business data science
GRADUATE PROGRAM

RESEARCH MASTER BUSINESS DATA SCIENCE

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GRADUATE PROGRAM | Erasmus | UvA | VU

JOINT DEGREE

Erasmus

UNIVERSITY OF AMSTERDAM

VU VRIJE UNIVERSITEIT AMSTERDAM

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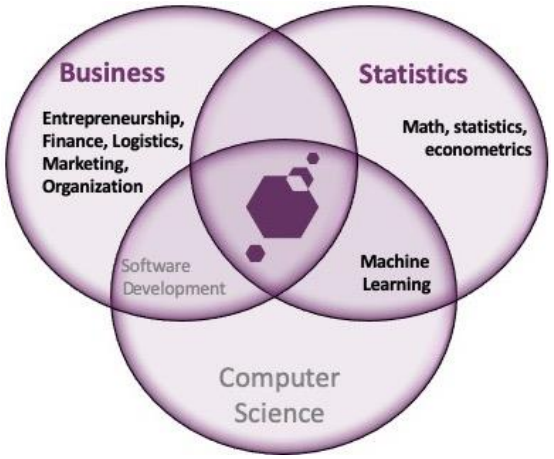
TAILORED PHD TRAJECTORY

25 TALENTED STUDENTS

CLOSE COLLABORATION WITH FACULTY



2-YEAR RESEARCH MASTER (120 EC)

HIGHER THEORETICAL LEVEL THAN TRADITIONAL MASTER'S DEGREE

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THREE PILARS

DATA SCIENCE FOUNDATION
Acquiring Skills

1st Year

Mathematics, Statistics, Econometrics, Micro-econometrics, Time-series, Simulation Analysis & Optimization, Parallel Computing & Big Data, Supervised Machine Learning, Unsupervised Machine Learning, Deep Learning, Natural Language Processing

2nd Year

Bayesian Econometrics, Reinforcement Learning, Precision & Forecasting

BUSINESS FOUNDATION
Building Knowledge

Decision Theory for Business
Business Foundation
Visits to Departments

Electives linked to one of our 3 Tracks:

- Quantitative Finance
- Management Science (Entrepreneurship & Innovation; Human Resources & Organization; Marketing; Strategy; Knowledge and Information Networks)
- Operation Analytics

RESEARCH PRACTICE
Aligning Skills & Knowledge

Research Hackathon/Internship

Skill Workshops

Research Master Thesis

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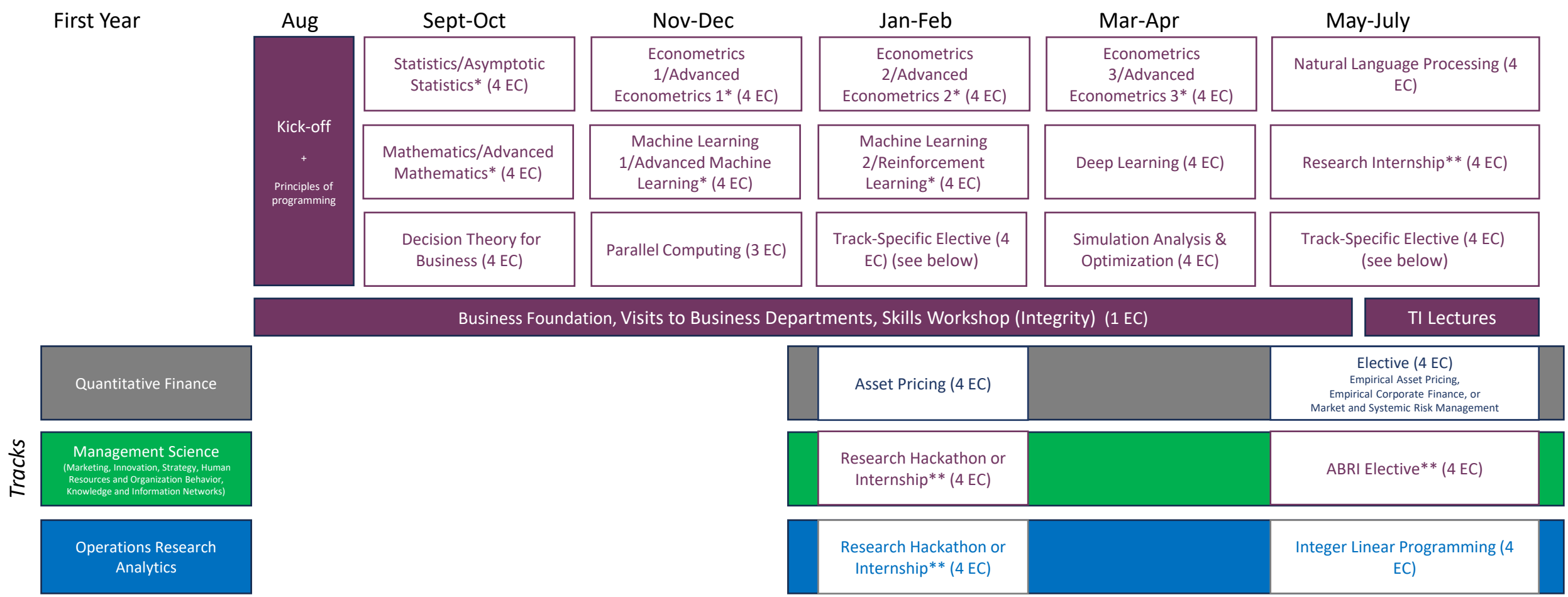
*depending on the students' own level, ** students can also opt for an elective

