

Erasmus  
School of  
Economics



# Marketing and Data Intelligence

Online Master  
**2025-2027**



Rotterdam School of Management  
Erasmus University





Advance your career  
with a master in Marketing  
and Data Intelligence.

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# Online Master Marketing and Data Intelligence

Are you a marketer who uses data to make business decisions? Do you want to deepen your knowledge of data analysis and apply research-driven insights to complex marketing challenges? Then this programme is for you.

The **Online MSc in Marketing and Data Intelligence** is a two-year part-time degree for marketers who want to develop more of a research mindset when using data science to drive business decisions. It integrates marketing expertise with data expertise, and presents the latest knowledge in data science, econometrics and AI, as well as up-to-date perspectives in business and strategy.

It builds your ability to get high quality and actionable insights from data-driven analyses in a broad range of complex marketing situations.

**Format:** Online  
**Duration:** 24 months  
**Hours:** 16 per week during lecture periods  
**Degree:** Master of Science (MSc) degree  
**Language:** English

## What will you learn?

If you are intrigued by the latest questions and challenges for marketers and want to create the most valuable marketing insights that theory, data science, and AI can provide, then this programme is for you. Students will acquire the skills, knowledge, and insights necessary to fulfil a variety of roles and to advance their careers in today's data-driven business environment.

The first year starts with a solid foundation in marketing, data, and AI, followed by two courses that take a deep dive into machine learning and marketing strategy. Courses in the second year build on this with more in-depth and integrative content on topics like omnichannel marketing, experimentation, and personalisation.

## Why choose this online programme?

Understanding data and AI is a most important skill in business and in marketing. The **Online MSc in Marketing and Data Intelligence** offers advanced knowledge and expertise in a highly interactive learning environment,

and uses a hands-on approach to data analyses and strategic marketing challenges. The curriculum combines theoretical and practical elements in an intimate online classroom.

You will learn from people who are all active at the forefront of academic research. They collaborate closely with the business community, and they are enthusiastic about sharing their knowledge in our truly diverse, intensive, and interactive classes. These skills will come in useful after you graduate from the study and jump into the job market.

## Career prospects

The adoption of artificial intelligence and the growing use of data is positively affecting the job market in several ways, most notably by creating a strong new demand for skilled professionals. This trend is evident across various sectors and is reshaping workforce dynamics.

For example, graduates can enter roles such as: data translator (working at the intersection of marketing and data science), marketing analyst, marketer or (digital) marketer, and other roles within the consulting industry.



# Meet your professors

Get to know a few of our experienced faculty members and what you can learn with them.



**dr. Pieter Schoonees**  
Academic Director  
Lecturer Foundations of Marketing,  
Data and AI



*We will be diving into advanced analytics, for example using tools like R for statistical computing and graphics, as well as looking at the ‘why’ and the ‘how’ to apply machine learning and neural networks for marketing solutions. Erasmus School of Economics is in a great position to offer this master because the institution has a great history with econometrics and data analytics techniques.*



**prof.dr. Bas Donkers**  
Programme Coordinator  
Professor of Marketing Research



*AI and data science isn’t as new as most people think. But what is different nowadays is the huge amount of data at our fingertips, so this master focuses on how to use the latest tools to get the most from your data, ultimately achieving marketing intelligence through data intelligence. The asynchronous learning activities take place in an engaging learning environment with rich and varied content to learn; participants will gain hands-on experience.*



**dr. Anastasija Tetereva**  
Lecturer Machine Learning Methods  
Assistant Professor of Financial  
Econometrics

*There are many data scientists, and there are many marketers. But there aren’t many professionals with both sets of skills and knowledge. That’s why this is a unique master – because it combines marketing and data science. We will equip professionals to translate data language into business language.*

This programme has been tailored for professionals who seek a master’s degree from one of Europe’s top economics schools and want to advance their careers without the need for travel – while still benefitting from an international classroom and engaging with leading faculty members.

## Programme overview



**Online**  
100% Online  
Flexible & convenient learning



**24 Months**  
Part-time two-year  
60 ECTS programme



**English**  
To best prepare you  
for the international  
job market



**International**  
Classroom: highly competent  
& experienced international  
individuals



**Small scale**  
Intimate classroom setting  
(approx. 35 students)



**Accredited**  
Globally recognised  
degree from a top  
university



**Experts**  
Live sessions with  
industry experts



**Support**  
Personalised  
support



**Grow**  
Professional  
development

The programme uses a blend of online approaches that keep you empowered to engage with the content and with your peers.

