

# Module catalogue

## “PrepTec” orientation programme

-Fit for study-

Module	Course elements	Type	Hours (weekly)	Assessment	Ongoing Assessment	Credit value	Page
<b>1. Semester</b>							
<b>Subject specific competencies (3 LP)</b>							
	Mathematical foundations	V/Ü	4	1 K (50%), 1 sbA (50%) <sup>1</sup>		3	2
<b>MINT-Orientation (3 LP)</b>							
	Interdisciplinary learning laboratory MME/MLS	P/S	2	1 PN		3	3
<b>Methodological skills (6 LP)</b>							
	Intercultural skills	V/S	2	1 K		3	5
	Study techniques and time management	W	3		1 sbB	3	
<b>Intensive German language preparation (Level B2) (3 LP)</b>							
	German (Level B2)	V/S	2	1 K (50%), 1 sbA (50%) <sup>1</sup>		3	8
<b>German language (Level C1) (12 LP)</b>							
	German (Level C1)	V/S	8	1 K (50%), 1 sbA (50%) <sup>1</sup>		12	10
<b>German for engineers (Level C1) (3 LP)</b>							
	German for engineers (Level C 1)	V/S	2	1 K (50%), 1 sbA (50%) <sup>1</sup>		3	12



<b>Mathematical foundations</b>						
Identification number	Workload	Credits/LP	Semester	Frequency	Length	
	90 h	3	Presemester	Each semester	1 Semester	
1	<b>Course elements</b> a) Lectures b) Tutorials		<b>Language</b> German	<b>Contact hours</b> 4 SWS / 45 h	<b>Self study</b> 45 h	<b>Expected group size</b> 15
2	<b>Learning outcomes/competencies</b>  On completion of this module, students will be able to...  <b>Knowledge(1):</b> ...define basic mathematical terms in German ... identify mathematical problems  <b>Understanding (2):</b> ... use examples to demonstrate basic mathematical calculations ...transform/solve equations and inequalities ...transform complex numbers into their various representations  <b>Application(3):</b> ...use the Gaussian algorithm to solve systems of linear equations ...calculate derivatives of important functions ...calculate integrals of important functions					
3	<b>Content</b>  Fundamentals: quantifiers, equations, inequalities, functions: Definitions, properties, limit values, continuities, trigonometric functions, exponential functions, logarithmic functions, differential calculations, derivations, factor rules, summation rules, product rules, quotient rules, chain rules					
4	<b>Teaching methods</b>  Lectures/ Tutorials					
5	<b>Participation pre-requisites</b>					
6	<b>Assessment methods</b>  a) Examination 1K , ongoing semester work					
7	<b>Application of module</b>  PrepTec pre-semester in preparation for MINT courses of study					
8	<b>Module coordinator/Primary teacher</b> Prof. Edgar Jäger, Dr. Elmar Dammann					
9	<b>Resources</b>					

MINT- Orientation						
Identification number	Workload 90 Std.	Credits/LP 3	Preparation semester PrepTec	Frequency Each semester	Length 1 Semester	
1	<b>Course elements</b> a) Interdisciplinary learning-laboratory - MME/MLS		<b>Language</b> a) German	<b>Contact hours</b> a) 22,5 Hrs	<b>Self study</b> a) 67,5 Hrs.	<b>Expected group size</b> a) 15-20
2	<p><b>Learning outcomes/competencies</b></p> <p>On successful completion of the module, students will be able to ...</p> <p><b>Knowledge (1)</b></p> <p>... show familiarity with the contents of technical courses at the HFU and display an understanding of future career paths</p> <p>...understand the structure, content and requirements of the technical courses at the HFU, specifically those of ANB und MTZ (Fakultät MLS) und MKB, MM und ELAN (Fakultät MME)</p> <p><b>Understanding (2)</b></p> <p>... display an understanding of the basic principles and applications of their respective disciplines</p> <p><b>Application (3)</b></p> <p>...apply basic engineering and subject specific knowledge and methods</p> <p><b>Analyse (4)</b></p> <p>...understand, analyse and contextually employ subject specific fundamentals</p>					

