

**Technische Natuurkunde Bachelor programme 2020/2021**(See also the [transitional arrangements TN](#))

The column 'Participation' indicates the accessibility of a course.

UT = Accessible to all UT students. provided that they meet prior knowledge and entry requirements for the course.

AD = After permission from the TN programme (see [Participation in Applied Physics Courses](#) for more information and the application form).

TN = Only accessible to TN students.

**B1 (Generation 2020/2021)**

Course code	Name	Coordinator/examiner	Lang.	Participation	EC
<b>TN MOD01 Dynamics and Relativity</b>		<b>J.H. Snoeijer</b>			
202000672	Dynamics and Relativity	J.H. Snoeijer	NL	UT	5.0
202001215	Calculus 1	L. Pehlivan	EN	UT	4.0
202000673	Lab Course 1	I.C.W.T.A. van Veldhoven	NL	AD	1.5
202000674	Programming and Data Processing 1	J.S. Kanger	NL	AD	2.0
202000675	Project Dynamics en Relativity	A. Marin	EN	TN	2.5
<b>TN MOD02 Thermodynamics</b>		<b>H.J.M. ter Brake</b>			
202000677	Thermodynamics	S. Vanapalli	EN/NL	UT	4.0
202001224	Calculus 2	J.W. Polderman	EN	UT	4.0
202000678	Lab Course 2	I.C.W.T.A. van Veldhoven	NL	AD	2.0
202000679	Programming and Data Processing 2	J.S. Kanger	NL	AD	1.0
202000680	Project Thermodynamics	H.J.M. ter Brake	NL	TN	4.0
<b>TN MOD03 Electromagnetism &amp; Measurements</b>		<b>H.L. Offerhaus</b>			
202000682	Electromagnetics	K.J. Boller	EN	UT	5.0
202001229	Vector Calculus	J.J.W. van der Vegt	EN	UT	2.0
202000683	Instrumentation	P.P. Veugelers	EN/NL	AD	4.0
202000684	Analytical Programming	J.W.J. Verschuur	EN	AD	1.0
202000685	Project Electromagnetism & Measurements	M.M.J. Dhalle	EN	TN	3.0
<b>TN MOD04 Quantum &amp; Geometrical Optics</b>		<b>A. Brinkman</b>			
202000687	Quantum Matter	A. Brinkman	NL	UT	5.0
202001211	Linear Algebra	T.S. Graig	EN	UT	3.0
202000688	Geometrical Optics	J.S. Kanger	NL	AD	2.5
202000689	Engineering Systems	S.J.G. Lemay	EN	TN	4.5
Total B1					60

**B2 (generation 2019/2020)**

Course code	Name	Coordinator/examiner	Lang.	Participation	EC
<b>TN MOD05 Signals. Models en Systems</b>		<b>G.C. Vreman - de Olde</b>			
202000691	Signals	S.J.G. Lemay	EN	AD	4.0
202000692	Models	I.C.W.T.A. van Veldhoven	EN	AD	4.0
202000693	Project Signals. Models en Systems	J.W.J. Verschuur Van Veldhoven	EN	TN	3.0
<b>Keuze 1 van 2:</b>					
202000694	Classical Mechanics	C. Filippi	EN	UT	4.0
202000695	Engineering Solid Mechanics	J.P. Schilder	EN	UT	4.0
<b>TN MOD06 Waves. Interference and Probability</b>		<b>J.S. Kanger</b>			
202000697	Optics	R. Saive	EN	AD	7.0
202000698	Quantum Mechanics	A. Brinkman	EN	UT	6.0
202000699	Hilbert Space	R.M.J. van Damme	EN	UT	2.0
<b>TN MOD07 Condensed Matter Physics</b>		<b>E.S. Kooij</b>			
202000701	Introduction Solid State Physics	A. van Houselt	NL	AD	7.0
202000702	Statistical Physics	F.G. Mugele	NL	UT	6.0
202000703	Partial Differential Equations	B.J. Geurts	EN	UT	2.0
<b>TN MOD08 Continuum Dynamics</b>		<b>R.M. van der Meer</b>			
202000705	Physics of Fluids	R.M. van der Meer	EN	AD	7.0
202000706	Electrodynamics	G.H.L.A. Brocks	EN	UT	6.0
202000707	Numerical Methods for PDE	B.J. Geurts	EN	UT	2.0
Total B2					60

**B3 (Generation 2018-2019)**

Course code	Name	Coordinator/examiner	Lang.	Participation	EC
	<b>Minor/profiling</b> The information is different per minor. A minor consists of 15 EC. See course Catalog Osiris and <a href="https://www.utwente.nl/en/education/electives/minor/general-information/">https://www.utwente.nl/en/education/electives/minor/general-information/</a> Possibilities: a. High Tech Human Touch Minors (HTHT) b. Regular UT minors <sup>1</sup> c. Leren Lesgeven (Dutch). Crossing Borders d. Study abroad e. Study at another educational study institute f. Transfer minor (transfer to a master's degree from another study programme)				<b>30.0</b>
	<b>TN MOD11 Orientation</b>	<b>Programme TN</b>			
202000709	Preparation Bachelor's Assignment <sup>2</sup>	C.I. van Emmerik	NL	TN	5.0
	<b>Electives 10 EC:</b>				
202000713	Computational Physics	C. Filippi	EN	UT	2.5/5.0
202000710	Materials Science	A. Brinkman	EN	UT	5.0
202000714	Machine Learning	M. Bokdam	EN	UT	3.0/5.0
202001416	Remote Control of Experiments	J.W.J. Verschuur	EN	UT	2.5/5.0
202001413	Soft Matter Physics	S.J.G. Lemay	EN	UT	5.0
202000711	Technical Optics	K.J. Boller	EN	UT	5.0
<b>202000715</b>	<b>TN MOD12 Bachelor's Assignment</b>	<b>Programme TN</b>			<b>15.0</b>
	General Aspects (50%)	Chair Bachelor's	EN	TN	
	Physical Aspects (50%)	Assignment Committee	EN	TN	
Total B3					60

<sup>1</sup> Technische Natuurkunde offers the minor modules;

- Soft and Biological Physics
- Capita Selecta Applied Physics
- Capita Selecta Programming and Software Engineering
- Multidisciplinair project TN

More information can be found on the programme's website: [https://www.utwente.nl/nl/tn/algemene-  
onderwijsinformatie/minor/](https://www.utwente.nl/nl/tn/algemene-onderwijsinformatie/minor/)

<sup>2</sup> Preparation Bachelor's assignment is also offered in block 1A for students who start their bachelor's assignment in Block 1B.