Everyone has different individual circumstances in a global online environment, and this programme strives to create a strong community in the student cohorts.

- » A two-year programme of 60 study credits (ECTS) tailored to you as a professional, so you can study alongside your job.
- » A focus on hands-on learning and using real-life case studies to bring your new knowledge to life and deepen your understanding of it.
- » An opportunity for you as a professional to remotely access a top-tier management education at a leading European university.

# Learning objectives

When you graduate from this online master programme, you will be equipped with new knowledge, the latest skills and a fresh perspective.

## Knowledge

Hold substantive knowledge on company and consumer behaviour.

Know and use advanced methods for data and AI.

Carry a critical understanding of the strategies and responsibilities that organisations face in relation to how data and AI are used to support marketing decisions.

## Skills

Be able to effectively integrate marketing theory, data and AI to support marketing decision making.

Be competent in getting actionable insights from data-driven analyses that are grounded in theory.

Work collaboratively to tackle the challenges and responsibilities that come with access to data and AI.

## Reasoning

Have a solution-oriented approach to using data and AI to improve marketing in your own organisation.

Participate in societal and organisational debates relevant to the use of data and AI for marketing, or start new enterprises to create positive change.



# Your learning experience

## Flexible, high quality online learning

This part-time MSc programme is delivered from the online campus of Erasmus University Rotterdam. It uses a blend of live learning sessions when you join other students on the programme, and an engaging online learning environment for your independent study.

This blend of learning activities enables you to fully engage and interact with the programme's content, as well as with faculty and with your peers.

## Learning resources

You will learn from online learning resources such as videos, readings, lectures, and tutorials, and with alternative sources, learning materials, and a range of formats for every topic. Rich variation in the way content is provided to you creates the flexibility to accommodate differences in knowledge, and to allow for variations in everyone's learning approaches and capabilities.

## Self-paced learning

Because the programme is part-time – and most study content is available for you independent of time and place – there is enough flexibility to fit around busy lives. The importance of independent study time also provides you with opportunities to learn at your own pace, and the weekly live sessions keep everyone on track. According to your knowledge and abilities, you can easily revisit the more challenging

learning materials, while progressing at an increased pace through materials that are a more natural fit to your knowledge and capacities.

By structuring each week's content into smaller segments, we allow you to learn in the way that suits you best, whether you are learning through shorter self-study sessions, or in longer or more intense periods.



## An intimate learning experience

We use small classes to ensure space for personalised support to accommodate everyone's personal circumstances as far as we can, while still fostering a sense of community.

There are around 30 learners in each class. You all work and learn closely with the faculty members and with each other in the online classroom, resulting in highly interactive environment.

Each week will close with a live session in which everyone is encouraged to ask questions and share their knowledge – here's where we encourage strong engagement from learners and faculty members together. This live session will be provided in multiple time zones to accommodate our global classroom.

## A collaborative international cohort

Interacting with your fellow students from all over the world is part of the experience. Our international classroom offers you an opportunity to see things from different perspectives. For example, solving problems in group settings can help you to understand that your own perspectives and beliefs can impact the outcomes of a project.

You will also experience different perspectives while problem-solving in group settings using an engaging online environment. Collaborating in this way helps you to understand that the combination of knowledge and the interrelated skills that other members of the group contribute lead to successful team projects and rewarding learning journeys.

We use peer-to-peer feedback and online discussions with teaching staff and peers to highlight these influences, to broaden your horizons, and to prepare you for personal growth.

Developing and maintaining a strong cohort dynamic is important for everyone to get the most out of the programme.

## Student support

Once you start your studies, our programme management team will be there to guide you with strategies for managing your time, for academic writing, and with online learning tips and how to navigate your online campus. The programme management team provide a compassionate space for you to seek support. We are committed to your well-being and provide tailored support to help you thrive from day one.



# Curriculum Overview

The curriculum comprises four semesters over two years. It provides the use of data and of advanced data science methods to create sound and accurate solutions and recommendations for a range of marketing problems, and the reflective and critical thinking skills to be able to propose an appropriate solution that suits all stakeholders.

