AGREEMENT OF INTERUNIVERSITY COOPERATION

FOR THE GRANTING OF A SECOND CYCLE DOUBLE DEGREE

Between

Alma Mater Studiorum – Università di Bologna (hereafter referred to as "UNIBO"), represented by its Rector Prof. Francesco Ubertini, Via Zamboni 33 – 40126 Bologna, Italy

and

Norwegian University of Science and Technology (hereafter referred to as "NTNU"), represented by the Vice Dean for Education of the Faculty of Information Technology and Electrical Engineering Assoc. Prof. Roger Midstraum, NO-7491 Trondheim, Norway

Together named "the Parties"

Provided that

- both universities are working together in the framework of a long-term collaboration and a cultural exchange partnership;
- the Italian Ministerial Decree "DM 270/04" allows Italian universities to jointly grant degrees (2nd cycle) with other foreign universities;
- the Norwegian Ministry of Education allows Norwegian universities to jointly grant degrees with other foreign universities («Forskrift om kvalitetssikring og kvalitetsutvikling i høyere utdanning og fagskoleutdanning», FOR-2010-02-01-96, § 4.1-4.3). Also see "Requirements for programmes of study at NTNU", pt 6.2;
- on 23rd January 2018 Parties signed an Agreement of Interuniversity Cooperation for the granting of a second cycle degree programme which is effective for four years starting from academic year 2018/19 so that the last enrolment is permitted to the cohort of students in academic year 2020/21;

- the Agreement signed on 2018 is now about to expire and both universities are interested in continuing their collaboration with the signature of a new cooperation agreement for the award of a second cycle degree in the field of Telecommunications Engineering;
- the Department “Ingegneria dell'Energia Elettrica e dell'Informazione Guglielmo Marconi” at UNIBO and the Department of Information security and Communication technology at NTNU have a common interest in continuing their collaboration for the creation of an integrated study programme in the field of telecommunications, by which enrolled students at both universities will be able to get a double degree qualification;
- both universities, with their resources and funds and in accordance with the law and regulations of their respective country, shall collaborate and host all students, faculty members and administrative staff who participate in the mobility programme as described in this Agreement.

It is agreed and stipulated as follows:

Art. 1 - Preamble

Preamble and Annexes are an integral part of this Agreement.

Art. 2 – Objective of the Agreement

The Parties agree to establish an integrated study programme which provides for the exchange of applicant students for a period of two semesters, at the end of which both universities will grant 2nd cycle degrees as follows.

Students from UNIBO (home university) will be awarded Laurea Magistrale in Telecommunications Engineering of UNIBO and Master of Science in Communication Technology of NTNU (host university). Students from NTNU (home university) will be awarded Laurea Magistrale in Telecommunications Engineering of UNIBO (host university) and Master of Science in

Communication Technology or Master of Science in Engineering in Communication Technology and Digital Security of NTNU depending on the programme they are enrolled in at NTNU.

Art. 3 - Students

3.1 Students Exchange

The exchange should be balanced and involve an equivalent number of students from both universities, where possible.

Both universities agree that the number of participating students will not be more than five units from each university per academic year. Parties shall be able to jointly agree a higher number of participants upon a notice exchange between the Parties.

All exams successfully passed at the host university by a student shall be automatically recognized by the home university.

Students involved in the mobility programme shall also enjoy the benefits and shall be likewise subject to the regulations and norms which are in force in the universities concerned by the programme.

3.2 Selection of students

Students admitted to the double degree programme will be selected by each University according to its own criteria and modalities, which will be agreed by the relevant degree programmes activated at both partner universities.

3.3 Enrolment and Mobility

Students from UNIBO (home university) who want to participate in the double degree programme must be regularly enrolled in the degree programme Laurea Magistrale in Telecommunications Engineering (two years, 120 ECTS). They must have an adequate knowledge of the English language at a level not lower than B2 and must be entitled of a valid visa or residence permit.

