

Microbiological food safety and AMR of foodborne pathogens – challenges and global trends

3 ECTS

About BIP. Microbiological food safety together with the increase of antimicrobial resistance of foodborne pathogens are one of the main public health, food producers and control institutions concerns. Therefore, Lithuanian University of Health Sciences is organizing a Blended Intensive Programme course focused on microbiological food safety, zoonoses (prevalence and global trends), contamination sources, microbiological evaluation criteria, and antimicrobial resistance. Courses are based on blended learning activities combine virtual/online learning activities and physical learning activities including practical part.

This course provides an overview of the most relevant foodborne pathogens in food chain, basic of microbiological examination of food, food safety. Course learning outcomes: students will gain a new knowledge about challenges in field of microbiological food safety, general competence to communicate in group and individually, skills to plan, implement and report the practical tasks.

Target students

Students of study programs related to food sciences, public health. Course topic is also relevant to students of veterinary medicine for food hygiene topic.

Coordinating institution

Lithuanian University of Health Sciences (Kaunas, Lithuania)

Partner institutions in course content

School of Veterinary Medicine, Freie Universität Berlin (Berlin, Germany)

Latvia University of Life Sciences and Technologies, (Jelgava, Latvia)

Key teachers

Prof. Mindaugas Malakauskas, Lithuanian University of Health Sciences (Kaunas, Lithuania)

Assoc. prof. Aistė Kabašinskienė, Lithuanian University of Health Sciences (Kaunas, Lithuania)

Assoc. prof. Aleksandr Novoslavskij, Lithuanian University of Health Sciences (Kaunas, Lithuania)

PhD Jurgita Aksomaitienė, Lithuanian University of Health Sciences (Kaunas, Lithuania)

Prof. Thomas Alter, School of Veterinary Medicine, Freie Universität Berlin (Berlin, Germany)

Prof. Aivars Bērziņš, Latvia University of Life Sciences and Technologies, (Jelgava, Latvia)

Assoc. prof. Margarita Terentjeva, Latvia University of Life Sciences and Technologies, (Jelgava, Latvia)

Organization of the BIP

- The *BIP* will be organized in a blended learning format – including an online and onsite sessions.
- Registration must be completed **before April 14, 2023**
- The Online session will be delivered in a MS Teams environment on May 4-18, 2023.
- The Onsite session will be organized and provided at the Lithuanian University of Health Sciences, Veterinary Faculty at June 05-09, 2023.

The onsite sessions will occur at June 05-09, students will be divided into four/five groups for laboratory works and they will be asked to prepare for the topic (student will be introduced to topics during first on-line meeting).

A 10-point system will be used to evaluate the preparedness and participation in debates sessions. This group work will be a great opportunity to work with your colleagues from other countries, to share your experience and gain knowledge.

[Registration form](#)

[Microbiological food safety and AMR for foodborne pathogens](#)

Schedules for on-line and on-site sessions

On-line session (May 4-18, 2023)

Day	Time (EET)	Activity
Thursday (May 4)	14.15-15.00	Opening of BIP 2023. All lecturers; course outline; introduction of course participants.
	15.00-15.45	Lecture Microbiological food safety – challenge for public health (prof. M. Malakauskas)
Tuesday (May 9)	15.00-16.30	Lecture Food microbial contamination: the role of hygiene in food safety (assoc. prof. A. Kabašinskiene)
Thursday (May 11)	15.00-15.45	Lecture. AMR of foodborne pathogens. Can we change current situation? (assoc. prof. A. Novoslavskij)
	15.45-16.30	Lecture How to apply genomics in food microbiology (Prof. Thomas Alter)
Tuesday	15.00-15.45	Lecture

(May 16)		International food trade: new challenges for food safety (Prof. Thomas Alter)
	15.45-16.30	Lecture Control measures to reduce zoonotic bacteria in the poultry production chain (Prof. Thomas Alter)
Thursday (May 18)	15.00-15.45	Lecture Control of foodborne zoonosis in the context of One Health approach (Prof. Aivars Bērziņš)
	15.45-16.30	Lecture Antimicrobial resistance and wildlife (assoc. prof. Margarita Terentjeva)

