Subject Examination and Academic Regulations for the Research on Teaching and Learning Master’s Programme at the Technische Universität München

Dated 6 June 2012

Pursuant to Art. 13 Para. 1 Clause 2 in conjunction with Art. 58 Para. 1 Clause 1, Art. 61 Para. 2 Clause 1 and Art. 43 Para. 5 of the Bayerische Hochschulgesetz (Bavarian Higher Education Act (BayHSchG)) the Technische Universität München issues the following regulations:

Note on linguistic usage: In accordance with Art. 3 Para. 2 of the German Constitution, women and men have equal rights. Any terms relating to persons and functions in the following regulations apply equally to women and men.

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§ 34
Applicability, academic title

(1) ¹The Subject Examination and Academic Regulations for the Research on Teaching and Learning Master's Programme (FPSO) at the Technische Universität München supplement the General Academic and Examination Regulations for Bachelor and Master Programmes at the Technische Universität München (APSO) as last amended. ²The APSO takes precedence.

(2) ¹The academic degree “Master of Education” (“M.Ed.”) is awarded on the basis that the Master's examination has been successfully completed. ²This academic degree may be used with the university added in the form of '(TUM)'.

§ 35
Programme start, standard period of study, ECTS

(1) ¹It is possible to start the Master’s course on Research on Teaching and Learning at the Technische Universität München in the winter semester and in the summer semester. ²It is recommended that students start the course in the winter semester. ³If students start the Research on Teaching and Learning Master's Programme in the summer semester, they must rearrange their study plan accordingly.

(2) ¹80 credits (58 semester credit hours) from the compulsory and compulsory elective modules spread over three semesters are required in order to be awarded the Master's degree. ²In addition, 10 credits must be obtained from course work during internships. ³A maximum of six months is added for completing the Master’s thesis pursuant to § 46. ⁴This means that at least 120 credits must be obtained for the course work and examination results for the compulsory and compulsory elective modules according to Appendix 1 in the Research on Teaching and Learning Master's Programme. ⁵The standard period of study for the Master's course is four semesters overall.

§ 36
Eligibility requirements

(1) Eligibility for the Research on Teaching and Learning Master's Programme is proven by

1. a classified Bachelor degree awarded by a German or foreign university after a programme of at least six semesters or an at least equivalent qualification in the programmes: scientific education for teachers at grammar schools, vocational training, pedagogy/educational science and psychology or comparable programmes and proof of successful participation in either a lecture, seminar or project in the field of empirical social research,

2. adequate knowledge of English; for this purpose those students whose native language or language of instruction is not English must provide proof by means of a recognized language test (level C1 within the European Framework) such as the “Test of English as a Foreign Language” (TOEFL), the “International English Language Testing System” (IELTS) or the “Cambridge Main Suite of English Examinations”; alternatively proof can be provided by means of a good grade (corresponding to at least 10 out of 15 points) in a German university entrance qualification; if examinations amounting to 60 credits were successfully completed in examination modules in English in the undergraduate programme, this also proves adequate knowledge of English,

3. passing of the aptitude assessment in accordance with Appendix 2.

(2) A classified university degree in accordance with Para. 1 Clause 1 exists if this comprises the obtaining of examination results which are equivalent to examination results in the scientifically oriented relevant
Bachelor programmes stated in Para. 1 Clause 1 of the Technische Universität München or comparable universities and correspond to the academic requirements of the Research on Teaching and Learning Master’s Programme.

(3) The module catalogue of the relevant Bachelor course is used to determine this in accordance with Para. 2.

(4) The Examination Committee decides on the comparability of the course, on the determination of the special academic aptitude, and on the equivalence of the university degree obtained at a foreign university taking into account Art. 63 of the Bavarian Higher Education Act.

§ 37
Modular structure, module examination, courses, study profiles, language of instruction

(1) 1§§ 6 and 8 APSO give the general regulations regarding modules and courses. 2If module stipulations deviate, § 12 Para. 8 APSO applies.

