Organisation

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Academic counsellor  Alyssa van 't Hout
The academic counsellor will advise you on all kinds of
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Useful web addresses

Brightspace  brightspace.tudelft.nl
Brightspace is TU Delft's digital learning environment.
Students, instructors and staff use Brightspace for almost
all communication for their courses. There is a Brightspace
page for every course, but also for the master Applied
Physics programme.

Digital study guide  ap.msc.studyguide.tudelft.nl
In the digital study guide you can find programme
details, courses and course details related to your study
programme.

Timetables  timetables.tudelft.nl
Here you can find the timetables for courses and for the
programme. For individual timetables see: MyTimetable.tudelft.nl

Register for exams  examdesk.tudelft.nl
Written exams require registration! You have to register
using Osiris which can be found via Brightspace. Students
are required to register for written exams in the examination
registration system no later than 14 days before the exam.

Regulations  www.tnw.tudelft.nl/regulations
The regulations handle all possible issues concerning
education and examinations. All rights and obligations of
both students and teachers are explained in detail.
The Teaching & Examination Regulations and the Imple-
mentation Regulations are established by the Board of
Studies. The Board of Examiners establishes the Rules
and Guidelines regarding examinations. See the web page
for an overview and archive of all regulations. In the Rules
and Guidelines you will find the pass/fail regulations, the
meaning of the marks, and the conditions for the predicate
‘with distinction’.

Faculty student portal  tnw.students.tudelft.nl
Within the student portal of the Faculty of Applied Sciences
you can find lots of relevant information relating to student
matters at TU Delft, such as timetables, internship, master
thesis project, contact information and study facilities.
On this webpage you also find links to the general TU Delft
student information.

E-service  e-service.tudelft.nl
Allows you to forward TU Delft e-mail to your personal
e-mail address, and change your password.

Student association  www.vvtp.tudelft.nl
“Vereniging voor Technische Physica” is the study
association of Applied Physics.

TU Delft Library  www.library.tudelft.nl
TU Delft has an extended library where you can borrow
books. The website gives access to many search portals,
electronic journals etc.
The Applied Physics programme is a two-year master programme and comprises 120 EC. The programme has a core-orientation structure. Within this structure, there is a choice of research tracks:

- Physics for Energy
- Physics for Fluids Engineering
- Physics for Health and Life
- Physics for Instrumentation
- Physics for Quantum Devices and Quantum Computing.

The core programme comprises 90 EC and has the same structure for all tracks and students:

- 12 EC of compulsory modules: Mathematical Methods for Physics (9EC) and Ethics and Engineering (3EC).
- 12 EC of G-list modules: choose two (out of four) general advanced physics courses. These modules aim at depth as well as breadth in general physics knowledge.
- 12 EC of T-list electives: technical and science subjects related to the tracks. T-list modules are more specialised than G-list modules. They are representative for the research areas of the physics departments.
- 6 EC chosen from subjects on the G-list, T-list or the list of General, not track-related, electives.
- 48 EC Master’s Thesis Project: always done in a Research and Development track or research in bio-nanoscience department.

Combining the core programme with a 30 EC orientation completes the master programme. Choose from:

- Research and Development (R&D) – an Industrial
- Study-abroad (SA) – a semester, 30 EC of modules, at a foreign university; optionally including a research project.
- Management of Technology (MoT) – consists of (either the first or) the second semester of the MSc MoT programme.
- Casimir (Cas) – a special pre-PhD programme in collaboration with Leiden University, linked to the Physics for Quantum Devices and Quantum Computing track or research in bio-nanoscience department.
- Education (Ed1/Ed2) – get a Dutch secondary school qualification.

Internship (AP3911), or a group design project (AP3843) and/or 12 EC of additional electives, chosen from subjects on the G-list, T-list, the list of General electives, or (with a maximum of 6 EC) societal modules from the S-list. Within the R&D orientation there are options for entrepreneurship, technology in sustainable development, nuclear science and engineering, and quantum technology annotations.

Core programme and orientations

Internship (AP3911), or a group design project (AP3843) and/or 12 EC of additional electives, chosen from subjects on the G-list, T-list, the list of General electives, or (with a maximum of 6 EC) societal modules from the S-list. Within the R&D orientation there are options for entrepreneurship, technology in sustainable development, nuclear science and engineering, and quantum technology annotations.