**Year 1 covers the foundations for insights, data, AI and marketing strategy.**

- There will be a focus on:
- » substantive theory of consumer and company behaviours
  - » machine learning and AI methods for marketing data
  - » insight and action generation for the involved stakeholders.

**Year 2 is a deep dive into the execution of marketing strategy.**

There is also a course that focuses on bringing organisations forward by considering current societal and organisational forces and the inherent strategic uncertainty in the future.

The MSc in Marketing and Data Intelligence has seven courses in total; completion of each course is worth 7.5 ECTS (study credits in the European Credit Transfer and Accumulation System). There is one foundational course that is worth 15 ECTS. Coursework is worth 60 ECTS, counted separately, and is spread over two years

**Semester 1**

**Foundations of Marketing, Data and AI (15 ECTS)**

- At the end of this course, you will be able to:
- » Understand the data science process (Cross-Industry Standard Process for Data Mining).
  - » Analyse marketing problems from a practical perspective.
  - » Apply basic data science methods to marketing problems.
  - » Obtain marketing-relevant insights using data science methods.

**Course content:**

- » Marketing and data fundamentals: marketing problems and decision-making; data wrangling; descriptive statistics; data visualization.
- » Programming: data structures; control flow; loops; functions
- » Statistics: linear regression; logistic regression; principal components analysis; cross-validation.

**Semester 2**

**Machine Learning (7.5 ECTS)**

- At the end of this course, you will be able to:
- » Select the most suitable techniques to solve real-world problems by evaluating learning algorithms and performing model selection.
  - » Apply explainable AI methods to interpret the model results.
  - » Create policy recommendations for organisations by transforming results produced by machine learning algorithms into insights.

**Course content:**

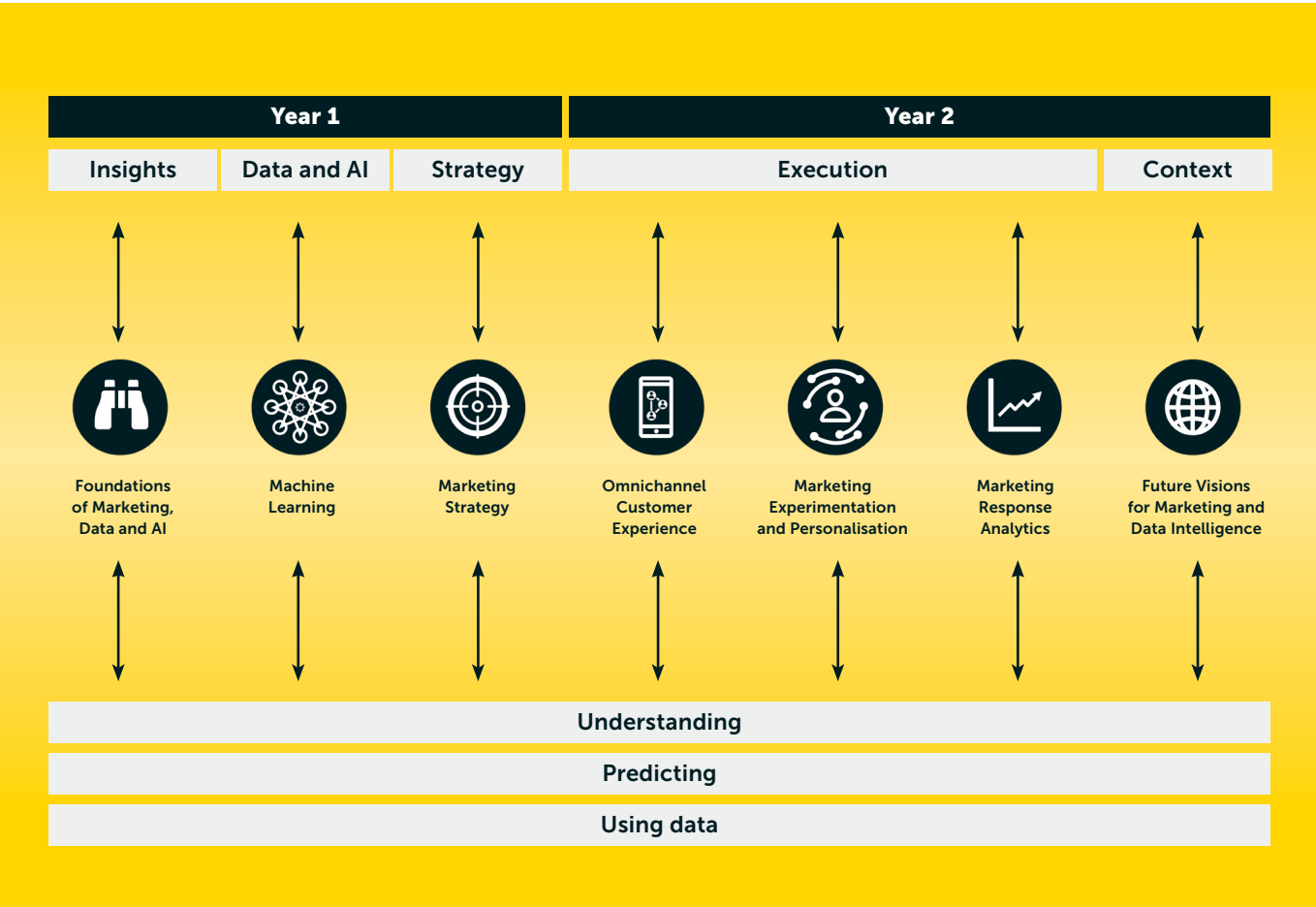
- » Penalised regression and performance estimation: overfitting, complexity control, performance estimation, penalised linear and logistic regression.
- » Decision trees and ensembles: decision trees, random forests, boosting.
- » Neural networks: multilayer perceptrons, deep learning.
- » Explainable AI: variable importance, partial dependence, accumulated local effects, Shapley values.

