



Universität
Zürich ^{UZH}

Department of Informatics



Master program in Informatics: Artificial Intelligence

Abraham Bernstein

17 September 2025



Contents

- About IfI/Professors
- General Information
- Structure of MSc Programs: Compulsory Module, Master's Project, Core Elective, Thesis
- MSc Artificial Intelligence
- Hints
- Questions/Whom to contact
- Library
- Welcome event for new Master's students with major Informatics

IfI: The Department of Informatics

- Founded in 1970 (IfI = Institut für Informatik)
- Part of the Faculty of Business, Economics and Informatics
- Focus on human-centered informatics
- 19 Professors, 130 PhD students and Post-Docs
- 550 Bachelor's students
- 650 Master's students
- Campus Oerlikon



You!



Ifi Professors



Alberto Bacchelli

Zurich
Empirical
Software Engineering
Team



Jürgen Bernard

Interactive
Visual
Data
Analysis Group



Abraham Bernstein

Dynamic and
Distributed
Information
Systems Group



Michael Böhlen

Data-
Base
Technology
Group



Ivan De Oliveira Nunes

Security and
Privacy of
Information,
Networks, and
Systems



Thomas Fritz

Human
Aspects of
Software
Engineering



Harald Gall

Software
Evolution and
Architecture
Lab



Manuel Günther

Artificial
Intelligence and
Machine
Learning Group



Anikó Hannák

Social
Computing
Group



Elaine Huang

Zurich
People
and
Computing Lab



Lena A. Jäger

Digital
Linguistics



Dan Olteanu

Data
Systems and
Theory Group



Renato Pajarola

Visualization and
Multi-
Media
Lab



Giorgia Ramponi

Autonomous Sequential
Learning and
Predictive
Intelligence Lab



Davide Scaramuzza

Robotics and
Perception
Group



Gerhard Schwabe

Information
Management
Research
Group



Burkhard Stiller

Communication
Systems
Group



Claudio Tessone

Blockchain and
Distributed
Ledger
Technologies



Martin Volk

Computational
Linguistics

General Information Online

Dean's Office: <https://www.oec.uzh.ch/en/studies.html>

➤ Study Regulations, Admission, Enrollment, Changing Programs, Course Booking, Important Dates, Petitions/Appeals, ...

IfI: <https://www.ifi.uzh.ch/en/studies/msc-info.html>

➤ Specific to Informatics: Fact Sheets (legally binding!), Topics/Professors, Tutors/TAs, also these slides for later reference

Please read the regulations and fact sheets!

The presentations held at the **Faculty's Master Welcome Day** are available from:

<https://www.oec.uzh.ch/en/studies/events/mwd.html>



Structure of the MSc Programs

All programs comprise...

- a compulsory module
- a Master's Project (group work!)
- modules from core/elective areas
- a Master's Thesis at the end

More on these components on the next slides...

Five Major MSc study programs					90 ECTS credits
Information Systems IS	Software Systems SOSY	People-Oriented Computing POC	Artificial Intelligence AI	Data Science DS	
Compulsory module 6 ECTS	Compulsory module 6 ECTS	Compulsory module 6 ECTS	Compulsory module 6 ECTS	Compulsory module 6 ECTS	
Master's project 15 ECTS					
Core elective area 18 ECTS	Core elective area 18 ECTS	Core elective area 18 ECTS	Core elective area 18 ECTS	Core elective area 18 ECTS	
INF elective area 15 ECTS					
WWF elective area 6 ECTS					
Master's thesis 30 ECTS	Master's thesis 30 ECTS	Master's thesis 30 ECTS	Master's thesis 30 ECTS	Master's thesis 30 ECTS	

Compulsory Module

Advanced Topics in Artificial Intelligence

Time: Wednesdays 8:15 -12:00h

Room: BIN 1.B.01

Grading

- Final Exam: Wednesday, 26.01.2023, 14:00-16:00 BYOD! -> Location to be announced
- Practice Exam (TBA)
- Assignments (20%)
- Active participation to the evaluation event on the 14.12. and 21.12.

Prerequisites

- General: Calculus, Linear Algebra, Probability Theory, Design and Analysis of Algorithms
- You have taken an intro class on AI (roughly, AIMA 4th Ed., chapters 1-18)
- You are familiar with basic Data Mining / Machine Learning techniques

Content

- Knowledge in AI, Large-scale AI, Collective Intelligence, AI & Society

This course

More about
this in a bit

Master's Project

The Master's Project...