(2) The curriculum containing the compulsory and compulsory elective courses is provided in Appendix 1.

(3) 1The language of instruction for the Master in Research on Teaching and Learning Programme is English. 2Hence in accordance with § 4 Para. 5 Cl. 8 of the Enrolment, Re-registration, Leave and De-registration Regulations of the Technische Universität München dated 30 March 2007 as last amended no proof of sufficient knowledge of German is required.

§ 38
Examination time limits, study progress monitoring, non-compliance with time limits

(1) Examination time limits, study progress monitoring, non-compliance with time limits are governed by § 10 APSO.

(2) 1At least one of the module examinations from the foundations stated in Appendix 1 must be successfully completed by the end of the second semester. 2If a time limit is exceeded, § 10 Para. 5 APSO applies.

§ 39
Examination Board

The Research on Teaching and Learning Master’s Examination Board is the responsible authority for decisions on examination issues in accordance with § 29 APSO.

§ 40
Recognition of study periods, course work and examination results

The recognition of study periods, course work and examination results is governed by § 16 APSO.

§ 41
Continuous course assessment
(1) The module examinations are usually taken during the Programme. The type and duration of a module examination are given in Appendix 1. If there are deviations from these specifications, § 12 Para. 8 APSO must be complied with. § 17 APSO applies to the grading of the module examinations.

(2) If Appendix 1 states that a module examination may be a written or an oral examination, the examiner will inform the students at the start of the lectures at the latest in a suitable way as to the form the examination will take.

(3) On application by the student and with the agreement of the examiner the examinations for courses in English can be taken in German.

§ 42
Registration for and admission to the Master’s examination

(1) Students enrolled in the Research on Teaching and Learning Master's Programme are deemed to be admitted to the module examinations of the Master’s examination.

(2) The registration for a module examination in compulsory and compulsory elective courses is governed by § 15 Para. 1 APSO. The registration for a corresponding repeat examination of a failed compulsory or compulsory elective module is governed by § 15 Para. 2 APSO.

§ 43
Scope of the Master’s examination

(1) The Master’s examination comprises:

1. the module examinations in the relevant modules pursuant to Para. 2,
2. the Master’s thesis pursuant to § 46.

(2) The module examinations are listed in Appendix 1. Candidates must achieve 70 credits in the compulsory modules and 10 credits in the compulsory elective modules. § 8 Para. 2 APSO must be complied with when selecting the modules.

§ 44
Repetition of examinations, failed examinations

(1) The repetition of examinations is governed by § 24 APSO.

(2) Failed examinations are governed by § 23 APSO.

§ 45
Course work

In addition to the examination results stated in § 43 Para. 1 course work amounting to 10 credits must be undertaken in the modules in accordance with Appendix 1.
§ 45 a

Multiple-choice test

(1) Pursuant to § 12 Para. 11 Clause 1 APSO a written examination can take the form of a multiple-choice test in an individual case with the agreement of the Faculty Council. If this type of examination is selected, the students must be notified in due time. § 6 Para. 4 Clause 4 APSO applies accordingly.

(2) The list of questions and answers must be drawn up by at least two persons entitled to conduct examinations in accordance with the APSO. The answers which are to be accepted as being correct must be specified.

(3) The examination is deemed to have been passed
1. if at least 60 percent of the questions asked are correctly answered or
2. if the number of correct answers amounts to at least 50 percent and the number of correctly answered questions is not less than 22 percent of the average examination result of the students who participated in the relevant examination for the first time.

(4) If the student has reached the minimum number of correctly answered questions required to pass the examination in accordance with Para. 3, the grade for the examination held by the multiple-choice method is:
1. “very good” for at least 75 percent,
2. “good” for at least 50 percent, but less than 75 percent,
3. “satisfactory” for at least 25 percent, but less than 50 percent,
4. “sufficient” for 0 or less than 25 percent of correct answers of the examination questions asked in addition.

