

**AGREEMENT FOR AN INTERNATIONAL GRADUATE STUDENT EXCHANGE PROGRAM
LEADING TO A DOUBLE DEGREE**

This Agreement is made as of the 1st day of September, 2013

B E T W E E N:

Ryerson University (Ryerson)
350 Victoria Street, Toronto, Ontario, Canada, M5B 2K3

and

Karlsruhe University of Applied Sciences (HsKA)
Moltkestr. 30, 76133 Karlsruhe, Germany

(Collectively the “Institutions”)

Recognizing the mutual interests in advancing the educational and research experience of graduate students, Ryerson University and Karlsruhe University of Applied Sciences hereby agree to establish an agreement for a graduate student exchange program leading to a double degree on the basis of:

- The Master program regulations of the Yeates School of Graduate Studies at Ryerson University governed by the laws of Ontario, Canada; and
- The corresponding Curriculum and Examination Regulations at Karlsruhe University of Applied Sciences.

WHEREAS the objectives of this agreement are to outline the understanding of the responsibilities of the Institutions for the implementation of all academic and administration matters related to the double degree program;

AND WHEREAS a double degree program means a program that awards two degrees for one Master student by two universities upon the completion of the program satisfying each University’s degree requirements;

AND WHEREAS the double degree programs are described in the attached appendices;

AND WHEREAS a double degree student is a graduate student registered at the Home and the Host Institutions (hereinafter an “Exchange Student”);

AND WHEREAS the “Home Institution” means the Institution at which the double degree student has been initially admitted to complete a graduate degree;

AND WHEREAS the “Host Institution” is the Institution at which the double degree student is completing a graduate degree parallel to their home degree;

NOW THEREFORE the Institutions agree to the terms and conditions of this Agreement, as set forth below.

ARTICLE 1: TERM OF THE AGREEMENT

1.1. Term of the Agreement

This Agreement shall be effective for five (5) years. It will be reviewed by each Institution and a new agreement will be signed for a period of five (5) years after a confirmation of renewal is exchanged between the Institutions in writing six (6) months prior to the expiry of the Agreement.

1.2. Termination of the Agreement

- (a) Either Institution may terminate this Agreement at any time for any reason by providing ninety (90) days' prior written notice of its intention to do so to the other Institution.
- (b) Where such correspondence is provided by facsimile, the Institution being advised of the termination of the Agreement is to be provided with originals of the correspondence within ten (10) business days of receipt of the facsimile.
- (c) Notwithstanding the termination of this Agreement for any reason, each Institution agrees that it will continue to honour and fulfill its responsibilities to Exchange Students during the Exchange Student's Academic Exchange Period (as defined below) at their respective Institution until the completion of the academic term during which the notice is given.

ARTICLE 2: DOUBLE DEGREE STUDENT EXCHANGES

- (a) Each Institution agrees in principle to exchange an equal number of graduate students. The maximum number of students to be exchanged each year is specified in the relevant program description agreed upon by the Institutions and attached as an appendix hereto.
- (b) The total number of students to exchange should balance over the term of this Agreement. Where significant imbalances of numbers occurs, the Institutions agree to modify the number of students to exchange each year in writing to rectify an imbalance and/or modify the maximum number of students to exchange per year.
- (c) Each Exchange Student will register and pay tuition fees at their Home Institution. Exchange Students will be registered at both the Home and Host Institution as full degree graduate students.
- (d) While at the Host Institution, Exchange Students will take courses in subjects with the approval of their Home Institution's academic advisors.
- (e) In circumstances where an Exchange Student needs to be repatriated to their home country (due to illness or other circumstance) the Host Institution shall do everything possible to enable the student to complete his or her studies, by for example remote submission of assignments, in accordance with the Host Institution's academic policies.
- (f) Prior to an Exchange Student's departure from the home country, the Home Institution will provide the Exchange Student with a detailed briefing on the Host Institution. This briefing will include: relevant information on the Host Institution; the particular program of study or courses to be taken; academic requirements; evaluation and marking criteria; anticipated costs; as well as, other general orientation materials provided by the Home Institution. On arrival at the host country, the Host Institution will provide the Exchange Student with the appropriate orientation to the host country and the Host Institution.

