

<b>SURGICAL SCIENCES AND APPLIED MICROBIOLOGY</b>	
<b>Cycle</b>	<b>XXX</b>
<b>Duration</b>	3 years
<b>Supervisor</b>	Prof. Luigi Roncoroni – Department of Surgical Sciences E-mail: <a href="mailto:luigi.roncoroni@unipr.it">luigi.roncoroni@unipr.it</a>
<b>Research Topics</b>	<ul style="list-style-type: none"> <li>• New surgical technologies and associated risks of infection. Minimally invasive surgery and advanced laparoscopy. Synthetic and biological prosthesis materials</li> <li>• Design and management of patient-specific three-dimensional virtual models on a CAT scan basis (“computer assisted radiology and surgery”), in the simulation, design and surgical phases</li> <li>• Risk factors for chronic pain after traditional versus laparoscopic surgery</li> <li>• Stem cells in the treatment of knee and ankle arthrosis and of chronic skin ulcers</li> <li>• New devices for local treatment of pleural malignant mesothelioma and pleural infection risk</li> <li>• Surgical treatment of aneurysms with micro-organisms colonization and infection complications in reconstructive vascular surgery</li> <li>• Interventional radiology and advanced laparoscopic surgery</li> <li>• Art-reat: specific computational model to improve the quality of prediction for atherosclerosis</li> <li>• Immune-resistant infections in after-surgery intensive care and algorithms for early treatment of sepsis</li> <li>• Diagnosis and therapies of endocarditis: clinical and microbiological implications</li> <li>• Study of the virus-cell relationships with regard to the cytoskeleton and to the viral genome regulation</li> <li>• Molecular approaches for the characterization and identification of Spirochaetes that are pathogen for humans</li> <li>• Innovative and molecular approaches for the study of malaria Plasmodia</li> <li>• Study of cellular compartmentalization of viral proteins and functional proteomics</li> <li>• Medical-surgical treatment of chronic otitis media. Cochlear implant: surgery and treatment of complications</li> <li>• Study of the evolutionary mechanisms of enteric viruses: the role of genetic and antigenic diversity in the virus-host relationships and their diagnostic and vaccine implications</li> </ul>
<b>Training objectives</b>	<p>This Doctorate Program aims at providing students with skills to carry out high-level research activities at public and private facilities, shall be qualifying also with regard to self-employed medical practice and shall contribute to the European High Education and Research Area. The skills acquired during the Doctorate Program and the research results are meant to enrich the scientific sectors relevant for the Program. The integrated study of advanced surgical and anaesthesiological technologies, of synthetic and biological prosthesis materials that are continuously evolving and the use of stem cells have the objective of acquiring new knowledge in the field of physiology and pathogenic action of emerging and/or re-emerging infection agents. Similarly, new knowledge and use of state-of-the-art technologies in the microbiological field aim at identifying the surgical procedures showing lower risk of infection.</p>

<b>Academic degree required</b>	Laurea pursuant to the previous university system, laurea specialistica or laurea magistrale, or a foreign academic qualification that has been recognized as equivalent		
<b>Positions put out to competition</b>			
<b>With scholarship</b>	4		
<b>Without scholarship</b>	1		
<b>Reserved to employees of companies having a "Industrial Engineering Doctorate" arrangement</b>	1		
<b>TOTAL</b>	<b>6</b>		
<b>Scholarship types</b>	<b>No.</b>	<b>Description</b> (funding entity and research topic, if any)	
	2	Funded by the Department of Surgical Sciences	
	1	Funded by the Department of Surgical Sciences of the funds made available by LILT - Section of Parma	
	1	Co-funded by Fondazione Cariparma	
<b>Positions reserved for "Industrial Engineering Doctorate"</b>	<b>No.</b>	<b>Position reserved to employees of:</b>	
	1	H&D s.r.l.	
<b>Admission procedures</b>	<b>Assessment of QUALIFICATIONS:</b> up to 40 points <b>ORAL EXAM:</b> up to 80 points  <b>Minimum score for ELIGIBILITY:</b> 70/120		
<b>List of QUALIFICATIONS to be submitted and their assessment</b>	<b>Graduation thesis</b>	Abstract of the graduation thesis <b>(mandatory qualification)</b>	Up to 10 points
	<b>Curriculum Vitae et studiorum</b>	Covering the candidate's university career and postgraduate experience, accompanied with a statutory declaration in lieu of the certification of the exams sat and passed, with the relevant marks, as well as the final graduation mark <b>(mandatory qualification)</b>	Up to 10 points
	<b>Research Project</b>	The research project shall consist of a maximum of 3 pages, be written in Italian or in English, focus on an original research topic and it shall be structured as follows: introduction of the problem in the scientific context, significance of the problem, expected results, argumentation. <u>It shall amount to no commitment on the subsequent choice of the doctoral thesis</u>	Up to 20 points

<b>Foreign language</b>	Language the fluency of which shall be assessed during the Oral Exam: <b>ENGLISH</b> and/or <b>FRENCH</b>
<b>Schedule of the admission exam</b>	<b>ORAL EXAM DATE:</b> 22 September 2014 <b>TIME:</b> 4:00pm <b>PLACE:</b> Multimedia Classroom of the Department of Surgical Sciences Via A. Gramsci, 14 – 43126 PARMA, ITALY