Dual Master Program mit

Korea Advanced Institute of Science and Technology (KAIST)

Daejeon, Südkorea

Die Vereinbarung des Dual Master Program m wurde im März 2009 unterzeichnet.

Ansprechpersonen:
Dr. Amin Velji, Institut für Kolbenmaschinen, IFKM *amin.velji@partner.kit.edu*
Prof. Thomas Koch, Institut für Kolbenmaschinen, IFKM *thomas.a.koch@kit.edu*

Das Dual Master Program mit KAIST
richtet sich an Studierende im Masterstudiengang Maschinenbau.

Dauer: 2 Semester
Es kann innerhalb des Masterstudiums entweder am Anfang, in der Mitte oder Ende (incl. Masterarbeit) absolviert werden.

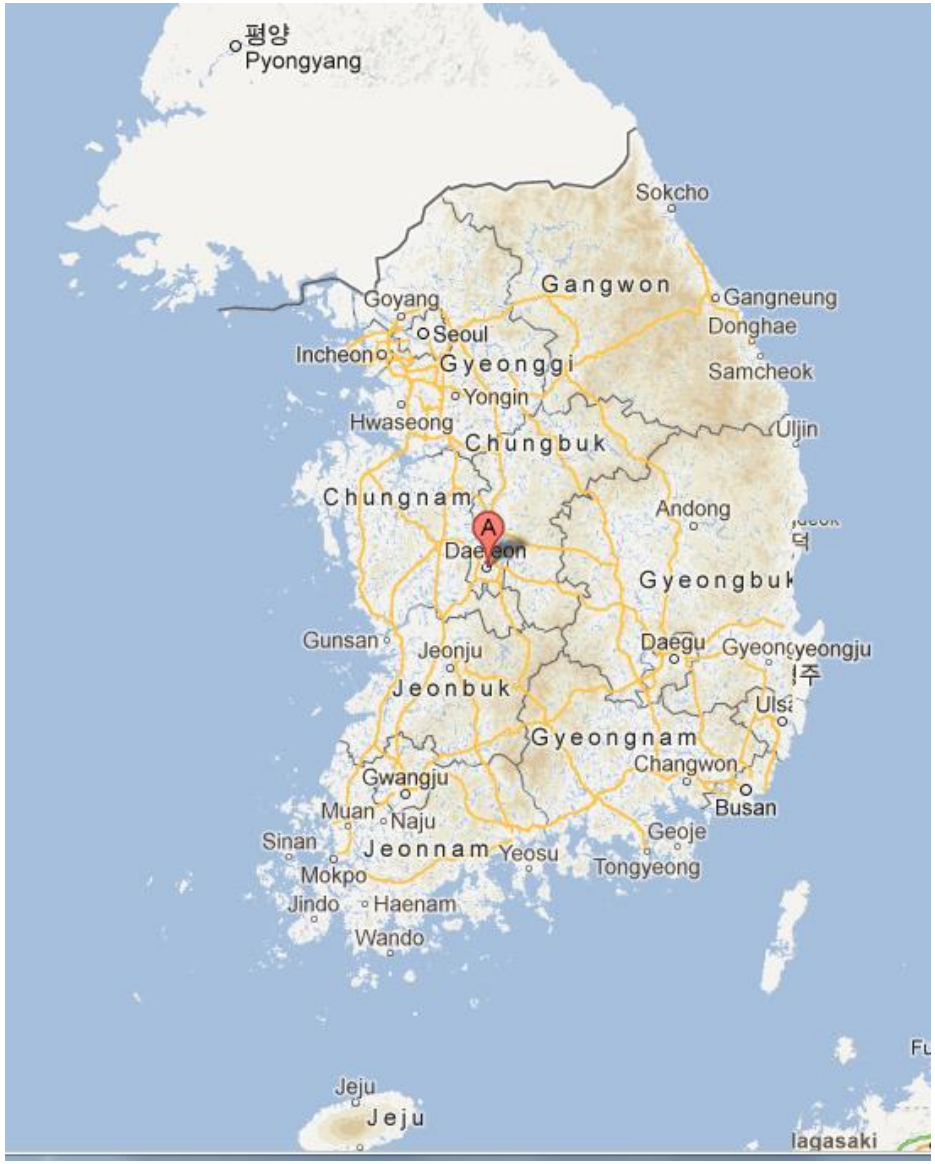
Den von KAIST angenommenen Studierenden werden die Studiengebühren bei KAIST erlassen. Für die Reisekosten empfiehlt sich z.B. ein DAAD-Stipendium zu beantragen.