- (g) Exchange Students are responsible for securing their own accommodation. However, the Host Institution will provide incoming Exchange Students with assistance in making accommodation arrangements for the Academic Exchange Period provided the Exchange Student fulfills the Host Institution's application procedures.
- (h) Purchase of health insurance coverage through the Ryerson Health Insurance Plan (UHIP) is a requirement for all international students studying at Ryerson. Students studying at Karlsruhe University of Applied Sciences will be required to present proof that they have adequate health insurance coverage in accordance with German statutory health insurance policy for the duration of the exchange period. For this, students can check with their health insurance provider if the health insurance is valid for study purposes in Germany also, otherwise they must purchase special health insurance which is accepted in Germany. Alternatively, they can apply for student health insurance upon arrival in Karlsruhe.
- (i) While participating in the Exchange Program at the Host Institution, the Exchange Student will be solely responsible for making travel arrangements and paying related expenses, including immigration/visa documentation; and paying for the cost of travel expenses to and from the host country, accommodation in the host country, all books, equipment, consumables, hospitalization, health insurance and other incidental expenses. It is the responsibility of the Home Institution to ensure its Exchange Students are aware of this requirement.
- (j) Both Institutions will issue appropriate documents for visa purposes in accordance with the current law, although it is ultimately the responsibility of the individual Exchange Student to obtain a proper visa in a timely manner.

ARTICLE 3: RESEARCH AND OTHER PROVISIONS

3.1 Intellectual Property

The Exchange Student and the supervisor(s) agree to comply with the relevant Institutional intellectual property policies at the Host and Home Institutions, as well as any sponsor or other third party funding agreements. In the event of commercialization of the research product intellectual property, the double degree student, the supervisor(s), and the partner Institutions will negotiate in good faith the commercialization of any intellectual property in a separate agreement.

3.2 Research Ethics

If required, it is the responsibility of the Exchange Student to obtain research ethics approval prior to the commencement of the research work. The research ethics approval should be obtained from the Institution where the research will be conducted.

3.3 Confidentiality

The Institutions each shall at all times during the term of this Agreement and for three (3) years after the expiry or termination of this Agreement:

- (a) use its best endeavours to keep exchanged information confidential and not to disclose it (or any part of it) to any other person or institution; and

- (b) not use any confidential information (or any part of it) for any purpose other than the purpose for which it is provided under this Agreement.

3.4 No Warranty

The Host Institution shall not be responsible, and makes no warranty, expressed or implied, with respect to any actions by or against the Home Institution and/or the Exchange Students' academic programs, the Host Institution's curriculum content, course materials and content delivery beyond the direct services provided by the Host Institution's faculty, the Host Institution Supervisor, employees and agents in Canada.

ARTICLE 4: GENERAL PROVISIONS

4.1 Amendment

No modification or amendment to this Agreement may be made unless agreed to in advance in writing by the Institutions. Amendments specific to the double degree program can be made by modifying the attached Appendix(ies) as agreed by the Institutions in advance in writing.

4.2 Dispute Resolution

Except as provided herein, no legal action with respect to any dispute arising out of or relating to this Agreement may commence until the Institutions attempt to resolve the dispute by negotiation. The Institutions may refer the dispute to personnel who have the authority to intervene and participate in the dispute resolution process. If a dispute is not settled by the Institutions within thirty (30) days of the negotiation process, either Institution may propose that the dispute is referred to mediation, and the other Institution shall consider this proposal in good faith. The Institutions shall elect a third Institution by mutual consent, which shall examine the dispute or claim and provide recommendations. The cost of the mediation shall be determined by the mediator. Any dispute resolved pursuant to the mediation process shall be binding on the Institutions.

4.3 Assignment

This Agreement is not assignable by either Institution.

4.4 Performance Standards

Each Institution agrees that it shall perform its respective obligations under this Agreement:

- (a) in an appropriate and competent manner in accordance with the provisions of this Agreement; and
- (b) in accordance with all applicable statutes, by-laws, regulations, orders, standards and guidelines of all municipal, provincial and federal authorities having jurisdiction.

4.6 Authority to Bind the Home Institution and Host Institution

The Institutions are independent parties and nothing in this Agreement shall constitute either Institution as the employer, principal or partner of or joint venturer with the other

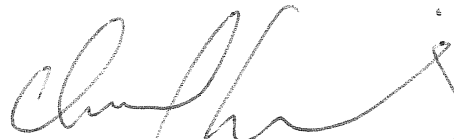
party. Neither Ryerson nor HsKA has any authority to assume or create any obligation or liability, either express or implied, on behalf of the other except as may be mutually agreed by addendum to this Agreement signed, in advance, by both Institutions.

