



## SYLLABUS

English for Science and Technology - Chemistry  
Academic year 2025-2026

### 1. Information about the study program

1.1. University	Babeș-Bolyai University
1.2. Faculty	The Faculty of Letters
1.3. Department	The Department of Foreign Languages for Specific Purposes
1.4. Field of study	Language and Literature
1.5. Study cycle (BA/MA)	BA
1.6. Study programme/Qualification	BA
1.7. Enrolment frequency	Full time

### 2. Information about the subject

2.1. Course title		English for Science and Technology - Chemistry				Course code		LLU0183 (LLJ3112)				
2.2. Course tutor					Lecturer Adriana Lazar, PhD							
2.3. Seminar / practical course (laboratory) tutor					Lecturer Adriana Lazar, PhD							
2.4. Year of study		2	2.5. Semester		3	2.6. Type of assessment		VP	2.7. Course status		<a href="#">Contents</a>	<a href="#">DC</a>
											<a href="#">Mandatory</a>	<a href="#">DO</a>

### 3. Total estimated time (teaching hours per semester)

3.1. Number of hours per week	4	of which: 3.2 course	2	3.3 seminar / <a href="#">practical course (laboratory)</a>	2
3.4. Total number of hours in the curriculum	56	of which: 3.5 course	28	3.6 seminar / <a href="#">practical course (laboratory)</a>	28
<b>Allotted time for individual study (ID) and self-study activities (SA)</b>					<b>hours</b>
Study based on textbook, course manual, recommended bibliography, personal notes (SA)					10
Additional research (in the library, online scientific databases/platforms, or field documentation)					8
Preparation for seminars / laboratory classes/ essays/ projects/ homework/ portfolios and reports					10
Tutoring					6
Assessment (examinations)					4
Other activities:					4
<b>3.7. Total hours for individual study (ID) and self-study activities (SA)</b>					<b>42</b>
<b>3.8. Total hours per semester</b>					<b>98</b>
<b>3.9. Number of credits</b>					<b>4</b>

Date of approval  
Name and signature of Dean



#### 4. Prerequisites (if necessary)

4.1. curriculum	
4.2. skills	

#### 5. Conditions (if necessary)

5.1. for delivering lectures	Laptop, overhead projector, internet connection, printer.
5.2. for teaching seminars / practical courses (laboratory classes)	Laptop, overhead projector, internet connection, printer.

#### 6. Acquired specific skills

Professional/essential skills	<p>C1 1 Identifying and understanding the sociocultural contexts and roles, the verbal and written communication conventions specific to the foreign language, in terms of reception (reading/listening), production (written/oral) and linguistic strategies. C1 2 Identifying and understanding the contexts and roles, as well as the concepts, methods and the discourse/language that are specific to the different professional communication contexts within the academic environment, focusing on the rhetorical situation, written and oral communication, the stages of the writing process, academic writing production from within the field of social sciences/exact sciences/humanities, professional deontology and identifying plagiarism. C2 1 Interpreting the relation between an oral or written message and the context it belongs to, identifying argumentative and construction techniques of the scientific message in the foreign language, especially within the academic and the professional communication contexts. C2 2 Making use of basic knowledge to explain and interpret the various written communication methods in the field of social sciences/exact sciences/humanities (textbooks, specialized literature, scientific communications, research reports, forewords and introductions to specialized literature books, reviews of specialized literature books – written and electronic support), of the conventions writing these texts imply, as well as identifying plagiarism. C3 1 The transfer of acquired concepts/principles/methods in guided activities for written text reception (critical reading) and for production (writing) focusing on the stages of the writing process (planning, draft writing, reviewing and producing a final draft), presenting and developing text related ideas as well as textual structure (global and local), developing strategies to expand specialized vocabulary, efficient verbal communication (style of communication), building argumentation to the standards specific for the foreign language studied in the academic environment, making use of techniques to avoid plagiarism (using quotes, summarizing, paraphrasing). C4 1 Organizing debates, carrying out individual and group projects on topics from within the field of study. C4 2 Critical reception and production of verbal or written messages, specific to scientific communication at university level (project presentations, reports, reviews, communications, dissertations etc.) in the foreign language. Using information sources with discernment and scientific probity. C4 3 Using the standard criteria acknowledged by the academic/professional community, focusing on the ones practiced by the international scientific publications within the area of social sciences/exact sciences/humanities, with the purpose of evaluating the quality of the academic productions (oral and written) in the foreign language. C5 Elaborating written papers and original, oral presentations in the foreign language, with the purpose of applying the drafting principles and techniques which have been universally acknowledged within the academic environment, focusing on the main genres from within the specific field of study: essays (descriptive, comparative, argumentative etc.), research reports, scientific papers, book reviews/presentations, annotated bibliographies, conference presentations etc. This type of productions will be elaborated on the basis of the students' current needs from within their field of study.</p>
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<b>Transversal skills</b>	<p>CT1 Completing individual tasks based on the writing models and with assistance from the teacher, materialized in the form of an individual portfolio. Applying the academic learning principles in the foreign language, fully governed by the principles of professional ethics. CT 2 Taking part in carrying out projects, as part of a pair or a team, focusing on becoming familiar with team roles in the academic working environment; the projects can take the form of presentations (conference presentations) on a topic specific to the field of study. CT3 Acknowledging the need for continuous development, focusing on consolidating and developing the basic knowledge related to the management of the individual learning process, regarding interindividual differences, specific to gender and culture, in processing information. The efficient use of certain intellectual operating tools and of learning resources/techniques/strategies: speed reading, reading sheets, taking notes, documentation, cognitive organizers.</p> <p>CT4 Acknowledging the need for continuous development focusing on using TIC tools to assist with personal and professional development management, by joining social media and professional networks, that support the development of the communication skills, specific for the foreign language.</p>
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#### 7. Course objectives (derived from the acquired specific skills)