In the second year, students shall be transferred to NTNU (host university) in order to attend the teaching activities offered within the second year of the Master of Science in Communication Technology programme (two years, 120 ECTS) in accordance with the correspondence table annexed to the present Agreement (Annex 1). Students must obtain 60 ECTS provided by the study programme at NTNU.

Students from UNIBO will prepare the master's thesis and defend their final dissertation at NTNU, according to its internal and national rules.

At NTNU the thesis is evaluated and graded by a department internal professor (cannot be the supervisor of the student) and an external sensor (pre-qualified as a sensor; usually from industry or another university). Public presentation of the thesis is mandatory but does not count towards the grade. UNIBO, at the time of recognition of NTNU's degree qualification, for the purpose of awarding its degree qualification to its own students will assign a graduation final grade according to UNIBO Teaching Regulation.

Students from NTNU (home university) who want to participate in the double degree programme must be regularly enrolled in the degree programme Master of Science in Communication Technology (MSTCNNS, 2-year international MSc programme, 120 ECTS) or at the degree programme Master of Science in Engineering in Communication Technology and Digital Security (MTKOM, 5-year integrated MSc Eng programme, 300 ECTS). They must have an adequate knowledge of the English language at a level not lower than B2 and must be entitled of a valid visa or residence permit.

In particular, students enrolled in the two-year master's programme, shall be transferred in their second year to UNIBO (host university) in order to attend the teaching activities provided by the degree programme Laurea Magistrale

in Telecommunications Engineering in accordance with the correspondence table annexed to the present Agreement (Annex 1) and they must obtain 60 ECTS.

Students from NTNU will prepare the master's thesis and defend their final dissertation at UNIBO, according to its internal and national rules.

At UNIBO the final exam involves the drafting of an original thesis which must be discussed in public during a session of a specific Committee consisting of at least three teachers appointed by the Degree Programme Board. The Commission in charge of the final examination can include a maximum of two teachers, who must have previously participated into the integrated study programme of each university. The Commission evaluates the student taking into account both the study career and the performance of the final exam.

Students from NTNU enrolled in the five-year master's programme do not hold a first cycle degree qualification and have already attended four years of their five-year degree programme for a total of 240 ECTS at the time of their arrival at UNIBO. In particular, 180 ECTS of the above-mentioned 240 ECTS are evaluated on the basis of a certification provided by NTNU for the admission to the Laurea Magistrale Telecommunications Engineering at UNIBO. By submitting the certification attesting the achievement of 180 ECTS as indicated in the table attached in Annex 2, students from NTNU will be admitted to the 2nd cycle degree programme of UNIBO.

The evaluation of these 180 ECTS is valid only for the access to the second cycle Italian degree programme but doesn't provide for the award of an Italian first cycle degree.

The first year of Laurea Magistrale is recognised referring to activities carried out at NTNU during both the third and fourth year of master's programme.

Students from NTNU enrolled in the five-year master's programme shall be transferred in their fifth year to UNIBO to attend the teaching activities provided by the degree programme Laurea Magistrale in Telecommunications Engineering in accordance with the correspondence table annexed to the present Agreement (Annex 2) and they must obtain 57 ECTS. They finally return to NTNU to defend their final dissertation according to NTNU internal and national rules.

3.4 Exemption from university admission and semester registration fees

During the mobility period students will remain enrolled at their home university and they will be registered at the host university.

Students participating in the mobility programme shall be exempted from paying university admission and semester registration fees at the host university, except for the degree granting fee if required.

All other charges, including health insurance, shall be borne by the students themselves.

3.5 Certifications

Host universities shall release and grant each mobility programme student a transcript of records indicating his/her attended teaching activities and his/her academic performances and number of credits obtained at the partner university.

3.6 Insurance obligation

The Parties state that their respective regularly admitted students are insured against any accident that they may suffer during their period of stay abroad for the activities concerned by this Agreement and that they are insured for legal liability against damages which they may involuntarily cause to third party (people or their properties).

3.7 Services offered

Students participating into the mobility programme shall benefit from all services offered by the host university to its regularly enrolled students.

