

## **ASIIN Seal**

# **Accreditation Report**

Master's Degree Programme Transport

Provided by **Ningbo University of Technology** 

Version: 26.06.2015

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## **A About the Accreditation Process**

Name of the degree programme (in original language)	(Official) Eng- lish transla- tion of the name	Labels applied for <sup>1</sup>	Previous accredita- tion (issu- ing agency, validity)	Involved Technical Commit- tees (TC) <sup>2</sup>			
	transport	ASIIN		TC 3			
Date of the contract: 08.07.2015		I					
Submission of the final version of th	e self-assessmen	t report: 29.10.2015					
Date of the onsite visit: 12-13.03.20	15						
at: Ningbo							
Peer panel:	Peer panel:						
Prof. Dr. Jörg Hauptmann, University of Applied Sciences Biberach; Prof. Dr. Reinhold Maier, Technical University of Dresden; DiplIng. Christoph Schröder, Office for traffic and road infrastructure of the city of Hamburg; Prof. Dr. Ning Wu, University Bochum							
Representative of the ASIIN headquarter: Dr. Michael Meyer							
Responsible decision-making committee: Accreditation Commission for Degree Programmes							
Criteria used:							
European Standards and Guidelines as of 10.05.2005							
ASIIN General Criteria, as of 28.03.2014							
Subject-Specific Criteria of Technical Committee 03 – Architecture, Civil Engineering and Survey as of 28.09.2012							

 $<sup>^{1}</sup>$  ASIIN Seal for degree programmes  $^{2}$  TC: Technical Committee for the following subject areas: TC 03 – Civil Engineering, Surveying and Architecture;

In order to facilitate the legibility of this document, only masculine noun forms will be used hereinafter. Any gender-specific terms used in this document apply to both women and men.

## **B** Characteristics of the Degree Programme

a) Name	Final degree (origi- nal/English translation)	b) Areas of Specialization	c) Corre- sponding level of the EQF <sup>3</sup>	d) Mode of Study	e) Dou- ble/Joint Degree	f) Duration	0.	h) Intake rhythm & First time of offer
Transport	M.Sc.		Level 7	Full time		4 Semester	120 ECTS	Winter semester; 2015/16

According to study regulations the following **intended qualifications profile** shall be achieved by the Master degree programme:

The Master Programme Transport aims to enhance the professional knowledge, skills and competences of the students in the transport related areas and thus to enable them to starting a career at higher scientific and technological levels. Through in-depth teaching of scientifically oriented and interdisciplinary knowledge, skills and methods, the graduates should be able to exercise challenging engineering work such as planning, design, constructing and commissioning of traffic installations. Through the promotion of theoretical and scientific abilities in a large spectrum within the traffic field, this Master Programme ensures a systematic preparation for future practices and research. Students should be able to identify solutions, to develop individually and responsibly, consider and evaluate between solutions. Moreover, students should become scientifically, socially and ecologically responsible and actively contribute to the shaping of their civil society.

Additionally the university described aims and learning outcomes of the programme in the self report as follows:

The transport system is of central importance for any economy in the world. It represents a core element of everyday life – for business or leisure – in the past, present and in the future. Besides, the concept of sustainable development challenges societies and economies and it requires new approaches to transport planning and management strategies. Global challenges such as the climate change, scarcity of resources, increasing transport and urban sprawl demand a change of thinking. Therefore, tomorrow's mobility has to fulfil especially three prerequisites: efficiency, safety and environmental compatibility.

<sup>&</sup>lt;sup>3</sup> EQF = The European Qualifications Framework for lifelong learning

Answers to these challenges have to consider all levels of the mobility system – from vehicles and infrastructure up to the transport management systems. In order to deal successfully with tasks like providing good transport conditions for societies and economies as well as enhancing living quality of rural and urban areas in the long-term we need to consider the transport system as part of a complex system. The reciprocal dependencies require a strongly integrative approach. In fact, it will be even more necessary in the following years to develop overall mobility concepts as a system solver. Therefore, transport planning strategies must include interactions between transport, economy, land use and natural environment.

Using intelligent management of traffic flows, the efficiency of the transport system can be improved substantially when all transport modes are dealt with in an integrative way. We need experts who not only know how to design safe roads and signal programmes for traffic lights, or how to plan public transport networks, but who also have to be familiar with the concepts of transport demand management, integrated land-use and traffic management, road safety management and intermodal traffic management.