<b>7.1 General objective of course</b>	On completing the course, the students will have the necessary skills to read various scientific articles and will be able to use the English language competently for delivering oral presentations as well as for writing texts relevant to the field of science and technology.
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## 7.2 Specific objectives

- Knowing and understanding thoroughly the contexts and roles, as well as the concepts, methods, the language/discourse specific to the different professional communication contexts in the academic environment in English, focusing on rhetoric, written and oral communication, the stages of the writing process and the products of academic writing, as well as on professional deontology. · 2. Using in-depth knowledge to explain and interpret the various types of written communication (types of scientific texts) and oral communication (scientific communications) as well as the conventions that govern the production of scientific texts in English in the context of BA studies and the extended professional community (both national and international). · 3. Transferring learning concepts/principles/methods in written text reception and in production, focusing on the stages of the writing process, organizing and developing ideas, text structure and the oral and written communication strategies specific to English specialized for the scientific discourse. · 4. Using the standard criteria acknowledged by the academic/professional community in order to assess the quality of academic productions both oral and written in English. · 5. Elaborating written papers and original, oral presentations applying the principles and techniques which have been universally acknowledged within the academic environment, focusing on the main genres from within the specific field of study. · 6. Completing the individual tasks independently/autonomously. · 7. Taking part in carrying out projects, as part of a pair or a team, focusing on becoming familiar with team roles in the academic working environment. · 8. Managing the individual learning process, identifying the learning needs, monitoring and reflecting on using the intellectual work tools efficiently together with the traditional learning resources/techniques/strategies and the ITC tools.

## 8. Contents

8.1 Course	Teaching methods	Remarks
1. Science Communication in a European context. Why do we need Science Communication?	Lecture	
2. Essentials of Science Communication: Style, Audience, Platform;	Lecture Interactive course, pair and teamwork, debate	
3. Principles of Scientific Writing (1). Moving from student to scientist mindset: Motivation of a study, Objectives, Laboratory/Educational purpose;	Lecture Interactive course, pair and teamwork, debate	
4. Principles of Scientific Writing (2). Gaining acceptance in the community: tentative versus categorical language;	Lecture Interactive course, pair and teamwork, debate	
5. Structure of the journal article	Lecture Interactive course, pair and teamwork, debate	



