

EMOS - European Master in Official Statistics

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The European Master in Official Statistics (EMOS) is no longer only a good idea, EMOS is real. After two years of discussions and two further years of preparatory work, the first EMOS call for interest was published this summer. 22 universities from 13 European countries expressed their interest to participate in the EMOS network. If admitted through this round, the pre-selected Master programmes and respective statistical authorities will be invited to participate in the preparatory workshop and subsequently to apply for the EMOS label in the first quarter of 2015. When approved by the European Statistical System Committee (ESSC)¹ meeting in May 2015, the first Master programmes with the EMOS label will start in autumn 2015.

The article describes the main steps towards the implementation of EMOS, in particular the EMOS curriculum and the governance model. It further presents the main eligibility and selection criteria and gives a brief overview of the next steps and long-term prospects.

I. Background and brief history

Following the first EMOS workshop in Southampton in 2010², a voluntary group, comprising National Statistical Institutes (NSIs) and universities from 12 European Union Member States was set up to draft a vision document on EMOS. The concept was presented in spring 2011.

In autumn 2011, Eurostat selected EMOS as a Vision Infrastructure Project in line with the objective of “creating a true European research and training facility in statistics” as provided for in the Communication from the Commission to the European Parliament and the Council on the production method of EU statistics: a vision for the next decade³.

In spring 2012, Eurostat launched a call for tender for the feasibility study “Towards a European Master in Official Statistics” with the feasibility study starting at the end of 2012. The results of the feasibility study, finalised at the end of 2013, were drawn from 151 replies from European universities to an online survey as well as individual interviews at universities and NSIs in 14 European countries.

¹ The ESSC is chaired by the European Commission (Eurostat) and composed of the representatives of Member States' National Statistical Institutes. For more information on the European Statistical System (ESS) please see http://epp.eurostat.ec.europa.eu/portal/page/portal/pgp_ess/ess/ess_news.

² For the EMOS workshop in Southampton please see <http://www.s3ri.soton.ac.uk/courses/european-masters/>.

³ COM(2009) 404 final, 10.8.2009.

The feasibility study resulted in the following main findings and recommendations⁴:

- Given the national differences in the accreditation of new Master programmes, it was recommended to implement EMOS as a label for existing Master programmes. The EMOS label must stand for *excellence* in European statistics and apply quality standards recognised by all stakeholders.
- EMOS raised interest in the majority of the universities visited as long as there was no major impact on the core parts of the Master programmes. Moreover, some programmes were ready to implement EMOS with minor changes in their curricula according to the criteria proposed by the feasibility study. There were also universities willing to join, but not fulfilling the criteria yet.
- Syllabus and governance structure for EMOS had been proposed and further developed by Eurostat in cooperation with the Group of Experts⁵.

II. EMOS concept

Based on the recommendations of the feasibility study, Eurostat and the Group of Experts developed the models for the EMOS curriculum and EMOS governance.

The concept for the implementation of EMOS was presented to the General Directors of NSIs in their ESSC meeting on 14 May 2014. Following the favourable opinion, the concept was presented at the EMOS workshop in Helsinki to the EMOS community in June 2014.⁶

II.1 EMOS curriculum

The recommendation of the feasibility study was to implement EMOS as a label for existing university Master programmes. The consensus by the Group of Experts was that the requirements should be flexible enough that all interested universities could in principle participate under the condition that the candidate Master programme meets the defined requirements.

Thus an EMOS-labelled Master will be made up of four main parts:

- EMOS module (approx. 10% of ECTS⁷ credits);
- Semi-elective courses (approx. 30% of ECTS credits);
- Elective courses (approx. 25% of ECTS credits);
- Internship and Master thesis (approx. 35% of ECTS credits).

⁴ For detailed results of the feasibility study please see <http://www.cros-portal.eu/content/results-feasibility-study>.

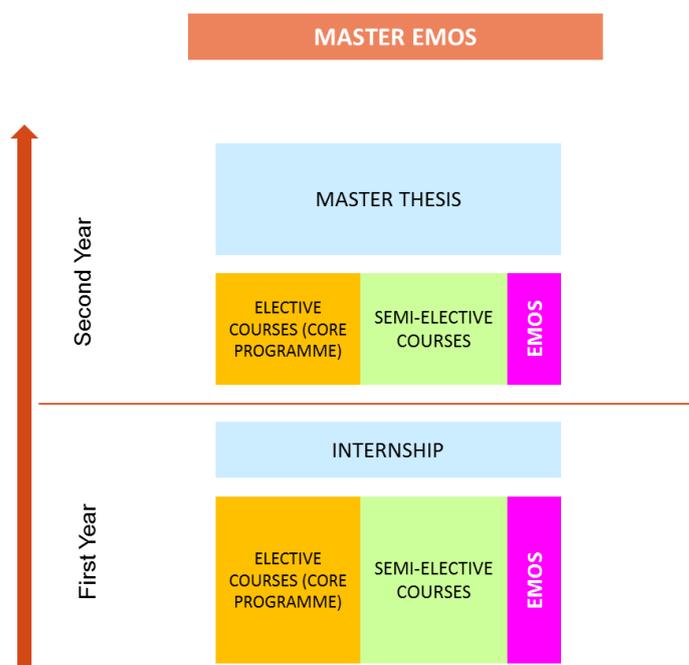
⁵ The mandate of the Group of Experts created in 2013 included assessment of the results of the feasibility study and making proposals for the EMOS curriculum and governance structure. For more information, please see <http://www.cros-portal.eu/content/members-group-experts>.

