Title:	MOLECULAR MECHANISMS OF CELLULAR MOTILITY
Lecture hours:	10
Study period: (summer/winter)	summer
Number of credits:	2
Assessment methods:	Exam
Language of instruction:	English
Prerequisites:	Biochemistry, basic level Cell biology, basic level English, intermediate level
Course content:	Actin filamet structure and dynamics Actin-dependent motility Myosin molecular motors Microtubules structure and functions Kinesins and dynein - molecular motors associated with microtubules
Learning outcomes:	The goal of this course is to demonstrate the integrity of the mechanisms governing different forms of cellular motility on the molecular level. Since the cellular motility is a vividly developing field of knowledge, students learn about the well established facts along with the newest achievements and discoveries.
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Literature:	Cooper G. M. (2000) The Cell a Molecular Approach. Sinauer Ass. Inc., 2nd ed. http://www.ncbi.nlm.nih.gov/books/bv.fcgi?rid=cooper.TOC&depth=2 Berg J.M., Tymoczko J. L. Stryer L. (2006) *Biochemistry* 5th ed. New York: W. H. Freeman & Co http://bcs.whfreeman.com/biochem5/default.asp Alberts B., Johnson A., Lewis J., Roberts K., Walter P. (2002) *Molecular Biology of the Cell*. 4th ed. http://www.ncbi.nlm.nih.gov/books/bv.fcgi?rid=mboc4.TOC&depth=2 Lodish H., Berk A., Zipursky S.L., Matsudaira P., Baltimore D., Darnell J. E. (2002) *Molecular Cell Biology. 4th ed.* New York: W. H. Freeman & Co. http://www.ncbi.nlm.nih.gov/books/bv.fcgi?rid=mcb.TOC