APPENDIX 2: Aptitude Assessment

Aptitude Assessment for the Master's program in Life Science Economics and Policy at the Technische Universität München

1. Purpose of the Assessment

   1 Eligibility for the Master's program in Life Science Economics and Policy, in addition to the requirements pursuant to § 36 (1) numbers 1 and 2, requires proof of aptitude pursuant to § 36 (1) no. 3 in accordance with the following provisions. 2 The special qualifications and skills of the candidates should correspond to the Life Science Economics and Policy profession. 3 Individual aptitude parameters are:
   1.1 Ability to conduct research work and/or basic research and methodological work. Prior knowledge from undergraduate studies in economics, and the natural and applied sciences.
   1.2 An active interest in questions about economics and policy concerning the life sciences.
   1.3 Excellent communication skills, especially the ability to present arguments convincingly about economics and policy concerning the life sciences.

2. Aptitude Assessment Process

2.1 The aptitude test will be held annually by the Department of Agricultural and Horticultural Sciences.

2.2 Applications for admission to the aptitude test including the documents set out in 2.3.1 through 2.3.5 must be filed online by 31 May for the winter semester to the Technische Universität München (absolute deadline). Degree certificate and diploma must be filed no later than five (5) weeks after the beginning of lectures. Otherwise, pursuant to § 36 participation in this degree program is not possible.

2.3 The application must include:

2.3.1 proof of degree obtained in accordance with § 36; if proof cannot be presented at the time of filing the application, a complete transcript of records of 140 credits must be enclosed;
2.3.2 curriculum vitae in tabular form;
2.3.3 a written statement (no more than 2 DIN A4 pages) of the reasons for choosing the Master's program at the Technische Universität München in which the candidate explains those specific abilities and interests that make him/her particularly qualified for the Life Science Economics and Policy Master's program at the Technische Universität München; a candidate's exceptional motivation and commitment is to be demonstrated by details on program-related vocational training, practicums, stays abroad, or program-related further education beyond the attendance and course requirements of the Bachelor's program, if necessary by appropriate documentation;
2.3.4 a declaration that both the statement of the reasons for choosing the program and the essay are the candidate's own work, and that the candidate has clearly identified any ideas taken from outside sources.

3. Aptitude Assessment Committee

3.1 1 The aptitude test is administered by a committee that, as a rule, consists of the dean for academic affairs in charge of the Life Science Economics and Policy Master's program, at least two members of the professorial faculty, and at least one research associate (wissenschaftlicher Mitarbeiter). 2 At least half of the committee members must be members of the professorial faculty. 3 A representative of the student body will be a part of the committee in an advisory capacity (exception: continuing education programs).

3.2 1 The members of the committee are appointed by the faculty council (Fakultätsrat) in consultation with the dean for academic affairs. At least one member of the professorial faculty is appointed as deputy member of the committee. 2 As a rule, the committee is chaired by the
4. Admission to the Aptitude Assessment Process

4.1 Admission to the aptitude assessment process requires that all documentation specified in no. 2.3 has been submitted in a timely and complete fashion.

4.2 Applicants who have fulfilled the requirements will be tested according to no. 5.

4.3 Applicants who are not admitted will receive a notification specifying the reasons therefor, and providing information on legal remedies.

5. The Aptitude Assessment Process

5.1 First stage of the aptitude assessment process.

5.1.1 ¹The committee will assess, on the basis of the written application documents required under no. 2.3, whether or not an applicant is suitable for a program pursuant to no. 1 (First stage of the aptitude assessment process). ²For this purpose, the committee evaluates and grades the candidate’s documentation on a scale ranging from 0 to 100 points, 0 and 100 being the worst and best possible result, respectively.

The following criteria will be applied to the evaluation:

1. Academic qualification

¹The curricular analysis is not conducted in the form of a schematic comparison of the modules, but rather on the basis of competencies. ²It will encompass the fundamental subject groups of the Bachelor programs in the natural sciences, and for undergraduates in the agricultural and forestry sciences at the Technische Universität München, in the following list.