3	<p><b>Contents</b></p> <p>The course will be divided in 2 SWS (before the official start of the lecture in the language introduction weeks) the students will be taught basic technical skills and vocabulary. Students will gain basic insights into the structure and content of the offered courses. Students can then decide on a course of study after receiving specialist guidance. They will receive an individually tailored curriculum, which includes subject-specific orientations/introductions (lectures/seminars) as well as specialized internships. About a quarter of the available contact time should be spent on practical skills.</p> <ol style="list-style-type: none"> <li>1. Scientific competence: Chemistry</li> <li>2. Scientific competence: Biology</li> <li>3. Technical competence: Machine construction/Mechatronics</li> <li>4. Technical competence: Electrotechnology</li> <li>5. Technical competence: Robotics</li> <li>6. Technical competence: Medical technology</li> <li>7. Description of the study programs of the HFU; compilation of the individual introduction to the study program according to your interests; subject-related individual study guidance</li> <li>8. .... To 13. in the scope of one SWS, students can participate in a course introduction according to their individual interests. In this case, 60 % of the time is spent on lectures and 40 % of the time on practical courses....</li> <li>14. Presentation of the individually completed technical introductions in a seminar</li> </ol>
4	<p><b>Teaching Methods</b> Lectures/Tutorials Lehrfor en</p>
5	<p><b>Participation pre-requisites</b> none</p>
6	<p><b>Assessment methods</b> a) Presentation 1PN (3 LP)</p>
7	<p><b>Description of module</b> Preparatory semester</p>
8	<p><b>Module coordinator/Primary Teacher</b> Prof. Dr. Ulrike Salat</p>
9	<p><b>Literature/Resources</b> Different SPOs of the presented study programmes. Updated daily on the homepage of the HFU.</p>

Methodological skills					
Identification number	Workload	Credits/LP	Semester	Frequency	Length
	180 h	6	1	Each semester	1 Semester
1	<b>Course elements</b> a) Intercultural skills b) Study techniques and time management	<b>Language</b> a) German b) German	<b>Contact hours</b> a) 22,5 Std. b) 33,75 Std	<b>Self study</b> a) 6,5 Std. b) 56,25 Std.	<b>Expected group size</b> 15
2	<b>Learning outcomes/competencies</b> On successful completion of the module, students will be able to ... <b>Knowledge (1)</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> ...recognise their own cultural norms</li> <li><input type="checkbox"/> ... recognise conventions used in both German and the home culture for communication.</li> <li><input type="checkbox"/> ... visualise and present using selected media.</li> <li><input type="checkbox"/> ...employ a range of learning strategies.</li> <li><input type="checkbox"/> ...define a personal vision for learning and develop specific learning goals.</li> <li><input type="checkbox"/> ...establish learning priorities</li> </ul> <b>Understanding (2)</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> ... recognise their own cultural norms.</li> <li><input type="checkbox"/> ... understand how intercultural communication functions.</li> <li><input type="checkbox"/> ... identify culture specific communication challenges and understand their origins</li> <li><input type="checkbox"/> ...understand German/European approaches and perspectives to communication</li> </ul> <b>Application (3)</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> ...skilfully employ language relevant to their specific language level.</li> <li><input type="checkbox"/> ...skilfully employ language to actively intervene and partake in communication.</li> <li><input type="checkbox"/> ...overcome nerves when speaking.</li> <li><input type="checkbox"/> ...demonstrate appropriate use of body language when presenting.</li> </ul>				