3.8 Fellowship

Each university can grant the available fellowships to their students who intend to participate into the study programme, based on a proper selection procedure.

Art. 4 – Didactics

4.1 Study programme

The integrated study programmes are attached to this Agreement. They describe the programme involving UNIBO students and NTNU students enrolled in the two-year Master of Science in Communication Technology programme (correspondence table – Annex 1) and the programme involving only NTNU students enrolled in the five-year Master of Science in Engineering in Communication Technology and Digital Security programme (correspondence table – Annex 2), respectively.

Study programmes cover all the period from the beginning of study to the last exams, to include the degree.

Exams and study period duration shall be organized in a balanced manner and shall find justification and validation in both partner universities, according to the provisions of articles 2 and 3 and to bonds included in the attached study programmes.

They can be modified by mutual consent between the Parties, to no detriment of students already enrolled.

4.2 Use of ECTS and grading tables

The Parties agree to use the ECTS grading system on the basis of a grading table yearly defined by the partner universities.

4.3 Award of the degree qualifications

Students participating in the integrated study programme obtain the degree qualification - Laurea Magistrale/Master of Science - at the University where they defend the final dissertation and they can require for the award of the degree at the other partner University on the basis of the related correspondence table annexed to this Agreement, by submitting the relevant academic documentation as soon as the article 3.3 has been fulfilled.

References offices for students participating in the double degree programme are listed in the Annex 3 to this Agreement.

Art. 5 – Exchange of faculty members and administrative staff

5.1 Exchange modalities

Both universities shall regulate the reception and employment of faculty members and administrative staff participating into the mobility programme under this Agreement, in conformity with the law and juridical rules in force in the country concerned under the exchange.

Personnel concerned under this Agreement will continue to comply with the contractual obligations with the home university and will continue to receive the due remuneration and to benefit from the rights they are entitled of for their juridical position, according to the legislative norms existing in the home country.

In any case, the home university shall consider the duration of the stay as ordinary service period for all purposes.

5.2 Activities for teachers and administrative personnel

Faculty members and researchers can hold courses and lectures, carry out tutorship activities, participate in seminars, be part of exam, final thesis and doctorate commissions at the partner University, and take part into research

activities and meetings for student exchange programme planning, evaluation and development, held at the partner University.

The administrative staff will have the possibility of participating in meetings for student exchange programme planning, evaluation and development and will be able to carry out special visits in order to analyse the management systems operating at the partner University.

For the expenses concerning the mobility of teaching staff members and research fellows, each university will cover all the costs for their own professors and research fellows according to the availability of Erasmus Plus Programme funds or other funds for research.

During their period at the hosting university, the faculty members and the researchers participating in said exchange, to carry out the above-mentioned activities, shall be considered as staff “on a mission” abroad.

5.3 Insurance obligation

The Parties state that their employees and staff (teachers and administrative personnel) will be insured against accidents that they may suffer during their stay abroad, for the activities under this Agreement, and for the civil liability for damage which they may involuntarily cause to third parties (people or their properties).

Art. 6 – Prevention and security

Both Parties shall supply each mobility programme participant with detailed information about the specific risks existing in the work environment in which they will operate and carry out their function and with necessary documentation about the prevention and emergency security measures and provisions in force in relation to their activity and about the

individuals/subjects in charge of this, in conformity with the legislative norms and regulations in force in the country of the hosting University.

Art. 7 – Use of name / Logo

Each Party may use the logos, names and other marks of the other only in connection with the programme. Each Party anticipates the other party's participation in press announcements, marketing and other reasonable promotional activities involving the double-degree programme through the appropriate use of the logos, names and marks of the Parties.

Art. 8 - Intellectual Property

Each Party acknowledges and agrees that any and all of the Intellectual Property Rights or other proprietary rights in respect of any literature, materials, research or teaching methods, procedures, processes and/or the learning experience in relation to or in connection with the Programme and any parts thereof, are and shall remain the sole property of its owner and, save as expressly set out herein, nothing in this Agreement is intended to transfer ownership or create any licensed rights under any such Intellectual Property Rights or other proprietary rights.