Subject groups for Bachelor of Natural Science:

Fundamentals of the natural sciences
(Mathematics, physics, chemistry, physical chemistry, biology)

Subject groups for Bachelor of Social Sciences:

Fundamentals of the social sciences
(Business management, economics)

Subject groups for Bachelor of Agricultural- and Forestry Science

Fundamentals of agricultural science
(Fundamentals of forestry science, fundamentals of ecology)

³Where a candidate’s competencies are at least equivalent to those listed above, he/she will be awarded a maximum of 60 points. ⁴Missing competencies will be deducted in accordance with the credits of the corresponding modules of the equivalent Bachelor’s program at the Technische Universität München.

⁴Outstanding competencies will be deducted in accordance with the credits of the modules of the corresponding Bachelor’s program at the Technische Universität München.

2. Final grade

¹For each tenth of a point that the grade of the Bachelor’s degree equivalent to 140 credits is better than 3, the applicant will be awarded one point. ²The maximum number of points achievable is 20. ³There will be no negative points. ⁴Where a degree
was obtained outside of Germany, the grade will be converted according to what is referred to as „Bavarian formula“ [bayerische Formel, pursuant to the resolution of the Standing Conference of the Ministers of Education and Cultural Affairs of the Länder in the Federal Republic of Germany (KMK) of 15 March 1991].

5If the applicant, at the time he or she files the application, submits a final degree certificate showing more than 140 credits, the assessment will be made on the basis of the modules that were awarded the best grades, up to 140 credits. 6The applicant must list them in the application, and confirm in writing the accuracy of the information presented.

7The grade average is calculated from the graded module examinations up to 140 credits. 8The overall grade average will be calculated as the weighted grade average of the modules. 9The grade weights of the individual modules correspond to the credits assigned to each module.

3. Letter of motivation
1The applicant’s written statement of purpose will be evaluated by two committee members and graded on a scale of 0 to 20 points. 2The letter of motivation will be assessed using the following criteria:

1. The grammatically correct use of the English language in the written form according to the rules of the language.
2. Factual arguments and style of writing.
3. Expression of the relationship between personal interests and the program’s contents.
4. Suitability for and motivation to do the program supported by well-founded arguments and examples.
5. Ability to orally express key points and present arguments in an appropriate way.

3The committee members independently assess each of the five (5) criteria, which are weighted equally. 4The total number of points will be calculated as the arithmetic mean of the individual assessments, rounded up to the nearest whole number.

5.1.3 1In those cases where it was determined that only some subject-specific requirements from undergraduate studies are missing, the committee may make admission subject to the successful completion of Fundamentals Exams from the Bachelor programs at the Technische Universität München amounting to a maximum of 10 credits. 2These Fundamentals Exams must be taken in the first year of study. 3Failed Fundamentals Exams may be repeated only once and at the next examination date. 4The examination board may make the admission to individual module examinations dependent on the successful completion of the Fundamentals Exam.

5.1.4 1Unsuitable applicants with an overall grade of fewer than 70 points will receive a rejection notice, signed by the TUM Board of Management, specifying the reasons for rejection and providing information on legal remedies. 2Signatory power may be delegated to the chairperson of the Committee.

5.2 Second stage of the aptitude assessment process

5.2.1 1In the second stage of the aptitude assessment process, the applicant’s qualification at undergraduate level and the result of the assessment interview will be evaluated. 2Interview appointments will be announced at least one (1) week in advance. 3Time slots for interviews must be scheduled before expiration of the application deadline. 4The interview appointment must be kept by the applicant. 5If the applicant is unable to attend an aptitude
assessment interview due to reasons beyond his or her control, a later appointment may be scheduled upon a student’s well-grounded request, but no later than two (2) weeks before the beginning of classes.

5.2.2 1The aptitude assessment interview is to be held individually for each applicant. 2The interview lasts at least 20 but not more than 30 minutes for each applicant. 3The interview will focus on the following topics (corresponding to the aptitude parameters under 1):

1. Motivation for the Master’s program in Life Science Economics and Policy.
2. Scientific ability: methodical and principled approach to work.
3. Level of undergraduate knowledge from the social- and natural and applied sciences.