The MPT provides graduates with the necessary knowledge and skills to deal with all the abovementioned challenges. Based on a Bachelor's Degree in transport related fields, MPT students will gain a deepening of knowledge in terms of both the research capabilities and special skills for starting a career in a higher-level of technological areas. Therefore, their professional capability exceeds the level of Bachelor graduates significantly.

Enhancing the ability to conduct independent scientific work, the students with the completion of this degree meet the requirements for admission to doctoral studies in the transport related fields. In addition to teaching of professional competences (factual and methodological competences) through promotion of analytical and networked thinking as well as of solution- and action competences, attention will also be paid to developing and strengthening of students' social competences.

The students will acquire the ability to apply the obtained knowledge to familiar and new problems as well as to learn even after graduating new knowledge in the transport related fields and thus to enhance their professional competences continuously and independently.

The learning outcomes of the MPT include the following:

The graduates will acquire the following detailed knowledge:

Knowledge 1: Knowledge of complex planning processes in transport and their statutory framework.

Knowledge 2: Knowledge of the tools and methods for the analysis of mobility- and trafficflows.

Knowledge 3: Knowledge of the various modes of individual und public transport, their properties and applications.

Knowledge 4: Knowledge of new mobility concepts and management strategies.

Knowledge 5: Knowledge of transport planning strategies including interactions between transport, traffic safety, economy, land use and natural environment.

The graduates will improve the following skills:

Skill 1: Skill to solve traffic engineering tasks, taking into account the traffic quality, traffic safety and environmental compatibility.

Skill 2: Skill to evaluate transport planning and traffic engineering measures and to determine their traffic technical, business operational as well as social economic impacts.

Skill 3: Skill to design and to operate modern transportation systems and integrated intermodal transport management systems.

The graduates will enhance the following competences:

Competence 1: Capable of analytic thinking, identifying complex connections, assessing existing solutions to problems and developing new solutions of their own.

Competence 2: Capability to be a professional member or leader of an international planning team.

Competence 3: Capable of describing transport related problems with suitable models and analyzing them.

Competence 4: capability to work successfully in teams and to communicate efficiently with different target groups and to complete projects in given time.

Competence 5: capable of identifying new problems, conceiving and applying appropriate means and methods for their solution as well as assessing their suitability.

The following **curriculum** is presented:

Ningbo Technical University (NBUT) Master programme transport (MPT)			1st se	emester	2nd se	mester	3rd se	mester	4th se	mester
Мо	dules	ETSC CP	СР	sws	СР	sws	СР	sws	СР	sws
1	Transport planning - advanced	6	6	4						
2	Traffic engineering - advanced	6	6	4						
3	Specific mathematics	6	6	4						
4	Traffic safety management	6	6	4						
5	Public transport	6	6	4						
6	Technical English for transport	6	3	2	3	2				
7	Intelligent transportation systems	6			6	4				
8	Economic evaluation of transport systems	6			6	4				
9	Traffic system management	6			6	4				
10	New mobility concepts and environmental aspects of transport	6			6	4				
11	Modelling and simulation in transport	6			6	4				
12	Application of tools in transport modelling	6					6	4		
13	International case studies in transport	6					6	4		
14	Joint project	8					8			
15	Internship	8					8			
16	Master's thesis	26							26	
		120	33	22	33	22	28	8	26	0

### C Peer Report for the ASIIN Seal

# 1. The Degree Programme: Concept, content & implementation

Criterion 1.1 Objectives and learning outcomes of a degree programme (intended qualifications profile)

#### **Evidence:**

- Self-assessment report
- Discussions with representatives of the university

#### Preliminary assessment and analysis of the peers:

The panel determined that the objectives and learning outcomes of the degree programme are described in a concise way. They are published within the study regulations of the programme and the panel positively noted that they will be published on the website of the university as well.

The programme educational objectives state in broad terms which competences graduates should have, taking into account professional and academic aspects. The panel considered these to generally correspond to the European Qualification Framework (EQF) Level 7.

