

## Dokuz Eylul University Graduate School of Health Sciences: Does It Meet The Basic Standards of ORPHEUS/AMSE/WFME? A Self-Evaluation

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**Abstract:** The mission of doctoral education in Dokuz Eylul University (DEU) is to train independent researchers, capable of transferring their knowledge and skills to different environments, globally. DEU is reknown, in Turkey and abroad, for its reforms in doctoral education. The university has made intensive efforts to collaborate with international organizations involving doctoral education. For evaluation, the self-evaluation questionnaire was used to test compliance to the Standards for PhD programmes and the level of a PhD degree in biomedicine and health sciences prepared by ORPHEUS, the Association of Medical Schools in Europe (AMSE), and the World Federation for Medical Education (WFME). It is observed that the Graduate school meets the majority of these standards. The graduate school is strong in the definition and transparency of the main procedures of PhD training, the guidelines of which are developed by the Higher Education Commission (YOK) act in Ankara. Some of the points which need amendment and/or further progress, on the basis of this evaluation are; the supervisor should not be a formal member of the thesis jury, the number of credited formal courses need to be reduced and the equivalence of the thesis to 3–4 in extenso international papers should be more clearly defined.

**Key words:** PhD, education, Turkey, Orpheus, basic standards

### 1. Introduction

The mission of doctoral education in Dokuz Eylul University is to train independent researchers, capable of transferring their knowledge and skills to different environments, globally. Dokuz Eylul University (Izmir) is one of the largest universities in Turkey, both with respect to undergraduate and graduate education. All institutional programmes have been adapted to the Bologna process, and the University has received the Bologna label. Dokuz Eylul University is reknown, in Turkey and abroad, for its reforms in doctoral education. The university has made intensive efforts to collaborate with international organizations involving doctoral education: The Graduate School of Health Sciences has been a member of ORPHEUS (Organization for PhD Education in Biomedicine and Health

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Sciences in the European System) since 2007; the University, besides being a member of the EUA, is also among the five institutional members of the EUA-CDE (since 2008). Dokuz Eylül University is also represented in the FRINDOC project (EU Project for Internationalization of Doctoral Training).

In its efforts to develop the quality of its PhD training, the Graduate School of Health Sciences has undertaken a self-evaluation to determine the extent to which it fulfils the requirements of ORPHEUS/AMSE/WFME PhD Standards.

## 2. Method

For evaluation, the self-evaluation questionnaire which was prepared by the ORPHEUS the Association of Medical Schools in Europe (AMSE), and the World Federation for Medical Education (WFME) standards document was used. The document proposed a set of standards for PhD programmes and the level of a PhD degree in biomedicine and health sciences. Self-evaluation questionnaire requested to complete about 60 items. The standards are about research environment, outcomes, admission policy and criteria, PhD training programme, supervision, PhD thesis, assesment and structure. For each item, the completed questionnaire should provide sufficient detail to allow evaluation of the extent to which the institution appears to comply with the ORPHEUS PhD standards. About 50 words were expected for the response to each item.

## 3. Results

Following is the results of a self-evaluation based on the ORPHEUS/AMSE/WFME PhD Standards Document. Here is presented only the Basic Standards that should be met from the outset.

**Table 1 Basic Standards**

Theme	"Basic standard"	What DEU Graduate school offers
<b>1. Research environment</b>		
Strong research environment around every PhD project.		The research environment offered includes the department where the Doctoral training is pursued, the Graduate school of health sciences, the entire university, and the strong universities in the country as well as abroad, with which there are established links.
Facilities must be compatible with the requirements of completing the PhD project		The research facilities offered depends on the specific area where the research is pursued. The Health campus offers a Research and Innovation Centre supported by a governmental grant, an R-Lab (Central Research Facility), and the departmental laboratories for research. The projects are supported by the University, as well as by TUBITAK and the EU.
Research consistent with international ethical standards		Every research project proposal has to be firstly approved by an appropriate Ethical Committee. On Dokuz Eylül University health campus, there are three functioning Ethical Committees: Ethical Committee for Clinical Research, Ethical Committee for Non-Invasive Research, and an Ethical Committee for Research on Laboratory Animals. These ethical committees are structured and functioning in line with the international ethical standards.
<b>2. Outcomes</b>		
PhD programmes must provide students with competences to be qualified and independent researchers, according to principles of good research practice		The aim of doctoral programmes in the Graduate school of Health Sciences is to train independent researchers equipped with the scientific knowledge, methodology, and skills which are prerequisite for an established scientist. The principles of good research practice are acquired in the research environment offered, under qualified supervision and facilitated with the structured courses on core knowledge and generic skills.

