

<b>Title:</b>	<i>Physics of massive Neutrinos</i>
<b>Lecturer:</b>	A. Menegolli
<b>Duration:</b>	24h
<b>CFU:</b>	4
<b>Period:</b>	End of February - Begin of March 2024
<b>Content:</b>	<p>The topics covered by the course are the following:</p> <ul style="list-style-type: none"><li>- neutrino oscillations: theoretical formalism and ideal experiments, neutrinos from accelerators, reactors, atmospheric and solar, survey of experiments and discussion of experimental results.</li><li>- double beta decay: massive neutrinos, Dirac and Majorana neutrinos, double beta decay with and without neutrino emission, survey of experiments and discussion of experimental results.</li></ul> <p>Bibliography:</p> <p>C. Giunti and C.W. Kim, "Fundamental of Neutrino Physics and Astrophysics", Oxford University Press (2007). R.N. Mohapatra and P.B. Pal, "Massive Neutrinos in Physics and Astrophysics", World Scientific Lecture Notes in Physics - Vol. 72 (2003).</p>
<b>Requirements:</b>	Notions of nuclear and subnuclear physics, radioactivity, electro- magnetism and quantum mechanics. Fermi theory of beta decay, Dirac theory, Electro-Weak theory.