



future ocean
KIEL MARINE SCIENCES

EDUCATION FOR THE FUTURE OCEAN

The Integrated School of Ocean Sciences (ISOS)

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The Cluster of Excellence "The Future Ocean" in Kiel, Germany, is a unique research group of more than 250 scientists from six faculties of the University of Kiel, the GEOMAR | Helmholtz Centre for Ocean Research, the Kiel Institute for the World Economy and the Muthesius Academy of Fine Arts and Design. The Cluster establishes marine sciences as a thematic focus of the University. It unites natural scientists, economists, lawyers, computing and medical scientists in frontier research into the scientific, economic and legal aspects of the seas.



MARINE SCIENCE EDUCATION

Several Bachelors (in German) and internationally-oriented Masters Degree Courses (in English) are taught at the University of Kiel (see graphic at right). The PhD programme of the Integrated School of Ocean Sciences (ISOS) – the education platform of the Cluster of Excellence "The Future Ocean" - focuses on interdisciplinary education outside of curricular courses. It offers supplementary training, a framework of supervision, mentoring and mobility for doctoral candidates. At the ISOS, students sharpen their scientific profile, are challenged to think beyond their discipline and to equip themselves for life after a PhD. Over 130 PhD candidates from 5 faculties participate in the PhD programme, forming a large interdisciplinary network.

www.futureocean.org/isos

Integrated School of Ocean Sciences (ISOS)

PhD Programme in Marine Sciences

Degree Courses in Marine Sciences

Multidisciplinary

- | Economics
- | Law of the Sea
- | Computing Science
- | Marine Medicine
- | Art and Design
- | others....

Marine Geosciences MSc

Climate Physics: Meteorology and Physical Oceanography MSc

Biological Oceanography MSc

Geowissenschaften (in German) BSc

Physik des Erdsystems (in German) BSc

PhD Support

- | Supervision
- | Training
- | Mentoring
- | Mobility
- | Life after a PhD
- | Web-based learning

MARINE RESEARCH AND EDUCATION

Vibrant, Dynamic, Interdisciplinary

Marine science education in Kiel is largely research-driven and focuses on training the next generation of scientists to investigate the role of the oceans in global change, assess resources and risks arising from the use of the oceans and implement sustainable management of living and non-living resources. Basic fundamental research is supplemented with applied science in a national and international framework that includes partners from industry and public life.

The ISOS PhD Programme

PhD candidates are recruited by members of the Cluster of Excellence directly and obtain their degrees in their respective faculties. Through choosing to join the PhD programme, candidates gain access to additional training, mentoring, multidisciplinary exposure, financial incentives and activities that supplement their disciplinary research.

The focus at the ISOS is on providing tangible benefit to the individual PhD, through early exposure to topics beyond research such as social responsibility, public communication and global sustainability. Input to the programme by senior cluster members, alumni and persons from industry and public life encourage PhD candidates to form networks early and set their goals for life after the doctorate.

Photos: Daniela Menge und JAGO-Team/GEOMAR

PhD topics within "The Future Ocean" include

- | marine ecosystems: adaptation, evolution and change
- | ocean circulation: observation and modeling
- | geoengineering: scientific, economic and legal options
- | the sea floor: resources, risks, hazards
- | marine medicine: model organisms for human systems
- | computing sciences: algorithm optimisation
- | sustainable fisheries: economy, ecology, law

...see www.futureocean.org for a full profile

Support Structure

Thesis Committees | Peer Mentoring | Mentoring at Scientific Fairs
Financial Support | Miniproposals ...

Life after a PhD

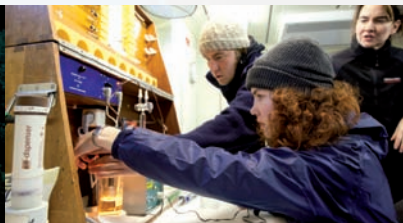
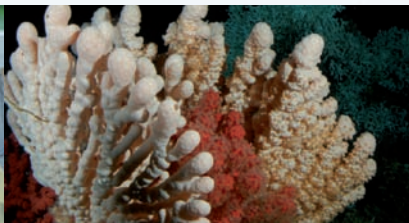
Career Evenings | Science meets Industry | Entrepreneurship
"Meet the Prof" | PhD Retreats ...

Personal Competencies

Peer Reviewing: An Insiders View | Good Scientific Practice
Moderating a Discussion | Grant Writing | Poster Presentation
„Setting the Compass“ for a PhD | Presentation Techniques and Rhetoric | Science Communication | Scientific Writing Lab
Project Management | Writing for the Public Press
Career Planning in R & D ...

ISOS Courses for Marine Sciences

GIS (Basic and Advanced) | MATLAB (Basic and Advanced)
Mass Spectrometry & Optical Spectroscopy | Data Mining
Law of the Sea | Applied Statistics | Parameter Optimisation
Numerical Modelling | Natural Resource Economics
Novel Approaches to Molecular Biology | Ocean Data Bases
Carbon Footprinting | Ocean Acidification | Carbon Cycling | ImageJ
Open Access Publishing | Digital Image Optimisation ...



To join the PhD Programme

- | you should have a PhD position with a cluster member
- | please apply through our website (www.futureocean.org/isos)

You may also contact us or a cluster member to find a PhD topic to support an application for a stipend.

Contact us for further information

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