(4) The examination report informs the student of
1. the grade,
2. the pass mark,
3. the number of questions asked,
4. the number of questions answered correctly and the average of the reference group stated in Para. 3.

§ 46 Master's thesis

(1) Pursuant to § 18 APSO every student must produce a Master's thesis as part of the Master’s examination. The final thesis may be assigned and supervised by any expert examiner of the Technische Universität München. The chairperson of the Examination Board shall approve the final thesis. With the agreement of the chairperson of the Examination Board, the final thesis may be prepared at an institution other than the university provided that it can be supervised by an examiner of the Technische Universität München.

(2) The Master's thesis (30 credits) shall be started after all module examinations have been successfully completed.

(3) The period between being assigned the Master's thesis and submitting it must not exceed six months. The Master's thesis may be written in either German or English.
(4) If the Master's thesis is not graded with at least "sufficient" (4.0), it can be repeated once with a new subject. It must be re-registered six weeks after notification of the result at the latest.

§ 47

Successful completion and grading of the Master's examination

(1) The Master's examination is deemed to have been successfully completed if all examinations which must be taken as part of the Master's examination pursuant to § 43 Para. 1 have been successfully completed and a credits balance of at least 120 credits has been achieved.

(2) The module grade is calculated pursuant to § 17 APSO. The overall grade of the Master's examination is calculated as a weighted average grade of the modules pursuant to § 43 and the Master's thesis. The weightings of the grades of the individual modules correspond to the credits assigned. The overall assessment is expressed by the grading pursuant to § 17 APSO.

§ 48

Certificate, diploma, diploma supplement

On successful completion of the Master's examination, a certificate, a diploma and a diploma supplement must be created with a Transcript of Records in accordance with § 25 Para. 1 and § 26 APSO. The date of the certificate must be the day on which all examination results and course work were achieved.

§ 49

Entry into force

These Regulations come into force on 1 April 2012.
They apply to all students who start their specialist study programme from the winter semester 2012/2013 at the Technische Universität München.
Explanation for the part-examinations (course work and examination result) of modules 4 and 7:
In modules 4 and 7 the students are introduced to the development of test procedures and shall also develop an empirical test procedure themselves. Since the field of test procedures is very wide, the development, evaluation and analysis of empirical test procedures is only made possible by an intense and specialised exploration. The students should therefore specialize in this field in accordance with their interests. It is important here that the students understand the theoretical fundamentals of test development. The students can gain this knowledge in Part a of the course work. Furthermore it is important here that the students become acquainted with the software used for the test procedures and can use it. They can do this in Part b of the course work. And, finally, to examine the knowledge gained and expanded the students must produce a project report where they can present the theoretical fundamentals of test development and also develop their own test procedure where the software of the particular test methods is also used. This project report represents a graded examination result.

Compulsory elective modules: 10 credits must be achieved from the following list:

