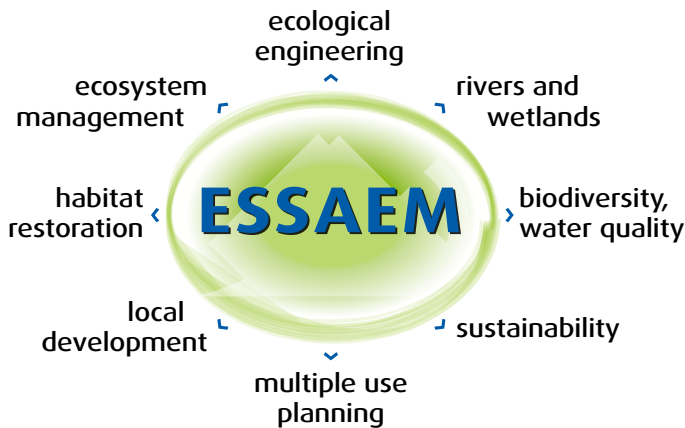


An international programme at the University of Tours, France

Beginning in January 2014

Master (M.Sc.) in Engineering Sciences for Sustainable Aquatic Ecosystem Management (ESSAEM)



A river in rapidly urbanising Bangladesh



Niger River, Mopti, Mali

THE PROGRAMME

→ The purpose of the **ESSAEM** Master's degree programme is to improve the training of professionals from tropical and sub-tropical regions of Africa, Asia and Latin America, who are involved in water management, conservation and restoration of watercourses and their ecosystems. This one-year programme delivered in English is held at the University of Tours (25,000 students) in the Loire River Valley (a UNESCO World Heritage site), France.

Background | Worldwide, there is an increasing need to plan and conserve aquatic or semi-aquatic systems, such as rivers, wetlands, lakes and their riparian zones and floodplains. This is especially true for tropical areas characterised by fast-growing populations and high rates of urbanisation. These concerns are reflected in the UN Millennium goals targeting the reduction of the negative impacts of human activities on aquatic systems and their rich biodiversity. They also encourage sustainable forms of sanitation and waste water treatment, healthcare (fight against water-borne diseases), controlled urbanisation and the restoration of wildlife habitats. These issues are central to the ESSAEM Programme.

Prospective students | Junior to senior professionals and qualified academic students desiring to improve their mastery of tools and techniques for the conservation and restoration of watercourses and water quality management.

Prospective students should be already familiar with one or several of the following topics:

- › Mitigation of environmental impacts on hydro-ecological features, including drainage, channelisation, impounding, sediment removal, land-filling, *etc*,
- › Control of land-use changes in river corridors and watersheds, especially in urban areas,

- › Monitoring and analysis of water quality data,
- › Bio-engineering techniques,
- › Management and treatment of water polluted by urban, industrial or agricultural uses,
- › Water-related health risks,
- › Regional/rural and urban planning in wet environments or/and in river corridors.

Professional achievements | After successful completion of the programme, students will be expected to:

- › Have a good command of the relevant tools and techniques for water quality management and the conservation/restoration of freshwater ecosystems.
- › Be able to select the most appropriate tools and techniques for a specific context geographic setting.
- › Be able to conceive and implement integrated solutions, which are environmentally, technically, culturally and economically feasible.

Potential employers: Graduates from ESSAEM will be able to work with **consultancy firms, NGOs, national and local government agencies, specialised international agencies, etc**

Content and calendar | The programme curriculum is divided in three periods. During the first period - **A: Introduction** - starting in January of each year, the participants will focus on the basics of river-related environmental engineering, including characterisation and functioning of hydro-systems, types of environmental impacts and their assessment.

Irrigation project, Mato Grosso, Brazil



Gravel quarrying, Burundi



The town of Chinon on the Vienne River

During the second period - **B: Specialisation** -, from March to May, courses will focus upon engineering approaches, including tools and techniques, with a concentration on operational aspects relating to:

- › Water Management,
- › Bio-Engineering,
- › Infrastructure and Sanitation.

From January to May, courses will take place at the Chinon campus of Tours University located in a historic town on the Vienne River

During the third period - **C: Professional training** -, from June to September, each student will be required to complete a 4-month professional internship/work placement, involving fieldwork in his/her country of origin (exceptions will be allowed if the added-value of an internship in France can be demonstrated). Internships will be the basis of a Master's thesis (indicative date of submission: mid-October). Theses may be defended by videoconference between Tours and the student's place of residence in early December (presence in France not required).

STUDENTS' PROFILE

→ Candidates from tropical, arid, or semi-arid areas in Africa, Asia, Latin America or Pacific Rim countries are especially welcome. Students from temperate zone countries with a keen interest in the thematic areas covered by the programme may also apply. Applicants should hold a Bachelor's or preferably a Master's degree in environmental or engineering sciences. Applicants with a relevant professional experience are also encouraged to apply (work experience equivalency possible under certain conditions).

How to apply | In their application, candidates will have to include a 2-page (max.) letter of motivation demonstrating how attending the programme will help them achieve their professional objectives. They are also strongly advised to include a letter of recommendation from current or previous employers, stating their professional motive for enrolling in the programme. A detailed application form is available from the Programme's admission office (see contact address below).

Language requirements | Eligible students must be fluent in both spoken and written English since English will be the teaching language (and preferred language for the writing of the M.Sc. thesis). Candidates may have to take a language test as part of the recruitment procedure. Proficiency in French will be considered as an asset. Upon the prior approval of the faculty (request must be made in their application), students may be allowed to write their exams and papers/theses in French or other languages (Spanish, Portuguese).

Enrolment | A maximum of 15 students will be admitted each academic year. Collaborations with universities in developing countries or emerging economies are encouraged (*e.g.*, student exchanges).

Application deadline | 20 June of each academic year for enrolling in the following year's programme (*e.g.*, 20 June 2013 for January 2014).

Teaching staff | It is the primary goal of ESSAEM to deliver a platform for the exchange of approaches and solutions. Teaching staff includes scientists and professionals from all over the world who are recognised specialists of aquatic ecosystem management, biology, hydrology, geology and geography, waste and water management, health and epidemiology, civil engineering, rural and urban planning, project management, economics of environment and development studies.

FURTHER PRACTICAL INFORMATION

Campus | Most courses will be held at the Chinon Institute for River Research, University of Tours. Chinon is a historic town on the Vienne River, a tributary of the Loire, and is located 50km from Tours (135,000 inhabitants) and 240km to the Southwest of Paris. Some courses will be held jointly with students from IMACOF (Department of Engineering of Aquatic and River corridors, University of Tours), and from the Urban and Regional Planning international programme of the University's Polytechnic School (at the Grandmont and Deux Lions campuses in Tours outskirts, respectively). A detailed curriculum of the ESSAEM Master course is available from the homepage:

imacof.univ-tours.fr/en/essaem.html

Inquiries and admissions | Fanny TOUZE, imacof@univ-tours.fr (please mention 'ESSAEM' in your message title), postal address: Dept. IMACOF, Parc Grandmont, 37200 Tours, France.

<http://Imacof.univ-tours.fr>

Tuition Fees | €4,000 (housing/accommodation not included. Reduced fees may be possible upon request for a few meritorious students)

Student housing | Available through the university.

Living expenses in Tours | Approximately 1000€/month for food, housing and insurances; travel and other extras not included

Visa requirements for international (non-EU) students

In order to successfully apply for a student visa, you must be able to show that you have enough money to cover your tuition fees and living expenses in France for up to one year. See also:

www.diplomatie.gouv.fr/en/france/coming-to-france/getting-a-visa/



Drainage in Lao PDR