Bewerbung: ca. 6 Monate zuvor beim Programmbeauftragten
Prof. Thomas Koch, Institut für Kolbenmaschinen, IFKM
thomas.a.koch@kit.edu
oder
Dr. Amin Velji, Institut für Kolbenmaschinen, IFKM
amin.velji@partner.kit.edu

vorsprechen

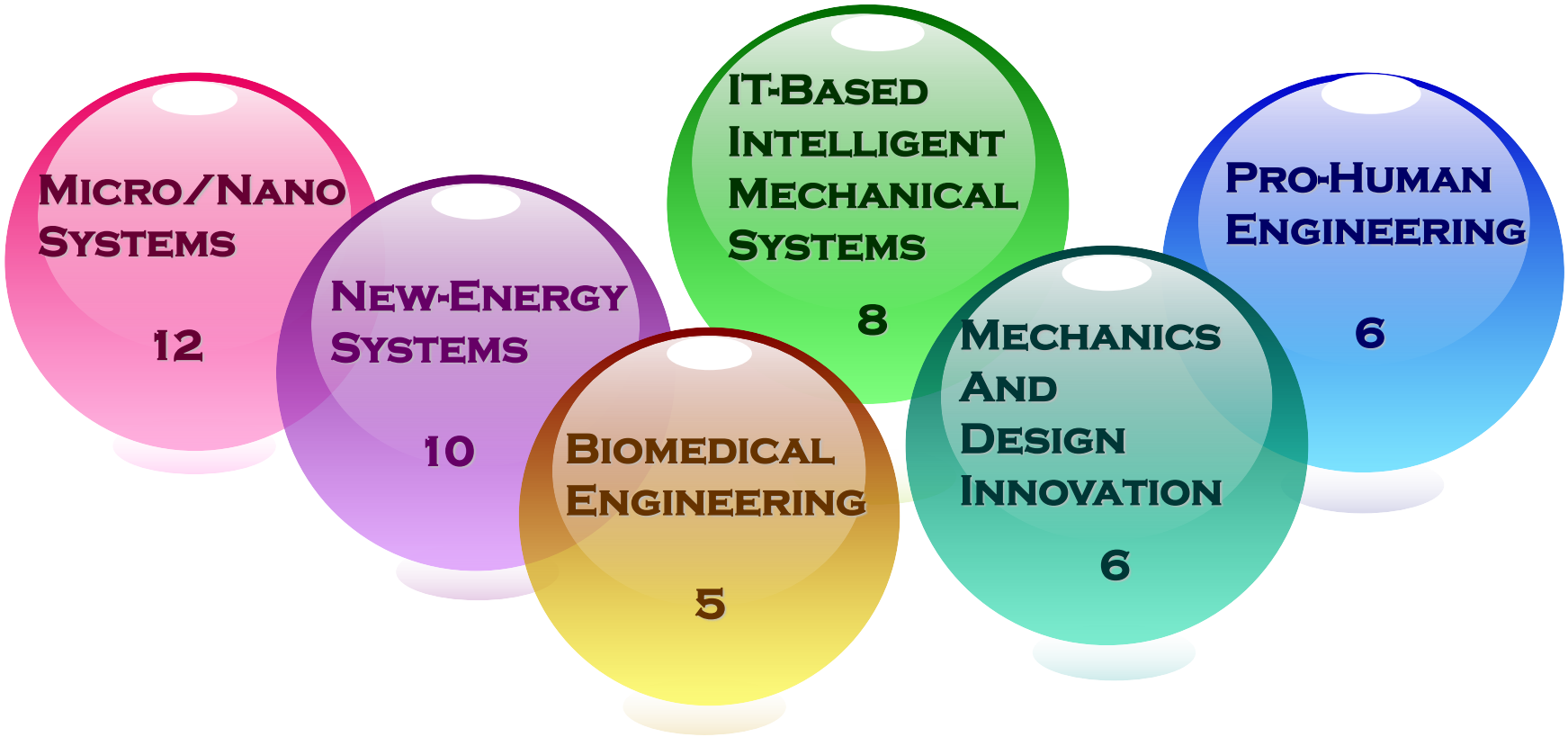
KAIST-Info: *http://www.kaist.edu/html/en/index.html*

Wo befindet sich KAIST?