(Table 1 to be continued)

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A PhD degree must also be of benefit in a career outside academic or clinical research (problem solving, analysis, evaluation, technology transfer etc.)	In order to enable a career outside academic or clinical research, an array of courses for generic skills are offered to the PhD candidate such as: Writing a Project Proposal, Writing a Scientific Article, Biostatistics, Creative Thinking, How to Structure a Biotech Company, Principles of Innovation, etc. DEU campus is hosting a technopark which presents an excellent opportunity for technology transfer.
<b>3. Admission policy and criteria</b>	
PhD students must be selected on the basis of a competitive and transparent process	PhD students are selected on a competitive and transparent process, the guidelines of which are developed by the Higher Education Commission (YOK) in Ankara. Namely, a candidate should present an MSc degree (equivalent to at least one year of research) or an MD degree, either present a GRE record or pass a central entrance examination organised by the Higher Education Commission (YOK) (similar to GRE), present a satisfactory result in an English exam (Toefl, etc) and successfully pass the departmental interview with an emphasis on the port-folio.
Applicants for PhD programmes must have an educational level corresponding to a master's degree	YES
Before enrolment or at clearly defined times during the programme, the institution must evaluate and approve: - Scientific quality of the project - The likelihood that the project can result in a thesis of the required standard within the timeframe - Innovation and creativity in the project - Qualifications of the nominated supervisors	YES. Before enrolment, the PhD student candidate's mastery of the project for which he/she is admitted, undergoes an assessment. At the onset, the supervisor needs to meet the supervision criteria. During the training programme, there is assessment by the Thesis Committee every six months. The Committee submits a written assessment of the progress to the Graduate school.
A PhD programme must only be initiated when the resources for completion are available	The PhD training programme can be initiated only after the approval of the following: The Graduate School Council-The University Senate- Higher education Commission in Ankara. The resources and the quality of the training programme are assessed.
<b>4. PhD training programme</b>	
Programmes must be based on original research, courses and other activities which include analytical and critical thinking	Original research is mandatory. Courses and other scientific activities support the training. The courses, workshops, etc attended by the PhD student are accepted for formal credits.
Programmes must be performed under supervision	Supervision is done by one or two supervisors and the Supervisory Committee (Thesis committee)
Programmes must ensure that students have substantial training in ethics and responsible conduct of research	In the training programme, the PhD student is introduced to ethics: a course on Ethics is given with formal credits; conferences/seminars are organised on selected topics of ethics
Programmes must have clear 3-4 year timeframe. Extensions should be possible but limited and exceptional.	In the Turkish system, the normal period is four years. However, the student can ask for extension under acceptable circumstances.
Programmes must include courses totalling about 30 ECTS. A substantial part must be concerned with training in transferable skills	The courses, presently total to about 120 ACTS. However, there is a project to decrease these courses, to focus more on what the specific student needs.
There must be arrangements that allow students to perform part of their programme in another institution, national and abroad	Through the Erasmus scheme, and through other bilateral collaborations, PhD students, supported by different sources of funding, have the opportunity to pass part of their training abroad.
Programmes that are performed in parallel with (clinical/professional) training must have the same time for research and course work as any other PhD	YES
Progress of PhD students must be continuously assessed throughout the PhD	The success of the students in the courses are assessed. The thesis is assessed at regular intervals by the Thesis (Supervisory) Committee.
<b>5. Supervision</b>	
Each PhD student must have a principal supervisor and when relevant at least one co-supervisor to cover all aspects of the programme	Yes. Normally, the second supervisor is from a different discipline, but this is NOT mandatory.