**Marketing Strategy (7.5 ECTS)**

- At the end of this course, you will be able to:
- » Analyse customer and market data using advanced marketing analytics to derive actionable insights.
  - » Employ segmentation, targeting, and positioning strategies using advanced marketing frameworks.
  - » Develop innovative data-driven marketing mix strategies to address real-world business challenges.
  - » Synthesize sustainable and ethical marketing strategies by integrating business objectives with societal and environmental considerations.

**Course content:**

- » Customer and market insights: introduction to strategic marketing, the five Cs of marketing (company, customers, competitors, collaborators, and climate).
- » Segmentation, targeting and positioning.
- » Strategic marketing mix decisions: product management; pricing and channels; advertising and promotion; sustainable marketing.



## Semester 3

### Omnichannel Customer Experience (7.5 ECTS)

At the end of this course, you will be able to

- » Understand the concepts, theory, and key issues for managing omnichannel customer experiences.
- » Solve business problems in omnichannel marketing and customer experience management.
- » Appraise the go-to-market systems of companies or organisations.
- » Demonstrate analytical and business communication skills, oral and written.

### Marketing Experimentation and Personalisation (7.5 ECTS)

At the end of this course, you will be able to

- » Understand the differences between correlation, causation, and reverse causation.
- » Design a data collection process that ensures a causal analysis is feasible.
- » Appraise the assumptions needed to ensure proper causal inference.
- » Interpret estimates of causal effects, given a set of assumptions.

## Semester 4

### Marketing Response Analytics (7.5 ECTS)

At the end of this course, you will be able to

- » Apply machine learning methods to measure responses to marketing actions.
- » Evaluate data-driven insights into competitor responses, market structure and market heterogeneity.
- » Evaluate different marketing mix decisions using data.

### Future Visions for Marketing and Data Intelligence (7.5 ECTS)

At the end of this course, you will be able to

- » Use a step-by-step methodology to achieve strategic foresight.
- » Understand how consumers respond to emerging technologies.
- » Develop innovative ideas based on the analysis of the future.
- » Evaluate the ethical, legal, and privacy challenges that arise from the use of data and in AI in marketing.

#### Course content:

- » Channel Selection: course overview; going to market; the go-to-market model and its evaluation; channel selection; selling direct or through intermediaries; managing multiple channels; grey markets; and response to grey markets.
- » Channel Management: managing channel partners; vertical integration (i.e., make versus buy); competing in the channel; direct-to-consumer (DTC) channels; retailing; e-commerce; and omnichannel.
- » Management within the channel: cutting out the middleman; evaluating DTC channels; new intermediaries in distribution.
- » Channel experience: understanding the customer experience; market basket analysis; recommendation systems (e.g., content, and collaborative filtering approaches).

#### Course content:

- » Causal inference fundamentals: introduction; instrumental variables; synthetic control; matching; regression discontinuity.
- » Experimentation and optimisation: A/B testing; multi-armed bandits; conjoint analysis.
- » Causal machine learning: causal machine learning methods; marketing applications.

