

3 credits

22.0 h

Q1

Language :	English
Place of the course	
Aims	<p>1 To discover the theories explaining how life appeared on our planet, from macromolecules until protocells. To familiarize the student with experimental approaches of directed evolution of macromolecules or microorganisms in the lab. To discover the diversity of adaptations selected by microorganisms, through the presentation of significative examples.</p> <p>-----</p> <p><i>The contribution of this Teaching Unit to the development and command of the skills and learning outcomes of the programme(s) can be accessed at the end of this sheet, in the section entitled "Programmes/courses offering this Teaching Unit".</i></p>
Evaluation methods	A short report (1 or 2 pages) is asked for each conference. For the rest of the course, an oral examination is organized in january.
Teaching methods	The course is constituted by powerpoint presentations, sometimes completed by video. A PDF version of the slides is available at the Webcampus website.
Content	None
Bibliography	Le cours débute avec la description des théories qui expliquent en partie l'apparition de la vie sur notre planète. Ensuite, les approches expérimentales qui mettent en oeuvre les concepts théoriques liés à l'évolution des macromolécules et des microorganismes sont présentées. Ensuite, divers concepts liés à l'évolution (transferts horizontaux, "parasites génétiques", convergence évolutive) illustrés par des exemples concrets issus de la littérature. Des orateurs invités vont venir exposer leurs travaux afin d'illustrer ces différents concepts.
Other infos	Table des matières (1) Primitive Aearth and the problem of the monomers (2) The RNA world (3) The protocells (4) Directed evolution of RNA and proteins (5) Directed evolution of microorganisms (6) Illustrations of horizontal transfers, genetic parasites and convergent evolution concepts.
Faculty or entity in charge	BIOL

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Aims
Master [120] in Biology of Organisms and Ecology	BOE2M	3		