6. Summary and Analysis. Writing effective literature reviews	Lecture Interactive course, pair and teamwork, debate, problem solving activities	
7. Ethics in Science Communication: Training Research Integrity	Lecture Interactive course, pair and teamwork, debate, problem solving activities	
8. Disseminating research activity and findings: from posting to laboratory reporting;	Lecture Interactive course, pair and teamwork, debate, problem solving activities	
9. Preparing a fellowship/grant proposal	Lecture Practical activities	
10. Giving the talk (1): steps to efficient presentations	Lecture Practical activities	
11. Giving the talk (2): Presentation enrichment tools	Lecture Practical activities	
12. Giving the talk (3): Flow and storyboarding. Revision	Lecture Practical activities	
13. Exam: student presentations	Practical task adapted to oral exam settings	
14. Exam: student presentations	Practical task adapted to oral exam settings	
<b>Bibliography</b>  1. Tamzen, Armer, Cambridge English for Scientists, Cambridge University Press, 2011  2. Cathryn Roos, Gregory Roos, Real Science in Clear English. A Guide to Scientific Writing for the Global Market, Springer Singapore, 2019.  3. Cornelia Dean, Am I Making Myself Clear? A Scientist's Guide to Talking to the Public, Harvard University Press, 2009/2012.  4. Fiona Scott-Barrett, New Proficiency: Use of English, Longman Exam Skills, Pearson Education Limited, 2002.  5. G. Tyler Miller, Jr., David G. Lygre, Chemistry: A Contemporary Approach, Wadsworth Publishing Company, Belmont California, 1991.  6. Holly B. Davis, Julian F. Tyson, Ian A. Pechenik, A short guide to writing about Chemistry, Pearson Education, 2010.		



7. Iris Eisenbach, English for Materials Science and Engineering, Vieweg +Teubner Verlag, 2011.
8. John M. Swales, Christine B. Feack, Academic Writing for Graduate students. Essential Skills and Tasks, 3rd Edition, Michigan ELT, 2012.
9. Nelson Duran, Leandro Carneiro Fonseca, Amedea B. Seabra, Intellectual Property in Chemistry, A Guide For Obtaining a Patent for Graduate Students and Postdoctoral Scholars, CRC Press, 2019.
10. R. Keese, M. P. Brandle, T. P. Toubé, Practical Organic Synthesis. A Student's Guide, Wiley & Sons, Ltd., 2007.
11. Robert A. Day, Nancy Sakaduski, Scientific English. A Guide for Scientists and other Professionals, Greenwood, 2011.
12. Robert Weissberg, Suzanne Buker. Writing up Research; Experimental Research report writing for students of English. Prentice Hall Regents. 1990.
13. Robinson M. S. et al., Write like a Chemist, Oxford University Press, 2008.
14. <http://www.ted.com>
15. <https://chemistrytalk.org>
16. <https://www.euchems.eu/divisions/european-young-chemists-network/>.

8.2 Seminar / practical course (laboratory class)	Teaching methods	Remarks
1. SciComm: Getting involved with scientific organizations; Case study: Games of Science – the competition that brings science to the wider public: analysis of sample communication;	Grammar explanations Interactive exercises	
2. Modes of communication and Style; Language mediation: Creating a SciComm style guide for social media usage;	Brainstorming, Grammar explanations Interactive exercises Worksheets	
3. Academic Writing for Science (1). Exploring features of Scientific writing: concision, accuracy and specificity	Brainstorming, Grammar explanations Interactive exercises Worksheets	
4. Academic Writing for Science (2). Why do Chemists write? Purpose and Formality; Strategies for balancing the Formality score;	Practical activities Grammar explanations Interactive exercises Worksheets	
5. The organization of the journal article; How to read efficiently: strategies for practicing targeted reading;	Practical activities Grammar explanations Interactive exercises Worksheets	



6. Is it new? Is it true? Writing the literature/critical review; Reporting structures;	Practical activities Grammar explanations Interactive exercises Worksheets	
7. How to avoid plagiarism in the age of AI? Essentials of a Similarity report; Citing sources and accountability; Paraphrasing and summarising;	Brainstorming, Teamwork Debate Practical activities	
8. Communicating research findings; Peer reviewing simulation; Visual communication project;	Practical activities Grammar explanations Interactive exercises Worksheets	
9. Writing a research project summary: Organization and structural characteristics; Using notes to write cohesive paragraphs;	Practical activities Grammar explanations Interactive exercises Worksheets	
10. Tactics for writing a persuasive proposal: credibility building/refining arguments and evidence; Peer reviewing simulation sessions;	Practical activities Grammar explanations Interactive exercises Worksheets	
11. Delivering oral presentations (1); Analysing effective presentations - case study: Games of Science winners; Presentation outline development; Incorporating storytelling techniques;	Practical activities Grammar explanations Interactive exercises Worksheets	
12. Delivering oral presentations (2) Avoiding "Death by Powerpoint": techniques for customising slides; Visual design software comparison: ChemSketch and Chem4Word; Best-practices sharing session;	Practical activities Grammar explanations Interactive exercises Worksheets	
13.Exam: student presentations	Practical activities	
14. Exam: student presentations	Practical activities	
<b>Bibliography</b>  1. Harwood Richard, Lodge Ian, Cambridge IGCSE Chemistry Workbook, Cambridge University Press, 2011.  2. Earl Bryan, Wilford Doug, Cambridge IGCS Chemistry, Cambridge University Press, 4th Edition, 2021;  3. Carter Ronald, McCarthy Michael, Cambridge Grammar of English. A Comprehensive Guide. Spoken and Written English. Grammar and Usage, Cambridge University Press, 2006  4. Eumeridou Eugenia, Academic English for Materials Science, Digisima Publications, 2021		





