

**Proposta di**  
**CORSO PER IL DOTTORATO DI RICERCA IN FISICA (XXXI Ciclo)**

<b>Titolo del corso</b>	Standard Model and Beyond
<b>Docente</b>	Fulvia De Fazio
<b>Ore</b>	2 CFU (16 hours)
<b>Periodo</b>	May 2016
<b>Sommario</b>	Electroweak interactions will be treated within the Standard Model and in a few new Physics scenarios, in particular in view of recent experimental results.
<b>Programma</b>	<p><b>The Standard Model</b></p> <ul style="list-style-type: none"> <li>- Symmetries and Lagrangian</li> <li>- Electroweak symmetry breaking</li> <li>- The Higgs boson</li> <li>- Quark mixing matrix and CP violation</li> <li>- Determination of the CKM matrix elements and tests of the Standard Model</li> </ul> <p><b>Physics beyond the Standard Model</b></p> <ul style="list-style-type: none"> <li>- Reasons to go beyond the Standard Model</li> <li>- Models based on extended gauge groups</li> <li>- Models introducing extra dimensions</li> <li>- Aspects of supersymmetry</li> </ul>
<b>Testi consigliati</b>	P. Langacker: The Standard Model and beyond CRC Press
<b>Modalità di verifica</b>	Seminar on a topic to be agreed