

SURGICAL AND MICROBIOLOGICAL SCIENCES	
Cycle	XXXI
Duration	3 years
Supervisor	Prof. Luigi Roncoroni – Department of Surgical Sciences E-mail: luigi.roncoroni@unipr.it
Research Topics	<ul style="list-style-type: none"> • New surgical technologies and associated risks of infection. Minimally invasive surgery and advanced laparoscopy. Synthetic and biological prosthesis materials, prosthetic valves and related infections • 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 • Risk factors for chronic pain after traditional versus laparoscopic surgery • Stem cells in the treatment of knee and ankle arthrosis and of chronic skin ulcers • New devices for local treatment of pleural malignant mesothelioma and pleural infection risk • Surgical treatment of aneurysms with micro-organisms colonization and infection complications in reconstructive vascular surgery • Interventional radiology and advanced laparoscopic surgery • Art-reat: specific computational model to improve the quality of prediction for atherosclerosis • Immune-resistant infections in after-surgery intensive care and algorithms for early treatment of sepsis • Diagnosis and therapies of endocarditis: clinical and microbiological implications • Study of the virus-cell relationships with regard to the cytoskeleton and to the viral genome regulation • Molecular approaches for the characterization and identification of Spirochaetes that are pathogen for humans • Innovative and molecular approaches for the study of malaria Plasmodia • Study of cellular compartmentalization of viral proteins and functional proteomics • Medical-surgical treatment of chronic otitis media. Cochlear implant: surgery and treatment of complications • 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 • The fast track surgery • Mode support anamnesis in surgery
Training objectives	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.		
Academic degree required	Laurea pursuant to the previous university system, laurea specialistica or laurea magistrale, or a foreign academic qualification that has been recognized as equivalent		
Positions put out to competition			
With scholarship	2		
Without scholarship	1		
Reserved to employees of companies having a "Industrial Engineering Doctorate" arrangement	2		
TOTAL	5		
Scholarship types	No.	Description (funding entity and research topic, if any)	
	1	Scholarships of the University of Parma	
	1	Funded by Department of Clinical and Experimental Medicine	
Positions reserved for "Industrial Engineering Doctorate"	No.	Position reserved to employees of:	
	2	Istituto Auxologico Italiano di Milano	
Admission procedures	Assessment of QUALIFICATIONS: up to 40 points WRITTEN EXAM: up to 40 points ORAL EXAM: up to 400 points Minimum score for ELIGIBILITY: 70/120		
List of QUALIFICATIONS to be submitted and their assessment	Graduation thesis	Abstract of the graduation thesis (mandatory qualification)	Up to 6 points
	Graduation Mark	Score based on the graduation mark - 110 with honours: 3 points; - 110: 2 points; - from 100 to 109: 1 point.	Up to 3 points
	Average of exam marks (if the candidate is enrolled subject to condition)	Score relating to the mark average: - 30/30: 2 points; - From 27/30 to 29/30: 1 point	Up to 3 points

	Curriculum Vitae et studiorum	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 (mandatory qualification)	Up to 4 points
	Research Project	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 11 points
	Statement of Research Interest	Short text – maximum 2 page – in Italian or in English, aimed at explaining the candidate's reasons to attend the doctorate program and at describing his/her specific research interests	Up to 10 points
	Scientific publications	Articles on national and international journals, papers presented at conferences or symposia, book chapters etc.	Up to 2 points
	Reference letters	a maximum of 3 written by University Teachers, Researchers, Heads of Italian and foreign Research Centers, persons in charge of research/tutoring activities	Up to 2 points
	Other qualifications	Awarding of Scholarships, prizes, internships etc.	Up to 2 points
Foreign language	<p>Language the fluency of which shall be assessed during the Oral Exam: ENGLISH and/or FRENCH.</p> <p>The evaluation of the knowledge of this language will be oral and will consist in reading and translating of a scientific text</p>		

<p>Schedule of the admission exams</p>	<p>WRITTEN EXAM DATE: 14 September 2015 TIME:4:00pm PLACE: Multimedia Classroom of the Department of Surgical Sciences Via A. Gramsci, 14 – 43126 PARMA, ITALY</p> <p>ORAL EXAM DATE: 14 September 2015 TIME: 6:00pm PLACE: Multimedia Classroom of the Department of Surgical Sciences Via A. Gramsci, 14 – 43126 PARMA, ITALY</p>
<p>Written Exam topics</p>	<p>The Written Exam will focus on surgery and Applied Microbiology.</p>
<p>Oral Exam topics</p>	<p>The Oral exam will focus on the discussion of the research project.</p>