Blick von oben auf den KAIST-Campus

Research Fields

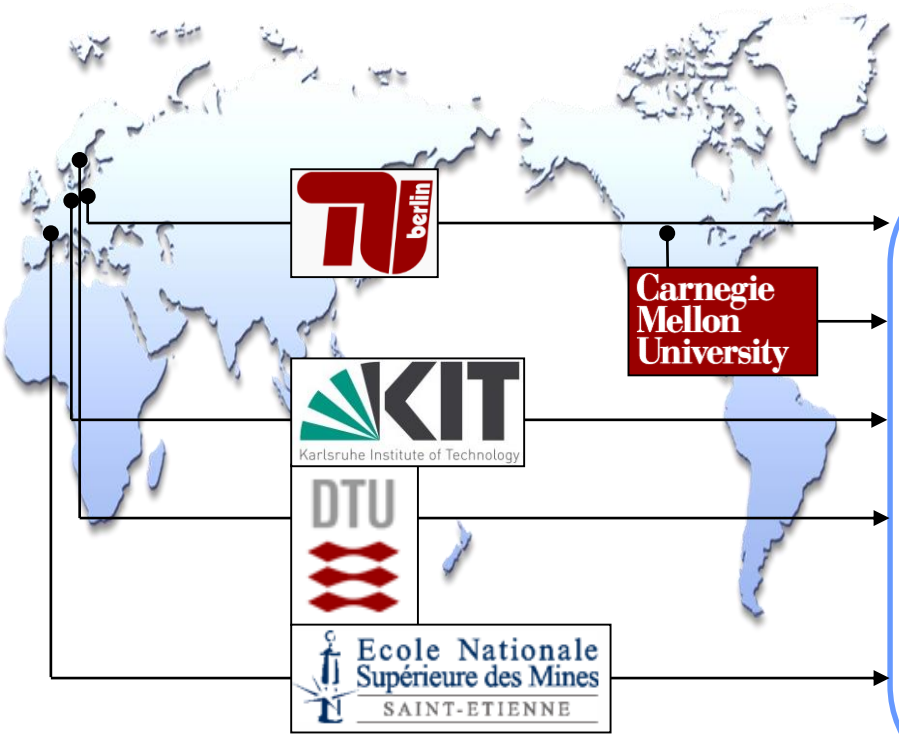


KAIST Facts & Figures (in 2011)

Faculty	**588**
Professors	328
Associate Professors	116
Assistant Professors	144
(Female professors)	6.6%
(Foreign professors)	8.3%
Administrative Staff	**474**
Colleges	**6**
Schools	2
Departments	19
Divisions	3
Professional Graduate Schools	10
Interdisciplinary Programs	10

Students	**10,396**
B.S	4,710
M.S	2,529
Ph.D	3,157
(Female students)	21%
(Foreign students)	5.3%
Graduations	**43,306**
KAIST Institutes	**6**
Total Budget	**720 Billion Won**
Government (Support)	24%
Research Grants	64%
Donations & etc.	12%
Campus Area *(Daedeok, Seoul, ICC)*	**1,543,015 m²**

Dual Degree Program



- **TU Berlin,** Germany (April 2008)
  Agreement on Dual Degree MS Program
- **Carnegie Mellon University,** USA (November 2008)
  Agreement on Dual Degree PhD Program
- **Karlsruhe Institute of Technology,** Germany (March 2009)
  Agreement on Dual Degree MS Program
- **DTU,** Denmark (May 2012)
  Agreement on Dual Degree MS Program(ME-DTU ME)
  Agreement on Dual Degree MS Program(ME-DTU EE)
  Agreement on Dual Degree MS Program(ME-DTU Eng. Acoustics)
- **ENSMSE,** France
  Dual degree Agreement of Research MS Program (April 2012)
  Dual Degree Agreement of MS Program (April 2009)

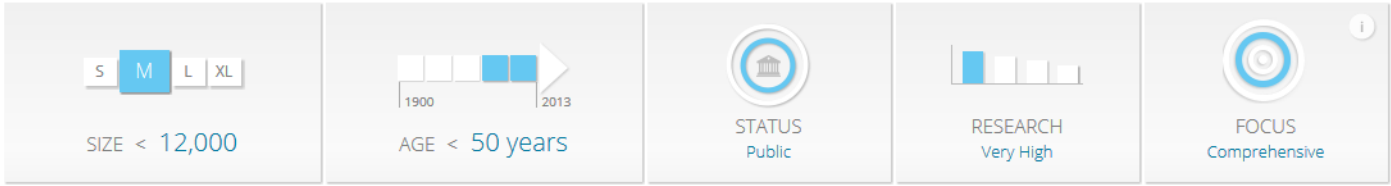
(as of Nov. 2012)

