into the university, review of open day and lastly, a conclusion of chosen university.

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Master of interest

The reason of interest of Tilburg University and JADS is due to not only both offering master programs I am interested in but also for the close distance of both universities.

JADS

“JADS is a unique cooperation between the Province of North Brabant, the Municipality of ‘s-Hertogenbosch, Tilburg University and Eindhoven University of Technology (TU/e). We offer various data science programs. From bachelor and master programs to EngD (formerly PDEng) education and professional education. Besides, we help organizations shape their data driven future.

At JADS, researchers and students work closely with the business community. In addition to education and research, JADS also offers space for innovative, data-driven entrepreneurship and public-private partnerships.” - About page <https://www.jads.nl/about-jads/>

Tilburg University

“Tilburg University is a public research university specializing in the social and behavioral sciences, economics, law, business sciences, theology and humanities, located in Tilburg in the southern part of the Netherlands.” – wiki https://en.wikipedia.org/wiki/Tilburg_University

Program

JADS (master program Data Science in Business and Entrepreneurship)

Length: 2 years

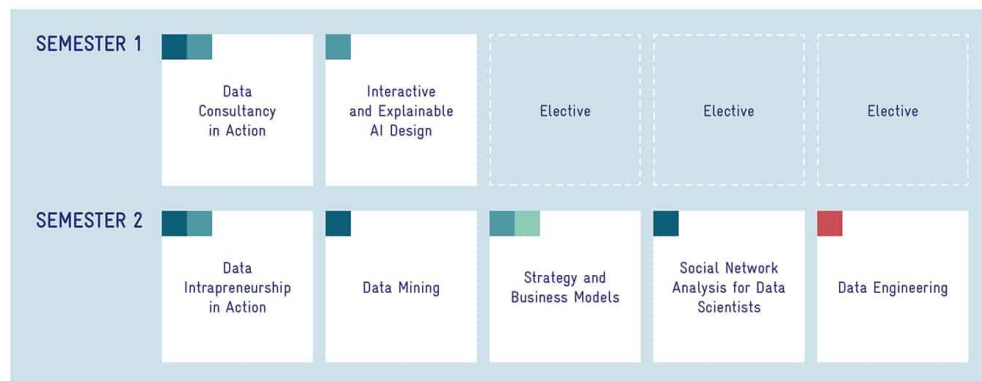
Start: February / September

The master's program is a combination of the two leading Dutch universities (Eindhoven University of Technology & Tilburg university). A combination of the technological know-how of TU/e with the business, legal and societal insights of TiU. The goal of the program is to shape the student into an all-round data scientist.

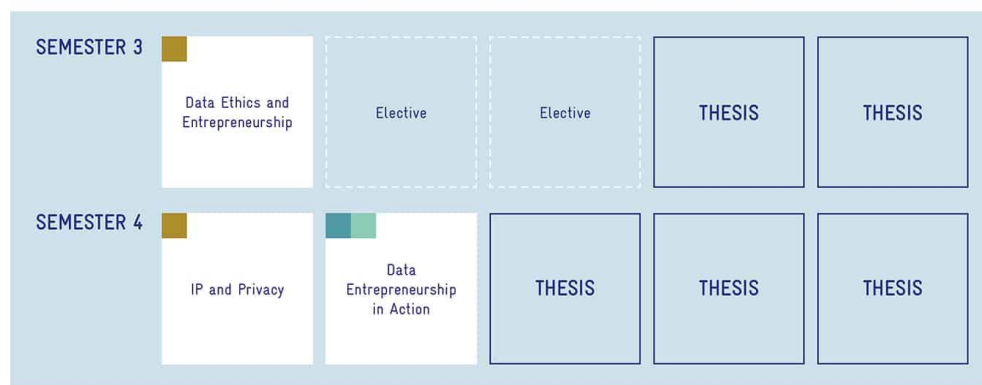
Program layout for February

PROGRAM FEBRUARY

Year 1



Year 2



--- Electives

Detail document regarding starting in february : [document](#)

Detail document regarding course description: [course description](#)

Premasters

Length: half a year

Start: February

The premaster is for students who have sufficient knowledge in statistics and mathematics but are not eligible for the master's program itself.

Courses:

- Programming
- Data-structures and algorithms
- Introduction to machine learning
- Foundation of databases
- Statistics for data scientists

Tilburg University

There are 2 master programs I am interested at Tilburg university which includes:

1. Data Science in business and entrepreneurship (same program at JADS)
2. Cognitive Science and Artificial Intelligence

We will be looking at the Cognitive Science and Artificial Intelligence master program and not the Data Science in business and entrepreneurship with reason that it is the same program that is explain for JADS.

Cognitive Science and Artificial Intelligence

Link: [Cognitive Science and Artificial Intelligence](#)

Length: 2 years

Starts: September

Introduction

“Gain a deep understanding of human cognition and artificial intelligence to research and develop innovative solutions and applications. This 2-year Master's program combines knowledge of cognitive science and artificial intelligence with techniques such as advanced deep learning, deep reinforcement learning and Bayesian modeling. You will investigate various aspects of intelligence, such as reasoning, learning, perception, communication and collaboration from both a human perspective and a machine perspective” – [about cognitive science and artificial intelligence](#)

Courses (2-year program consists of 120 credits (ECTS)):

- 5 Artificial Intelligence courses (30 ECTS)
- 5 Cognitive Science courses (30 ECTS)
- 3 Research Skills courses (9 ECTS)
- 1 Elective course (6 ECTS)
- Research internship (15 ECTS)
 - In the first semester of the second year, you will conduct a (mandatory) internship.
- Project and thesis (30 ECTS)
 - You conclude the program with an advanced interdisciplinary research project that results in a thesis.
- Extra-curricular: research assistantship.