The programme process contains learning outcomes in line with the Subject-Specific Criteria for Civil Engineering as far as these are applicably to the field of transport. In particular, the panel recognized out of the learning outcomes described by the university that students should earn advanced subject-specific methodical knowledge in transport subjects to be able to develop new, challenging and innovative methods for documented evidence and forecasting. They should identify required information and data, determine available sources of such information, and evaluate data at a stage when the task itself is still not clear enough in order to independently create plans and concepts in the work field of transport. Additionally the students should be capable to acquire autonomously the current state of scientific knowledge relating a research question and to examine, describe, analyse and solve problems. So the peers asserted that the students should be capable to participate in the practical, methodical and scientific, theoretical development of the subject and are able to create solution strategies for complex, undefined or novel duties on the basis of scientific methods and current research results. They should have

adapted social competences as teamwork and communication skill to organize implement and manage complex projects.

The panel confirmed that the programme objectives corresponds with the requirements of the Subject-Specific Criteria for Civil Engineering regarding to the field of transport.

Due to the fact that the programme did not start yet there are no statistical data about working sectors or employment rates for graduates. Nevertheless it seemed very plausible to the panel that graduates of the programme may start a career as transport consultant or transport planner in all transport related sectors, such as governmental agencies, public transport authorities, consulting companies, urban and regional planning departments, private and state owned transportation companies, infrastructure maintaining companies or as instructor or researcher at universities or research institutes. Therefore the peers confirmed that the intended qualifications profile allows the students to take up an occupation which corresponds to their qualification.

#### **Criterion 1.2 Name of the degree programme**

#### **Evidence:**

- The study regulations defines the title of the programme. s
- The teaching staff explains the tile of the programme.

#### Preliminary assessment and analysis of the peer

The peers learned that the university understand transport in a meaning to include transport planning and traffic engineering. They saw this definition corresponding with the objectives and content of the programme and assessed that the name of the programme reflects the intended aims and learning outcomes as well as the main course language.

#### Criterion 1.3 Curriculum

#### **Evidence:**

- The study regulations define the curriculum and the single modules.
- The module descriptions inform about the aims and content of the single modules.

#### Preliminary assessment and analysis of the peers:

In general, the panel acknowledged that the curriculum is very much aligned to the expected demands that graduates will face in their working life, specifically covering practical and functional aspects.

The peers assessed that advanced mathematical and subject-specific methodical knowledge is conveyed as well as for transport planning as for traffic engineering. The students

got the knowledge of methods to plan and realize new concepts for individual and public traffic systems, to consider economic aspects for the concepts and to manage running systems. They become familiar with modelling and simulations methods in transport and learn about international approaches to traffic problems. As an interdisciplinary approach only aspects of urban planning are conveyed in the curriculum. The peers recommended to strengthen the interdisciplinary aspects in the programmes in order to extend the ability of the students to consider interdisciplinary research during their studies.

The panel valued positively that the curriculum includes a bigger project in the third semester and some minor group work in several modules which target the integration of several topics and the solution of more complex problems. The students come into contact with actual research activities of the teaching staff. As basis data of traffic concepts the university got the real traffic statistics of the city of Ningbo so all projects of the programme have a real background. The projects usually are implemented by small teams set up by the instructors and include prior and final presentations. Besides the use of the field specific methods which they learned theoretically the students can train their team working and communications skills within these projects. But the peers determined that the projects are the only opportunity for the students to train their social competences. With regard to the requirement that graduates should be able to organize implement and manage complex projects the peers recommended to strengthen these aspects in the curriculum.

All together the peers confirmed that the main aim of the programmes to enhance the professional knowledge, skills and competences of the students in the transport related areas and thus to enable them to starting a career at higher scientific and technological levels is fulfilled by the curriculum. It allows the students to achieve the intended learning outcomes in order to obtain the degree. The overall objectives and intended learning outcomes for the degree programme are systematically substantiated and updated in its individual modules. It is clear which knowledge, skills and competences students will acquire in each module.

#### **Criterion 1.4 Admission requirements**

#### **Evidence:**

• The study regulations define the admission requirements.

#### Preliminary assessment and analysis of the peers:

The panel determined that students must have achieved at least the grade "Good" in the Bachelor Programme 'Transportation' or 'Traffic Engineering' or in a similar university degree to be admitted in the master's degree programme. In case of missing technical

preliminary skills, the examination committee can decide to give a provisory admission to the student with the condition that a specific number of modules from the Bachelor Programme "Traffic and Transport Engineering" at the NBUT should be caught up in the first two semesters. Additionally students must verify their English language knowledge by a TOEFL Test.