4.7 Severability

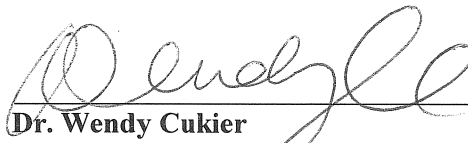
If any provision is determined to be invalid, void, illegal or unenforceable in whole or in part, for any reason whatsoever, such provision shall be severable from all other provisions and shall not in any way affect or impair the validity of this Agreement.

IN WITNESS WHEREOF, the Institutions here agree to have executed this Agreement, as of the date first mentioned above.

RYERSON UNIVERSITY



Dr. Mohamed Lachemi
Provost and Vice President Academic



Dr. Wendy Cukier
Vice President, Research and Innovation

We have authority to bind the corporation.

KARLSRUHE UNIVERSITY OF APPLIED SCIENCES



Dr. Karl-Heinz Meisel
President



Dr. Dieter Höpfel
Vice President, Academic and International Affairs

Appendix “A”
Double Master’s Degree in Electrical and Computer Engineering
Program Description

1. Participating Departments

Ryerson University (RU)
Department: Electrical and Computer Engineering
Degree: Master of Engineering

Karlsruhe University of Applied Sciences (HsKA)
Department: Electrical and Information Engineering
Degree: Master of Science

2. Graduate Program Duration

- a) RU: Typically 2 years (6 terms), including a Master’s Project
- b) HsKA: Typically 2 years (4 semesters), including a Master’s Thesis

3. Double Degree Program Start Dates

- Ryerson University: September
- HsKA: March or October

4. Characteristics of the Double Degree Program

- a) Academic Student Exchange Period: Two (2) semesters at RU and two (2) semesters at the HsKA.
- b) Students have the option to start either at the home or host Institution for a consecutive two semesters.
- c) Student exchanges are only acceptable at the beginning of the academic year at the host Institution. RU students may start the program at the beginning of the academic year: September if starting at RU or October if starting at HsKA. HsKA students may start the program at HsKA either in March or October.
- d) Number of exchange students: Five (5) students will be exchanged per year from each partner Institution. Exchange student reciprocation should be achieved during a period of five (5) years which is the period of the agreement between Ryerson and HsKA.

5. Academic Details

- a) Admission
 - A list of selected candidates at the home university will be provided by the home university’s program director to the to the host university’s program director for formal approval into the program.

- Admission to the Double Degree Program is undertaken at the home university.
 - For admission of HsKA students at RU, a list of selected candidates must be provided to RU by May 1st only for students starting the double degree at RU.
 - For admission at HsKA, the application deadline is July 15th.
 - For Ryerson applicants: Minimum requirements for admission at RU as the home Institution is a bachelor's degree in an electrical engineering based program from a recognized university with overall grade at least 3.0/4.33 (B) in the last two years of study.
 - For HsKA applicants: Minimum requirements for admission at the HsKA as the home Institution is a bachelor's degree in an electrical engineering based program from a recognized university with at least 210 Credit Points (CP cf. European Credit Transfer System –ECTS) and an overall grade better than 2.5/5.
 - English language proficiency requirement for admission at RU: Applicants whose language of instruction during their undergraduate studies was a language other than English are required to submit a test of English language proficiency. Any of the following tests is accepted at RU: Test of English as a Foreign Language (TOEFL) with a minimum score of 93, the Cambridge International English Language Testing System (IELTS) with a minimum score of 7.0, the Michigan English Language Assessment Battery (MELAB) test with a minimum score of 85.
- b) Language of Instruction
- The principal program language is English.
 - All courses offered at HsKA for RU students are taught in English.
- c) Academic calendar

Table 1. Academic calendar

Institution	Term/Semester (1)	Term/Semester (2)	Term/Semester (3)
Ryerson (term)	September – December (Fall)	January – April (Winter)	May – August (Spring/Summer)
HsKA (semester)	October – February (Winter)	March – September (Summer)	n/a

d) Joint Program Committee

A joint program committee (JPC) will be established with three professors from each RU and HsKA. Two of them are co-chairs (program directors); one from RU, the other from HsKA. Responsibilities: Development of the program, examination rules, students advising etc.

e) Funding / Grants

Each Institution will aim to acquire grants for their own students for the period abroad. HsKA will apply for a DAAD grant, RU will check funding from the OBW (Ontario-Baden-Württemberg) program.