⁶ For the EMOS workshop in Helsinki see <https://wiki.helsinki.fi/display/EMOS2014/Home+EMOS>.

⁷ European Credit Transfer and Accumulation System.

The current phase should serve to implement the EMOS curriculum in running Master programmes; therefore, some flexibility will be required to align EMOS requirements with the structure of different programmes such as Master in Statistics, Master in Economics, Master in Economic Analysis; Master in Survey Statistics; Master in Business; Public Policy and Management, etc.

Table 1: The EMOS curriculum



EMOS Module

The EMOS module is compulsory and includes topics of Official Statistics and a European dimension. The content of the EMOS module is described in the following positive list:

European Statistical System (ESS), Code of Practice, Quality, Production Model, Data Management, Metadata, Sampling Theory, Statistical Disclosure Control, Data law, Administrative Data, Big Data in Official Statistics, Classification, Evaluation and Monitoring, Statistical Data Editing.⁸

Following the end of the implementation phase, the EMOS Board⁹ will be able to evaluate the module.

Semi-Elective Courses

The semi-elective courses include empirical and statistical issues. These topics are offered by many university courses and in different Master programmes. Universities

⁸ Currently, Eurostat and the Group of Experts work on the detailed description of the content of the EMOS module. The detailed EMOS module will facilitate the preparation for the universities and NSIs participating in the EMOS network.

⁹ The EMOS Board is a part of the EMOS governance structure, please cf. chapter II.2.

will have the possibility to choose topics in this module, but they are obliged to choose from a definite list, which is why it is only a semi-open process.

The weight of the semi-elective courses should be around 30 % of ECTS of the whole Master programme. The content of the semi-elective courses are also described in the positive list below which includes many more subjects than necessary for 30 % of credits of a Master programme. The aim is to have a broader range of topics in this module in order to make EMOS compatible with more programmes. It should be possible that Masters in Economics as well as in Survey Methodology find statistical topics in this module that are tailored to their main programme.

The content of the semi-elective courses is described in the following positive list:

Survey Methodology, Government and Public Finances, Demography, Price Statistics, Econometrics, Econometrics of Time Series and Panel Data, Multivariate Statistics, Small Area Estimation and Spatial Statistics, Statistical Computing, Record Linkage and Statistical Matching.

The EMOS Board will be able to review this list after the first evaluation of the project.

Elective Courses

For this part of programme amounting to 25 % of ECTS, universities are completely free to choose the topics.

Internship and Master Thesis

The main objective of this requirement is to establish a regular structure for internships and Master theses, both with the support of NSIs or other statistical authorities. Students should have the possibility to get practical experience within an NSI or other statistical authority. The EMOS Board will assess whether alternatives to an internship within an NSI, such as assistance in a university project like a FP 7 project, can be considered eligible for EMOS.

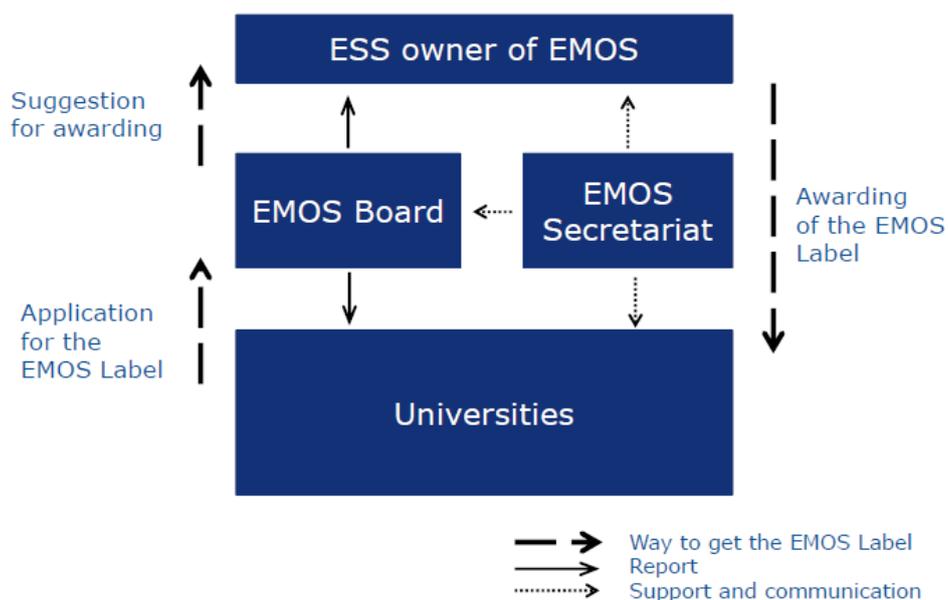
The internship should have a weight of around 10 % of ECTS of the whole Master programme. Given that 2 ECTS credits require 50 to 60 hours of work, an internship should last no longer than six to eight weeks.