Core programme and orientations

Master programme – Orientation Research and Development

1st year

<table>
<thead>
<tr>
<th>Module Code</th>
<th>Module title</th>
<th>EC</th>
<th>Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>AP3001</td>
<td>Mathematical Methods for Physics</td>
<td>9</td>
<td>1+2</td>
</tr>
<tr>
<td>AP3902</td>
<td>Master Thesis</td>
<td>6+42</td>
<td>-</td>
</tr>
<tr>
<td>WM0320TU</td>
<td>Ethics and Engineering</td>
<td>3</td>
<td>1 or 3</td>
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</tbody>
</table>

**Remarks:**

- Ethics and Engineering can also be done in the third period.
- The second year is flexible. Internship in Industry can also be done before the Master Thesis Project.
- See Brightspace organization ‘master Applied Physics’ for the schemes of other variants of the programme.
## G-list modules

<table>
<thead>
<tr>
<th>Module Code</th>
<th>Module title</th>
<th>EC</th>
<th>Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>AP3021</td>
<td>Advanced Statistical Mechanics</td>
<td>6</td>
<td>1+2</td>
</tr>
<tr>
<td>AP3032</td>
<td>Continuum Physics</td>
<td>6</td>
<td>1+2</td>
</tr>
<tr>
<td>AP3051</td>
<td>Advanced Quantum Mechanics</td>
<td>6</td>
<td>3+4</td>
</tr>
<tr>
<td>AP3071</td>
<td>Advanced Electrodynamics</td>
<td>6</td>
<td>1+2</td>
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</table>

## Recommended T-list modules Physics for Energy track

<table>
<thead>
<tr>
<th>Module Code</th>
<th>Module title</th>
<th>EC</th>
<th>Period</th>
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</thead>
<tbody>
<tr>
<td>AP3082</td>
<td>Computational Physics</td>
<td>6</td>
<td>3+4</td>
</tr>
<tr>
<td>AP3141</td>
<td>Environmental Physics</td>
<td>6</td>
<td>3+4</td>
</tr>
<tr>
<td>AP3211</td>
<td>Advanced Solid State Physics</td>
<td>6</td>
<td>3+4</td>
</tr>
<tr>
<td>AP3271</td>
<td>Molecular Electronics</td>
<td>6</td>
<td>3+4</td>
</tr>
<tr>
<td>AP3311</td>
<td>Neutrons, X-Rays and Positrons for Studying Structures &amp; Dyn.</td>
<td>6</td>
<td>3+4</td>
</tr>
<tr>
<td>AP3333</td>
<td>Physics of Energy Materials</td>
<td>6</td>
<td>1+2</td>
</tr>
<tr>
<td>AP3341</td>
<td>Nuclear Reactor Physics</td>
<td>6</td>
<td>3+4</td>
</tr>
<tr>
<td>AP3352</td>
<td>Introduction to Nuclear Science and Engineering</td>
<td>6</td>
<td>1+2</td>
</tr>
<tr>
<td>CH3222</td>
<td>Energy Storage in Batteries</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>CH3632</td>
<td>Chemistry and Physics of Solar Cells</td>
<td>6</td>
<td>3</td>
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<tr>
<td>CH3672</td>
<td>Computational Materials Science</td>
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<td>3</td>
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<tr>
<td>CH3783</td>
<td>Materials Chemistry for the Nuclear Fuel Cycle</td>
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## Recommended T-list modules Physics for Fluids Engineering track