<table>
<thead>
<tr>
<th>No.</th>
<th>Module designation</th>
<th>Form of teaching</th>
<th>Sem.</th>
<th>SWS</th>
<th>Credits</th>
<th>Examination type</th>
<th>Examination duration</th>
<th>Language of instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>SWS</td>
<td></td>
<td></td>
<td></td>
<td>type</td>
<td>duration</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Introduction to methods in Teaching and Learning Science (1)**</td>
<td>V + Ü</td>
<td>1</td>
<td>4</td>
<td>5</td>
<td>Written</td>
<td>90</td>
<td>English</td>
</tr>
<tr>
<td>2</td>
<td>Institutions in the international context of educational systems (4)**</td>
<td>S+S+S</td>
<td>1</td>
<td>7</td>
<td>10</td>
<td>Project work</td>
<td></td>
<td>English</td>
</tr>
<tr>
<td>3</td>
<td>Models of teaching and learning (5)**</td>
<td>S+S+S</td>
<td>1</td>
<td>7</td>
<td>10</td>
<td>Project work</td>
<td></td>
<td>English</td>
</tr>
<tr>
<td>4</td>
<td>Educational processes and outcomes I (6)</td>
<td>S+U/S+U /S</td>
<td>2</td>
<td>7</td>
<td>10</td>
<td>Project work + SL</td>
<td></td>
<td>English</td>
</tr>
<tr>
<td>5</td>
<td>Educational institutions and their quality development (7)</td>
<td>S+S+S</td>
<td>2</td>
<td>7</td>
<td>10</td>
<td>Project work</td>
<td></td>
<td>English</td>
</tr>
<tr>
<td>6</td>
<td>Instructional Design of Classrooms (8)</td>
<td>S+S+S</td>
<td>2</td>
<td>7</td>
<td>10</td>
<td>Project work</td>
<td></td>
<td>English</td>
</tr>
<tr>
<td>7</td>
<td>Educational processes and outcomes II (9)</td>
<td>S+U/S+U /S</td>
<td>3</td>
<td>7</td>
<td>10</td>
<td>Project work + SL</td>
<td></td>
<td>English</td>
</tr>
<tr>
<td>8</td>
<td>Research on Teaching and Learning: Specialization (13)</td>
<td>S+S</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>Project work</td>
<td></td>
<td>English</td>
</tr>
</tbody>
</table>

** This module is a foundation module.
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### Course work: 10 credits must be achieved from the following list:

<table>
<thead>
<tr>
<th></th>
<th>Research internship (14)</th>
<th>P</th>
<th>3</th>
<th>40</th>
<th>5</th>
<th>SL***</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Internship in educational institutions (15)</td>
<td>P</td>
<td>3</td>
<td>40</td>
<td>5</td>
<td>SL***</td>
<td>English</td>
</tr>
</tbody>
</table>

*** An internship report must be written for this course work

**Explanations:**
Sem. = semester; SWS = semester credit hours; V = lecture; S = seminar; Ü = exercise; P = internship; SL = course work.
For written examinations the column “Duration of the examination” contains the duration of the examination in minutes. An “m” is entered there for oral examinations.

### APPENDIX 2: Aptitude assessment

Aptitude assessment for the Research on Teaching and Learning Master’s Programme at the Technische Universität München

1. **Purpose of the assessment**

   1In determining eligibility for the Research on Teaching and Learning Master’s Programme, the requirements pursuant to § 36 Para. 1 Cl. 1 and 2 are supplemented by the requirement to provide proof of aptitude pursuant to § 36 Para. 1 Cl. 3 in accordance with the following provisions. 2The special qualifications and skills of the applicants should correspond to the professional field of research on
teaching, educational research, research administration, educational systems and teaching, foundations, university administration and issues of the ministry of science and culture. Individual aptitude parameters are:

1.1 ability to work scientifically and in accordance with fundamental principles and methods
1.2 existing specialist knowledge from the undergraduate programme in one of the disciplines stated at § 36 Para. 1 Cl. 1
1.3 special interest in the research areas of education and teaching
1.4 above average spoken and written linguistic skills
1.5 special dedication and motivation for the Research in Teaching and Learning Science Master's Programme.

2. Aptitude assessment procedure

2.1 The aptitude assessment will be held every six months by the TUM School of Education.

2.2 Applications for admission to the aptitude assessment must be submitted to the Technische Universität München together with the documentation listed at 2.3.1 to 2.3.4f inclusive no later than 31 May for the winter semester and no later than 31 December for the summer semester (absolute deadlines). The diploma and the certificate as proof of the successful completion of the Bachelor's programme must be presented to the Admissions Office of the Technische Universität München five weeks after the start of lectures at the latest. Otherwise it is not yet possible to start the Master's programme pursuant to § 36 of these Regulations.