#### Course content:

- » Introduction to marketing mix models: effects of pricing, promotions, and advertising; univariate time series.
- » Dynamics, attribution, and allocation: advertising stock; interactions and attribution; pricing and budget allocation with aggregate-level data.
- » Advanced marketing response analytics: market structure with cross-elasticities; machine learning for multivariate time series; individual choice models.

#### Course content:

- » Foresight fundamentals: strategic foresight theory; step-by-step research methodology.
- » Innovation: new business models; innovation and emerging technologies; consumer responses to emerging technologies.
- » Ethical, legal, and privacy issues: ethical and legal issues; privacy issues with AI and data in marketing.
- » Team presentations, key takeaways and 'your future vision' ideas.

# Methodology and assessment

**Our carefully designed blend of learning activities and resources provides a structure with ample flexibility such that you can plan for and engage with the learning materials at a time and place most convenient for you.**

### Independent study

Core and background information is delivered for you to take in and process when convenient, providing more flexibility than a scheduled programme on campus. For example, working on online materials such as knowledge clips, guided readings, discussion forums, and online workbooks can be fitted around your other obligations.

### Live sessions

Students in our online programmes have personal sessions with their study advisors, in the same way as our students on campus. You will have weekly live sessions with your professors when you are invited to share knowledge and learn from each other. These live sessions are also used to discuss and reflect on your understanding of the most important aspects of the course – this is when you can discuss the course materials, and ask questions for clarification or to further your knowledge.

### Hands-on approach to learning

First and foremost, the programme takes a hands-on approach. The programme's concept for learning is that students learn best when not just listening or reading about new knowledge, but when applying this knowledge themselves.

The programme offers group and individual assignments, including case studies, data analyses and essays, which will bring your new knowledge to life and deepen your understanding of it.

### Assessment

Assessment of individual and group learning is done through various formats: essays, online discussions, reports, quizzes, presentations, and peer assessments. These different types of assessments provide everyone with the opportunity to successfully demonstrate their competencies ways that fit their preferences.





## Erasmus School of Economics

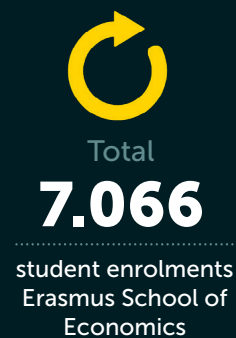
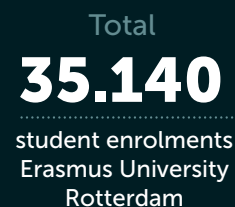
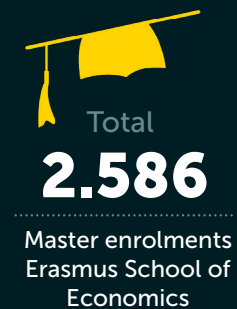
# Integration of research with education

Based in the vibrant city of Rotterdam and at the economic and logistics centre of Europe, **Erasmus School of Economics (ESE)** at Erasmus University Rotterdam has provided outstanding education and produced excellent research for over a century. Erasmus University Rotterdam is home to over 3,700 academics and professionals and 33,000 students from more than 140 countries.

The school has hosted many of the world's renowned researchers and prides itself on the first Nobel prize in economic sciences, awarded to Jan Tinbergen in 1969. Graduates of ESE are equipped for successful careers in the fields of economics, marketing, and data science anywhere in the world. Through their thorough training, they can deliver value to many organisations, integrating theoretical and data-driven analyses to create actionable insights.

You can recognise our alumni by their effectiveness, drive, commitment and academic attitude. We not only devote attention to the issues of today, but we also focus on potential solutions to the problems of tomorrow.

### Academic Ranking of World Universities 2023; subject Economics



### Why ESE?

ESE strives to be the best in its disciplines (economics, business economics and econometrics) and seeks to achieve excellence both in its research and teaching. Visit [our website](#) for more information about our rankings..

There are several international university rankings which Erasmus School of Economics participates in that are considered to be most influential ones. QS World University Ranking, Times Higher Education Ranking and Academic Ranking of World Universities.