The learning materials and any other literature, materials, research methods, procedures, processes or programmes in which a party has Intellectual Property Rights relating to or in connection with the Programme and which are disclosed to the other party pursuant to this Agreement may be used by the other party solely for the purposes of performing its obligations under, and during the period of, this Agreement and for no other purpose.

Art. 9 - Data Protection

Regarding personal data transmission Parties shall meet the requirements of the Regulation (EU) 2016/679 – General Data Protection Regulation and act

upon accordingly.

Art. 10 – Other activities

The Parties can extend the cooperation agreement for other purposes beyond the student exchange. Further cooperation projects, including intensive courses, distance teachings, joined researches, organization of seminars, symposia, and interviews on common interest topics and all other activities consolidating the cooperation, will be encouraged by both Parties. These projects will be subject to specific addenda to this Agreement document, which will be stipulated by both Parties.

Both Parties agree to promote this programme in their catalogues and websites. All costs will be maintained by the individual institutions, unless otherwise specified in writing and agreed upon by both Parties.

Art. 11 – Responsible for the Agreement

Each University shall appoint a coordinator for the cooperation agreement.

Art. 12 – Evaluation of the programme

The Parties will consult each other when appropriate, but at least once a year, in order to evaluate the programme development, to draw up a report about the ongoing initiatives and to elaborate other cooperation programmes.

Art. 13 – Controversies

In the event of any controversy arising from this Agreement the Parties will endeavour to resolve the matter amicably and in good faith.

Art. 14 – Duration of the Agreement

This Agreement will operate from the last date of signing and will be effective for a period of five years from academic year 2021/22. In particular, the Agreement will be applicable to UNIBO students and NTNU students of the two-year Master of Science in Communication Technology programme

enrolling from a.y. 2021/22 to a.y. 2024/25 and to NTNU students of the five-year Master of Science in Engineering in Communication Technology and Digital Security programme enrolling in their fourth year from a.y. 2021/22 to a.y. 2024/25 (the last cohort of students will enrol in the first year of the 2-year master's programme or in the fourth year of the 5-year master's programme in academic year 2024/25). This Agreement may be extended by mutual written agreement between the Parties.

The Agreement may be amended in writing in compliance with reference rules and regulations and with guidelines of Governing Bodies of the Parties.

This Agreement may be terminated at the request of either party provided that a minimum of six months' prior written notice is given to the other party to enable satisfactory arrangements to be put in place for students already participating in the program and those to whom an offer of a place on the Programme has been formally made. Both Parties shall be equally responsible for such arrangements.

Any modification or termination of the Agreement shall be carried out in such a way as to ensure no damage for the participants in the programme already underway.

If any of the partner institutions wishes to withdraw, it must be guaranteed that all the students admitted to this institution will be able to regularly complete their studies.

Annexes can be individually modified by mutual consent between the Parties by means of an exchange of official notes between the partner Universities, to no detriment to the students already enrolled.

Art. 15 – Copies and language

This Agreement is subscribed in two originals in English.

Bologna, date ……

Alma Mater Studiorum – Università di Bologna

The Rector

……..

Trondheim, date ……

Norwegian University of Science and Technology

Faculty of Information Technology and Electrical Engineering

The Vice Dean for Education

……..

Annex 1

Correspondence table for UNIBO students and NTNU students enrolled in the two-year master's programme