- is a **group project** (= at least 2 students)
- is an **intensive and demanding** project worth 15 ECTS credits
- best time: During semester break
- max. 12 months to complete
- must be supervised by an IfI professor

➤ **Check the fact sheet!**

IfI organizes a **Master's Project Market** each semester

➤ Some open projects are presented and you can find peers

Five Major MSc study programs					90 ECTS credits
Information Systems IS	Software Systems SOSY	People-Oriented Computing POC	Artificial Intelligence AI	Data Science DS	
Compulsory module 6 ECTS	Compulsory module 6 ECTS	Compulsory module 6 ECTS	Compulsory module 6 ECTS	Compulsory module 6 ECTS	
Master's project 15 ECTS					
Core elective area 18 ECTS	Core elective area 18 ECTS	Core elective area 18 ECTS	Core elective area 18 ECTS	Core elective area 18 ECTS	
INF elective area 15 ECTS					
WWF elective area 6 ECTS					
Master's thesis 30 ECTS	Master's thesis 30 ECTS	Master's thesis 30 ECTS	Master's thesis 30 ECTS	Master's thesis 30 ECTS	

Elective Areas

Core elective area

Specific to your Major study program (IS, SOSY, POC, AI, or DS).

INF elective area

All modules offered by IfI on the Master's level (definition in the Study Regulations, p. 31)

WWF elective area

All modules offered by WWF on the Master's level (definition in the Study Regulations, p. 31)

Five Major MSc study programs					90 ECTS credits
Information Systems	Software Systems	People-Oriented Computing	Artificial Intelligence	Data Science	
IS	SOSY	POC	AI	DS	
Compulsory module 6 ECTS	Compulsory module 6 ECTS	Compulsory module 6 ECTS	Compulsory module 6 ECTS	Compulsory module 6 ECTS	
Master's project 15 ECTS					
Core elective area 18 ECTS	Core elective area 18 ECTS	Core elective area 18 ECTS	Core elective area 18 ECTS	Core elective area 18 ECTS	
INF elective area 15 ECTS					
WWF elective area 6 ECTS					
Master's thesis 30 ECTS	Master's thesis 30 ECTS	Master's thesis 30 ECTS	Master's thesis 30 ECTS	Master's thesis 30 ECTS	

AI Major – Core Electives and Instructors

Advanced Machine Learning	Lena Jäger
Advanced Techniques of Machine Translation	Rico Sennrich
Combinatorial Algorithms	Alexander Souza
Computer Graphics	Renato Pajarola
Deep Learning	Manuel Günther
Essentials in Text and Speech Processing	Mathias Müller
Machine Learning for Natural Language Processing 1	Simone Clematide
Network Science	Claudio Tessone
Randomized Algorithms	Alexander Souza
Statistical Foundations for Finance (Mathematical and Computational Statistics with a View Towards Finance and Risk Management)	Marc Paolella
Vision Algorithms for Mobile Robotics	Davide Scaramuzza
Real Analysis I	Marc Paolella
Reinforcement Learning	Giorgia Ramponi

Master's Thesis

The Master's Thesis...

- must be written in your **Major area**
- is a **full-time endeavor** worth 30 ECTS credits (i.e., no significant side jobs or other study activities possible)
- max. 6 months to complete
- can only be started once the Master's Project has been successfully completed
- must be supervised by an IfI professor

➤ **Check the fact sheet!**

- Find topics on the IfI website (check the individual group pages) or contact the groups directly.

Five Major MSc study programs					90 ECTS credits
Information Systems IS	Software Systems SOSY	People-Oriented Computing POC	Artificial Intelligence AI	Data Science DS	
Compulsory module 6 ECTS	Compulsory module 6 ECTS	Compulsory module 6 ECTS	Compulsory module 6 ECTS	Compulsory module 6 ECTS	
Master's project 15 ECTS					
Core elective area 18 ECTS	Core elective area 18 ECTS	Core elective area 18 ECTS	Core elective area 18 ECTS	Core elective area 18 ECTS	
INF elective area 15 ECTS					
WWF elective area 6 ECTS					
Master's thesis 30 ECTS	Master's thesis 30 ECTS	Master's thesis 30 ECTS	Master's thesis 30 ECTS	Master's thesis 30 ECTS	

Further Modules

Seminar

- one seminar is mandatory
- recommended from 2nd semester
- check the Course Catalogue early and register for the seminar within the seminar's application deadline

