

Course Syllabus

I General Information

Course name in English	Scientific writing
Course name in Polish	Pisanie tekstów naukowych
Programme	Bioanalytical Technologies
Level of studies (BA, BSc, MA, MSc, long-cycle MA)	MSc
Form of studies (full-time, part-time)	Full-time
Discipline	Biological sciences
Language of instruction	English

Course coordinator/person responsible	Asst. Prof. Dr. Mirza Suljagic/ dr hab. inż. Andrea Baier
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Type of class (<i>use only the types mentioned below</i>)	Number of teaching hours	semester	ECTS
Lecture	15	II	4
Tutorial	45	II	

Course pre-requisites	No pre-requisites
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II Course Objectives

C1 – To explain the process and teach the fundamentals of effective scientific writing.
C2 – To teach how to write effectively, concisely, and clearly.
C3 – To prepare students to write an actual scientific manuscript or grant application.

III Course learning outcomes with reference to programme learning outcomes

Symbol	Description of course learning outcome	Reference to programme learning outcome
KNOWLEDGE		
W_01	knows the rules of writing and editing scientific texts, research reports, procedures, grant applications and other documents used in professional work	K_W01, K_W02, K_W10
W_02	knows the terminology used in biology can define the complex phenomena and processes occurring in living organisms	K_W01
SKILLS		

U_01	applies methodology used in scientific writing	K_U06, K_U08
U_02	he is planning the process of organization of a research and professional manuscript, examines and analyze research publications	K_U06, K_U07
U_03	prepares a review of scientific and industry literature	K_U02, K_U03, K_U16
U_04	effectively design research and implementation proposal	K_U06
U_05	can analyze and dissect scientific news from electronic articles as well as original research articles and reviews	K_U16
U_06	describes methodology of analysis, scientific writing and classify research articles	K_U06, K_U07
U_07	writes a research proposal	K_U05, K_U06, K_U07
U_08	can develop a manuscript of their choice, systematically and critically analyze published scientific articles	K_U02, K_U03
COMPETENCIES		

IV Course Content

Demystifying the Writing Process

Introduction

Lecture: What makes good writing? Are there “good writers” and “bad writers”?

The News:

Lecture: Dissecting the news article

Tutorial: Sorting through news articles.

Writing Basics I

Lecture: Punctuation and Parallelism. Tricks for clarity, brevity, and finesse.

Tutorial: Peer interviews and write-up mini-profiles

Writing Basics II

Lecture: Paragraphs, logic, and organization. Organizational strategies.

Tutorial : Peer interviews and write-up mini-profiles (swap)

Writing Basics III

Lecture: Putting it all together

Tutorial: group rewrites of hard-to-read scientific snippets

Good Writing Applied: The Scientific Manuscript

Methods and Results Sections

Lecture/s: How to present data effectively. How to write prose that complements a table or figure.

Tutorial: Discuss a variety of journal articles that present data in different ways; rewrite a results paragraph.

The Abstract, Introduction, and Discussion

Lecture/s: Getting to the main point and summarizing effectively. How to conduct literature reviews.

Tutorial: Writing an effective discussion.

Wrap-up scientific manuscripts plus Overview of grant writing

Lectures: I. Submission and authorship for scientific manuscripts. II. Overview of the grant writing process.

Communicating effectively with the media and lay public and peer review

Communicating effectively with the media and lay public; peer review

Lecture/s: How to write articles for the lay public. How to deal with the media. Ethics. Also: how to write a peer review.

Tutorial: Practice writing a peer review

Letter to the Editor; Discussion section of ongoing manuscript

SUBMISSION completed (or near-completed) manuscript by deadline and discussion

Course overview

Preparation for the final exam. Q&A session

V Didactic methods used and forms of assessment of learning outcomes

Symbol	Didactic methods (choose from the list)	Forms of assessment (choose from the list)	Documentation type (choose from the list)
KNOWLEDGE			
W_01	Conventional lectures	Written test, reports, manuscripts	Evaluated written test report printout, manuscripts
W_02			
SKILLS			
U_01	Tutorials	Test, written test report, project	Evaluated written test report printout
U_02			
U_03			
U_04			
U_05			
U_06			
U_07			
U_08			
COMPETENCIES			

VI Grading criteria, weighting factors

lecture: written test

lab classes: 2 tests (80%), work during classes, reports (20%)

Mark	Evaluation criteria	
Very good (5)	the student realizes the assumed learning outcomes at a very good level	the student demonstrates knowledge of the education content at the level of 95-100%
overgood (4.5)	the student accomplishes the assumed learning	the student demonstrates knowledge of the education content at the level of 85-94

	outcomes an over good level	%
Good (4)	the student accomplishes the assumed learning outcomes at a good level	the student demonstrates knowledge of the education content at the level of 75-84%
Quite good (3.5)	the student accomplishes the assumed learning outcomes at a quite good level	the student demonstrates knowledge of the education content at the level of 65-74%
sufficient (3)	the student accomplishes the assumed learning outcomes at a sufficient level	the student demonstrates knowledge of the education content at the level of 55-64%
insufficient (2)	the student accomplishes the assumed learning outcomes at an insufficient level	the student demonstrates knowledge of the education content below the level of 55%

VII Student workload

Form of activity	Number of hours
Number of contact hours (with the teacher)	68 (60 + 8 individual consultation)
Number of hours of individual student work	32

VIII Literature

Basic literature
<i>Sin and Syntax</i> , Constance Hale, Three Rivers Press, 2013, Constance Hale
<i>Successful Scientific Writing: A step-by-step guide for biomedical scientists</i> , Cambridge University Press, 2014, Janice R. Matthews
Additional literature
Science news, original research manuscripts, scientific review, grant applications
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