I year (1st semester) A.Y. 2024-2025	Scientific Field	**SCIENTIFIC WRITING AND RESEARCH COMMUNICATION**	TUTOR	ECTS
	L-LIN/12	Scientific Writing and Research Communication	Donadel Giulia	3
	L-LIN/12	Scientific Writing and Research Communication	Barbato Gaetano	1
	L-LIN/12	Scientific Writing and Research Communication	Marciani Maria Grazia	1
	L-LIN/12	Scientific Writing and Research Communication	Barbato Gaetano	1
		TOT		6

PREREQUISITES: *Common European Framework of Reference for Languages Levels*

- *The student must have a sufficient range of language competence to be able to give clear descriptions, express viewpoints and develop arguments without much conspicuous searching for words, using some complex sentence forms to do so.*

The specific learning outcomes of the program are coherent with the general provisions of the Bologna Process and the specific provisions of EC Directive 2005/36/EC. They lie within the European Qualifications Framework (Dublin Descriptors) as follows:

1. **Knowledge and Understanding**
   - Learn to report appropriate laboratory and diagnostic studies.
   - Report clinical and ethical cases; provide an exhaustive explanation of the possible hypothesis and appropriate approaches.

2. **Applying Knowledge and Understanding**
   - Understand the significance of classificatory tools in the main aspects of scientific investigation.

3. **Making Judgements**
   - Recognize the importance of an in-depth knowledge of the topics consistent with a proper medical and bio-ethical education.

4. **Communication Skills**
   - Present the topics in an organized and consistent manner.
   - Use of proper scientific language coherent with the topic of discussion.

5. **Learning Skills**
   - Identify the possible use of the acknowledged skills in the future career.

- Assess the importance of the acquired knowledge in the overall medical education process.

SPECIFIC AIMS

The purpose of this course is to provide the students with the necessary skills to:

- identify and produce the various parts of a scientific manuscript;
- use official web sites, national libraries and bibliographical data and write a manuscript;;
- propose a clinical drug trial;
- write a patent;

The course is divided into four parts:

SCIENTIFIC WRITING

1) SCIENTIFIC WRITING - Prof. G. Barbato

This part of the course is not a conventional English language course but an English for Specific Purposes (ESP) series of lectures and workshop. The aim is to make the students aware of the importance of dealing with language as *discourse* and not as a set of rules; after all, communication has, simultaneously, a structural, functional and discoursal level.

By the end of the course, students are expected to be able to identify and produce the various parts of the manuscript. Analysis of the inner semantic connections between sections, paragraphs and sentences that determine the overall texture.

RESEARCH COMMUNICATION

2) RESEARCH COMMUNICATION – Prof. Giulia Donadel

Students will learn how to use official web sites to achieve scientific results officially recognized by the scientific community. They will use their own tablet and other devices to connect themselves to the National Library in Bethesda, Maryland, the temple of all data published worldwide. Students will become acquainted with bibliographic search, collect information and use it to write abstracts and other scientific editing. Teamwork and/or individual training on particular topics provided by the teacher. An informal evaluation will be carried out during the last class session.

BIOETHICS AND HUMAN EXPERIMENTATION

3) BIOETHICS AND HUMAN EXPERIMENTATION - Prof. Maria Grazia Marciani

The potential of human experimentation has increased enormously in the last decades with the advancement and specialization of technology: in the fields of genetics, molecular biology, pharmacology, biochemistry, physics, functional imaging. But the rapid progress of the experimental and clinical research in biomedical sciences, raise several ethical dilemmas that physicians have to resolve dealing their clinical activity. The experimental research on human being, in the middle of the twentieth century started to be regulated by principles and lows in various part of the world (Nuremberg Code 1947; Universal Declaration of Human Rights 1948). The most famous and still current code of professional ethics is the Declaration of Helsinki of 1964, which has been revised several times (last revision was in 2008) to address new scientific and ethical problems that arose. Therefore the regulation of human experimentation is one important matter defining the end, the subject, and the condition of experimentation itself: essential is to clarify if the end if therapeutic or not, for subjects to distinguish the sick, fetus, prisoner etc., and for conditions to consider freedom, informed or presumed consent. Therefore, in pharmacological experimentations, preceded by a scientific knowledge and followed by laboratory studies and confirmation, the validation process is completed through experimentation on the recipient for whom is intended: the man itself. This is the main path to achieve the “good” of the patient.

INTELLECTUAL PROPERTY	Clinical Drug Trials: - Experimentation is necessary. - The technical meaning of pharmacological experimentation. - History, practice and legislation (The Nuremberg Code, Helsinki Declaration); - International Ethical Guidelines for Biomedical Research involving Human Subjects: European directives (2012); Decrees and circulars of the Italian Ministry of Health. Ethics of human experimentation (the fundamental ethical values); - Function of Ethical Committee. 4) INTELLECTUAL PROPERTY A basic introduction of Intellectual Property (IP) rights: brief history of Patent, Copyright, Trademarks evolution. Tools for Researchers: Academia impact on IP rights. Branches of IP and International/National Organisms where to apply for IP. Types of protection: Patents & copyright. How a Patent is structured. Concepts: Prior Art, Patentability, Timeline and Procedures. Patents and PCT. Rights conferred by Copyrights. Examples in the medical area and everyday life: medical devices, pharmaceuticals & published literature. Rules and exceptions to rules. Procedural management of IP. IP lifecycle and its regulation. Web sites and their consultation/search: EPO, WIPO, USPTO.
TEXTBOOKS	- SCIENTIFIC WRITING:

	- Robert A. Day – Scientific English: A Guide – Oryx Press - Robert A. Day – How to write & publish a Scientific Paper – Oryx Press - Vernon Booth – Communicating in Science – Cambridge University Press (All available on amazon.com) - BIOETHICS AND HUMAN EXPERIMENTATION: Handouts provided during the sessions - RESEARCH COMMUNICATION: - PubMed search and handouts provided during the sessions - INTELLECTUAL PROPERTY: Handouts provided during the sessions WIPO pub_895_2016 Understanding Intellectual Property WIPO pub_909_2016 Understanding Copyright and related rights WIPO pub_guide_patentsearch
EXAM METHOD	- SCIENTIFIC WRITING – INTELLECTUAL PROPERTY - BIOETHICS AND HUMAN EXPERIMENTATION - RESEARCH COMMUNICATION: for each part will be held written intermediate evaluation before the final exam. ✓ Single oral final exam: must enroll through totem to record your grade.
EXAM COMMISSION	The Coordinator, full Professors of the disciplines, Professors of similar disciplines, Specialists of the subject, compose the exam Commission of the Integrated Course.

Donadel Giulia, President

Marciani Maria Grazia
Barbato Gaetano

CONTACTS

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