

Master Digital Engineering

- Key idea:
 - Interdisciplinary course: Engineering and Computer Science
 - 2 years, entirely in English
 - Essential skills for Industry 4.0 (the German initiative to digitalize and automate the industry)
 - Focus on civil engineering



Fields of Applications After Study

- Industry 4.0
- Interdisciplinary projects between computer science and engineering
- Model manager in industry
- Analyst and scientist in engineering
- System integrator
- Technical manager
- Consultant for digitalization concepts
- Software developer
- Engineer in production
- Research positions

Study Plan

Name	ECTS
Fundamentals	18
Modelling	18
Simulation and Validation	18
Visualization and Data Science	18
Electives	12
Research Project	12
Master Module	24
<i>Sum</i>	120

Basic + Specialization 1. year

Project + Specialization + Master thesis 2. year

Review study and exam regulations!

<https://www.uni-weimar.de/en/civil-engineering/studies/master-degree-programmes/digital-engineering/curriculum/>

Some important facts:

- Master thesis requirements: **English C1 and German A1**
- Language courses for C1 can be used as Elective modules (**register early!**)
- Expected are **30 ECTS per semester** (~ 5 successful courses)
- Fundamentals must be taken within the **first 2 semesters**
- **Research project** must be completed **before the master** module can be started
- Preparatory research module must be completed before the thesis can be started

Time	Monday	Tuesday	Wednesday	Thursday	Friday			
07:30 - 09:00			[F] (Applied) Structural Dynamics (E) Group A Dr. Zabel Luna-blue, M7B					
09:15 - 10:45		[F] Software Engineering (M.Sc.) (L) Prof. Echterler LH B, M 13 C start: 09.Oct 2018	[F] (Applied) Structural Dynamics (E) Group B Dr. Zabel Luna-grey, M7B	[SaV] Fundamentals of structural health monitoring (SHM) (L) Prof. Smarsly 09:15-12:30 Orion-Pool, C13D	[F] (Applied) Structural Dynamics (E) Group C Dr. Zabel Luna-blue, M7B	[VaDS] Introduction to Machine Learning (L) Prof. Stein LH A, M 13 C start: t.b.a.	[F] (Applied) Structural Dynamics (L) *** Dr. Zabel LH C, M13C	[F] Object-oriented Modeling and Programming in Engineering (E) Prof. Koch Luna Blue /Grey M7b start: 19 Oct. 2018
11:00 - 12:30	[VaDS] Photogrammetric ComputerVision (PCV)* (L) Prof. Rodehorst SR 015, B11 start: 08.Oct.2018	[F] Nonlinear Continuum Mechanics (E) Prof. Rabczuk LH 2, C 13A	[SaV] Design & Interpretation of Experiments (L) Prof. Lahmer LH B, M13C / SR205, M7b	[F] (Applied) Structural Dynamics (L) *** Dr. Zabel LH C, M13C	[VaDS] Introduction to Machine Learning (E) M.Völske LH A, M13 C start: t.b.a.			
13:30 - 15:00	[VaDS] PCV (E) N.N. SR 15, B11 / LINT-Pool start: 15.Oct.18 fortnightly	[F] Applied Mathematics and Stochastics(L) Prof. Lahmer LH B, M13 C	[F] Applied Mathematics and Stochastics Prof. Gürlebeck LH 2, C13A	[SaV] Design & Interpretation of Experiments Prof. Kraus LH C, M13C	[F] Software Engineering (M.Sc.) (E) Prof. Echterler LH 2, C13A start: 11. Oct 2018			
15:15 - 16:45	[F] Object-oriented Modeling and Programming in Engineering (L) Prof. Koch SR210, C13B							Tutorial Programming N.Dittrich (keine ECTS) LINT-Pool start: 19.Oct 2018
17:00 - 18:30	[F] Applied Mathematics and Stochastics (E) Group A+B+C Prof. Lahmer /Legatiuk LH B, M13C start: 15.Oct 2018	Academic English Part I ** H. Atkinson SR 015, B11 start: 06. Nov 2018	Academic English Part II* H. Atkinson SR 015, B11 start: 07. Nov 2018	[F] Nonlinear Continuum Mechanics (L) Prof. Rabczuk LH C, M13 C	Tutorial Programming N.Dittrich (keine ECTS) SR13, B11 start: 18.Oct 2018			↑ ← Tip

*PCV: first lecture: Okt. 8th, 2018, 13:30 – 15:00, room 015, Bauhausstraße 11

**Registration for first time participants: October 24th, 2018, 10:00-12:00 a.m., room 001, Bauhausstr. 11
October 30th, 2018, 16:00-18:00 p.m., room 001, Bauhausstr. 11

***"Structural Dynamics" until November 29th, 2018, starting from December 5th, 2018 „Applied Structural Dynamics“

(L)=Lecture / (E) =Exercise / (S) = Seminar

<u>List of abbreviations:</u>	M7: Marienstraße 7
B11: Bauhausstraße 11	M13: Marienstraße 13
C13: Coudraystraße 13	LH: lecture hall
HK7: Haußknechtstraße 7	SR: seminar room

 Requirement + Fundamental Fundamental English course for C1 Specialization

FAQ

- Arriving in Weimar: What to do?
 - <https://www.uni-weimar.de/en/university/international/to-weimar/preparing-your-stay/>
- **Student assistants helping you arriving**
 - Mr. David Tschirschwitz (david.tschirschwitz@uni-weimar.de)
 - Mr. Jahed Ahmed (jahed.ahmed@uni-weimar.de)
- For CS courses:
 - Media students receive 4.5 ECTS
 - DE students receive 6 ECTS -> more tasks and/or larger exam
- Feedback conference between students and program authority (Prof. Koch, Prof. Siegmund)
- **Java introductory tutorial from Nathalie Dittrich** (nathalie.jolanthe.dittrich@uni-weimar.de)
- Check your university e-Mail box **regularly!**