**(Table 1 to be continued)**

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<b>(Table 1 continued)</b>	
The number of PhD students per supervisor must be compatible with the supervisor's workload	In the DEU Graduate School of Health Sciences, a faculty member cannot supervise more than 5 PhD students
Supervisors must be scientifically qualified and active scholars in the field concerned	Yes. The supervisor has to present proof of ongoing research project. The Research project administration department of the DEU Rector does not support projects of faculty whose former projects have not been finalised with scientific articles published internationally.
Supervisors must have regular consultations with their students (annotation: varies during the programme but will normally mean several times per month)	The rule is at least one formal meeting each week.
It must be ensured that training for all supervisors and potential supervisors is available.	DEU Graduate school of Health Sciences is the only Graduate School in Turkey which has been offering Supervisor training courses since 2005.
The supervisor-student relationship is key to a successful PhD programme. There must be mutual respect and shared responsibility	YES. The supervisor also supports the PhD student to be part of the scientific society and to plan his/her career.
<b>6. PhD thesis</b>	
The PhD thesis must be the basis for evaluating if the student has acquired independent research skills and can evaluate work done by others	The PhD thesis is the basis for these assessments. The thesis contains chapters including introduction, critical literature review, full account of aim and objectives, perspectives and plan, methodology, results a thorough discussion and conclusions.
The benchmark for the thesis must be the expected outcome from 3-4 years research. In health sciences this benchmark is equivalent of at least three <i>in extenso</i> papers in scientific peer-reviewed international journals.	In many of the cases, this is so. However, there is no clear-cut criteria that the candidate should present <i>in extenso</i> papers published in international journals.
In addition to papers the thesis must include a full literature review and full account of aims, method, results, discussion and conclusion.	YES
If the thesis is presented in other formats (e.g., as single monograph), the assessment committee must ensure equivalence to the above benchmark	-
A PhD thesis in clinical medicine must meet the same standards as other PhD theses	It is mandatory that a thesis in clinical medicine, nursing, or physiotherapy meet the same standards.
<b>7. Assessment</b>	
Acceptance of a PhD thesis must include acceptance of both written thesis and a subsequent oral defence	YES
PhD degrees must be awarded by the institution on the recommendation of assessment committee who have evaluated the thesis and the oral defence	YES
The assessment committee must consist of established and active scientists without connection to the milieu where the PhD was performed and without conflict of interest. Min. two should be from another institution	YES
The supervisor must not be a member of the assessment committee	NOT YET
If the assessment of the thesis/defence is negative, the student must normally be given an opportunity to rewrite/an additional defence	For a PhD thesis, a period of six months is allocated for rewriting the thesis. Additional defence is necessary.
<b>8. Structure</b>	
The graduate school must have sufficient resources for proper conduct of PhD programmes. This includes resources to: Support admission of students, implement the PhD programmes of the students enrolled, assess PhD theses and to award PhD degrees	The graduate School conducts the PhD training programmes according to the Higher Education Act of YOK. This includes the criteria for admission, PhD training programme, and PhD thesis assessment.

#### 4. Discussion and Conclusions

The self-evaluation of the graduate school of Health Sciences using the ORPHEUS/AMSE/WFME standards has permitted a critical review of the basic standards. It is observed that the Graduate school meets the majority of these standards. The graduate school is strong in the definition and transparency of the main procedures of PhD training, the guidelines of which are developed by the Higher Education Commission (YOK) act in Ankara.

The points which need amendment and/or further progress, on the basis of this evaluation, are the following:

- The supervisor should Not be a formal member of the thesis jury
- The number of credited formal courses need to be reduced
- The equivalence of the thesis to 3-4 *in extenso* international papers should be more clearly defined.

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