

## Master programme “Meteorology, Physical Oceanography and Climate” will continue as “Climate Physics” in 2016

By Aarnout van Delden (IMAU, Utrecht University)

(<http://news.imau.nl/?p=2490>)

See also the Climate Physics Master Film: <http://news.imau.nl/?p=2832>

In September 2015 20 new students, of which seven from abroad, started the two-year master programme “Meteorology, Physical Oceanography and Climate”, also known by the acronym, “MPOC”. Presumably, this acronym will vanish from the vocabulary at IMAU. Next year the master programme will continue as “Climate Physics”.

Since its commencement in September 2003, as a result of the Bologna agreement, the MPOC-master programme has attracted on average 16 students per year. During the past few years all master programmes at Utrecht University have gone through a process of re-certification. The certifying committee, led by Professor Frits van Oostrom, demanded a shorter name than “MPOC” and suggested “Climate Physics”. This name fits better with “Theoretical Physics” and “Experimental Physics”, which are the names of the two other master programmes in the department of physics. The MPOC-master has now received renewed official recognition under the name, “Climate Physics”.

Since September 2006, 166 students have started the MPOC-master. The table below lists the number of MPOC students per academic year. This number, clearly, has fluctuated wildly, with a high of 27 in 2012-2013 and a low of only 9 in 2010-2011. A great majority of these students (105 or 63%) was admitted to the MPOC-master with a bachelor degree in physics, while 29 (17%) were admitted with a bachelor degree in Earth Sciences and 11 (7%) were admitted with a bachelors degree from the University College Utrecht. The majority of the students with a bachelor degree in physics obtained this degree in Utrecht (79 or 75%), while less than one third (9) of the students with a background in earth science obtained their bachelor degree in Utrecht. The number of foreign students that enrolled in the MPOC-master since September 2006, amounts to 39 (23%), of which 12 from Greece, 6 from the UK, 4 from Germany and 4 from Italy.

| year      | number |
|-----------|--------|
| 2006-2007 | 12     |
| 2007-2008 | 14     |
| 2008-2009 | 12     |
| 2009-2010 | 25     |
| 2010-2011 | 9      |
| 2011-2012 | 11     |
| 2012-2013 | 27     |
| 2013-2014 | 15     |
| 2014-2015 | 20     |
| 2015      | 20     |

Number of students that started the MPOC-master programme per academic year.

The first year of the Climate Physics master consists of theoretical courses, amounting to a total of 60 European Credits (EC's). Three courses (22.5 EC) are compulsory: Dynamical Meteorology, Dynamical Oceanography and Atmospheric Composition and Chemical Processes. The second year of the Climate Physics master starts with two practical courses with a strong focus on skills such as programming, data-analysis and communication. The first course is concerned with simulation of ocean, atmosphere and climate. The second course is concerned with making, analyzing and interpreting observations. These two courses function as preparation for the thesis research project, which takes up the remainder of the second year (45 EC). The topic of the thesis can be classified into 4 research themes, i.e. Meteorology, Physical Oceanography, Ice and Climate and Physics and Chemistry of the Atmosphere. Physical Oceanography is the most popular topic. An impressive 44% of all students pick a topic in Physical Oceanography. Meteorology accounts for 28% of all thesis projects. Many of these projects are carried out at KNMI.

The first step in the career of 91 students, which were admitted since September 2006 and completed the MPOC-master, is known. A very large percentage (57) of these students was accepted in a PhD program (19% at IMAU and 19% at a foreign university), while 9% started a career as an operational meteorologist. Only 3 students chose to become a teacher of physics or mathematics. Most others have found jobs at institutes and companies, which are concerned with applied research in Earth Science, Energy, Instrumentation, Information Technology and Finance.