ANNUAL SCHEDULE



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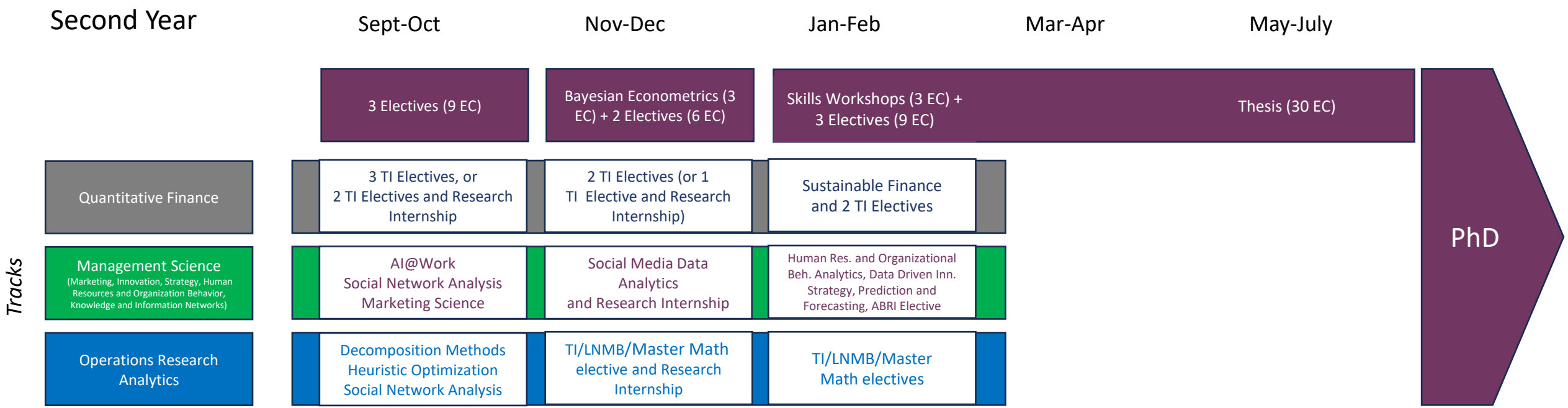
ANNUAL SCHEDULE



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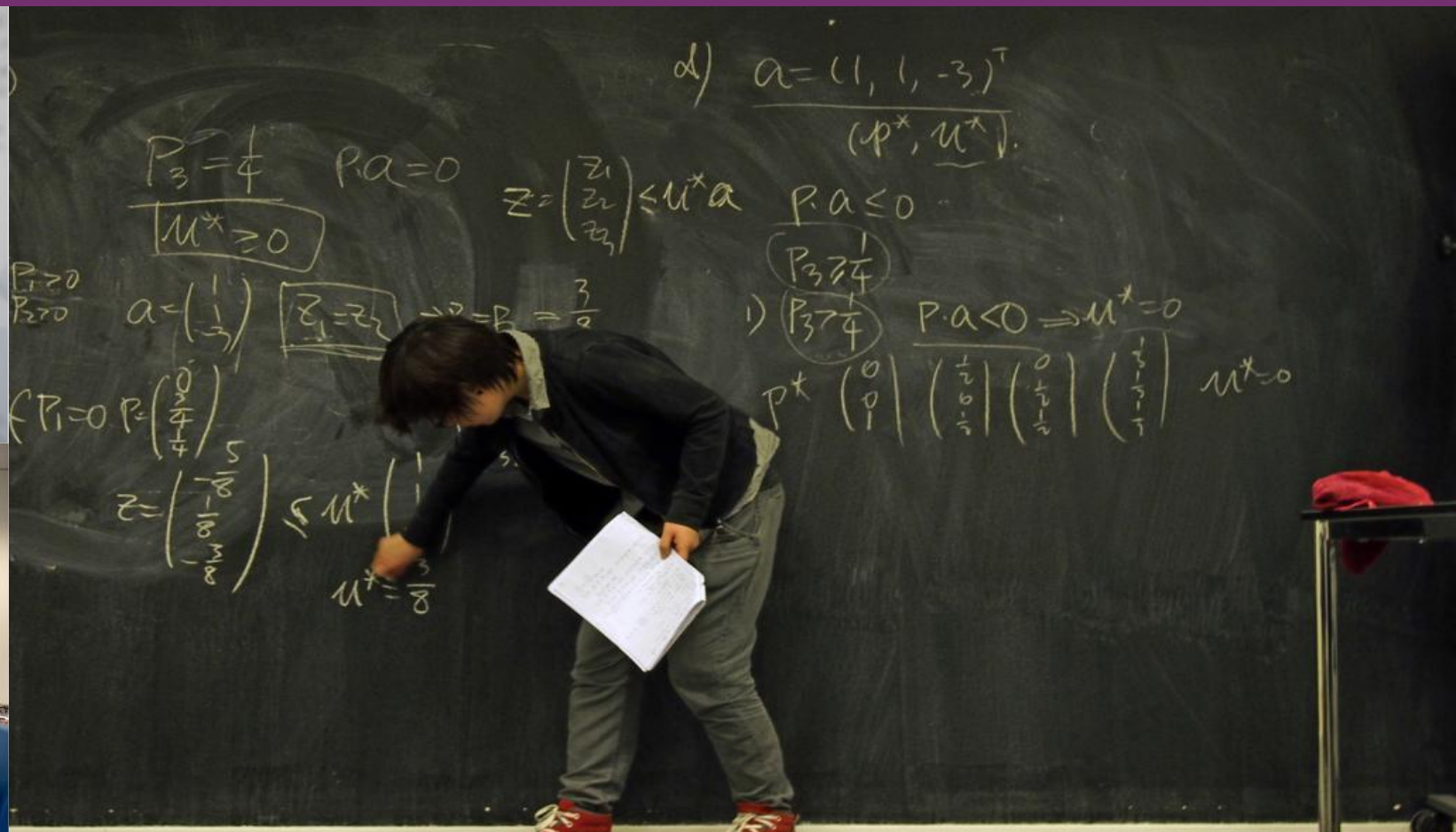
EMPOWERING GROWTH
TAILORED SUPPORT FOR EVERY STUDENT'S JOURNEY