Excellence

Ranked the 1st for four consecutive years

- 2008 BK21 Evaluation: **(1) KAIST** (2) Seoul National Univ. (3) Hanyang Univ.
- 2009 BK21 Evaluation: **(1) KAIST** (2) Seoul National Univ. (3) Yonsei Univ.
- 2010 BK21 Evaluation: **(1) KAIST** (2) Seoul National Univ. (3) Yonsei Univ.
- 2011 BK21 Evaluation: **Selected as the Best Team** (No ranking was officially known in 2011)

KAIST - Korea Advanced Institute of Science & Technology



Korea Advanced Institute of Science & Technology is facing with the increasing importance of and demand for highly qualified scientists and engineers to support Korea?s industrialization, following the implementation of economic development plans since 1962. It is the now first research-oriented science and technology graduate school in Korea. Its mission is as follows: Education and training of highly qualified scientists and engineers equipped with theoretical and practical expertise. Participation in mid- to long-term government research projects and basic and applied research for the technology. Provision of research platforms to other research institutes and enterprises.

accumulation of Korea?s competitiveness in science and ▲ Read less

Benefits for Foreign Students

- ✓ **Full scholarship to all students**
  - Full scholarship (tuition and fees)
- ✓ **Courses taught in English**
- ✓ **Dormitory**
  - Dormitories on campus for all students (dormitory fee: appr. 86,000KRW= ca. 70 €)
- ✓ **On-camps medical service**
  - Minor wounds and illnesses are treated at an on-campus clinic for free.
  - For more serious illnesses, high quality professional medical service is offered on campus at the Pappalardo Medical Center
- ✓ **Library**
  - Two major libraries; science library and undergraduate branch library
  - A bookstore and a cafeteria
- ✓ **Sports facilities**
  - For table tennis, tennis, soccer, racket ball, badminton, volley ball and basket ball
  - Swimming pools and fitness centers

bis 2019: 14 KIT-Studierende nach KAIST

Feedback ausschließlich sehr positiv

Bis 2019: 4 KAIST-Studierende nach KIT

KAIST/KIT Dual Degree Program Application

	Items	Check
1	KAIST/KIT Dual Degree Program Application (Refer to the attached form)	
2	CV	
3	Recommendation letter	
4	KAIST/KIT Dual Degree Program Study Plan (more than 1page in English) - Duration of study in each institute, date of proposal exam, research description, plan of classes to attend	
5	Official Transcript of Academic Record (B.S and M.S) - Please include the summary of the credit and accomplished year	
6	Language proficiency - TOEFL or IELTS.. / German Language Test results	
7	Copy of passport	

Fach	Modul	LP/ Modul	Teilleistung	LP	Koordinator	Art der Erfolgskontrolle	Pr (h)	Gew
Vertiefung ingenieurwissenschaftlicher Grundlagen	Produktentstehung - Bauteildimensionierung	7	Produktentstehung - Bauteildimensionierung	7	Schulze	sPr	2	7
	Produktentstehung - Entwicklungsmethodik	6	Methoden und Prozesse der PGE - Produktgenerationsentwicklung	6	Matthiesen, Albers	sPr	2	6
	Modellbildung und Simulation	7	Modellbildung und Simulation	7	Proppe	sPr	3	7
	Mathematische Methoden	6	wählbare TL s. Modulhandbuch	6	Heilmaier	sPr	3[1]	6
	Laborpraktikum	4	wählbare TL s. Modulhandbuch	4	Stiller, Furmans	Schein		
	Wahlpflichtmodul Maschinenbau	8	Teilleistung 1, wählbare TL s. Modulhandbuch	4	Heilmaier	mPr	ca. 0,4	4
			Teilleistung 2, wählbare TL s. Modulhandbuch	4	Heilmaier	mPr	ca. 0,4	4
	Wahlpflichtmodul nat/inf/etit	6	wählbare TL s. Modulhandbuch	6	Maas	Schein		
	Wahlpflichtmodul wirt/recht	4	wählbare TL s. Modulhandbuch	4	Furmans	Schein		
	Schlüsselqualifikationen	2	wählbare TL von HoC, ZAK bzw. Modulhandbuch	2		Schein		
Vertiefungsrichtung	Schwerpunkt 1	16	Kern-/Ergänzungsbereich, wählbare TL s. Modulhandbuch	16	SP-Verantwortlicher	mPr	ca. 2x0,7 bzw. ca. 4x0,4	16
	Schwerpunkt 2	16	Kern-/Ergänzungsbereich, wählbare TL s. Modulhandbuch	16	SP-Verantwortlicher	mPr	ca. 2x0,7 bzw. ca. 4x0,4	16
	Grundlagen und Methoden der Vertiefungsrichtung	8	Teilleistung 1, wählbare TL s. Modulhandbuch	4	Heilmaier	mPr, sPr	ca. 0,4 bzw. 1,5 - 3,0	4
			Teilleistung 2, wählbare TL s. Modulhandbuch	4	Heilmaier	mPr, sPr	ca. 0,4 bzw. 1,5 – 3,0	4
Masterarbeit	Masterarbeit	30	Masterarbeit und Präsentation	30		PraA		30

