

• **Course Name**



Erasmus Mundus Joint Masters Degree in **Aquaculture, Environment and Society (ACES-STAR)**

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Aquaculture Master's Degree:

www.emm-aces.org

• **About the University**

University of Crete (UoC) is the EMJM ACES-STAR Programme Coordinator and here you will spend the second semester in Year 1 of your studies. UoC, established in 1973 and accepted its first students in 1977-7, is a young public educational institution committed to excellence in research and teaching. The international orientation of the University is reflected in its track record of collaborations with many of the leading research and educational institutions in Europe and worldwide as well as active promotion of mobility and exchange programmes. Reflecting its research activity and associated initiatives, the University of Crete is the first Greek University to have signed the EU Charter and the Code for the recruitment of researchers, and forms part of the Euraxess European network for the mobility of researchers. During your time at the University of Crete, you will be based at the Department of Biology and will work closely with the Institute of Marine Biology, Biotechnology and Aquaculture, based at the Hellenic Centre for Marine Research (HCMR). The Biology Department is a centre of excellence, focusing on fish physiology, endocrinology, behaviour, fish welfare, product quality, as well as on aquaculture-environmental interactions of

Mediterranean marine species. Many of the key staff involved with this programme have international reputations in aquaculture-related topics and considerable experience in coordinating Erasmus placements in industry.

• **About the Course**

The Erasmus Mundus Joint Master (EMJM) in AquaCulture, Environment and Society STAR (ACES- STAR) is a two-year program fully taught in English. It is organised around a truly global learning environment, to reflect the international nature of the industry. The highly diverse cultural background of the students, recruited at the global level, combined with the mobility of up to 4 countries and teachers from 'Centres of Aquaculture Excellence' in different EU and non-EU countries will make this EMJM ACES-STAR program a unique learning and life experience. This Master aims at preparing graduates with a solid knowledge and advanced practical skills expected by academic, public or the private sectors. Traditional and innovative teaching and learning methods also ensure the development of digital and critical soft skills. The first three semesters of the program are organised around a progressive specialisation, involving gaining a basic understanding of the global aquaculture industry, before focusing on the major groups of cultured species, their environmental interactions, new technologies and systems, health, welfare, product quality and refinement and how the industry is governed. The final semester is devoted to an internship in an academic institution, in a public body or in private corporation and the production of the dissertation. Throughout the program, the learning process is enriched by the continuous exposure of students to academic research, business leaders and real-life practical experience provided by over 60 associate partners and external experts from across the globe. Students are given the opportunity to participate in seminars, conferences and meetings with business leaders. The end goal is to enhance opportunities for employment, through building networks, gaining extensive practical experience, as well as learning to deal with different languages and cultures.

• **Course Name An innovative Curriculum**



Erasmus Mundus Joint Masters Degree in
**Aquaculture, Environment and
Society (ACES-STAR)**

The Erasmus Mundus Joint Master Degree in AquaCulture, Environment and Society-STAR (EMJMD ACES-STAR) is a 120-ECTS course that runs for two years and involves study periods in three (or more) different European countries. This movement allows students to gain experience and networking opportunities in European 'Centres of Excellence' for aquaculture research and learning, the chance to learn new languages and, of course, the experience of living in different cultures and making friends with students from all over the world!

• Graduate Outcomes

Students will gain a broad understanding of the key principles of aquaculture and an in-depth knowledge of the many major scientific, technological and social challenges facing the sustainable development of the global aquaculture industry, including fin-fish, crustaceans, bivalves and seaweed. Key challenges influencing the sustainability of the industry include; environmental issues, nutrition, feed formulation, disease, welfare, reproduction and genetics, product safety, ecotoxicology, aquaculture systems.

Students will also be provided with key 'life' skills training, such as presentation, networking, social media, entrepreneurship. This unique programme will, therefore, equip students with the essential skills required to establish, manage and/or assess aquaculture activities either from a research, public authority or commercial perspective and to communicate confidently with industry representatives or the public sector.

• Career Opportunities

The close links we have with the aquaculture industry globally facilitates excellent employment prospects for our students, whether in the commercial or public sector and/or academia. So far, several former EMJMD ACES students have gained PhD positions in universities in the UK, Europe, South America and Australia, several are working as lecturers in universities and marine institutes, and approx. 2/3rds are working in industry. Many of our former students have also had articles published in peer-reviewed journals.