5. Fiona Scott-Barrett, New Proficiency: Use of English, Longman Exam Skills, Pearson Education Limited, 2002.
6. Gallagher RoseMarie, Ingram Paul, Cambridge IGCSE & O Level Complete Chemistry- Student Book, Oxford University Press, Fourth Edition 2021
7. Hodgetts Katsampoxaki Kallia, Academic English for Chemistry, An English for Specific Academic Purpose Course for International Chemistry Students – Upper Intermediate B2 Level, Digisima Publications, 2017
8. John M. Swales, Christine B. Feack, Academic Writing for Graduate students. Essential Skills and Tasks, 3rd Edition, Michigan ELT, 2012.
9. Kwiatkowski Marek, Stepnowski Piotr, English in Chemistry, Gdansk University, 2017
10. Tamzen, Armer, Cambridge English for Scientists, Cambridge University Press, 2011 11.
- <http://www.uefap.co.uk/listen/listfram.htm> 13. <http://chemistry.about.com/od/sciencefairprojects> 14. <http://www.owl.english.purdue.edu> 15. <http://grammar.ccc.commnet.edu/grammar>

## 9. Validating course contents based on the expectations of epistemic communities, professional associations and of potential employers related to the field of study.

International and European language policies seek to address the growing needs of a labor and a scientifically internationalized research market, and as such, foreign languages for academic and specific purposes are represented throughout many university centers · in the country (in vocational fields such as business, law, medicine, computer science, tourism, but also in the courses which make use of the scientific discourse in various fields – chemistry, physics, education sciences, social and communication sciences etc.). For reference, see the specific departments and the foreign language centers in Bucharest, Timișoara, Iași, Tîrgu-Mureș, Alba Iulia, Oradea etc. · abroad (particularly regarding the academic learning competences and socio-professional communication), where all universities have centres that specialize in practical areas of the specialized discourse, playing an essential role in creating an instructional and academic culture. For instance, universities such as: Harvard, Washington, North Carolina, Southampton, Darmouth, Essex, Leeds, Graz, Central European University, etc. The content of the teaching activity can develop those skills and competences that are specific to academic learning and research activities, in the context of higher education internationalization.

## 10. Assessment (examination)

Type of activity	10.1 Assessment criteria	10.2 Assessment methods	10.3 Weight in the final grade
10.4 Course	· attendance and classroom activities · the ability to use English efficiently in academic and professional contexts · developing academic study skills	Elaborating a written scientific text	50 %
	· the ability to elaborate a written scientific text carrying out correctly and in time the given tasks · the ability to use the specialized vocabulary	Individual project: Oral presentation based on students' current academic and professional interests	50 %

Date of approval  
Name and signature of Dean





	<ul style="list-style-type: none"> <li>• the ability to use grammatical structures specific to scientific discourse</li> <li>• the ability to use English efficiently in academic and professional contexts</li> </ul>		
10.5 Seminar/practical course (laboratory class)			
10.6 Basic performance standard			
<ul style="list-style-type: none"> <li>•</li> </ul>			

#### 11. Labels ODD (Sustainable Development Goals)

	General label for Sustainable Development

Date:  
21.01. 2025

Course tutor's name and signature  
Lecturer Lazar Adriana, PhD

Seminar tutor's name and signature /  
Practical course tutor's (Laboratory tutor's)  
name and signature,

Lecturer Lazar Adriana, PhD

Date of approval:  
31.01. 2025

Head of Department's name and signature,  
Teglaş Camelia

Date of approval  
Name and signature of Dean



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