Study Plan

- orientiert sich an der Gliederung des KIT Studienplans
- Nicht alles ist konsistent
- https://www.mach.kit.edu/download/MACH_MSc-de_88-604-H-20165_20190911.pdf
  Seite 16

IFKM

Study Plan

1) Department	KIT - Mechanical Engineering	2) Name	Max Mustermann
3) KIT Advisor	Dr-Ing. Amin Velji	4) Period of stay	Fall 2020 & Spring 2020

Course name	University code	Date / Semester	Credits (KIT)	Credits (KAIST)	Category (KIT)	Institution
Semester 1						
Modelling of mycrostructures	T-MACH-105303	28.08.19	5	-	SP 26 - Materials Science and Engineering	KIT
Product develepment - Methods of product development	T-MACH-109192	27.09.19	6	-	Compulsory subject	KIT
Physical basics of laser technology	T-MACH-102102	10.10.19	6	-	Compulsory elective module Natural Science	KIT
Sum:			KIT	17	KAIST	-
Semester 2						
Product develepment - Dimensioning of components	T-MACH-105383	WS 19/20	7	-	Compulsory subject	KIT
Mathematical models and methods for Production Systems	T-MACH-105189	WS 19/20	6	-	Compulsory elective mathematical models	KIT
Modelling and Simulation	T-MACH-105297	27.02.2020	7	-	Compulsory subject	KIT
Quality management	T-MACH-102107	WS 19/20	4	-	Compulsory elective module Economics / Law	KIT
Systematic Materials Selection	T-MACH-100531	11.02.2020	4	-	Fundamentals and Methods of Production Technology	KIT
Sum:			KIT	28	KAIST	-
Semester 3						
Mechanical behaviour of polymeric and composite materials	ME 663	Fall 2020	8	3	Elective course	KAIST
Special Topics in Production Engineering	ME 870	Fall 2020	8	3	SP 39 - Production Technology	KAIST
Introduction to Nanotech Processing	ME 526	Fall 2020	8	3	Elective course	KAIST
Introduction to materials and engineering	CC512	Fall 2020	8	3	SP 26 - Materials Science and Engineering	KAIST
Sum:			KIT	32	KAIST	12

Dual Master Agreement

- Ausrichtung nach KIT Studienplan
- Master KIT: 120 ECTS (4 Sem.)
- Master KAIST: 33 Cr (4 Sem.)
- Umrechung 33 Cr = 110 ECTS →Faktor 3,3
- Teilleistungen die am KIT nicht existieren mit 3,3 multiplizieren

IFKM

Study Plan

Semester 4						
Advaned manufacturing systems	ME 570	Spring 2020	8	3*	SP 39 - Production Technology	
Optimal Design of Composite Structures	ME 537	Spring 2020	4	3	SP 26 - Materials Science and Engineering	KAIST
Research (JDI/AMSE)	-	Spring 2020	-	12	Research	KAIST
Sum:			KIT	12	KAIST	18
Semester 5						
Master Thesis	M-MACH-102858	WS 20/21	30	-	Thesis	KIT
Value stream within enterprises – The value chain at Bosch	T-MACH-106375	WS 20/21	2	-	Key Qualifications	KIT
Sum:			KIT	32	KAIST	-

Total credits:	KIT	121	KAIST	30

= 36,7 KAIS Cr.

Research task:

JDI Research group:

Website: https://ddori456.wixsite.com/website

23.09.2019

Student

Advisor

IFKM

For further information, please visit the following websites:

KAIST	**http://www.kaist.ac.kr**
ME Department	**http://me.kaist.ac.kr**