The panel valued that terms of admission, the requirements and procedures are binding and the same for all applicants. Overall the admission requirements are structured in a way that supports the students in achieving the learning outcomes. But it became not clear for the peers which are the field specific requirements to be admitted to the programme. They found it necessary to define these requirements in a for candidates transparent way. Therefore they welcomed the announcement of the university to inform the candidates about the requirements with a separate document.

# Final assessment of the peers after the comment of the Higher Education Institution regarding criterion 1:

The peers appreciated the advertisements of the university to add more lectures with regard to social skills and to add more elective courses to strengthen the interdisciplinary of the programme. Because the university could not implement yet the announced additions the peers confirmed their recommendations from their preliminary assessment regarding the soft skills and interdisciplinary.

The draft of the new admission requirements made it clear for the peers that not only graduates out of the bachelor's degree programmes in 'transportation' or 'Traffic engineering' ob Ningbo University will be admitted to the master's degree programme and they appreciate that clarification. On the other side they still could not identify the field specific requirements applicants have to fulfil. Especially foreign students who want to study an English programme could have difficulties to recognize the contents of the national bachelor's degree programmes. Therefore the panel still saw the necessity that the field specific requirements to be admitted to the programme must be defined in a transparent way for students.

Besides the admission requirements the panel found the criteria in general as fulfilled.

# 2. The degree programme: structures, methods and implementation

#### **Criterion 2.1 Structure and modules**

#### **Evidence:**

- study regulations
- examination regulations
- module descriptions

#### Preliminary assessment and analysis of the peers:

The panel determined that the programme is divided into modules and each module is a sum of teaching and learning whose contents are concerted. They ensure that each module objectives helps to reach both the qualification level and the overall intended learning outcomes. The structure ensures that the learning outcomes can be reached. The curriculum is structured in a way to allow students to complete the degree without exceeding the regular course duration.

All theoretical modules have a size of 6 ECTS points. Additional the project and the internship contain 8 ECTS-Points and the master thesis 26 credit points. All modules are finished within one semester.

But the peers were astonished that there are no elective courses in the programme which would allow students to define an individual focus and course of study. They welcomed the announcement of the university to develop elective courses after the start of the programme. Their content will depend on the demands of the students. The peers saw it comprehensible that modules from other departments or faculties could not be integrated in the programme because the university did not offer any other master's degree programme up to now. The peers recommended to add elective courses especially with regard to the recommended strengthening of interdisciplinary aspects.

The internship is well-integrated into the curriculum, and the university vouches for their quality in terms of relevance, content and structure.

There are rules for recognising achievements and competences acquired outside Ningbo Technical University corresponding to the Lisbon Convention.

#### Criterion 2.2 Work load and credits

#### Evidence:

- The module descriptions inform about the student workload for the single modules.
- The study regulation defined the use of ECTS Creditpoints for the programme.

#### Preliminary assessment and analysis of the peers:

A credit point system is defined in the study regulation using the European Credit Transfer System (ECTS). The first two semesters contain 33 ECTS-Points, the third semester 28 ECTS-Points and in the last semester students only absolve the master thesis with 26 ECTS-Points. The peers did not see a notable peak from this distribution of the workload over the single semesters.

For the peers the estimated time budgets for the single modules seems to be realistic and enables students to complete the degree without exceeding the regular course duration. Because the programme did not start yet the university could not offer any evaluation results of the workload or statistical data of the study behaviour of the students.

#### Criterion 2.3 Teaching methodology

#### **Evidence:**

- The didactical concept of the university is described in the self report.
- The module descriptions inform about the used teaching methods.

#### Preliminary assessment and analysis of the peers:

The educational methods include several elements appreciated by the panel. In particular, the expected small class sizes and the projects which supported the direct application of knowledge and thereby the acquirement of the intended learning outcomes.

From the view of the peers the intended teaching methods and instruments will support the achievement of the learning outcomes. The self study of the students shall be campaigned closely by teaching staff. By involving the students into the research projects of the School of Transport (SOT) they will become familiar with independent academic research.

