

Registration request Master's thesis and final  
oral examination  
Communication Systems and Networks  
(Examination Regulations of January 04, 2021)

Technology  
Arts Sciences  
TH Köln

First name:	Md Nur	Phone number:	+491606340577
Last name (birth name, if applicable):	Mohammad	E-mail address (TH):	md_nur.mohammad@smail.th-koeln
Address:	Theodor-Körner-str.13	Date of birth:	07.08.1993
Postal code, town/city:	50389, Wesseling	Place of birth:	Gaibandha
Student ID:	11145131	Country of birth:	Bangladesh
Gender:	<input checked="" type="checkbox"/> male <input type="checkbox"/> female <input type="checkbox"/> divers		

I hereby declare that I ☒ **have not** ☐ **have once** previously attempted producing a Master's thesis (incl. final oral examination).

I agree that my Master's thesis will be made available for borrowing in the university library: ☒ yes ☐ no

I agree to having an audience present for my final oral examination: ☒ yes ☐ no

Is the present thesis an external thesis \*: ☒ yes ☐ no

\*External theses: For the most part, the thesis is completed in the work environment of the company/institution, where the student is under subject-specific supervision. The chosen topic for the thesis is in the company's/institution's interest. The second assessor can, but does not have to be associated with the company/institution.

1 Definition of company/institution: Company: Profit-oriented and socio-economic companies; Institutions: Associations, public institutions, non-profit organizations, non-governmental organizations.

**Please note!**

In accordance with section 26 (1) students must have accumulated a minimum of **45 ECTS credit points** to be eligible to register for the Master's thesis.

Students whose enrollment was conditional may only register for the Master's thesis if they have submitted proof that they have met these conditions to the Office of Examination Services.

The final oral examination may only take place if, in accordance with section 29 (2), item b, the Master's thesis has been graded 'sufficient' or better.

In compliance with section 30, the Master's examination is passed, if 90 credit points (ECTS) have been obtained.

In compliance with section 26 (2), **(required) elective modules have to be finalized with this request.** Therefore, please complete and submit the attached form at the latest for thesis registration.

A detailed guide to the thesis and colloquium procedure can be found in ILU.

Please include the following supporting documents: **list of electives (page 3) at the latest for registration**

Cologne, 17/03/2025

Signature: **X**

Nur Mohammad

According to our documents the student has accumulated a total of 50 ECTS credit points.

The registration requirements: ☐ have been met ☐ have not been met

20.03.25

Wagner

First name: Mohammad Last name: Md Nur Student ID number: 11145131

I agree to prepare and support the production of a Master's thesis with the following topic:

Optimizing Distributed Tracing and Telemetry in Microservices Using OpenTelemetry

Thesis duration: ☒ 5 months (Earliest possible submission: after 3 months)

Start and end date: start: 05.05.2025 end: 05.10.2025

(earliest possible start date is the date of confirmation of registration requirements)

1st examiner: Prof. Dr. Harald Elders-Boll

(please print)

Signature: **X** Harald Elders-Boll

2nd examiner: ElHussien Habib

(please print)

Signature: **X** ElHussien Habib

Examiners who are not employed by Cologne University of Applied Sciences need to provide the name of their employer

(company or institution): Trivago

In this case, please also submit the form "External Examiner"!

I approve the registration of this Master's thesis.

\_\_\_\_\_  
(date)

\_\_\_\_\_  
(signature of the Chairperson of the Examination Board)

## Attachment

Selection of required electives (section §26 (2))  
and additional modules (section § 23 (2))

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First name:	<u>Md Nur</u>	Student ID:	<u>11145131</u>
Last name (birth name, if applicable):	<u>Mohammad</u>	Gender:	<input checked="" type="checkbox"/> M <input type="checkbox"/> F <input type="checkbox"/> D

### List of Electives

#### Specializations (PFM 1 - 4)

		Specialization Communication Systems	Networks & Security
PFM1:	<u>Next Generation networks</u> Exam No.: <u>2180</u>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
PFM2:	<u>Advance Multimedia commu</u> Exam No.: <u>2270</u>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
PFM3:	<u>Reliability of comm: systems</u> Exam No.: <u>2350</u>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
PFM4:	<u>Virtual Private networks</u> Exam No.: <u>3250</u>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

#### Notice:

To achieve a specialization, all four modules must be from the list for that specialization.

#### General electives catalogue (EL 1 -3)

EL1:	<u>Digital signal processing</u>	Exam No.:	<u>2260</u>
EL2:	<u>Large and cloud-based software systems</u>	Exam No.:	<u>3290</u>
EL3:	<u>Wind Energy and Hydro Power</u>	Exam No.:	<u>6170</u>

**Additional modules** (not accounted for in the calculation of the final grade):

\_\_\_\_\_  
\_\_\_\_\_

I hereby confirm that I have determined the aforementioned electives for my Master's examination. I have also bindingly determined additional modules.

Cologne, 30.04.2025

Signature: **X** Muhammad