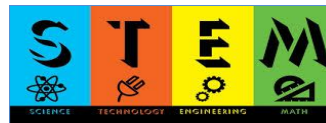


STEM-based Russian for Advanced Heritage and Non-heritage Students: Challenges and Overcomes



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World Language Summit,
January 23, 2016 University of Washington

RUSS 316 Extended Russian Through STEM



Fall 2015

Extended Russian Through STEM: The Course Overview

- 2-credit course, meets once a week;
- Designed based on UW STARTALK *Russian in the Sky and Outer Space* (2011-2015) experiences ;
- First time offered in the Slavic Department of UW in the fall 2015;
- For mixed group of students: heritage and non-heritage, working in either technical fields or the humanities;
- For students who are already relatively proficient in spoken Russian (Intermediate High) and can read and write (no less than Novice High).

The Main Goal

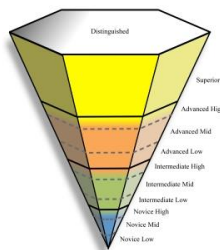
To start using Russian for professional purposes

- To extend the language to the STEM fields and gain proficiency in academic style;
- To develop social stylistic registers available to educated native speakers;
- Advanced Mid-High (depend on students' current language skills).

Challenges

- How to set a goal and select a linguistic minimum of course content (only 20 hrs!)?
- Where to find resources and materials?
- How to design helpful and interesting course for every student?
- How to meet needs heritage and non-heritage students?

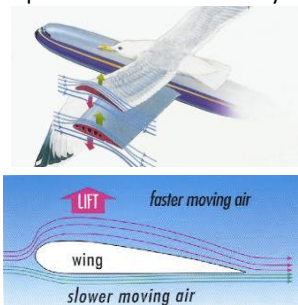
Standards



Selecting Topics

- **Chemistry:** Elements and compounds, Periodic table of elements. Dmitry Mendeleev
- **Astronomy:** The structure of the Solar system
- **Math:** Physical quantities and their measurement. How to read a graph
- **Physics:** Forces acting on a body. Bernoulli's principle and lifting force. Aerodynamics of airplanes. Nikolay Zhukovsky
- **Engineering:** How to describe and compare objects based on their technical characteristics

Physics: Forces acting on a body. Bernoulli's principle and lifting force. Aerodynamics of airplanes. Nikolay Zhukovsky



Tasks and the Final Performance Assessment

Authentic tasks: reading and discussing articles, filling out conference registration form, describing graphs and diagrams, solving and explaining problems;

Academic Reading: 2 articles (read, work on vocabulary and STEM terms, write summaries and use them for a Final Oral Presentations);

Project-based task: the Final Oral Presentation on a STEM topic of students' choices.

Chemistry: Elements and compounds, Periodic table of elements. Dmitry Mendeleev

Resources and Materials



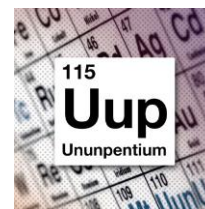
Authentic materials: Scientific articles, websites, dictionaries, documentary films, video lectures, and business cards

Textbooks and dictionaries for references:

- *Callaham's Russian-English dictionary of science and technology* by Ludmilla Ignatiev Callaham; Patricia E Newman; John R Callaham. 1996
- *Russian context: The culture behind the language.* Eloise M Boyle, Genevra Gerhart, ch. 12. 2002
- *Russian for Russians.* Olga Kagan, Tatiana Akishina, Richard Robin. 2002
- *Научный стиль речи. Технический профиль. Пособие по русскому языку для иностранных студентов.* Т.Е. Аросева, Л.Г. Рогова, Н.Ф. Сафьянова. 2010 (2012)
- **UW Language Learning Center MOODLE**

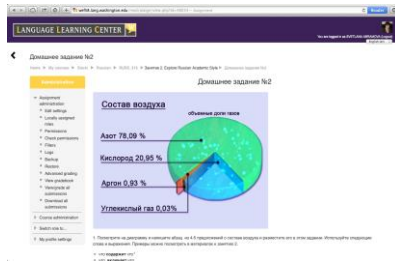
How to Motivate and Engage Students?

- Select topics they already know;
- Add some new interesting information from current research and news;
- Use authentic resources and focus on cultural context;
- Give them an opportunity to work on topics of professional interest.



What Works for HLL and Advanced SLL

- Content-based, task-based curriculum;
- Authentic materials and tasks;
- Using 99% of the target language.



| Информация 1 | Информация 2 | Участники | Дополнение | Печать |
|--|---|-----------|------------|----------------------|
| <p>Новости конференции 28 декабря 2015 «Объемы тиражирования» опубликованы правила приема статей для публикации в журналах.</p> <p>Информационное сообщение Глубокоуважаемые коллеги!</p> | <p>Поздравляю Вас принять участие в Российской конференции с международным участием «ЭКСПЕРИМЕНТАЛЬНАЯ И КОМПЬЮТЕРНАЯ БИОМЕДИЦИНА», организованной Уральским федеральным университетом имени первого Президента России Б.И. Ельцина, Институтом анатомии и физиологии Уральского отделения РАН, Уральским отделением Российской академии наук и Федеральным агентством научных организаций.</p> <p>Программа конференции включает пленарные доклады и лекции ведущих российских и зарубежных ученых (Бельгия, Великобритания, Германия, Италия, Нидерланды, США и др.), а также краткие доклады молодых ученых и студенческие сессии.</p> | | | Изменено: 28.12.2015 |

Student's presentation:

3D-Printed Open-Source Hand Orthosis for Individuals with Spinal Cord Injury

RUSS-316 Course Outcomes

By the end of the course, students demonstrate the ability to:

- Express ideas and opinions when engaged in conversation related to their professional fields;
- Ask questions and exchange general information on STEM topics outside their professional fields of interest;
- Understand the main ideas and some details on STEM topics that are presented through documentary films, video lectures and presentations;
- Understand the main idea and a few supporting facts about famous scientists and scientific discoveries on STEM fields from short articles and summarized descriptions;
- Read and understand the main ideas in nonliterary texts, such as articles, reviews, and summaries on STEM topics;
- Describe their professional interests with clarity and details;
- Deliver an oral presentation on STEM topics in academic style;
- Write a summary based on articles in academic style language.

Moving from 2 to 5-credit Course

More time for

- Absorbing authentic materials;
- Interviewing native Russian professionals;
- Polishing presentational skills (writing and oral forms);
- Exploring cultural context, using academic style words and expressions in non-academic settings.