



The Physics Department, Aristotle University of Thessaloniki, welcomes international students. The incoming students who are not fluent in Greek have the opportunity to choose undergraduate or post-graduate courses, which are offered in English, among those listed in the following tables. These courses are taught in the individual study scheme according to which the students are provided with teaching material in English (overheads and/or class notes, literature), a detailed study scheme and regular/weekly meeting hours with the faculty members. Finally they are examined in English. In addition to that they have the option to work on a project towards a B.Sc. or M.Sc. Thesis. In this case, it is necessary that they consult with the research activities of the individual faculty members (<http://www.physics.auth.gr/en/home>) and come to an agreement with them prior to their arrival.

## Bachelor Degree Courses offered in English

*Odd/fall semesters run from October to mid-February (examination period included)*

*Even/spring semesters run from mid-February to the end of June (examination period included)*

Semester	Course Title	ECTS	Contact Person	Web page
3 <sup>rd</sup>	Physics IV (waves and optics)	8	<a href="#">J. Arvanitidis, M Katsikini</a>	<a href="http://www.physics.auth.gr/en/courses/141">http://www.physics.auth.gr/en/courses/141</a>
3 <sup>rd</sup>	Atmospheric and environmental physics	5	<a href="#">A.Bais, D. Melas, D. Balis</a>	<a href="http://www.physics.auth.gr/en/courses/138">http://www.physics.auth.gr/en/courses/138</a>
4 <sup>th</sup>	Optics laboratory	4	<a href="#">J. Arvanitidis, M Katsikini</a>	<a href="http://www.physics.auth.gr/en/courses/154">http://www.physics.auth.gr/en/courses/154</a>
4 <sup>th</sup>	Electronics	5	<a href="#">S. Nikolaidis</a>	<a href="http://www.physics.auth.gr/en/courses/153">http://www.physics.auth.gr/en/courses/153</a>
5 <sup>th</sup>	Bioelectromagnetics	4	<a href="#">T. Samaras</a>	<a href="http://www.physics.auth.gr/en/courses/160">http://www.physics.auth.gr/en/courses/160</a>
5 <sup>th</sup>	History and Evolution of Concepts in Physics	4	<a href="#">H. Varvoglis</a>	<a href="http://www.physics.auth.gr/en/courses/156">http://www.physics.auth.gr/en/courses/156</a>
5 <sup>th</sup>	Physics of Metals	4	<a href="#">T. Kehagias, G. Dimitrakopoulos</a>	<a href="http://www.physics.auth.gr/en/courses/162">http://www.physics.auth.gr/en/courses/162</a>
5 <sup>th</sup>	Quantum Mechanics I	8	<a href="#">T. Gaitanos</a>	<a href="http://www.physics.auth.gr/en/courses/122">http://www.physics.auth.gr/en/courses/122</a>
6 <sup>th</sup>	Cosmic Radiation	4	<a href="#">A. Liolios</a>	<a href="http://www.physics.auth.gr/en/courses/170">http://www.physics.auth.gr/en/courses/170</a>
6 <sup>th</sup>	Physics of Materials	4	<a href="#">F. Kominou, J. Kioseoglou</a>	<a href="http://www.physics.auth.gr/en/courses/178">http://www.physics.auth.gr/en/courses/178</a>
7 <sup>th</sup>	Computational Simulation Methods in the Physics of Condensed Phases and Complex Systems I	4	<a href="#">P. Argyrakis</a>	<a href="http://www.physics.auth.gr/en/courses/212">http://www.physics.auth.gr/en/courses/212</a>
7 <sup>th</sup>	Solid State Physics	7	<a href="#">S. Ves, E. C. Paloura</a>	<a href="http://www.physics.auth.gr/en/courses/43">http://www.physics.auth.gr/en/courses/43</a>
7 <sup>th</sup>	Magnetic materials and Applications	4	<a href="#">M. Angelakeris, H. Sarafidis</a>	<a href="http://www.physics.auth.gr/en/courses/216">http://www.physics.auth.gr/en/courses/216</a>
7 <sup>th</sup>	Nonlinear Dynamical Systems	5	<a href="#">G. Vougiatzis</a>	<a href="http://www.physics.auth.gr/en/courses/200">http://www.physics.auth.gr/en/courses/200</a>
7 <sup>th</sup>	Digital Circuits	4	<a href="#">S. Nikolaidis</a>	<a href="http://www.physics.auth.gr/en/courses/220">http://www.physics.auth.gr/en/courses/220</a>
7 <sup>th</sup>	Atmospheric environment	5	<a href="#">D. Melas, K. Tourpali</a>	<a href="http://www.physics.auth.gr/en/courses/199">http://www.physics.auth.gr/en/courses/199</a>
7 <sup>th</sup>	Electronic Circuits	5	<a href="#">T. Laopoulos, T. Noulis</a>	<a href="http://www.physics.auth.gr/en/courses/196">http://www.physics.auth.gr/en/courses/196</a>
8 <sup>th</sup>	Physics of nanostructures and surfaces	4	<a href="#">E. C. Paloura</a>	<a href="http://www.physics.auth.gr/en/courses/205">http://www.physics.auth.gr/en/courses/205</a>
8 <sup>th</sup>	Solid State Physics II	5	<a href="#">M. Angelakeris, M. Gioti</a>	<a href="http://www.physics.auth.gr/en/courses/204">http://www.physics.auth.gr/en/courses/204</a>
8 <sup>th</sup>	Radiation Physics and Applications of Radioisotopes	4	<a href="#">A. Ioannidou</a>	<a href="http://www.physics.auth.gr/en/courses/228">http://www.physics.auth.gr/en/courses/228</a>
8 <sup>th</sup>	Cosmology	4	<a href="#">C. Tsagas</a>	<a href="http://www.physics.auth.gr/en/courses/222">http://www.physics.auth.gr/en/courses/222</a>
8 <sup>th</sup>	General Theory of Relativity	4	<a href="#">C. Tsagas, N. Stergioulas</a>	<a href="http://www.physics.auth.gr/en/courses/236">http://www.physics.auth.gr/en/courses/236</a>
8 <sup>th</sup>	Photonics and Applications	4	<a href="#">K. Virsokinos</a>	<a href="http://www.physics.auth.gr/en/courses/186">http://www.physics.auth.gr/en/courses/186</a>
8 <sup>th</sup>	Atmospheric Technology	4	<a href="#">A.Bais, D. Balis, K. Garane, K. Tourpali</a>	<a href="http://www.physics.auth.gr/en/courses/231">http://www.physics.auth.gr/en/courses/231</a>
8 <sup>th</sup>	Global Environmental Changes	4	<a href="#">D. Balis, K. Tourpali</a>	<a href="http://www.physics.auth.gr/en/courses/232">http://www.physics.auth.gr/en/courses/232</a>



