

<b>Course Title</b>	<b>Molecular Medicine Training Course</b>
<b>About this course</b>	<p>Molecular medicine is the study of molecular and cellular phenomena in biological systems that enhances our understanding of human diseases and facilitates discovery research in disease prevention, diagnosis and therapy. Molecular Medicine offers new scientific tools to address mechanistic aspects of different diseases, both in diagnostics and therapy.</p> <p>The course helps to clarify the causes of diseases on a molecular basis with the methods of molecular- and cell biology and to describe and discuss topics related to infectious diseases, chronic diseases, genetic diseases, endocrine disorders, malignancy and diseases arising from abnormal immune responses.</p> <p>One of the unique strengths of this course is its emphasis on an interdisciplinary approach whereby medical sciences, molecular and biochemical aspects of biology is addressed. Students will be encouraged to participate in interdisciplinary learning activities, and some of the courses from different programs are jointly offered.</p>
<b>Audience:</b> Level (BSc, MSc., PhD, etc.)	This training opportunity should be primarily designed for Ph.D. candidates; M.D. and M.D./Ph.D. doctoral candidates.
<b>Department</b>  <b>Instructor</b>	Genetics  Mohammad Reza Zamanian MD, PhD
❖ <b>Modules/Resources</b>	The course includes lectures on cellular biology and molecular genetics as they apply generally to normal cell and tissue function and to disease processes. Advanced modules cover topics such as molecular oncology, signaling, development and therapeutics, immunology and infectious agents among others. A selection of modules on issues such as bioinformatics, research methodology, statistics and ethical legal aspects of the discipline may be undertaken on an optional basis.

<b>Course Requirements</b>	<p>Students must complete a core module “Practical and self-directed research in Molecular Medicine” which includes a literature review, presentations, journal clubs, laboratory practical, and modules on statistics, biomedical ethics and bioinformatics. Students are examined on the basis of the submitted critical literature review essay, and written examinations of the modules taken.</p>
<b>Registration Costs</b>	<p>4000 \$</p>
<b>❖ Duration:</b>	<p>One semester (4.5 months)</p>