#### Criterion 2.4 Support and assistance

#### **Evidence:**

- In the self-assessment report the support and assistance of the students are described
- Students from other programmes describe their experiences with the support by the teaching staff.

#### Preliminary assessment and analysis of the peers:

The supervision, support and advice of students were considered by the peers to be one of the strong points of the teaching and learning process. By involving even students out of the bachelor's degree programme into the research projects of the School of Transport

they have an extremely close contact to the teaching staff. The students can reach the Chinese professors at any time in their office and with the Chinese lecturers they share the same working areas. The contact with foreign professors is secured by electronic media. During the absence of the foreign professors the contact is secured by electronic media and Chinese lecturers who support them will be reachable for the students any time. Additional students can use the advisory offers of the central advisory service and the student office of the university.

The panel was impressed by advice and support of the students. They confirmed excellent individual assistance, advice and support for all students.

# Final assessment of the peers after the comment of the Higher Education Institution regarding criterion 2:

The panel appreciate the announcement of the university to add elective courses to the curriculum. But they did not find a definition of mandatory and elective courses in the new draft of the study regulations as mentioned in the comment of the university. Therefore they confirmed their recommendation from their preliminary assessment to to include more interdisciplinary aspects by additional elective courses.

In general the peers saw the criteria as fulfilled.

### 3. Exams: System, concept and organisation

Criterion 3 Exams: System, concept and organisation

#### **Evidence:**

• The examination regulation defined the organization of the examination system.

#### Preliminary assessment and analysis of the peers:

The panel discussed the exam types in use with the teaching staff and students. The module descriptions contain information about the continuous and final exams for each course, for example quizzes, lab reports and written exams. Therefore students know the examination procedure for each module before the beginning of the semester. The peers recognized that oral exams are also part of course exams, as are presentations, in particular for the course projects. The latter are used to be able to grade each student individually in the case of group projects. Exams are module-related and their forms are oriented on the learning outcomes of the modules.

The grading system is oriented to the German system with four grades for passed and one grade for failed exams. Failed exams can be repeated twice. The degree programme comprises a thesis which ensures that students work on a set task independently and at the level aimed for.

The panel confirmed an adequate examination concept for the programme. Because the examination regulations are oriented on German comparable regulations the peers recommended to define the opportunity for the students to look at the corrections of exams and to define the time afforded to the teaching staff to correct exams.

# Final assessment of the peers after the comment of the Higher Education Institution regarding criterion 3:

The peers saw the criteria as fulfilled. They appreciated that in the new draft of the examination regulations students get the opportunity to look at the corrections of exams and that the time afforded to the teaching staff to correct exams is defined as well. The peers saw these recommendations as fulfilled after the new examination regulations will be put in force.

#### 4. Resources

#### Criterion 4.1 Staff

#### **Evidence:**

Staff handbook

#### Preliminary assessment and analysis of the peers:

Eight Professors and eleven lecturers will take part in the programme including four professors and nine lecturers from Germany. With the foreign professors and lecturers contracts will be concluded at least for three years. Additional the German professors will be supported by Chinese lecturers. All involved Chinese professors and lecturers have experiences in Europe or USA either by absolving their PHD or by teaching tasks and research projects at foreign universities.

From the view of the peers composition, scientific orientation and qualification of the teaching staff are suitable for sustaining the degree. They saw sufficient staff resources available for providing assistance and advice to students and for administrative tasks. The research and development activities of the staff concerning transport planning and traffic engineering are in line with the objectives of the programme.

#### Criterion 4.2 Staff development

#### **Evidence:**

 The self assessment report describes the opportunities for the teaching staff to develop their teaching capabilities.

#### Preliminary assessment and analysis of the peers:

The university has implemented various measures for staff development. In the respect of enhancing professional knowledge and capability, all new lecturers are required to attend at least 144 hours professional training a year. In addition, various plans are introduced to improve teaching skills of lecturers, such as one to one twinning with senior lecturers, visiting to lectures given by leading experts in the concerned fields, organizing lecturer salons and other activities. NBUT has also established a scholarship to fund key lecturers visiting famous universities and research institutions in foreign countries. In addition, NBUT has set up various awards to provide corresponding bonus to successful lecturers, recognizing their efforts and achievements, and in this way, encouraging everyone of the staff team to develop continuously professional skills.

