

## Course syllabus « Mathematical English»

Approved by  
Programme Academic Council  
Protocol Nr. 10 from 27.08.2019

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Number of credits	2
Contact hours	24
Self-study hours	52
Course	1
Educational format	Without use of online course

### I. Goals and Results of Mastering the Discipline; Prerequisites

This course is an adaptive discipline, offered to some students of MASNA program to prepare them for the advanced nature of the program. The goal of the course is to review English in its application to mathematical disciplines.

As a result, students should:

#### **Know:**

- basic mathematical terminology of the English language.
- grammatical rules for using mathematics in the written and spoken English
- basic rules for writing up mathematical texts in English

#### **Be able to:**

- understand mathematical notation and terminology in English
- read advanced texts with mathematical notation and explanation
- express own thoughts, containing mathematics, verbally and in writing

#### **Have:**

- a working command of mathematical English
- an ability to communicate freely in English
- an ability to use mathematical notation appropriately, both in writing and orally.

An upper-intermediary level of English is required for this problem. The basics of this discipline should be used all other program related courses

The course is strongly related and complementary to all courses in the program as the program is taught in English. The course gives students an important foundation to read advanced mathematical texts and express own thoughts in English.

### II. Content of the Course

**Please note:** each session goes over two class periods.

## **SESSION ONE: A mathematical grammar of English**

The intricacies of building sentences, containing mathematical expressions.

## **SESSION TWO: Mathematical terms**

Basics of translating mathematical terms into English. Incorporating mathematical lingo into the everyday conversations, presentations, and written texts.

## **SESSION THREE: Foundations of English grammar**

English as a scientific and research language; peculiarities of using mathematical English.

### **III. Grading**

Course grade will be computed as follows: 40% homeworks + 60% final exam.

If the final grade is non-integer, it is rounded according to algebraic rules. If has a half (.5) at the end, we are rounding upward. Rounding of cumulative grades and other rounding issues are performed according to the HSE rules.

### **IV. Grading Tools**

This class contains several assignments that test student knowledge and understanding throughout the course.

#### Homework assignments

There will be several homework assignments that will provide additional hands-on practice for the concepts we've learned in class and practiced during the seminar. Homeworks will be assigned as needed throughout the semester. All homework submissions must be done by the stated deadline via the LMS system.

#### Final exam

There will be comprehensive final exam in this course, which will consist of translating from Russian to English and English to Russian, completing several grammatical assignments (multiple choice), and writing a brief essay containing mathematics.

### **V. Resources**

#### **5.1 Main Literature**

1. Hemphill, George. A Mathematical Grammar of English, De Gruyter, Inc., 1973. ProQuest Ebook Central, URL <https://ebookcentral.proquest.com/lib/hselibrary-ebooks/detail.action?docID=3043152>.
2. Schwartzman, Steven. Words of Mathematics : An Etymological Dictionary of Mathematical Terms Used in English, American Mathematical Society, 1994. ProQuest Ebook Central, URL <https://ebookcentral.proquest.com/lib/hselibrary-ebooks/detail.action?docID=3330363>.
3. Baber, Robert L.. The Language of Mathematics : Utilizing Math in Practice, John Wiley & Sons, Incorporated, 2011. ProQuest Ebook Central, URL <https://ebookcentral.proquest.com/lib/hselibrary-ebooks/detail.action?docID=697632>.
4. Molina, Concepcion. The Problem with Math Is English : A Language-Focused Approach to Helping All Students Develop a Deeper Understanding of Mathematics, John Wiley & Sons, In-

- corporated, 2012. ProQuest Ebook Central, URL <https://ebookcentral.proquest.com/lib/hselibrary-ebooks/detail.action?docID=843636>.
5. Urdan, Timothy C.. Statistics in Plain English, Lawrence Erlbaum Associates, Incorporated, 2005. ProQuest Ebook Central, URL <https://ebookcentral.proquest.com/lib/hselibrary-ebooks/detail.action?docID=3060431>.

## 5.2 Additional Literature

1. Herbst, Thomas. English Linguistics : A Coursebook for Students of English, De Gruyter, Inc., 2010. ProQuest Ebook Central, URL <https://ebookcentral.proquest.com/lib/hselibrary-ebooks/detail.action?docID=772986>.
2. Writing in Foreign Language Contexts : Learning, Teaching, and Research, edited by Rosa Manchón, Channel View Publications, 2009. ProQuest Ebook Central, URL <https://ebookcentral.proquest.com/lib/hselibrary-ebooks/detail.action?docID=449890>.
3. English As a Scientific and Research Language : Debates and Discourses: English in Europe, Volume 2, edited by Alastrué, Ramón Plo, and Carmen Pérez-Llantada, De Gruyter, Inc., 2015. ProQuest Ebook Central, URL <https://ebookcentral.proquest.com/lib/hselibrary-ebooks/detail.action?docID=2129550>.
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## 5.3 Software

№ п/п	Name	Access conditions
1.	MicrosoftWindows 7 Professional RUS MicrosoftWindows 10 MicrosoftWindows 8.1 Professional RUS	<i>From the university's internal network (contract)</i>
2.	Microsoft Office Professional Plus 2010	<i>From the university's internal network (contract)</i>

## 5.3 Material and technical support

Classrooms for lectures on the discipline provide for the use and demonstration of thematic illustrations corresponding to the program of the discipline, consisting of:

- PC with Internet access (operating system, office software, antivirus software);
- multimedia projector with remote control.