	STUDENTS ENROLLED AT NTNU (2-year Master's Degree)						
	LM TE DD_NTNU specialization Optical Communications and Networking (OCN)						
FIRST YEAR IN NTNU (spec. OCN)							
	Equivalence at UNIBO	**Hours**	**ECTS**	**SSD**	**Type**	***Courses at NTNU***	**ECTS**
15 CFU (Type C + Type D)	Type D		9	ING-INF/05	D	TTM4105 Access and Transport Networks	7,5
	37085 - Principles Models and Applications for Distributed Systems M	60	6	ING-INF/05	C	TTM4135 Applied cryptography in network security or Elective course	7,5
39 CFU (Type B)	82072 - Antennas for Wireless Systems M	60	6	ING-INF/02	B	TTM4240 Advanced Network Control and Management	7,5
	87202 - Communication Theory And Coding M	60	6	ING-INF/03	B	TTM4110 Dependability and Performance with discrete event simulation	7,5
	73548 - Wireless Sensor Networks M	60	6	ING-INF/03	B	TTM4115 Design of communicating systems	7,5
	87203 - Mobile Radio Networks M	60	6	ING-INF/03	B	TTM4133 Mobile Networks and Services	7,5
	35167 - Communications Systems: theory and measurements M	90	9	ING-INF/03	B		
	69494 - Multimedia Services and Applications M	60	6	ING-INF/03	B	Elective course	7,5
6 CFU	73387 - Creativity and innovation	30	3	ING-INF/03	D	Experts in teamwork, interdisciplinary project	7,5
	81799 - Project management and soft skills	30	3		F		
TOTAL CFU			**60**				**60**
SECOND YEAR IN BOLOGNA (spec. OCN)							
	Courses at UNIBO	**Hours**	**ECTS**	**SSD**	**Type**	***Equivalence at NTNU***	**ECTS**
30 ECTS	82069 - Electromagnetic Propagation for Wireless Systems M	90	9	ING-INF/02	B	TFE4130 Electromagnetic and Acoustic Waves	7,5
	82071 - Network Design M	60	6	ING-INF/03	B	TTM4158 Dependability and Performance Design	7,5
	73545 - Mathematical Methods M	60	6	MAT/05	C	TMA4195 Mathematical Modelling	7,5
	75477 - Optical Fiber Systems M	60	6	ING-INF/02	B	TFE4160 Electrooptics and Lasers	7,5
	93330 - Trends in communications M	30	3		F		
30 ECTS	90053 - Preparation for the final examination abroad		21		E	TTM4905 Networks and services - master's thesis	30
	86298 - Final examination		3				
	93179 - Laboratory of advanced networking M	30	3		F		
	75493 - Protocols and architectures for space networks M	30	3		F		
TOTAL CFU			**60**				**60**

STUDENTS ENROLLED AT UNIBO

FIRST YEAR IN UNIBO (spec. QNET or NSEC)

	Courses at UNIBO	Hours	ECTS	SSD	Type	*Equivalence at NTNU*	ECTS
60 CFU	82072 - Antennas for Wireless Systems M	60	6	ING-INF/02	B	Elective course	7,5
	82071 - Network Design M	60	6	ING-INF/03	B	TTM4110 Dependability and Performance with discrete event simulation	7,5
	87203 - Mobile Radio Networks M	60	6	ING-INF/03	B	TTM4133 Mobile Networks and Services	7,5
	75477 - Optical Fiber Systems M	60	6	ING-INF/02	B	TFE4160 Electrooptics and Lasers	7,5
	73387 - Creativity and innovation or 81799 - Project management and soft skills	30	3		F	Experts in teamwork, interdisciplinary project	7,5
	82069 - Electromagnetic Propagation for Wireless Systems M	90	9	ING-INF/02	B	TFE4130 Electromagnetic and Acoustic Waves	7,5
	35167 - Communications Systems: theory and measurements M	90	9	ING-INF/03	B		
	73545 - Mathematical Methods M or 69441 Optimization Models and Algorithms M	60	6	MAT/05	C	TMA4195 Mathematical Modelling	7,5
	93330 - Trends in communications M	30	3		F	TTM4502 Telematics, Specialization Project	7,5
	87202 - Communication Theory And Coding M	60	6	ING-INF/03	B		
TOTAL CFU			**60**				**60**

SECOND YEAR IN NTNU (spec. QNET)