3	<p><b>a) Contents</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Culture: What is culture? What is my culture? - Culture as part of my identity</li> <li><input type="checkbox"/> Intercultural communication: prerequisites for successful communication, causes of misunderstandings; different conventions; evaluations and stereotypes; intercultural communication in (professional) everyday life</li> <li><input type="checkbox"/> Conventions in communication: Same word - different meaning; direct and indirect style of communication; different registers and labels; values and standards</li> </ul> <p><b>b) Presentation techniques</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Prepare presentations: Different occasions, What is the aim of the presentation? Participants / listeners</li> <li><input type="checkbox"/> Design elements of the presentation: understanding differences in audience perception, use of charts and organization charts, colours, choice of font, layout</li> <li><input type="checkbox"/> Media: Use and function of different media, beamer, flipchart, pinboard</li> <li><input type="checkbox"/> Execution: Opening / interesting entrances, main part, closing</li> <li><input type="checkbox"/> Other topics: Use of language and body language, dealing with stage fright, question techniques, dealing with breakdowns and disturbances, rhetorical questioning</li> </ul> <p><b>Time management and study skills</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Visions and goals: Orientation for professional life, visions as guiding principles, recognising wishes, formulating goals, motivation</li> <li><input type="checkbox"/> Roles: roles before beginning study and roles during study</li> <li><input type="checkbox"/> Planning: Life planning, yearly, monthly, weekly and daily planning, ALPEN-Method, Pareto-Principle</li> <li><input type="checkbox"/> Priorities: ABC-Analysis, Eisenhower-Matrix, saying 'no', delegating</li> <li><input type="checkbox"/> Other topics: self-discipline, biorhythms, personal learning curves, orderly study spaces, management and planning systems (books and software), coping with time killers, learning in groups, procrastination, dealing with perfectionism, dealing with stress, movement, the body, nutrition, sleep, study techniques</li> </ul>
4	<p><b>Teaching methods</b></p> <p>a) Lectures: communication focussed partner and group work Blended-Learning: guided online learning modules, which can be completed by self-directed learning</p> <p>b) Workshop</p>
5	<p><b>Participation pre-requisite</b></p> <p>none</p>
6	<p><b>Assessment format</b></p> <p>a) examination performance: 1K 50%</p> <p>b) Presentation</p>
7	<p><b>Module application</b></p>

8	<p><b>Module coordinator/Primary Teacher</b></p> <p>a) Mary Rose Keane-Matt</p> <p>b) LB Susanne Geyer</p>
9	<p><b>Resources</b></p> <p>a)</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Hans Jürgen Heringer: Interkulturelle Kompetenz, A. Francke Verlag Tübingen und Basel, 2012</li> <li><input type="checkbox"/> Marielle Grasemann und Christina Kasperski: Interkulturelle Kompetenz, Ernst Klett Sprachen Verlag GmbH, 2018</li> <li><input type="checkbox"/> Volker Eismann: Erfolgreich in der interkulturellen Kommunikation, Cornelsen Schulverlage GmbH, 2013</li> </ul> <p>b)</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Seifert, Josef W.: Visualisieren, Präsentieren, Moderieren</li> <li><input type="checkbox"/> Lenzen, Andreas: Präsentieren – Moderieren</li> <li><input type="checkbox"/> Krengel, Martin: Golden Rules – Erfolgreich lernen und arbeiten</li> <li><input type="checkbox"/> Krengel, Martin: Der Studi Survival Guide</li> <li><input type="checkbox"/> Seiwert, Lothar: Noch mehr Zeit für das Wesentliche</li> </ul>



<b>German B2 - Intensive</b>					
<b>Identification number</b>	<b>Workload</b> 90 Std.	<b>Credits/ LP</b> 3	<b>Semester</b> PrepTec	<b>Frequency</b> Each semester	<b>Length</b> 3 Wochen
<b>1</b>	<b>Course elements</b> DaF B2 - Intensive	<b>Language</b> German	<b>Contact hours</b> 2 SWS/ 22,5 Std	<b>Self study</b> 67,5 Std	<b>Expected group size</b> 10
<b>2</b>	<b>Learning outcomes/competencies</b> On successful completion of this module, students will be able to effectively use German at B2 level in social and work situations to... <ul style="list-style-type: none"> <li><input type="checkbox"/> communicate with a variety of audiences using a variety of different communication skills.</li> <li><input type="checkbox"/> participate in discussions in a competent, structured and detailed manner.</li> <li><input type="checkbox"/> write structured, coherent texts on complex topics with little to no errors.</li> </ul>				
<b>3</b>	<b>Contents</b> <ul style="list-style-type: none"> <li>- reading comprehension</li> <li>- specific grammatical features as required</li> <li>- listening to interviews, radio features and reports</li> <li>- presentation of own projects</li> <li>- discussions</li> <li>- coherent text production</li> </ul>				
<b>4</b>	<b>Teaching formats</b> Lectures: communicative group activities Blended Learning: guided online learning modules, which can be completed by self-directed learning				
<b>5</b>	<b>Participation pre-requisite</b> Minimum certified competence at B2 level (GER)				
<b>6</b>	<b>Assessment format</b> 1 Exam (50%), 1 sbA (50%)				
<b>7</b>	<b>Module application</b> On successful completion of this module, students will be able to undertake TestDAF assessment.				
<b>8</b>	<b>Module coordinator/Primary Teacher</b> Stephanie Kahsay (M.A.)				