2.3 The application must include:

2.3.1 a Transcript of Records with modules amounting to 108 credits of which 90 credits must be shown to be examination results. The Transcript of Records must be issued by the Examination authority or the Admissions Office responsible.
2.3.2 curriculum vitae in tabular form,
2.3.3 a written statement (no more than 1-2 A4 pages) of the reason for choosing the Research on Teaching and Learning Programme at the Technische Universität München in which the candidate explains which specific abilities and interests they consider make them particularly suitable for the Research on Teaching and Learning Master's Programme at the Technische Universität München; the special dedication can be supported by carrying out professional training specific to the programme, internships, stays abroad or further training in the discipline during the Bachelor’s programme which exceeds the periods of compulsory attendance and compulsory courses. This must be supported by enclosures, if applicable.
2.3.4 a declaration that both the statement of the reasons for choosing the programme and the essay are the candidate's own work and have been completed without outside help, and that the candidate has clearly identified any ideas adopted from outside sources.

3. Aptitude Assessment Commission

3.1 The aptitude assessment will be carried out by a Commission that will generally consist of the dean of studies in charge of the Research on Teaching and Learning Master's Programme, at least two lecturers and at least one research assistant. At least half of the Commission members must be university lecturers. A students’ representative will have an advisory role in the Commission.

3.2 The members of the Commission will be appointed by the Faculty Council in consultation with the dean of studies. At least one lecturer will be appointed as a deputy member of the Commission. The Commission will be chaired by the dean of studies as a rule. The procedure is governed by Art. 41 of the BayHSchG as last amended.

4. Admission to the Aptitude Assessment Procedure

4.1 Admission to the aptitude assessment process requires that all documentation specified in Cl. 2.3 has been submitted in due time and that all documentation is complete.
4.1 Applicants who fulfill the requirements will be assessed pursuant to Cl. 5.
4.2 Applicants who are not admitted will receive a notification of rejection specifying the reasons and providing information on legal remedies.

5. The Aptitude Assessment Procedure

5.1 On the basis of the written application documents pursuant to the requirements in Cl. 2.3 and an aptitude assessment interview the Commission will assess whether or not an applicant has the aptitude for a programme pursuant to Cl. 1. The assessment is made on a scale of 0 to 55 points, where 0 is the worst and 55 the best possible result:

The assessment involves the following criteria:

5.1.1. Final grade
1. The grade of the qualification recorded in the first academic university degree course will be used to assess the skills and knowledge stated in Cl. 1.1 and 1.2. 2. The applicant will be awarded two points for every one tenth of the grade where the average calculated from examination results amounting to 90 credits exceeds 2.5. 3. The maximum number of points is 30. 4. Negative points are not awarded. 5. For foreign degrees the grade calculated with the aid of the Bavarian formula is used.

5.1.2. Letter of motivation
1. The applicant's written statement is graded by two members of the Commission on a scale of 0 - 5 points in respect of the written linguistic competence of the application by means of the following criteria:

   1. is able to phrase the reason for their application in a matter-of-fact yet appealing way
   2. is able to represent the connection between personal interests and study programme content in a well-structured way,
   3. is able to convincingly provide reasons for their special aptitude and motivation for the Master's Programme by giving arguments and meaningful examples,
   4. is able to linguistically emphasize important points of their reasoning in an appropriate way

2. The Commission members assess each of the five criteria independently with a maximum of one point. 3. The points total will be calculated on the basis of the arithmetic average of the individual assessments. Decimal places are rounded up.

5.1.3 Aptitude assessment interview
1. All applicants admitted are invited to a selection interview. 2. The time and date for the selection interview will be announced at least one week in advance. 3. Time slots for any selection interviews to be undertaken must be scheduled before the application deadline expires. 4. The applicant must keep the appointment scheduled. 5. If the applicant is unable to attend an aptitude assessment interview due to reasons beyond their control, a later appointment may be scheduled upon a student's well-founded request, but no later than two weeks before lectures begin.

2. The selection interview must be held for each candidate individually. 2. The interview must last at least 20 but not more than 30 minutes for each candidate. 3. The interview must cover the following key topics
   1. Interest in research topics relating to education
   2. Special dedication and motivation
   3. Assessment of the personal aptitude profile 4. The subject can also be the documents submitted pursuant to 2.3. 5. Specialist knowledge which is only to be taught in the Research on Teaching and Learning Master's Programme is not decisive. 6. With the applicant's agreement, a students' representative may sit in on the interview.