Program Content

Compulsory courses per year semester	
Year 1	
AI = Artificial Intelligence course CS= Cognitive Science course RS = Research Skills course	
Semester 1	Semester 2
♦ Core Topics Artificial Intelligence (AI)	♦ Risk Communication and Uncertainty (CS)
♦ Core Topics Cognitive Science (CS)	♦ Complex Systems (AI)
♦ Cognitive Models of Language Learning (CS)	♦ Deep Reinforcement Learning (AI)
♦ Computer Games (AI)	♦ Brain Computer Interfacing (CS)
	♦ Image Analysis (RS)
	♦ Spatiotemporal Data Analysis (RS)
Year 2	
Semester 1	Semester 2
♦ Advanced Deep Learning (AI)	♦ Research Project and Thesis
♦ Big Data (RS)	
♦ Bayesian Models of Cognitive Processes (CS)	
♦ Internship	

Detail document regarding course description: [Course Description](#)

The course description and subjects can change from now till a year.

Admission criteria

JADS

Link: [admission](#)

In order to be eligible to the Master Data Science in Business and Entrepreneurship, the curriculum of current bachelor program needs to meet the following criteria:

- A minimum of 15 EC in mathematics and statistics, which includes at least 5 EC in mathematics and 5 EC in statistics.

Courses in:

- Database
 - Algorithms
 - Programming
 - Machine learning / Data mining
-
- Needs to meet the English language requirement
 - o If you completed a 3-years Academic Bachelor's program (of at least 180 ECTS credits) fully in English in an accredited Research University in the Netherlands.

Students holding a degree in HBO ICT or equivalent

If your HBO ICT program contains at least 15 ECTS in mathematics and statistics, which includes a minimum of 5 ECTS in mathematics and 5 ECTS in statistics, your English meets the language requirements and your average grade of the HBO ICT program is 7,5 or higher you are most likely to be eligible for a premaster at JADS.

Tilburg University

Cognitive Science and Artificial Intelligence

Link: [admission](#)

Educational background:

You are eligible to apply if you have a bachelor's degree from a Research University in Cognitive Science, Artificial Intelligence, Computer Science, or a related program that provided you with:

- a sufficient **mathematics** background.
- a broad knowledge of AI techniques.
- sufficient programming experience in Python or other AI programming languages;
- demonstrable basic-level knowledge in disciplines such as cognitive science, cognitive neuroscience, cognitive psychology, psycholinguistics, or similar.

English Language Requirements:

You must prove your proficiency in English by submitting the results of one of these tests:

- Academic IELTS with a minimum overall score of 6.5 and a minimum score of 6.0 on all individual parts of the test.
- TOEFL iBT with a minimum score of 90 for the traditional TOEFL iBT test at a test center or the TOEFL iBT Paper Edition. Please check in our corona FAQ whether the TOEFL iBT Home Edition will be accepted for the intake of your choice.
- Cambridge English test results: C1 advanced (formerly CAE) or C2 proficiency (formerly CPE). For both C1 and C2, we accept a score of A, B, or C.

Please note

- The test results must not be older than two years at the time of application.
- We do not accept a combination of test results on different test dates, e.g., TOEFL's 'My Best Scores'.
- You must be able to prove your English language proficiency at the time of application. Without test results your application can not be processed, unless you are exempted.

An English proficiency test is not required if one of the following applies to your situation:

- You hold a passport from one of the following countries:
 - Australia, Canada, Ireland, New Zealand, the United Kingdom, or the United States of America.
- You have studied and completed your entire bachelor's or Master's program in one of the following countries:
 - Australia, Canada (with the exception of Quebec), Ireland, New Zealand, the United Kingdom, or the United States of America.

Review of Open Day

Tilburg University (19th of November 2022)

After visiting the open day at Tilburg University and finding out more information of the study and the admission requirements, I came to realize what next steps I would have to do if I would like to follow either the “Data Science in Business and Entrepreneurship” or the “Cognitive Science and Artificial Intelligence” master.

Data Science in Business and Entrepreneurship

After listening to the information received by some students and lectures of the program, I can say that it is quite an interesting study. The Entrepreneurship side does not interest me but the data science side does. I am willing to apply to the study to see if I am eligible but I personally don't have the passion to follow this master's program after attending the open day.

Cognitive Science and Artificial Intelligence

This master seems quite interesting and one that I would like to follow, after I have completed my bachelor. After going to the open day at Tilburg University, I have found out quite a lot of information regarding not only the program but also the admissions to get in. This program does not have a premaster and my skills and bachelor diploma are not enough which I was told. The only advice I received from 5 different people regarding the study (due to the fact they had no clue) is to contact the admission team to see if I am eligible for the study or what I can do to be able to follow the study.

Conclusion

After visiting the open day at Tilburg university, I can conclude that I was able to get the needed information from the master programs I am interested in. I am most probably not going to follow the master program in “Data Science in Business and Entrepreneurship” where my passion is more for the “Cognitive Science and Artificial Intelligence” master program. Due to some skills I am lacking in where I am not eligible for the study, I will be making contact with their admission team to see what I can do to get into this study.