The above topics may cover the documentation submitted pursuant to 2.3. Any subject-specific academic knowledge that is to be taught in the Master’s program in Life Science Economics and Policy will not affect the decision. With the applicant’s approval, a representative of the student body may sit in on the interview.

5.2.3 1The aptitude assessment interview will be conducted by at least two (2) members of the committee. 2The committee members will grade each of the four topics independently according to:

a) Competence in the English language
b) Exceptional motivation and commitment
c) Level of interest in the topic of Life Science Economics and Policy/ aptitude in the fields of natural-, engineering-, economic- or agricultural-/forestry sciences

Whereby the following criterion are considered:

a) Oral competence in the English language (0 to 10 points, a max. of 2 points per criterion)
   • Clear, fluent, and appropriate use of style
   • Precise expression of thoughts and ideas; capable of providing comprehensive answers in conversation
   • Provide technically correct and understandable answers to questions about previous undergraduate studies
   • Able to convincingly back-up statements using appropriate examples
   • Effortlessly understand questions of a scientific nature concerning own competencies and expectations, and when necessary, pose questions for purposes of clarification

b) Interest in the topic of Life Science Economics and Policy/ aptitude in the fields of natural-, engineering-, economic- or agricultural-/forestry sciences (0 to 20 points, a max. of 4 points per criterion)
   • Contextually knows the current political, economic and legal developments in the life sciences
   • Capable of naming topics and issues relating to the contents of this study program and capable of relating these to his/her undergraduate studies or other previous studies.
   • Has attended lectures and courses in the following fields: natural-, engineering-, economic- or agricultural-/forestry sciences.
   • Actively involved in activities outside of her/his studies in research groups, and for example in student committees.
• Demonstrates having executed practical tasks in a given vocational field, for
example from vocational training, work experience, practical/s during
undergraduate studies, additional voluntary practical work, or a Bachelor’s
dissertation based on work done in a firm.
• Involved with interdisciplinary issues during undergraduate studies.

c) Commitment and motivation (0 to 10 points, a max. of 2 points per criterion)
• Expresses interest in scientific research by raising questions concerning the
various fields within Life Science Economics and Policy
• Reflection about aptitudes and competencies, and how these are linked to the
goals of the study program
• Reflection about life-/career goals, and how to achieve these
• Prepared to independently participate in contact hours and compulsory events
(cf. outstanding commitment / additional qualifications during undergraduate
study)
• General motivation for the Master’s qualification (career/scientific)

5 Each member will grade the result of the interview on a scale from 0 to 40, with 0 and 40
being the worst and best possible result, respectively. 4 The points total will be calculated as
the arithmetic mean of the individual points. 5 The result will be rounded up to the nearest full
point.

5.2.4 1 The applicant’s points total in the second stage will be calculated as the sum of all points
obtained under 5.2.3 and the points under 5.1.1.1 (academic qualification) and 5.1.1.2
(grade). 2 Applicants with 100 or more points will be deemed suitable.

5.2.5 1 The applicant will be notified of the result of the aptitude test determined by the committee
in writing - where applicable, subject to the requirements determined in stage 1, number
5.1.3. 2 The notice must be signed by the TUM Board of Management. 3 Signatory power
may be delegated. 4 A rejection notice must specify the reasons for the rejection and
provide information on legal remedies.

5.2.6 Admission to the Master’s program in Life Science Economics and Policy shall apply to all
subsequent applications for this program.

6. Record
1 The aptitude assessment process must be documented, including the date, duration and
location of the assessment, the names of the committee members, the applicant’s name, and
the decision of the members of the committee, as well as the complete results. 2 This record
must contain the essential reasons for the decision and the topics discussed at the interview
held with the applicant; these reasons and topics may be recorded in note form.

7. Repetition
Applicants who have failed the aptitude test for the Master’s program in Life Science
Economics and Policy may register for one repetition of the Aptitude Assessment Test.