The Master thesis should have a weight of approx. 25 % of ECTS and a strong link to topics of Official Statistics. The thesis should be supported by an NSI; whereas, the evaluation and grading of a Master thesis is the responsibility of the university.

II.2 EMOS governance model

The EMOS governance model includes several bodies involved in the development of EMOS, including the labelling process. At the top of the model is the ESSC who is the owner of the EMOS label. The ESSC will be responsible for awarding university Master programmes with the EMOS label, the quality and development of EMOS.

Table 2: The EMOS governance model



EMOS Board

The EMOS Board is an essential part of the EMOS governance framework and for the development of EMOS. The Board will assist the ESSC with regard to the development of EMOS, in particular the award of the EMOS label to Master programmes in compliance with the EMOS requirements. It will also contribute to quality monitoring of the EMOS Master programmes in order to ensure that the required standards are achieved and maintained through evaluation of new applications and extensions of the EMOS label.

As decided by the 22nd ESSC meeting of 26 September 2014, the Board will be composed of fourteen members: six members from universities, five members from NSIs, one member from a national central bank (NCB), one member from the European Statistical Advisory Committee (ESAC), and one member from Eurostat, acting as Chair. The EMOS Board should be appointed by the ESSC in their meeting of 13-14 November 2014.

EMOS Secretariat

The EMOS secretariat provided and managed by Eurostat will be responsible for the daily work. The secretariat will provide support to the EMOS Board and will organise the EMOS Board meetings and other EMOS activities.

The secretariat will also be responsible for communication on EMOS with the EMOS Board, within the EMOS network and to the EMOS community.

III. Criteria for EMOS membership

University Master programmes that want to receive the EMOS label have to fulfil a set of criteria:

Eligibility criteria

- The programme is an accredited Master programme in an EU Member State, EU candidate country or EFTA country.
- The Master programme is in line with the Bologna process¹⁰ and the European Credit Transfer and Accumulation System (ECTS) or equivalent.

Selection criteria

- The Master programme is organised in line with the EMOS curriculum.
- The university has set up a collaboration scheme with the respective National Statistical Office or other statistical authorities with regard to internships and other support.
- The university holds adequate teaching capacity and qualifications for the Master programme.
- Adequate infrastructure is assigned to the programme, e.g. premises, IT equipment.

Additional assets

Though not taken into account in the selection decision, the following are considered assets:

- effective quality assurance system;
- cooperation with higher education institutions at an international level or participation in national networks.

The first round of EMOS is carried out in two parts: (1) the on-going pre-selection of Master programmes to participate in the preparation for EMOS within the EMOS network and (2) evaluation of applications for the EMOS label in the first half of 2015.

The objective of the current stage is to pre-select Master programmes which are ready enough to implement EMOS in autumn 2015. 22 replies have been received to the call for interest published in August and are being assessed by the Group of Experts. The pre-selected universities as well as the cooperating national statistical authorities¹¹ will be then invited to a preparation workshop in Luxembourg in December 2014. Following the workshop, the universities will then be invited to submit their full applications for the EMOS label by the end of February 2015. The newly-established EMOS Board will then evaluate the candidates for the ESSC to award the successful programmes with the EMOS label in May 2015.

¹⁰ http://ec.europa.eu/education/policy/higher-education/bologna-process_en.htm.

¹¹ NSIs are not the only institutions producing official statistics; this can also extend to central banks, ministries or regional statistical institutes.

IV. Prospects

EMOS is more than a label for Master programmes - EMOS is also a European network of universities and national statistical authorities working together to share and further develop issues of Official Statistics. In times of fast changing technologies and new challenges such as Big Data, an intensive collaboration between the academic world and the European Statistical System is extremely important.

Official Statistics is seeing continuous developments, which means that future and current staff members of statistical offices need to continuously acquire new knowledge and update their current skills. An intensive cooperation with universities is a key in meeting these challenges; therefore, one of the next steps is to see how EMOS could be used for training staff in NSIs.

Furthermore, we should see how new technologies could be employed to bring the learning content together and be made available at a distance. Massive Open Online Courses (MOOCs) and webinars¹² are good examples to be followed and further developed. In March 2015, a second webinar will be co-organised by the Universities of Trier, Pisa and Eurostat on the topics of the EMOS core module. It is foreseen to open the webinar to around 40 locations and offer web-streaming.

The European Master in Official Statistics is getting real as a label and growing as a community; however, there is a lot of work and further developments in front of us. But nevertheless EMOS is still a pilot which will be evaluated in 2017. The ESS has then to decide about the next steps of EMOS.

We will continue documenting all these developments and disseminating the information on EMOS via <http://www.cros-portal.eu/content/emos>.

¹² Please see for more information <http://www.cros-portal.eu/content/joint-eiframe-summer-school>.