

Course Transfer Equivalences from the Technische Universität Darmstadt (Darmstadt University of Technology) to Virginia Tech:

The Faculty of Mechanical Engineering at Virginia Tech have found the following sets of courses at the Technische Universität Darmstadt (TUD) to be equivalent to the corresponding sets of courses at Virginia Tech.

One-to-one equivalencies (required courses):

Numerische Mathematik <i>Numerical Analysis</i>	4 CP ECTS	VT BSME technical elective (ME 4XXX) 2 credits
Numerische Berechnungsverfahren <i>Numerical Methods</i>	4 CP ECTS	VT BSME technical elective (ME 4XXX) 2 credits
Strukturdynamik <i>Structural Dynamics</i>	6 CP ECTS	ME 3504 Dynamic Systems – Vibrations 3 credits
Systemtheorie und Regelungstechnik <i>Control Engineering (ME version, summer semesters)</i>	6 CP ECTS	ME 4504 Dynamic Systems – Controls Engineering I 3 credits
Systemdynamik und Regelungstechnik I <i>Control Engineering (EE version, winter semesters)</i>	6 CP ECTS	ME 4504 Dynamic Systems – Controls Engineering I 3 credits

Equivalence #1 (required course):

	ME 4015 Engineering Design & Project I	ME 4016 Engineering Design & Project II		
Bachelor-Thesis <i>Bachelor-Thesis</i>	6 CP ECTS, 3 cr	6 CP ECTS, 3 cr		12 CP ECTS, 6 cr
	6 CP ECTS, 3 cr	6 CP ECTS, 3 cr		

The students will be required to complete one of the following two combinations:

Equivalence #2a:

	ME 4006 Mechanical Engineering Lab II	ME 4124 Fluid Machinery - Heat Transfer Design	VT BSME technical elective (ME 4XXX)	
Fluids Engineering Laboratory <i>Fluids Engineering Laboratory</i>	4 CP ECTS, 2 cr			4 CP ECTS, 2 cr
Grundlagen der Turbomaschinen und Fluidsysteme <i>Fundamentals of Turbomachinery and Fluid Systems</i>	2 CP ECTS, 1 cr	4 CP ECTS, 2 cr	2 CP ECTS, 1 cr	8 CP ECTS, 4 cr
Aerodynamik I <i>Aerodynamics I</i>		2 CP ECTS, 1 cr	4 CP ECTS, 2 cr	6 CP ECTS, 3 cr
	6 CP ECTS, 3 cr	6 CP ECTS, 3 cr	6 CP ECTS, 3 cr	

Equivalence #2b:

	ME 4006 Mechanical Engineering Lab II	ME 4124 Fluid Machinery - Heat Transfer Design	VT BSME technical elective (ME 4XXX)	
Fluids Engineering Laboratory <i>Fluids Engineering Laboratory</i>	4 CP ECTS, 2 cr			4 CP ECTS, 2 cr
Grundlagen der Turbomaschinen und Fluidsysteme <i>Fundamentals of Turbomachinery and Fluid Systems</i>	2 CP ECTS, 1 cr	4 CP ECTS, 2 cr	2 CP ECTS, 1 cr	8 CP ECTS, 4 cr
Grundlagen der Flugantriebe <i>Flight Propulsion Fundamentals</i>		2 CP ECTS, 1 cr	6 CP ECTS, 3 cr	8 CP ECTS, 4 cr
	6 CP ECTS, 3 cr	6 CP ECTS, 3 cr	8 CP ECTS, 4 cr	

Courses at the Technische Universität Darmstadt (TUD) that are approved for transfer to Virginia Tech as **ME 4xxx Technical Elective**

		TUD credits ECTS (CP)	VT Semester Credit Hours	TUD Semester
German TUD transcript text:	English TUD transcript text:			
Aerodynamik I *	Aerodynamics I *	6	3	WS
Angewandte Produktentwicklung	Applied Product Development	8	4	WS
Einführung in die Druck- und Medientechnik	Introduction to Printing and Media Technology	4	2	WS
Einführung in die Kunststofftechnik	Introduction into Polymer Technology	4	2	WS
Einführung in die Papiertechnik	Introduction into Paper Technology	4	2	WS
Elektrische Antriebe für MEC	Electrical Drives for MEC	8	4	SS
Elektronik	Electronics	4	2	WS
Elektrotechnik und Informationstechnik II	Electrical Engineering and Information Technology II	6	3	SS
Energie und Klimaschutz	Energy and Climate Change	4	2	WS
Fahrzeugschwingungen	Vehicle Oscillations	4	2	SS
Flugmechanik I: Flugleistungen	Flight Mechanics I: Performance	6	3	WS
Gestaltung von Mensch-Maschine-Schnittstellen	Design of Human-Machine-Interfaces	8	4	SS
Grundlagen der Flugantriebe	Flight Propulsion Fundamentals	8	4	WS
Grundlagen der Turbomaschinen und Fluidsysteme *	Fundamentals of Turbomachinery and Fluid Systems *	8	4	SS
International Research Project (IRP)	International Research Project	Variable		WS / SS
Konstruieren mit Faser-Kunststoff-Verbunden I	Design with Advanced Composite Materials I	8	4	SS
Konstruktionsprinzipien im Druckmaschinenbau	Design Principles in Printing Press Construction	4	2	WS
Kraftfahrzeugtechnik	Motor Vehicles	6	3	WS
Laser in der Fertigung	Lasers in Manufacturing	4	2	WS
Logischer Entwurf	Logic Design	5	2	WS
Mechanische Verfahrenstechnik	Mechanical Process Engineering	4	2	SS
Nachhaltige Verbrennungstechnologien A	Efficient combustion technologies A	8	4	WS
Praktikum Aktoren für mechatronische Systeme	Practical Course with mechatronic actuators	4	2	SS
Praktikum Regelung mechatronischer Systeme	Lab Tutorial Control of Mechatronic Systems	4	2	SS
Praktische Farbmessung	Applied Colorimetry	4	2	SS
Thermische Verfahrenstechnik I – Thermodynamik der Gemische	Chemical Engineering Thermodynamics	4	2	SS
Thermische Verfahrenstechnik II – Verfahrenstechnische Grundoperationen	Equilibrium- and Non-Equilibrium-Stage Separation Processes	4	2	SS
Verbrennungskraftmaschinen I	Combustion Engines I	6	3	WS
Werkstofftechnologie und -anwendung	Materials Technology and Applications	6	3	SS
Werkzeugmaschinen und Industrieroboter	Machine Tools and Industrial Robots	8	4	WS
Zuverlässigkeit im Maschinenbau	Reliability in Mechanical Engineering	4	2	SS

* Unless used to meet other course requirements

"WS" = Winter Semester (October - March) "SS" = Summer Semester (April - August)