<table>
<thead>
<tr>
<th>Module Code</th>
<th>Module title</th>
<th>EC</th>
<th>Period</th>
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<tbody>
<tr>
<td>AP3082</td>
<td>Computational Physics</td>
<td>6</td>
<td>3+4</td>
</tr>
<tr>
<td>AP3141</td>
<td>Environmental Physics</td>
<td>6</td>
<td>3+4</td>
</tr>
<tr>
<td>AP3171</td>
<td>Advanced Physical Transport Phenomena</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>AP3181</td>
<td>Applied Multiphase Flow</td>
<td>6</td>
<td>3+4</td>
</tr>
<tr>
<td>AP3551</td>
<td>Computational Multiphase Flow</td>
<td>6</td>
<td>3+4</td>
</tr>
<tr>
<td>AE4180</td>
<td>Flow Measurement Techniques</td>
<td>3</td>
<td>3+4</td>
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<tr>
<td>AE4W02TU</td>
<td>Introduction to Wind Turbines: Physics and Technology</td>
<td>4</td>
<td>2</td>
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<tr>
<td>CH3053</td>
<td>Applied Physical Transport Phenomena</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>CH3152</td>
<td>Molecular Transport Phenomena</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>CH3421</td>
<td>Computational Transport Phenomena</td>
<td>6</td>
<td>3</td>
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<tr>
<td>CIE4601</td>
<td>Physics of the Earth and Atmosphere</td>
<td>5</td>
<td>1</td>
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<tr>
<td>CIE4708</td>
<td>Water in the Atmosphere</td>
<td>5</td>
<td>4</td>
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<tr>
<td>ME45000</td>
<td>Advanced Heat Transfer</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>ME45030</td>
<td>Turbulence</td>
<td>5</td>
<td>3+4</td>
</tr>
<tr>
<td>ME45041</td>
<td>Advanced Fluid Dynamics</td>
<td>6</td>
<td>1+2</td>
</tr>
<tr>
<td>ME45160</td>
<td>Advanced Applied Thermodynamics</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>ME45190</td>
<td>Chaos in Dynamical Systems</td>
<td>3</td>
<td>2</td>
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<tr>
<td>WI4011</td>
<td>Computational Fluid Dynamics</td>
<td>6</td>
<td>1+2</td>
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</tbody>
</table>

## Recommended T-list modules Physics for Health and Life track

<table>
<thead>
<tr>
<th>Module Code</th>
<th>Module title</th>
<th>EC</th>
<th>Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>AP3061</td>
<td>Acoustic, Elastic and Electromagnetic Waves</td>
<td>6</td>
<td>1+2</td>
</tr>
<tr>
<td>AP3082</td>
<td>Computational Physics</td>
<td>6</td>
<td>3+4</td>
</tr>
<tr>
<td>AP3122</td>
<td>Advanced Optical Imaging</td>
<td>6</td>
<td>1+2</td>
</tr>
<tr>
<td>AP3132</td>
<td>Advanced Digital Image Processing</td>
<td>6</td>
<td>3+4</td>
</tr>
<tr>
<td>AP3162</td>
<td>Physics of Biological Systems: Mathematical Modelling in S.B.</td>
<td>6</td>
<td>3+4</td>
</tr>
<tr>
<td>AP3232</td>
<td>Medical Imaging Signals and Systems</td>
<td>6</td>
<td>1+2</td>
</tr>
<tr>
<td>AP3352</td>
<td>Introduction to Nuclear Science and Engineering</td>
<td>6</td>
<td>1+2</td>
</tr>
<tr>
<td>AP3371</td>
<td>Radiological Health Physics</td>
<td>6</td>
<td>Different</td>
</tr>
<tr>
<td>AP3511/NB4070</td>
<td>Biophysics / Soft Matter Physics</td>
<td>6</td>
<td>1+2</td>
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<tr>
<td>AP3531</td>
<td>Acoustical Imaging</td>
<td>6</td>
<td>3+4</td>
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<tr>
<td>AP3582</td>
<td>Medical Physics of Photon and Proton Therapy</td>
<td>6</td>
<td>3+4</td>
</tr>
<tr>
<td>CH3763</td>
<td>Nuclear Medicine</td>
<td>3</td>
<td>3</td>
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<tr>
<td>CH3771</td>
<td>Nuclear Chemistry</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>NB4020</td>
<td>High Resolution Imaging</td>
<td>4</td>
<td>1</td>
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<tr>
<td>NB4150</td>
<td>The Origin and Synthesis of Life</td>
<td>6</td>
<td>3+4</td>
</tr>
<tr>
<td>NB4160</td>
<td>Engineering of Living Systems</td>
<td>3</td>
<td>4</td>
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<tr>
<td>4403THBPH</td>
<td>Theoretical Biophysics</td>
<td>6</td>
<td>3+4</td>
</tr>
</tbody>
</table>
A more detailed description of the core programme, orientations and courses can be found in the studyguide ap.msc.studyguide.tudelft.nl