6. Structure of the Master Program

6.1 Structure of the Master of Engineering Program at RU

- a total of 8 elective courses (8 credits) to be selected from the list of courses offered by the Electrical and Computer Engineering graduate program at RU.
- choice has to be approved by RU's program director
- successful completion of the Master's Project (pass)

6.2 Structure of the Master of Science Program at HsKA

- modules totalizing 60 CP cf. ECTS (excluding Master's thesis project) from the curriculum of the Master's program in Electrical and Information Engineering
- modules has to be approved by HsKA's program director
- successful completion of the Master's Thesis 30 CP cf. ECTS

7. Structure of the Double Degree Program

7.1 For obtaining the degree at RU, the requirements for the exchange students are:

1. successful completion of 6 elective courses from RU's master program in Electrical and Computer Engineering
2. successful completion of 2 modules from Table 4 at HsKA
3. successful completion of the Master's project/thesis
4. for HsKA students only: successful completion of the soft skill course at RU

7.2 For obtaining the degree at the HsKA, the requirements for the exchange students are:

1. successful completion of modules with a total amount of 42 CP
2. successful completion of 3 courses at RU from Table 3
3. successful completion of the Master's project/thesis
4. for RU students only: successful completion of the German language course at HsKA

7.3 Master's Project/Master's Thesis (MP/MT)

- One Master's project/thesis, which is accepted by both universities
- The documentation of the Master's project/thesis has to be in English
- Students can choose the Institution at which they will do their Master's project/thesis
- Supervision is done by two professors: one from each Institution
- Principal advisor is from the Institution at which the project is carried out
- Duration of Master's project/thesis is equivalent to 6 months full time work, i.e. 30 CP (ECTS)
- Start of Master's project/thesis and part time work on it is possible at the beginning of the second year of studies

Student supervision

Each student will be assigned two supervisors, one from each Institution. The principle supervisor is from the Institution at which the Master's project/thesis is carried out, while the co-supervisor is from the partner Institution.

Table 2. Double Degree Credit Requirements

For RU degree	Canadian Credit	German Credit
Successful completion of 6 elective courses at RU	6 credits	n/a
Successful completion of 2 modules at HsKA	2 credits	RU will transfer credit ←
German as a Foreign Language Course (only for RU students)	No credit	No credit
Completion of the jointly supervised Master's project/thesis	Pass	n/a
Total Credits for the Double Degree Program at RU	8 Credits	n/a
For HsKA degree		
Successful completion of modules with a total amount of 42 CP	n/a	42 CP
Successful completion of 3 courses at RU	HsKA will transfer credit →	18 CP
Art of Communication in Engineering and Science course (only for HsKA students)	No credit	No credit
Completion of the jointly supervised Master's project/thesis	n/a	30 CP (ECTS)
Total Credits for the Double Degree Program at HsKA	n/a	90 CP (ECTS)

8. List of Courses Available to Double Degree Students

8.1 Courses Taken at RU by HsKA Students

- The current list of available courses is shown in Table 3. Courses are usually offered on a two-year cycle in either the Fall or Winter. A list of which courses are usually held in which semester will be supplied. One course consists of lectures in an amount of 3 hours/week plus assignments and self study. The work load for assignments and self study is about 3 times presence time. Thus one course has a work load of about 12 hours/week and is credited with 6 CP cf. ECTS.
- Course selection has to be approved by the Program director at RU
- In addition to the professional courses from Table 3, it is mandatory for HsKA students to take the soft-skill course Art of Communication in Engineering and Science (course number CMN432)

Table 3: RU Current List of Courses Offered by Electrical and Computer Engineering Graduate Program