The panel found adequate offers and support mechanisms available for teaching staff who wish to further develop their professional and teaching skills.

#### Criterion 4.3 Funds and equipment

#### **Evidence:**

The self assessment report informs about the funds and the equipment of the university.

#### Preliminary assessment and analysis of the peers:

The programme is offered by the Scholl of Transport (SOT) of Ningbo Technical University and financed by fees from some 5000 Euro per student and year. The funds SOT received by the university increased within the last years continuously. Actual the SOT gets 1 Mio Euro from the central administration of the university. Additional SOT gets appreciable funds out of its research projects which are administrated by itself. If fees are not sufficient for financing the programme SOT guaranties the financing for the programme by their own funds. If the intake of students would be stopped, SOT also guaranties that the enrolled students could finish their studies. Out of the data of the self assessment report the panel saw a valid financing of the programme.

As mentioned above the teaching capacity will be secured by contracts with the foreign teaching staff. The peers were impressed by the equipment of the laboratories and val-

ued them as very good base for practical use by students and for research activities of the teaching staff. On the other side the peers determined that the equipment of the library regarding to international literature is not on the same level as the equipment of the laboratories and they recommended to improve it.

# Final assessment of the peers after the comment of the Higher Education Institution regarding criterion 4:

The peers appreciated the announced activities to improve the equipment of the library regarding to international literature. Because these activities need time to show results they confirm their recommendation from the preliminary assessment. Beyond that the peers saw the criteria fulfilled.

### 5. Transparency and documentation

#### **Criterion 5.1 Module descriptions**

#### **Evidence:**

• specific descriptions exist for each module.

#### Preliminary assessment and analysis of the peers:

The auditors assessed that the module descriptions are detailed and provide the relevant information about knowledge, skills and competences students are expected to acquire in the individual modules as well as the person responsible for each module, the teaching methods and work load, credit points, the admission and examination requirements for each module and the forms of assessment. The peers only were missing a description of the master thesis which has to be added. As mentioned above the peers assessed that not in all cases the used examination forms are specified in the descriptions. To optimize the descriptions the peers recommended to stated preparing literature in all module descriptions.

#### **Criterion 5.2 Diploma and Diploma Supplement**

#### **Evidence:**

There is no diploma supplement or transcript of records of the programme

#### Preliminary assessment and analysis of the peers:

Within the examination regulations it is defined that after graduation, a diploma or degree certificate is issued together with a Diploma Supplement printed in English. Until now no programme specific pattern of the diploma supplement exists but the university ensures that it will be developed in the near future. The peers asked for a diploma supplement which informs about aims,

contents, the student's qualifications profile and individual performance as well as the classification of the degree programme with regard to its applicable education system.

In addition to the final mark, statistical data as set forth in the ECTS User's Guide to allow readers to categorize the individual degree are foreseen in the examination regulations.

#### Criterion 5.3 Relevant rules

#### **Evidence:**

examination regulations

#### Preliminary assessment and analysis of the peers:

The peers assessed the draft of the examination regulations is orientated on comparable German regulations and it encompasses all key stipulations for admission, operation of the programmes and graduation. They asked to legalize the draft by the appropriate institutions of the university.

## Final assessment of the peers after the comment of the Higher Education Institution regarding criterion 5:

The peers found the module description of the master thesis which was delivered together with the comment of the university informative for students. It contents all needed information about the thesis module and for the peers there is no reason any longer for a requirement about the description of the master thesis.

Additionally the university announced in their comment the introduction of a diploma supplement and the completion of the module description regarding list of literature. The peers appreciate these announcements but confirmed their preliminary assessment besides the demand of the module description of the master thesis. To fulfil the criteria the university has to introduce a diploma supplement and put the study and examination regulations into force. Additionally it would be wishful to support the students by specific lists of literature for each module.

### 6. Quality management: quality assessment and development

#### Criterion 6 Quality management: quality assessment and development

#### **Evidence:**

- Self-Assessment report
- Discussions during onsite visit

#### Preliminary assessment and analysis of the peers:

Actual evaluation regulations for the complete university are developed by the head of university with internal reports inside the faculties and reports by the faculties to the head of university. Therefore SOT presents only a concept for quality assurance of the master's degree programme which is oriented on a running system for the bachelor's degree programmes of SOT.