### Mission and Vision

Erasmus School of Economics has become a world-leading academic institution for economics and econometrics by pursuing its three main principles:

1. Quality first
2. Integration of top research with top education
3. A strong focus on current and future real-world questions

### Vision

Erasmus School of Economics is the natural choice for ambitious students who wish to study economics, business economics, or econometrics, for academics eager to contribute to relevant and challenging research and education, for alumni eager to continue learning and to share their experiences and for governments and firms seeking reliable advice.

- » World class education provider in economic disciplines and econometrics
- » 7000+ Dutch and international students welcomed every academic year at ESE
- » 31 per cent of Erasmus School of Economics' student population is international, representing 92 nationalities



### History

Erasmus School of Economics' history goes back to 1913, when the Netherlands School of Commerce was founded through a private initiative with broad support from the Rotterdam business community. In 1939, the statutory recognition of higher education in commerce and economics as an academic discipline resulted in the Netherlands School of Economics, the predecessor of Erasmus University Rotterdam.

The university gained worldwide fame with its education and research in the fields of economics, business economics, and econometrics and with its renowned professors such as Johannes Witteveen, who became the first Managing Director of the International Monetary Fund, and Jan Tinbergen, who won the first Nobel Prize in Economics in 1969. Another notable alumnus is Guido Imbens, who won the Nobel Prize in Economic Sciences in 2021, further consolidating the university's reputation for excellence.

The school's **Econometric Institute** is internationally recognised for its groundbreaking work and has Jan Tinbergen, a pioneer of econometrics as a discipline, as one of its founders.



# Admissions and application

## Is this the programme for you?

You see the huge potential of using data to improve marketing decision making. You are an analytical thinker that wants to creatively build on available data to create valuable insights for your organisation. You are eager to learn with and comfortable participating in a diverse, international classroom.

For this online MSc study, you must demonstrate:

- » **Professional achievements:** At least three years of relevant work experience, preferably in a job that builds on data-driven insights to support the organisation's marketing decisions.
- » **Academic excellence:** A certificate from a research university bachelor's degree programme. Your prior education should cover sufficient analytical courses, such as mathematics, statistics or research methods and sufficient marketing or business-related courses.
- » **English proficiency:** a strong command of the English language.

If you already have an extensive data science education but lack relevant business experience, sadly this programme is not a good fit for you.

## Admissions process

### 1. To complete the online application form, be sure you also include:

- » Copies of your certified diploma(s) and transcripts, and certified English or Dutch translations if necessary
- » Motivation letter
- » Your recent CV
- » A copy of an English test score report (TOEFL/ IELTS/Cambridge)
- » A copy of your passport
- » A non-refundable application fee of € 20

### 2. Admissions Interview

Selected applicants will be invited to an online interview.

## Fees & finance

The tuition fee for the programme starting in September 2025 is €19,000.

To secure your place in the programme, a €3,000 non-refundable admissions fee is required upon signing the registration agreement. The remaining tuition can be paid in four instalments of €4,000 each.

Date	Payment	Amount
When applying	Application fee	€ 20
Registration deadline	Admissions fee	€ 3,000
TBC	1 <sup>st</sup> instalment	€ 4,000
TBC	2 <sup>nd</sup> instalment	€ 4,000
TBC	3 <sup>rd</sup> instalment	€ 4,000
TBC	4 <sup>th</sup> instalment	€ 4,000



## Support from Rotterdam School of Management, Erasmus University Rotterdam

This online master is a collaboration between Erasmus School of Economics and RSM BV. RSM BV is responsible for the execution and delivery of this programme on behalf of Erasmus School of Economics.

All inquiries regarding the programme, including contractual matters, should be directed to RSM BV.

Upon successful completion of the programme and fulfilment of all requirements, graduates will receive a MSc degree in Marketing and Data Intelligence from RSM BV, which is awarded on behalf of Erasmus University Rotterdam.

For more information about the legal structure of Rotterdam School of Management BV, visit: [rsm.nl/about-rsm/organisation/legal-structure](https://rsm.nl/about-rsm/organisation/legal-structure).

## RSM has a rolling admissions process

You can apply at any time during the year. Applications are reviewed and admission decisions are made throughout the year.

For more information about entry requirements, forms or our application process, please visit our website: [rsm.nl/online masters](https://rsm.nl/online masters)

## Get in touch

Do you have any questions? We're here to support you, every step of the way. Send us an email at: [online masters@rsm.nl](mailto:online masters@rsm.nl)

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