On-site session (June 05-09, 2023)

Day	Time (EET)	Activity
Monday (June 05)	9.00-9.30	Welcome session and key points from on-line session (address: Tilzes str. 18, Kaunas) Outline of onsite session
	9.30-10.30	Biosafety at microbiology laboratory. Short introduction to the microbiology laboratory of the dep. Of Food safety and quality. (assoc. prof. A. Novoslavskij)
	10.30-11.00	Break
	11.00-13.15	Practical part. Microbiological examination of minced meat (ACC count and <i>E. coli</i>) (part I) (assoc. prof. A. Novoslavskij)
	13.15-14.15	Lunch
	14.15-15.45	Workshop (4 groups) based on self-learning topics (assoc. prof. A. Novoslavskij, assoc. prof. A. Kabašinskienė)
	18.30	Welcome dinner
Tuesday (June 06)	9.00-9.45	Introduction: Microbial contamination at home and public catering area (assoc. prof. A. Kabašinskienė)
	9.45-10.30	Practical part. Analysis of food processing hygiene in public catering area (part I: sampling and incubation) (assoc. prof. A. Kabašinskienė)
	10.30-10.45	Break
	10.45-12.15	Outbreak investigation (assoc. prof. A. Kabašinskienė)
	12.15-13.15	Lunch
	13.15-14.00	<i>Salmonella</i> vs <i>Campylobacter</i> – risk assessment (prof. M. Malakauskas)
	14.00-15.30	Campus visitation
Wednesday (June 07)	8.30-10.00 travel to Vilnius 10.00-12.00 visitation 12.00-13.30 travel back to Kaunas	Visit to National Food and Veterinary Risk Assessment Institute in Vilnius
	13.30-14.30	Lunch
	14.30-15.15	Working with MLST data (part I). (Prof. Thomas Alter)
	15.15-	Self-work
	Thursday	9.00-10.30

<i>(June 08)</i>		Minced meat microbiological criteria analysis (total bacteria count and <i>E. coli</i>) (part II) (assoc. prof. A. Novoslavskij)
	10.30-11.00	Break
	11.00-12.30	Classical and molecular detection and analysis of AMR (discs, broth micro dilution, MIC test strips, molecular identification) (part I) (PhD Jurgita Aksomaitienė/assoc. prof. A. Novoslavskij)
	12.30-13.30	Lunch
	13.30-15.00	Working with MLST data (part II). (Prof. Thomas Alter)
	15.00-	Self-work
Friday <i>(June 09)</i>	9.00 – 10.30	Classical and molecular detection and analysis of AMR (discs, broth micro dilution, MIC test strips, molecular identification) (part II) (PhD Jurgita Aksomaitienė/assoc. prof. A. Novoslavskij)
	10.30 – 10.45	Break
	10.45 – 12.15	Presentation of group work and debates (30 min. for each group)
	12.15 – 13.15	Lunch
	13.15 – 14.00	Closing session: reflections from students, course evaluation

Accommodation

Hotels and apartments that we recommend to book are here:

- “Zaliakalnio terasos apartamentai” address: Savanorių pr. 276 393, 50201 Kaunas, Lithuania;
- “Kaunas City” address: Laisves al. 90, LT-44251 Kaunas, Lithuania;
- “LoveKaunas Apartments” address: A. Mickevičiaus st. 39, 44244 Kaunas, Lithuania;
- “Villa Kaunensis” address: Rotušės aikštė 21, LT-44279 Kaunas, Lithuania;
- “House 22A Studio Apartments” address: Šv. Gertrūdos st. 22A, 44260 Kaunas, Lithuania;
- “Moja Accommodation” address: Gedimino st. 28, LT-44319 Kaunas, Lithuania;
- “Happy Inn” address: Vytauto avenue 21, LT-44352 Kaunas, Lithuania;
- “Oak house apartments” address: Aušros st. 31, 44157 Kaunas, Lithuania.

All of these hotels, condo hotels and more, can be found at <https://www.booking.com/>

Contacts

Any questions related to academic matters of the BIP shall be addressed to

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General questions like accommodation, contracts, etc. shall be addressed to
the International Programme Coordinator

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