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SUPPORT: DEDICATED LOCATION IN AMSTERDAM

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SUPPORT: STRONG COMMUNITY

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SUPPORT: FINANCIAL AIDS

- Apply for Scholarships: e.g., https://www.eur.nl/en/education/practical-matters/financial-matters/scholarships-grants

- BDS Support:
  - Year 1: basic, partial, and full scholarships to a small selection of students
  - Year 2: BDS assigns scholarships based on students' performance

- Reimbursement of transportation costs from/to Amsterdam/Rotterdam

- Teaching/Research Assistantship (TA/RA) positions are possible at the end of the first year

TIMELINE

	Year 1: Courses	Find your topic and supervisor – Work as RA
	Year 2: Electives	Thesis – PhD Application
	Year 3 - 5: PhD	

After BDS?

- Academia (comparable to other 5-year PhD programs)
- Regulatory bodies (Central banks; regulators (AFM; ESMA); EU institutions, ministries, …)
- Industry (Banks, large companies with data science needs)

High to excellent earning potential in all the above

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ADMISSIONS

Requirements

Bachelor or Master's Degree
High GPA (> 7.5/10)
GMAT >700, GRE >160, TOEFL
(not for students with Dutch degrees)
Passion for Business, Data Science & Research
Programming skills

Deadlines

Rolling admission until June 15, 2024
If interested: email us for a site visit!
(talk to our students & DGS)

www.businessdatascience.nl

Check the website for more info on

- How to contact us
- Admissions & Scholarships
- Events
- Courses & Tracks

Sign up also for summer schools or individual courses

Summer schools or Courses in:

- (Advanced) Machine Learning, Deep Learning, Reinforcement Learning
- Natural Language Programming
- Foundation of Data Analysis & Machine Learning in Phyton
- Sustainable Finance
- AI@Work

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EXAMPLES OF THESES TOPICS for the MANAGEMENT SCIENCE & OPERATION ANALYTICS TRACKS

Marketing

Retailing (inflation/pricing, marketplaces, omnichannel, channel synergies, metaverse, blockchains, NFTs, etc.); Biases (algorithmic bias, discrimination, diversity, etc.); Branding; New Product Innovation (crowdsourcing, adoption etc.); Marketing-finance; Social media (eWOM, influencer marketing, engagement, multi-platform effects, owned social media, earned social media); Sustainability; Recommendation Systems

Journals: Marketing Science, Journal of Marketing, Journal of Marketing Research, Journal of the Academy of Marketing Science, International Journal of Research in Marketing, Journal of Retailing

Management, Organization, & Information Systems

HR Analytics; AI & wellbeing; Digital transformation; Technology adoption; IT governance; IT development and deployment;
ML for Innovation; ML for Creativity & Entrepreneurship; Data-driven Job matching; Text analyses for Leadership detection; Algorithmic management; Organization & job fit; Talent retention

Journals: Management Science, Information Systems Research, Journal on Computing, MIS Quarterly, Academy of Management Journal, Academy of Management Review, Organization Science, Journal of International Business Studies, Strategic Management Journal

Operation Analytics

Multimedia, Computer vision and Information Retrieval for Improv.; City Livability; Multimodal interactive learning; Conversational Search; Geometric Deep Learning; Legal information retrieval; Recommendation Systems; Optimization for and with machine learning; Robust optimization (Optimization of food supply of World Food Programme); Stochastic systems (Appointment scheduling in healthcare); Explainable machine learning (Rule-based methods and counterfactual explanations)

Journals: Operations Research, Journal of Operations Management, Manufacturing and Service Operations Management, Production and Operations Management