The quality of teaching should be mainly ensured by evaluating each course on the basis of an evaluation questionnaire. The teaching staff gets for its classes an anonymous evaluation report during the current semester and discusses the results with the students. Similarly, the programme director receives the aggregated data for the entire study programme. He informs the "Committee on Study Programmes and Science" and works together with the members of this committee in the analysis and interpretation of these evaluation results. On this basis, talking with the participating teachers will be organised in order to avoid any negative trends over several semesters. Based on the knowledge gained, actions will be carried out by individual teachers and by the programme management for the programme level improvements.

The development of the programme will be the task of the study commission which also secures the coordination of the content of the single modules. For example it secure that the different experiences of the teaching staff with transport systems in China, Europe and the USA will be combined and neglected within the programme.

The peers saw an adequate concept for the quality assurance of the programme. Its implementation and its effectiveness has to be proved in the future.

Final assessment of the peers after the comment of the Higher Education Institution regarding criterion 6:

The university did not give any comment on this criteria therefore the peers confirmed their preliminary assessment without any changes.

### **D** Additional Documents

No additional documents needed.

# E Comment of the Higher Education Institution (08.06.2015)

The University gave a detailed comment on the accreditation report of the peers and added the following documents:

- New draft of the study regulations
- · New draft of the examination regulations
- Module description of the master thesis

## F Summary: Peer recommendations (18.06.2015)

Taking into account the additional information and the comments given by Ningbo University of Technology the peers summarize their analysis and **final assessment** for the award of the seals as follows:

Degree Programme		Maximum duration of accreditation	
Ma Transport	With requirements for one year	30.09.2020	

#### Requirements

- A 1. (ASIIN 1.4) The field specific requirements to be admitted to the programme must be defined and transparent for students.
- A 2. (ASIIN 5.2) It is required that a diploma supplement is developed which informs about aims, contents and structure of the programme.
- A 3. (ASIIN 5.3) It is required that the study and examination regulations to which students can refer are put into force.

#### Recommendations

E 1. (ASIIN 1.3) It is recommended to offer more possibilities for the students to train their social competences (so called soft skills).

- E 2. (ASIIN 1.3, 2.1) It is recommended to include more interdisciplinary aspects by additional elective courses.
- E 3. (ASIIN 4.3) It is recommended to improve the equipment of the library regarding to international literature.
- E 4. (ASIIN 5.1) It is recommended to state preparing literature in all module descriptions.

# G Comment of the Technical Committee 03- Civil Engineering (15.06.2015)

The Technical Committe discussed the report and followed the assessment of the peers without any changes.

The Technical Committee proposed the award of the seal as follows:

Degree Programme	(AR)	Maximum duration of accreditation	
Ma Transport	With requirements for one year	30.09.2020	

#### Requirements

- A 1. (ASIIN 1.4) The field specific requirements to be admitted to the programme must be defined and transparent for students.
- A 2. (ASIIN 5.2) It is required that a diploma supplement is developed which informs about aims, contents and structure of the programme.
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- E 3. (ASIIN 4.3) It is recommended to improve the equipment of the library regarding to international literature.
- E 4. (ASIIN 5.1) It is recommended to state preparing literature in all module descriptions

# H Decision of the Accreditation Commission (26.06.2015)

The Accreditation Committee discussed the report and changed some requirements and recommendations to clarify their content.

The Accreditation Commission for Degree Programmes decides to award the following seals:

Degree Programme		Maximum duration of accreditation	
Ma Transport	With requirements for one year	30.09.2020	

#### Requirements

- A 1. (ASIIN 1.4) The field specific admission requirements must be defined and have to be transparent for students.
- A 2. (ASIIN 5.2) It is required that a diploma supplement is developed which informs about aims, contents and structure of the programme.
- A 3. (ASIIN 5.3) It is required that the study and examination regulations are put into force and made public.

#### Recommendations

- E 1. (ASIIN 1.3) It is recommended to offer more possibilities for the students to train their social competences (so called soft skills).
- E 2. (ASIIN 1.3, 2.1) It is recommended to include more interdisciplinary aspects by additional elective courses.

- E 3. (ASIIN 4.3) It is recommended to improve the equipment of the library with regard to international literature.
- E 4. (ASIIN 5.1) It is recommended to list preparing literature in all module descriptions.