	Equivalence at UNIBO	Hours	ECTS	SSD	Type	*Courses at NTNU*	ECTS
30 ECTS	type D (12 CFU)	120	12		D	TTM4158 - Dependability and Performance Design	7,5
	37085 - Principles Models and Applications for Distributed Systems M	60	6	ING-INF/05	C	TTM4517 Advanced topics in Networking - Networks, Services and Applications, Specialization Course	7,5
	69494 - Multimedia Services and Applications M	60	6	ING-INF/03	B	TTM4240 Advanced Network Control and Management	7,5
	73548 - Wireless Sensor Networks M	60	6	ING-INF/03	B	TTM4115 Design of communicating systems or TTM4105 Access and Transport Networks	7,5
30 ECTS	90053 - Preparation for the final examination abroad		21		E	TTM4905 Networks and services - master's thesis	30
	86298 - Final examination		3				
	93179 - Laboratory of advanced networking M	30	3		F		
	75493 - Protocols and architectures for space networks M	30	3		F		
TOTAL CFU			**60**				**60**

SECOND YEAR IN NTNU (spec. NSEC)

	Equivalence at UNIBO	Hours	ECTS	SSD	Type	*Courses at NTNU*	ECTS
30 ECTS	type D (12 CFU)	120	12		D	TTM4536 Ethical Hacking - Information Security, Specialization Course or TTM4105 Access and Transport Networks	7,5
	37085 - Principles Models and Applications for Distributed Systems M	60	6	ING-INF/05	C	TTM4135 Applied Cryptography and Network Security	7,5
	69494 - Multimedia Services and Applications M	60	6	ING-INF/03	B	TTM4240 Advanced Network Control and Management	7,5
	73548 - Wireless Sensor Networks M	60	6	ING-INF/03	B	TTM4137 Wireless network security	7,5
30 ECTS	90053 - Preparation for the final examination abroad		21		E	TTM4905 Networks and services - master's thesis	30
	86298 - Final examination		3				
	93179 - Laboratory of advanced networking M	30	3		F		
	75493 - Protocols and architectures for space networks M	30	3		F		
TOTAL CFU			**60**				**60**

	Study plan for students enrolled at UNIBO
	Study plan for students enrolled at NTNU

Annex 2

Correspondence table for NTNU students enrolled in the five-year master's programme

	STUDENTS ENROLLED AT NTNU (5-year integrated single cyle degree in Communication Technology)						
	120 ECTS credits involved in the double degree						
	THIRD AND FOURTH YEAR IN NTNU						
	Equivalence at UNIBO	**Hours**	**ECTS**	**SSD**	**Type**	***Courses at NTNU***	**ECTS**
15 CFU (Type C + Type D)	Type D		9	ING-INF/03	D		
	37085 - Principles Models and Applications for Distributed Systems M	60	6	ING-INF/05	C	TTM4135 Applied cryptography in network security (3rd year)	7,5
39 CFU (Type B)	82072 - Antennas for Wireless Systems M	60	6	ING-INF/02	B	TTM4240 Advanced Network Control and Management (4th year)	7,5
	87202 - Communication Theory And Coding M	60	6	ING-INF/03	B	TTM4110 Dependability and Performance with discrete event simulation (3rd year)	7,5
	73548 - Wireless Sensor Networks M	60	6	ING-INF/03	B	TTM4105 Access and Transport Networks (3rd year)	7,5
	87203 - Mobile Radio Networks M	60	6	ING-INF/03	B	TTM4133 Mobile Networks and Services (3rd year)	7,5
	35167 - Communications Systems: theory and measurements M	90	9	ING-INF/03	B	TTM4115 Design of communicating systems (3rd year)	7,5
	69494 - Multimedia Services and Applications M	60	6	ING-INF/03	B	Complementary course (4th year)	7,5
6 CFU (Type F)	73387 - Creativity and innovation	30	3	ING-INF/03	D	Experts in teamwork, interdisciplinary project (fourth year)	7,5
	81799 - Project management and soft skills	30	3		F		
TOTAL CFU			**60**				60
	FIFTH YEAR IN BOLOGNA						
	Courses at UNIBO	**Hours**	**ECTS**	**SSD**	**Type**	***Equivalence at NTNU***	**ECTS**
30 ECTS	82069 - Electromagnetic Propagation for Wireless Systems M	90	9	ING-INF/02	B	TTM4502 Communication Technology, Specialization Project	7,5
	82071 - Network Design M	60	6	ING-INF/03	B	TTM4517 Advanced Topics in Networking - Networked Systems, Specialization Course	7,5
	73545 - Mathematical Methods M	60	6	MAT/05	C	Complementary course (5th year)	7,5
	75477 - Optical Fiber Systems M	60	6	ING-INF/02	B	TTM4250 Advanced Internet Technologies	7,5
	93330 - Trends in communications M	30	3		F		
27 ECTS	90053 - Preparation for the final examination abroad		21		E	TTM4905 Communication Technology - Master's Thesis	30
	93179 - Laboratory of advanced networking M	30	3		F		
	75493 - Protocols and architectures for space networks M	30	3		F		
	Total CFU carried out in Bologna		**57**				
3 ECTS	86298 - Final examination (to be recognized upon the graduation at NTNU)		3		E		
TOTAL CFU			**60**				**60**
	Activities carried out in Bologna by NTNU students						
	Activities carried out in Trondheim by NTNU students						