➤ **Note: this deadline is shorter than the regular module booking deadline!**

Independent Study

- Optional module
- **Check the fact sheet!**

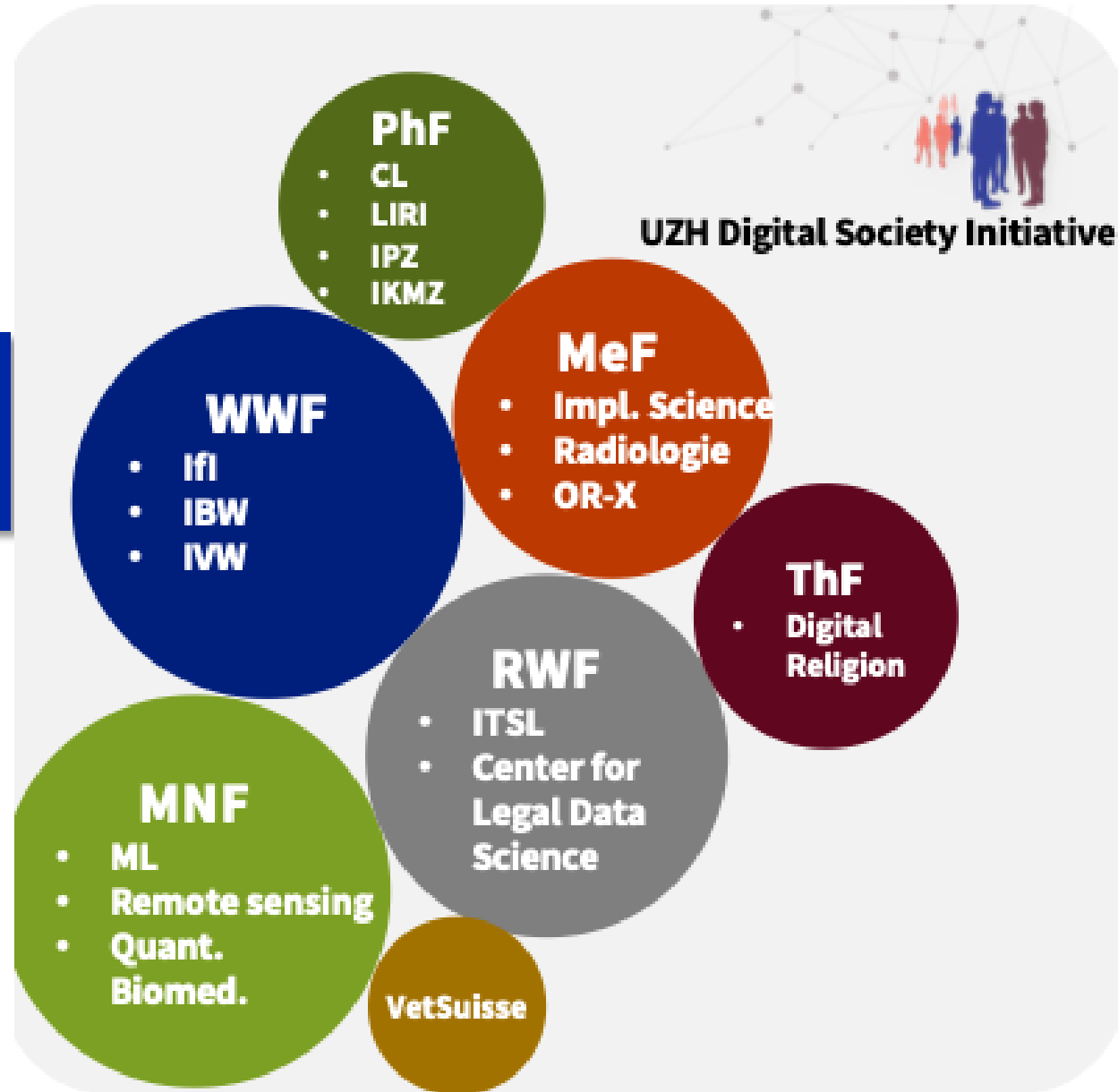
External Modules

- ETH: <https://www.oec.uzh.ch/en/studies/credits/external-eth.html>
- Mobility within Switzerland: <https://www.uzh.ch/cmsssl/en/studies/application/chmobilityout.html>
- International exchange: <https://www.int.uzh.ch/en/out.html>
- Partner universities: <https://www.oec.uzh.ch/en/international/engagement.html>

AI Research Activities at UZH ...

The screenshot shows the ZORA (Zurich Open Repository and Archive) search page. The search query is "artificial intelligence". A blue box highlights the text "Showing 1 - 10 out of 5348". The search results are displayed in a table with columns for Year, Name, and Relevance. The first result is "Artificial Intelligence, Gesundheitsversorgung und Krankenversicherung." by Gächter, Thomas ; Poledna, Thomas (2018). The second result is "Artificial intelligence, affordances and fundamental rights." by Graber, Christoph B (2018).