Nr.	course-nr.	Name
1.	EE8102	Signal Detection Theory
2.	EE8104	Adaptive Signal Processing
3.	EE8111	Digital Signal Processing II
4.	EE8112	Digital Waveform Processing
5.	EE8204	Neural Networks
6.	EE8212	Digital Image Processing II
7.	EE8108	Multimedia Processing
8.	EE8121	Wireless Networks
9.	EE8207	High Performance Computer System Design
10.	EE8205	Embedded Computer Systems
11.	EE8213	Computer Network Security
12.	EE8216	Computer Networks
13.	EE8601	Directed Studies: Electrical Engineering
14.	EE8603	Selected Topics: Computer Engineering
15.	EE8604	Selected Topics: Electrical Engineering
16.	EE8215	Human Machine Interface
17.	EE8401	Computer Methods in Power Systems Analysis
18.	EE8403	Advanced Topics in Power Systems
19.	EE8405	Power System Stability and Control
20.	EE8408	Switched Mode Power Supply
21.	EE8412	Advanced AC Drives
22.	EE8413	Advanced Digital Control of Power Systems
23.	EE8105	Digital Signal Processing
24.	EE8120	Applied Optimization Techniques
25.	EE8120	Architecture of Field-Programmable Gate Arrays
26.	EE8504	VLSI Design Automation and CAD Tools
27.	EE8605	Special Topics in Computer Science

8.2 Modules Taken at HsKA by Ryerson Students

- The current list of available courses is shown in Table 4.
- Module selection has to be approved by the Program Director at HsKA.
- In addition to the modules chosen from Table 4, it is mandatory for RU students to take the course “Deutsch als Fremdsprache“(German as a Foreign Language) of the IFS (Foreign Language Institute) at HsKA. The course will consist of a block course in September and of the regular follow-on course in the fall semester (4 lecture hours/week). At the beginning, the language prerequisites of the students are evaluated. Based on the result, the students will attend the course suited to their knowledge of the German language.

Table 4: List of Modules Offered by HsKA

Nr	Module nr.	Title	CP	lecture hours/week
1	EMA110	Advanced Control	5	4
2	EMI300	Project Work	8	
3	EMI230	RF Systems	7	6
4	EMI210	Information Theory and Coding	5	4

5	E2M190	Medical Systems	4	4
6	EMI110	Signal Theory	5	4
7	EMI220	Analog-digital systems	5	4
7	EMI120	Communication Systems	5	4
8	EMI130	Optical Data Transmission	5	4
		Total	49	

9. Grade Conversion

Table 5: Conversion of Ryerson grades into HsKA grades (and vice versa)

Canadian numerical grade (best: 4.33, worst: 0)	Canadian grade equivalent	German grade (best 1, worst 4.7)
4.33	A+	1
4	A	1.3
3.67	A-	1.7
3.33	B+	2.3
3.0	B	3.0
2.67	B-	4.0
0 (below 2.67)	F	0 (over 4.7)

Note: In the Master's program at RU the grades C, D, E, and F, are considered failures and marked "F".

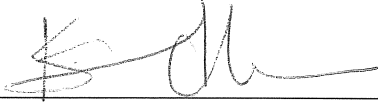
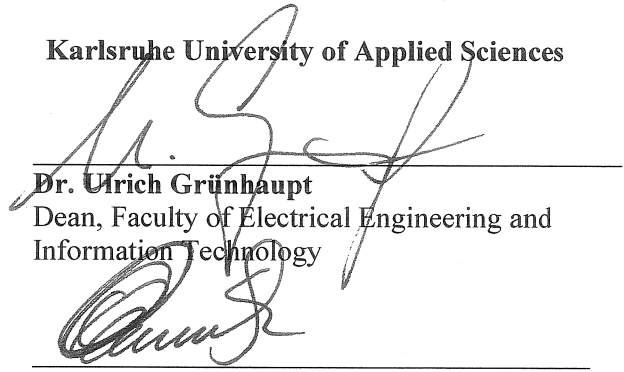
10. Contact Information

RU: Dr. Lian Zhao, lzhao@ee.ryerson.ca

HsKA: Dr. Franz Quint, franz.quint@hs-karlsruhe.de

Ryerson University

Karlsruhe University of Applied Sciences

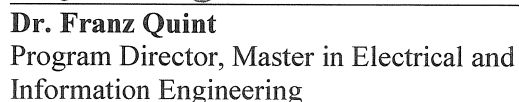



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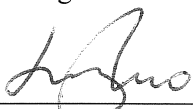
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