

<b>Name of the subject:</b> <b>Automatic manufacturing systems II.</b>	<b>NEPTUN code:</b> KMWAG6ABNE	<b>Weekly hours:</b> 2 lec+0 gs+ 1 lab	<b>Credit: 3</b> <b>Req:</b> Examination
<b>Subject leader:</b> <b>Dr. György Schuster</b>		<b>Prerequisites:</b> KMWAG5ABNE	
<b>Description of the subject:</b>			
<p>Review of object oriented methodology. Simulation methods. Network programming. Soft computing methods (fuzzy logic, neural networks, genetic algorithms) and application in case of automatic production systems. Intelligent sensors (vibration sensors, vision modules, load sensors, etc). Industrial robots and intelligent sensors. Mixed type production systems (ship yard, plane production). Viewpoint for building them. Informatics of production systems and their connection to other information systems of the company.</p> <p>Laboratory exercise:</p> <ul style="list-style-type: none"> <li>- TCP/IP programming using several protokoll.</li> <li>- RS232C,</li> <li>- I2C (TWI),</li> <li>- CAN bus,</li> <li>- LIN bus programming.</li> <li>- Usage of FPGA (soft processors design).</li> <li>- Usage of 32 bit microcontrollers.</li> </ul>			
<b>Literature:</b>			
<p>Mikell P. Groover “Automation, production systems, and computer-integrated manufacturing” Prentice Hall 2007 ISBN 0-13-239321-2</p> <p>J Norberto Pires ”Industrial Robots Programming” Springer 2007 ISBN 0-387-23325-2</p> <p><a href="http://www.book123.net/introduction-to-fpga_230244.html">http://www.book123.net/introduction-to-fpga_230244.html</a></p> <p><a href="http://www.arm.com/files/pdf/IntroToCortex-M3.pdf">www.arm.com/files/pdf/IntroToCortex-M3.pdf</a></p> <p><a href="http://en.wikipedia.org/wiki/ARM_architecture">en.wikipedia.org/wiki/ARM_architecture</a></p> <p>Remarks:</p>			