

<b>Evolutionary Medicine I</b>	
Module code	<b>mIsEvoMedI-01a</b>
Abbreviated title	EvoMed I
Module components	Lecture, seminar, practical exercise
When	Semester 2
Module coordinator/ Organiser	J.Baines IEM
Lecturers	<b>J. Baines</b> (IEM), A. Nebel (IKMB), H. Schulenburg (Zoology)
Contact hours	Lecture 2 CH                      Seminar 2 CH                      Practical exercise 2 CH
Workload	<u>Lecture: 30 h</u> Attendance time 26 h, revision 4 h <u>Seminar: 60 h</u> Attendance time 28 h, preparation 22 h, revision 10 h <u>Practical exercise: 60 h</u>
Total: 150 h	Attendance time 38 h, preparation 12 h, revision 10 h
Credit points	5 (lectures 1 CP, seminar 2 CP, practical exercise 2 CP)
Requirements	<i>MolBio</i> passed
Expected outcome	<p><u>Knowledge:</u> Students</p> <ul style="list-style-type: none"> <li>- understand the basic principles of evolutionary biology, human evolution, evolutionary medicine</li> <li>- are familiar with methods of genetic analysis</li> <li>- are familiar with the most important theories in evolutionary biology as a basic science for medicine.</li> </ul> <p><u>Skills:</u> Students</p> <ul style="list-style-type: none"> <li>- can apply statistical tests and software for data evaluation.</li> </ul> <p><u>Competences:</u> Students</p> <ul style="list-style-type: none"> <li>- can transfer acquired knowledge to new scientific tasks</li> <li>- are able to familiarize themselves with a scientific topic through literature research</li> <li>- understand an English scientific publication and can discuss it critically</li> <li>- can develop an oral presentation taking into account English scientific publications</li> <li>- are aware of the social and ethical implications disease research has and take them into account in their research work.</li> </ul>
Content	<p><u>Lecture:</u> Evolutionary biology in medicine: developmental biology, anatomy, genetic variation, natural selection, population genetics, molecular development, human development and disease, life-history theory; principles of evolution in nutrition and metabolism, disease and drug resistance.</p> <p><u>Seminar:</u> Discussion of current scientific literature.</p> <p><u>Practical exercise:</u> Rotation through diagnostic labs (e.g. osteology, staining/microscopy, bacterial cell cultures) executing lab experiments under supervision.</p>

Module evaluation/ exam	<b>Graded</b> Written exam
Media used	PPT presentations, lab experiments, manuals and instructions for lab work, case studies.
Literature	Ridley M, Evolution (John Wiley & Sons 2003) [still valid, no new edition available] Gluckman P, Beedle A, Hanson M, Principles of Evolutionary Medicine (OUP 2 <sup>nd</sup> edition, 2016) Stearns S, Medzhitov R, Evolutionary Medicine (Sinauer Associates 2015) Current original publications and reviews