<b>Deutsch C1</b>					
<b>Identification number</b>	<b>Workload</b>	<b>Credits/LP</b>	<b>Semester</b>	<b>Frequency</b>	<b>Length</b>
	360 Std	12	PrepTec	Each semester	15 Wochen
<b>1</b>	<b>Course elements</b> DaF C1	<b>Language</b> German	<b>Contact hours</b> 8 SWS/ 90 Std	<b>Self study</b> 270 Std	<b>Expected group size</b> 10
<b>2</b>	<b>Learning outcomes/competencies</b> On successful completion of this module, students will be able to effectively use German at C1level in social and work situations to... <ul style="list-style-type: none"> <li><input type="checkbox"/> communicate with a variety of audiences using a variety of different communication skills..</li> <li><input type="checkbox"/> partake in discussions with ease.</li> <li><input type="checkbox"/> write texts with a minimum of grammatical and syntactical errors.</li> </ul>				
<b>3</b>	<b>Contents</b> <ul style="list-style-type: none"> <li>- reading comprehension</li> <li>- specific grammatical features as required</li> <li>- listening to interviews, radio features and reports</li> <li>- presentation of own projects</li> <li>- discussions</li> <li>- coherent text production – summaries, correspondence, contributions to discussions</li> </ul>				
<b>4</b>	<b>Teaching formats</b> Lectures: communicative group activities Blended Learning: guided online learning modules which can be completed by self-directed study				
<b>5</b>	<b>Participation prerequisites</b> Minimum certified competence at the B1 level (GER) (B2???)				
<b>6</b>	<b>Assessment format</b> 1 Exam(50%), 1 sbA (50%)				
<b>7</b>	<b>Module application</b> On successful completion of this module, students will able to undertake further studies in a subsequent C1 course.				
<b>8</b>	<b>Module coordinator/Primary Teacher</b> Stephanie Kahsay (M.A.)				
<b>9</b>	<b>Resources</b> Sicher! Deutsch als Fremdsprache B2 Kurs- und Arbeitsbuch (Hueber-Verlag)				



<b>Deutsch C1 - Engineering</b>					
<b>Identification number</b>	<b>Workload</b> 90 Std	<b>Credits/LP</b> 3	<b>Semester</b> PrepTec	<b>Frequency</b> Each semester	<b>Length</b> 15 Wochen
<b>1</b>	<b>Course elements</b> DaF C1- Engineering		<b>Language</b> German	<b>Contact hours</b> 2 SWS/ 22,5 Std	<b>Self study</b> 67,5Std  <b>Expected group size</b> 10
<b>2</b>	<p><b>Learning outcomes and competencies</b></p> <p>On successful completion of this module, students will be able to effectively use German at C1 level in social and work situations to...</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> analyse technical texts and identify key points/arguments</li> <li><input type="checkbox"/> competently participate in (technical) discussions and give presentations on specialist topics.</li> </ul>				
<b>3</b>	<p><b>Content</b></p> <ul style="list-style-type: none"> <li>- reading comprehension, analysis of specific tasks - specific grammatical features as required</li> <li>- listening to interviews, radio features and reports</li> <li>- presentation of own projects</li> <li>- discussions</li> <li>- text production – summaries, transcripts and other academically relevant, texts</li> <li>- execution of selected tasks from the MINT study areas at the HFU</li> </ul>				
<b>4</b>	<p><b>Teaching formats</b></p> <p>Lectures: communicative group activities</p> <p>Blended Learning: guided online learning modules which can be completed by self-directed study</p>				
<b>5</b>	<p><b>Participation prerequisites</b></p> <p>Minimum certified competence at B2 level (GER)</p>				
<b>6</b>	<p><b>Assessment format</b></p> <p>1 Exam(50%), 1 sbA (50%)</p>				
<b>7</b>	<p><b>Module application</b></p> <p>On successful completion of this module, students will be able to undertake further studies in a subsequent C1 course</p>				
<b>8</b>	<p><b>Module coordinator/Primary Teacher</b></p> <p>Stephanie Kahsay (M.A.)</p>				

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**Resources**

Deutsch für Ingenieure: Ein DaF-Lehrwerk für Studierende ingenieurwissenschaftlicher Fächer (Springer-Verlag), und ausgewählte Materialien aus den MINT-Studiengängen der HFU