YEAR	NAME	Relevance
2025	Bernstein Abraham (0000-0002-0128-4602)	86
2024	Scaramuzza Davide	894
2023	Rinaldi Fabio (0000-0001-5718-5462)	769
2022	Schwabe Gerhard (0000-0002-0453-9762)	613
2021	Weibel Robert	512



Minor

Available Minor programs are listed in the Course Catalogue:

<https://studentservices.uzh.ch/uzh/anonym/vvz/index.html>

➤ Master of Science UZH in Informatics (RVO22) > Minor 30

Note: Modules in the *Minor area Informatics (INF)* are offered only in the Fall semester. There are no modules in the *Minor area Informatics* in the Spring semester. Take this into account when planning your next few semesters.

You can change your Minor under certain conditions:

<https://www.oec.uzh.ch/en/studies/enrollment/change.html>

Study programs (18)

> Major 90

▼ Minor 30 - Faculty of Business, Economics and Informatics

Informatics

Data Science

Information Systems

Economics

Business Administration

Banking and Finance

▼ Minor 30 - Other Faculties

Bioinformatics

Biology

Chemistry

Computational Linguistics and Language Technology

Geography

Mathematics

Physics

Hints (1/3)

- **Focus on the compulsory modules** in your Major and Minor programs
- **Make a study plan**
- Check course schedule of previous years for planning. Courses often stay in the same slot. Suggested order:



- **Read the fact sheets** well before starting the respective module or thesis
- All legally binding information regarding modules, incl. exam dates, are in the UZH Course Catalogue. Most modules additionally have a website or OLAT course, but **the Course Catalogue is binding**

Hints (2/3)

- **Check the study websites** of the Faculty and the Department:
 - <https://www.oec.uzh.ch/en/studies.html>
 - <https://www.ifi.uzh.ch/en/studies/msc-info.html>
- Note that **booking/cancellation deadlines** may vary between faculties.
- Working at IfI: Some modules/courses seek **Tutors or Teaching Assistants**.
- Check out <https://www.ifi.uzh.ch/en/studies/msc-info.html> and the individual group pages.
- Mentoring, social events, representatives: Informatics **student association ICU**: <https://icuzh.ch>

Hints (3/3)

- **Consider the policies on plagiarism and scientific integrity.** You find the fact sheet on plagiarism on this website:
 - <https://www.ifi.uzh.ch/en/studies/msc-info.html>
 - The Swiss Academies of Arts and Sciences issued a Code of conduct for scientific integrity:
<https://swiss-academies.ch/publications/kodex-fur-wissenschaftliche-integritat>
- UZH provides a number of **advice and support services** for topics such as Gender Equality and Diversity, Disability, or Psychological Counseling:
 - <https://www.students.uzh.ch/en/advice.html>
- **Practise passive and active English without tools** (in exams, no translation tools are permitted)
 - UZH offers English courses: <https://www.sprachenzentrum.uzh.ch/en/Sprachkurse/Englisch.html>

Questions/Whom to Contact

If you have questions, please follow these steps:

1. Read the Study Regulations: <https://www.oec.uzh.ch/en/studies/regulations.html>
2. Read the Ifl's study information and fact sheets: <https://www.ifi.uzh.ch/en/studies/msc-info.html>
3. Check information in the Course Catalogue: <https://studentservices.uzh.ch/uzh/anonym/vvz/index.html>
4. Send e-mail to the respective person:

For questions about

- Master's Project
- Independent Studies
- Master's Thesis
- Informatics studies in general

Contact the Ifl's Study Coordinator,
Daniela Bärtschi: studies@ifi.uzh.ch

For questions specific to a course: Contact the instructor.

For everything else, contact the Dean's Office:
<https://www.oec.uzh.ch/en/staff/team.html> (Student Affairs)

And of course you can ask your fellow students, for example by joining the student association ICU: <https://icuzh.ch>

Did you know?

The Informatics Library is part of the UB Sciences on the Irchel campus!

Books can be delivered to Oerlikon free of charge:
Simply select “UB Psychology” as pick-up location in swisscovery.

<https://t.uzh.ch/1mr>
or <https://www.ub.uzh.ch/en>





Universität
Zürich^{UZH}

Department of Informatics



IfI Master Welcome Event for incoming MSc Informatics students

Monday, 22 September 2025, 12:15 in BIN 2.A.01

No registration necessary

