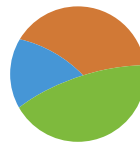


River Delta Development

Master of Science  Velp (Arnhem), Holland



**van hall
larenstein**
university of applied sciences



Towards sustainable delta systems

River Delta Development is a unique master of science degree programme that focuses on the most challenging, ecological topics the world is faced with, within delta areas. Everywhere in the world, urbanisation and climate change are encroaching upon these fertile and ecologically valuable regions. The challenge is to decrease the vulnerability of river deltas, while simultaneously increasing the opportunities for healthy economic and ecological development. Versatile delta professionals are required, who not only have knowledge of river delta systems (coast, fluvial and urban), but also possess the necessary research and communication skills to make meaningful contributions to the environment.

River Delta Development is a cooperative programme developed by Van Hall Larenstein, HZ University of Applied Sciences and Rotterdam University of Applied Sciences.



**ROTTERDAM UNIVERSITY
OF APPLIED SCIENCES**



Degree

Upon graduation you will receive a Master of Science degree. Our master programmes are accredited by the Accreditation Organisation of the Netherlands and Flanders (NVAO).



Duration

1,5 years, starting in September



Location

Middelburg/Velp (Arnhem)/Rotterdam, Holland



Language

English



Admission

To qualify for enrolment you should have a Bachelor degree or equivalent qualification in a relevant subject. You also need to prove English proficiency by providing a certificate issued by selected language institutions (TOEFL 80/IELTS 6.0, or other equivalent certificates).



International classroom



Learning in professional situations



Personal and professional development



Focus on sustainability



Joint learning with stakeholders

Please visit our website for more information:

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Will you become the future facilitator of change?

The Master's programme River Delta Development (MSc) trains students to be facilitators of change for river deltas through:

- in-depth knowledge of the water systems of a river delta by working and learning in various delta zones (coastal, fluvial, urban);
- working with the latest insights and methods in delta technology, design and governance by participating in research programmes of three Dutch Universities of Applied Sciences;
- giving room for personal development as a graduate of the programme, supported by innovative teaching methods and based on a didactically founded competence profile.

Example study programme

Year 1 (46 EC's)	Introduction (4 weeks, Middelburg)	Semester 1: Coastal systems (17 weeks, Middelburg)	Semester 2: Fluvial systems (17 weeks, Velp)
	<ul style="list-style-type: none"> • Introduction into riverdelta systems • Excursion • System analysis • Transition theories • Case study • Learning plan 6 EC	<ul style="list-style-type: none"> • Insight into coastal systems 5 EC <ul style="list-style-type: none"> • Research in Living Labs including coaching, transition and intervention 15 EC <ul style="list-style-type: none"> • Assessment 	<ul style="list-style-type: none"> • Insight into fluvialsystems 5 EC <ul style="list-style-type: none"> • Research in Living Labs including coaching, transition and intervention 15 EC <ul style="list-style-type: none"> • Assessment
Year 2 (44 EC's)	Semester 3: Urban systems (17 weeks, Rotterdam)	Final Phase (3 weeks, Rotterdam)	
	<ul style="list-style-type: none"> • Insight into urban systems 5 EC <ul style="list-style-type: none"> • Research in Living Labs including coaching, transition and intervention 15 EC <ul style="list-style-type: none"> • Assessment 	<ul style="list-style-type: none"> • Final assignment • Conference presentation • Oral assessment 24 EC	



Learning together in Living Labs

Worldwide we face several challenges like large scale urbanisation, sea-level rise, extreme drought, climate change and large scale pollution. Each of these global challenges need a local solution. During the programme, you carry out fieldwork (on average, three days a week), where you become a part of the solution in our Living Labs. Living Labs are research and learning environments where professionals, researchers, and students do fieldwork together. Examples of Living Labs are:

- **Coastal Defense** (South West Netherlands)
The danger of flooding is an urgent (and on-going) challenge that needs constant attention. One of the topics in our Living Lab is coastal defense by oyster reefs. A sustainable and ecofriendly solution to keep the coast from flooding.
- **Rivers and Green Energy** (Eastern Netherlands)
The world is in need for green energy. Hydropower dams are not sustainable but there is a variety of innovative ideas that might offer a solution. They involve solar systems, fish friendly hydro turbines, biomass etc.
- **Tidal Parc** (Rotterdam)
The challenge in this example stretches from increasing biodiversity to increasing flood resilience and its public awareness. The solution is a tidal park where all challenges are met and a base is created for urban development to create a new, significant public space for the city.

Themes

We start with an extensive introduction in which we fully prepare you for the three semesters ahead. You will get to know your fellow students, lecturers, and professors and delve into the delta during a one-week field trip.

Semester 1

- Insight into coastal systems: coastal defense, building with nature and water technology
- Research in Living Labs
- Assessment of your own research in relation to the delta as a whole and the issues in that environment

Semester 2

- Insight into fluvial systems: water safety approach and water governance
- Research in Living Labs
- Assessment of your own research in relation to the delta as a whole and the issues in that environment

Semester 3

- Insight into urban systems: water sensitive cities and sustainable port development
- Research in Living Labs
- Assessment of your own research in relation to the delta as a whole and the issues in that environment
- Graduation phase in Rotterdam



Studying in Holland

Holland is well known for being open-minded, tolerant and internationally oriented. Study and living costs are affordable and the quality of Dutch institutions is well-recognised. Off campus you can explore the picturesque nature areas that surround our site in Velp by foot or bike. Throughout the year there are several free festivals, markets and concerts where you can hang out with your friends and meet the locals. Amsterdam, The Hague, Berlin and Paris are only a short train journey away.

“I look at water challenges from a broader perspective”

After completing my bachelor's degree Land and Water Management at Van Hall Larenstein, I felt that there was more to learn about the mechanisms behind spatial and water safety challenges in the Netherlands. Where we learned how to engage in these challenges during our bachelor, the master learns you to understand the system and how to effectively intervene in it. This goes beyond for example, calculating dyke heights and failure mechanisms. It lets you think about water safety measures altogether and ask yourself the question “Is it always necessary?”. When completing this master, I am able not just to answer the question “How can we do this?” but also “Why?”. I already look at challenges in the water sector from a broader perspective.”

Jonathan van Ekris, Masterstudent River Delta Development



Come by for a visit or meet us online!

We would be pleased to welcome you. In addition to our open days, VHL also organises orientation days, one-on-one conversations with students and lecturers, as well as other events. For the latest information and registration, please visit:



Facts and figures

	Theory	Practice
8 lesson hours	30%	70%
24 living lab research hours		
	Individual	Teamwork
8 hours of self study	30%	70%

These facts and figures give an estimate of the time you spend on your studies on a weekly basis.

Career opportunities

Compared to a bachelor degree this master programme increases your knowledge and improves your career opportunities. You develop the right skills and tools to work on more complex issues. Upon graduation your career prospects will be varied and covering a wide range, including:

- Process manager
- facilitator of delta-related change
- water manager
- researcher
- project leader
- (senior) consultant



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Questions?

Are you a future student and do you want to know more about this programme? Please contact us!

+31 (0)58 284 62 32

info@vhluas.com

www.vhluas.com