	180 ECTS credits to be recognized as bachelor-equivalent for double degree purposes						
				FIRST YEAR IN NTNU			
	Equivalence at UNIBO	**Hours**	**ECTS**	**SSD**	**Type**	***Courses at NTNU***	**ECTS**
	First year of a Bachelor degree	600	60			TDT4109 Information Technology, Introduction	7,5
						TMA4100 Calculus 1	7,5
						TMA4140 Discrete Mathematics	7,5
						TTM4175 Communication Technology, Introduction	7,5
						TFY4125 Physics	7,5
						TDT4110 Object-Oriented Programming	7,5
						TMA4115 Calculus 3	7,5
						TTM4200 Computer Networks	7,5
TOTAL CFU			**60**				**60**
				SECOND YEAR IN NTNU			
	Equivalence at UNIBO	**Hours**	**ECTS**	**SSD**	**Type**	***Courses at NTNU***	**ECTS**
	Second year of a Bachelor degree	600	60			TDT4120 Algorithms and Data Structures	7,5
						TMA4135 Calculus 4	7,5
						TTM4165 Digital Economics	7,5
						TTM4185 Security and Robustness in ICT systems	7,5
						TDT4145 Data Modelling, Databases and Database Management Systems	7,5
						TFE4101 Electrical Circuits and Digital Design	7,5
						TMA4145 Statistics	7,5
						TTM4180 Applied Networking	7,5
TOTAL CFU			**60**				**60**
				THIRD AND FOURTH YEAR IN NTNU			
	Equivalence at UNIBO	**Hours**	**ECTS**	**SSD**	**Type**	***Courses at NTNU***	**ECTS**
	Third year of a Bachelor degree	600	60			TDT4160 Computers and Digital Design (3rd year)	7,5
						TIØ4252 Technology Management (3rd year)	7,5
						EXPH0300 Examen Philosophicum for Science and Technology (3rd year)	7,5
						TTM4158 Dependability and Performance Design or TTM4160 Design of Cyber-Physical Systems (4th year)	7,5
						Elective course first semester (4th year)	7,5
						Elective course second semester (4th year)	7,5
						Elective course second semester (4th year)	7,5
						Elective course second semester (4th year)	7,5
TOTAL CFU			**60**				**60**

Annex 3

Reference offices for students participating in the double degree programme

Alma Mater Studiorum – Università di Bologna:

Office: AFORM – Engineering Education Services

Address: Viale del Risorgimento 2, 40136 Bologna, Italy

Ph.: +39 051 2093648 Fax: +39 051 2086204

E-mail: dei.didattica@unibo.it

Norwegian University of Science and Technology:

Office: B206, Electro B

Address: NTNU, Department of Information security and Communication technology,

O.S. Bragstads plass 2A, 7491 Trondheim, Norway.

Ph.: +47-73594533

E-mail: kontakt@iik.ntnu.no