3. The selection interview will be conducted by at least two members of the Commission. 2. The Commission members will assess the following independently
   a) the spoken linguistic competence,
   b) interest in research topics relating to education and teaching
c) the special dedication and motivation,

using the following criteria:

a) spoken linguistic competence (0 - 5 points, per criterion 1 point max.)
   • is able to present and discuss facts clearly, fluently and in a style appropriate to the situation
   • is able to express thoughts and opinions with precision and also structure more comprehensive answers
   • is able to answer questions regarding the undergraduate programme or its specialist field using accurate terminology yet in a comprehensible way
   • is able to convincingly provide reasons for statements by giving arguments and meaningful examples,
   • is easily able to understand questions relating to scientific subjects or their own abilities and expectations or clarify by querying them, where necessary

b) interest in the research topics relating to education and teaching (0-10 points, per criterion 2 points max)
   • is able to name topics and issues contained in the Programme and relate them by way of example to their undergraduate studies
   • has attended lectures and talks with a methodological focus on pedagogy or psychology
   • is familiar with authors and publications that have dealt with the research topics of the Programme
   • is involved (in addition to their studies) in study groups, reading circles, students’ groups or bodies etc. even outside their discipline
   • can provide evidence of practical activities in the stated professional field (research into teaching, research on education and training, research administration, educational systems and teaching, foundations, university administration and issues of the ministry of science and culture)
   • is interested in demanding literature
   • has worked on issues of education and teaching research during their undergraduate studies

c) special dedication and motivation (0 - 5 points, per criterion 1 point max.)
   • shows interest in the scientific work on issues of educational research
   • reflects on their life/career goals and on ways of achieving them
   • reflects on their own skills and abilities and relates them to the objectives of the programme
   • is prepared to learn independently outside periods of compulsory attendance and compulsory courses (cf. special commitment/additional qualification during their undergraduate studies)
   • general motivation for Master’s Programme (professional/academic qualification)
   • Miscellaneous

Each member will grade the result of the selection interview on a scale from 0 to 20, 0 being the worst and 20 being the best possible result. The applicant’s score is calculated on the basis of the arithmetic average of the individual assessments. Any non-zero decimal places must be rounded up.

5.2 ¹The overall assessment results from the number of points in 5.1.1 (final grade, 0 - 30 points), 5.1.2 (letter of motivation, 0 - 5 points) and 5.1.3 (aptitude assessment interview, 0 - 20 points). ²Applicants with 25 or more points will be graded as suitable. ³In those cases where it was determined that only some subject-specific requirements for the Master’s Programme are missing from the undergraduate studies, the Aptitude Assessment Commission may admit the applicant subject to their successful completion of foundation examinations from the Bachelor’s programme in scientific education or professional education up to a maximum of 30 credits. ⁴These foundation examinations must be taken in the first academic year. ⁵Failed foundation examinations may be repeated only once and at the next
examination date. The Examination Board may make the admission to individual module examinations conditional on the successful completion of the foundation examination.

5.3 The applicant will be notified of the result of the aptitude assessment determined by the Commission in writing. The notification must be signed by the university management. The signatory authority may be delegated. A rejection notification must specify the reasons for the rejection and provide information on legal remedies.

5.4 Admissions to the Research on Teaching and Learning Master’s Programme shall apply to all subsequent applications for this Programme.

6. Records

A record must be kept of the aptitude assessment procedure showing the date, duration and location of the assessment, the names of the Commission members, the applicants’ names, and the assessment of the Commission members as well as the overall result. This record must contain the main reasons for the decision and the topics discussed at the interview held with the applicants; the main reasons and topics may be recorded in note form.

7. Repetition

Applicants who have failed the Aptitude Assessment for the Research on Teaching and Learning Master’s Programme may re-register once for the Aptitude Assessment.