## Master Degree courses offered in English

Odd (even) semester numbers correspond to fall (spring) semesters.

Semester	Course Title	ECTS	Contact Person	Web page
1 <sup>st</sup>	Laboratory of Programming and Software Applications	6	<a href="#">T. Samaras</a>	<a href="http://qa.auth.gr/en/class/1/600004130">http://qa.auth.gr/en/class/1/600004130</a>
1 <sup>st</sup>	Atmospheric and environmental physics	8	<a href="#">K. Tourpali</a>	<a href="https://qa.auth.gr/en/class/1/600004175">https://qa.auth.gr/en/class/1/600004175</a>
1 <sup>st</sup>	Radiation in the atmosphere	8	<a href="#">A.Bais</a>	<a href="https://qa.auth.gr/en/class/1/600004177">https://qa.auth.gr/en/class/1/600004177</a>
1 <sup>st</sup>	Electronic Circuits	7	<a href="#">T. Laopoulos, T. Noulis</a>	<a href="http://elecom.physics.auth.gr/En/Courses/Electro n/semesterE1.htm">http://elecom.physics.auth.gr/En/Courses/Electro n/semesterE1.htm</a> <a href="http://qa.auth.gr/en/class/1/600004163">http://qa.auth.gr/en/class/1/600004163</a>
1 <sup>st</sup>	Physical properties of materials	8	<a href="#">O. Kalogirou</a>	<a href="http://qa.auth.gr/en/class/1/600004252/">http://qa.auth.gr/en/class/1/600004252/</a>
1 <sup>st</sup>	Materials structure, growth & synthesis	8	<a href="#">E. C. Paloura</a>	<a href="https://qa.auth.gr/en/class/1/600004253">https://qa.auth.gr/en/class/1/600004253</a>
2 <sup>nd</sup>	Computational Simulation Methods in the Physics of Condensed Phases and Complex Systems II	4	<a href="#">P. Argyrakis</a>	<a href="http://comphys.web.auth.gr/index.php/2012-04-27-13-47-30/2012-05-06-17-07-59/80-2012-05-09-15-43-27/93-a8">http://comphys.web.auth.gr/index.php/2012-04-27-13-47-30/2012-05-06-17-07-59/80-2012-05-09-15-43-27/93-a8</a> (**the abstract is shown at the end of this table )
2 <sup>nd</sup>	Thin films II: applications	2	<a href="#">M. Angelakeris, E. C. Paloura</a>	<a href="https://qa.auth.gr/en/class/1/600004402">https://qa.auth.gr/en/class/1/600004402</a>
2 <sup>nd</sup>	Magnetic nanostructures	2	<a href="#">M. Angelakeris</a>	<a href="http://qa.auth.gr/en/class/1/600004411">http://qa.auth.gr/en/class/1/600004411</a>
2 <sup>nd</sup>	Computational Electromagnetics	7.5	<a href="#">T. Samaras</a>	<a href="http://qa.auth.gr/en/class/1/600004363">http://qa.auth.gr/en/class/1/600004363</a>
2 <sup>nd</sup>	Global change	4	<a href="#">K. Tourpali</a>	<a href="https://qa.auth.gr/en/class/1/600004329">https://qa.auth.gr/en/class/1/600004329</a>
2 <sup>nd</sup>	Radiative transfer models	4	<a href="#">A.Bais</a>	<a href="https://qa.auth.gr/en/class/1/600004330">https://qa.auth.gr/en/class/1/600004330</a>
2 <sup>nd</sup>	Atmospheric Aerosols	4	<a href="#">D. Balis</a>	<a href="https://qa.auth.gr/en/class/1/600004333">https://qa.auth.gr/en/class/1/600004333</a>
2 <sup>nd</sup>	Atmospheric Pollution and Environmental Meteorology	8	<a href="#">D. Melas</a>	<a href="https://qa.auth.gr/en/class/1/600004320">https://qa.auth.gr/en/class/1/600004320</a>
2 <sup>nd</sup>	Materials Optimization and Selection Methods	8	<a href="#">I.Kioseoglou</a>	<a href="http://qa.auth.gr/en/class/1/600004398/M1">http://qa.auth.gr/en/class/1/600004398/M1</a>

\*\* Computer simulation methods using the Monte-Carlo technique of advanced problems in Condensed Matter Physics. Use of random numbers. Diffusion in lattices and Random walks, Number of sites visited, Probability for return to the origin, Trapping phenomena, Percolation and phase transitions of 2<sup>nd</sup> order. Critical exponents. Networks. Scale-free systems. Probability distribution functions. Boxing techniques. Correlation functions. Molecular Dynamics methods.