The objectives and format of the EMJMD ACES-STAR allows for graduates to be equipped to work in senior management roles in a wide range of settings, including fin and shell-fish farms, environmental and regulatory organisations, international trade organisations, and also non-governmental organisations.

Expected career paths include:

Company manager: work with a team to innovate and develop farm operations to boost productivity.

Policy and strategy: develop aquaculture-related procedures, guidelines and policies

Project development: create and implement aquaculture-related projects.

Applied research: design and carry out research into environmental and/or social issues and the effectiveness of certain practices and innovations in the aquaculture industry.

Stakeholder partnership: build networks and collaboration, especially to raise the profile of the aquaculture industry and develop consensus to promote sustainable practices.

The EMJMD ACES-STAR programme is also geared towards developing professional practice and policy. Close links with the aquaculture industry and legislators are central to this programme. Our objectives explicitly promote the interests of the industry and cooperation with other professionals.

• Information about the course

The EMJMD ACES STAR is a 2-year programme that is modularised to enable flexibility for learning whilst at the same time maintaining the very highest standards of training. The modular structure allows the student to make subject choices according to their future career aspirations. The course is divided into nine taught modules and a single research project module. The overall course is divided into four parts or semesters:

<p>Semester 1</p> <p>LOCATION: Scottish Association for Marine Science (SAMS), Scotland</p> <p>MODULES: Overview of Global Aquaculture Aquaculture Environmental Interactions</p> <p>OPTIONAL (ONE) Innovation, Technology & Systems Aquaculture Governance & Society Managing Biological Lifecycles – Micro & Macroalgae</p>	<p>Semester 2</p> <p>LOCATION: University of Crete, Greece</p> <p>MODULES: Managing Lifecycles in Captivity: Finfish biology, nutrition, & reproduction Fish Quality – Environmental & Genetic Components</p> <p>OPTIONAL (ONE) Professional & Entrepreneurial Skills, including a 3-month internship Fish Welfare & Disease Management Environmental Impact Assessment for Aquaculture</p>
<p>Semester 3</p> <p>LOCATION: Nantes Université, France</p> <p>MODULES: Shellfish Lifecycle Marine Product Safety</p> <p>OPTIONAL (ONE) Refinement & Development of Marine Natural Products Food Composition, Trophic Transfer & Human Nutrition</p>	<p>Semester 4</p> <p>LOCATION: Students are able to choose a dissertation project either at one of the partner or affiliated partner universities or research institutes, based on their choice of topic & availability of staff with the relevant research expertise.</p> <p>MODULES: Dissertation - A 6-month dissertation will help students to investigate & evaluate a chosen aspect of the aquaculture industry.</p>

• The Department of Biology

The Department of Biology of the University of Crete was established in 1981 and is today an internationally recognized center for contemporary university education and research in the field of Biology. Arguably the choice vindicated through the complete education and training, in a high quality environment, with excellent scientists who offer training that contributes to the fullness of the knowledge of a biologist, fosters scientific thinking and provides the Greek and International era with people well trained to serve the science of biology.

. Other Information

If you wish to apply for a place on this programme which starts September, please contact us at ACES@sams.ac.uk. Applications from EU and non-EU applicants are welcome – the course.

The closing date for Erasmus Mundus Scholarship applications is typically February. The closing date for self-funded students is in August.

Fees and Scholarships:

The cost of tuition fees per academic year is €5000 for international/non-EU students and €2500 for EU/UK students.

We have a number of Erasmus Mundus scholarships, funded by the EACEA of the European Union, which will meet the cost of tuition fees and provide a contribution towards travel and daily living expenses. Please note: Erasmus Mundus scholarships are subject to

For more information please email aces@sams.ac.uk.

What our students say...

“Being able to research & explore shellfish & finfish aquaculture in various countries in Europe through the ACES programme has been an unforgettable experience. The knowledge shared between fellow classmates & also the experts in academia & industry has allowed me to continue to grow my networks & friendships. I’m so grateful for being accepted onto the ACES programme, as it helped me springboard my career in fish health”, ACES 2020 alumni Aaliyah Malla

Find us on Social: [@AquaStudents](#), Facebook - Instagram - Twitter – LinkedIn

Scan for more information about our Joint Master’s in Aquaculture, Environment and Society STAR or visit www.emm-aces.org

