INGENIUM, Staff Academy

10-14 February 2025
Mikkeli, Finland

South-Eastern Finland University of Applied Sciences - Xamk
Patteristonkatu 3, 50100 Mikkeli, Finland

Some sessions may require the use of a laptop or mobile device, please bring your own device (BYOD).

Tuesday 11 CLASS D128

9.00-9.15	**Opening Speech** Katri Ryttyläinen-Korhonen *Xamk's Pedagogical Renewal*
9.15-9.30	Guest Speech by **Kallia Katsamponaxi-Hodgetts** *Innovative Faculty Development and Teacher Education: Designing Academic Development Programs through the Multiliteracies Learning by Design Model.*
9.30-10.30	**Linda O'Sullivan & Róisín O'Grady** *Beyond Teaching: A Case Study in Cultivating a Coaching & Mentoring Culture*
10.30-11.30	**Manuel-Cristóbal Rodríguez-Martínez** *Fostering academic writing by (oral and written) participation in bilingual scientific conference*
11.30-12.30	**Lunch**
12.30-14.00	**Daria Chekalskaia** *Climate Fresk: Cards for a better future*
14.00-14.30	**Coffee break**
14.30-15.30	**Corina Cimpanu** *Engaging students in e-learning environments for micro-learning: A study case on Machine Learning in Knowledge Representation and Reasoning.*

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Wednesday 12 CLASS D128

9.00-10.30	**Manol Sokolov** *Opportunities for combining traditional and high-tech innovative and interactive surgical training for medical students.*
10.30-11.30	**Marcus Nohlberg** *Gamifying Cybersecurity Education: Engaging Students Through Active Play.*
11.30-12.30	**Lunch**
12.30-14.00	**Catharina Lutz & Devin Feng** *Designing the Future of Urban Spaces: Living Laboratories and AI-Driven Visualization.*
14.00-14.30	**Coffee Break**
14.30-15.30	**Mercedes Bravo Rebolledo** *Facilitating Project Based Learning in EFL.*

Thursday 13 CLASS D128

9.30-10.30	**Maria Fouskaki & Ioannis Metaxas** *Chemistry Outreach Group (COG): Building Reflective and Inclusive Educational Outreach Activities in Science Education.*
10.30-11.30	**Simone Di Plinio** *Empowering Students through Flipped Classrooms and Autonomous Publications. A Practical Model for University Lecturers.*
11.30-12.30	**Lunch**

Tuesday 11

9.00-9.15

Opening Speech

Katri Ryttyläinen-Korhonen
Ph.D., eMBA, RN, RM
Vice President
Director, School of Health and Wellbeing

Xamk's Pedagogigal Renewal.

In 2022, the South-Eastern Finland University of Applied Sciences (Xamk) launched a pedagogical renewal initiative. Its vision was: We enable students to build their individual competencies in close collaboration with the working world. The reform was based on the principles of student-centredness, flexibility, future working life needs, sustainable development, internationality, and financial sustainability. Three key themes were developing courses and course details, enhancing learning environments and open learning materials, and revising curricula.

The goals and vision of Xamk's pedagogical renewal initiative were defined based on data collected and analysed during future-oriented workshops. Course development and implementation were supported by conceptualising three support models: pedagogical coaching, the Xamk Support Universe (a framework that organises and clarifies the available support resources), and events as a means of engagement. Teachers had the opportunity to participate in workshops focused on learning environments. These workshops identified key areas for development: shared principles for enhancing learning environments, a model for developing shared environments, and a model for supporting specialised environments. Based on the outcomes of the workshops, three scenarios for learning environments were created.

The curriculum reform identified needs to enhance the quality of teaching and guidance, optimise resource use, and reduce overlap in education. Additionally, the goal was to tackle challenges related to internationality by expanding educational offerings through international collaboration, including programmes organised with the European University INGENIUM. The new curriculum guidelines were approved in February 2023 and will be implemented in programmes commencing in January 2025 and beyond. Pedagogical development at Xamk will continue, including renewing the university's pedagogical development program.

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South-Eastern Finland University of
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XAMK
South-Eastern Finland
University of Applied Sciences

INGENIUM

Tuesday 11

9.15-9.30

Guest Speech

Kallia Katsampoxaki-Hodgetts, Dr.
Postdoctoral Researcher (Education)

Innovative Faculty Development and Teacher Education: Designing Academic Development Programs through the Multiliteracies Learning by Design Model.

This presentation outlines a conceptual and pragmatic model for Faculty Development inspired by the Multiliteracies Learning by Design framework. The framework is applied at UOC to create an academic development program that fosters inclusive, student-centered (ISC) pedagogies. The approach integrates theoretical and practical elements to support faculty in designing and implementing reflective, research-informed teaching strategies. The Learning by Design model in our faculty development program follows a structured pathway:

- Experiencing the Old and the New: We utilised peer observations and reflective reports from observers, enabling faculty to engage critically with current and new teaching practices.
- Analysing Critically: Faculty participants used these reflections to examine their teaching in light of ISC pedagogies, discussing insights and challenges collaboratively.
- Conceptualising: Through a MOOC, participants accessed online resources to deepen their understanding of ISC principles and integrate this knowledge with their personal teaching contexts.
- Applying Appropriately and Creatively: Participants subsequently devised lesson plans in which content delivery, engagement, and assessment were in line with ISC pedagogy. These plans were executed in classroom settings and assessed using Action Research methodologies, promoting ongoing improvement and adaptation.

Aligned with the goals of the Ingenium Staff Academy, this model emphasizes inclusive, student-centred pedagogies and learning strategies, bridges theoretical research with practical teaching aspects, and showcases the Multiliteracies approach's transformative potential for faculty development and teacher education.

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University of Crete, Greece

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INGENIUM

Tuesday 11

9.30-10.30

Linda O'Sullivan & Róisín O'Grady

Beyond Teaching: A Case Study in Cultivating a Coaching & Mentoring Culture.

Abstract

In today's rapidly evolving higher education landscape, fostering a culture of coaching and mentoring is essential for empowering both students and staff. This session will delve into the innovative pedagogical approach of integrating coaching and mentoring as core components of the teaching and learning experience. Participants will explore how MTU is transforming its educational environment through various structured coaching and mentoring programmes targeting both students and staff. This person-centred approach to both staff and student development focuses on developing the whole person – academically, personally, and professionally.

The session will feature an interactive demonstration of a coaching tool designed to illustrate the practical application of coaching and mentoring techniques. Participants will engage in hands-on activities that simulate coaching conversations, allowing them to experience firsthand the dynamics of effective coaching and mentoring relationships. This interactive format will encourage active participation, fostering an inviting atmosphere for collaboration and exploration. Participants will have the opportunity to reflect on their own experiences and share best practices through small group discussions, creating a rich dialogue around this effective pedagogical strategy. By the end of the session, participants will leave with actionable insights to cultivate similar initiatives in their own institutions, preparing their communities to embrace change and respond effectively to future challenges.

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Tuesday 11

10.30-11.30

Manuel-Cristóbal Rodríguez-Martínez
Assistant Professor

Fostering academic writing by (oral and written) participation in bilingual scientific conference.

Abstract

One of the main challenges of academic writing is that university students often encounter this type of writing in their final projects without receiving adequate linguistic and functional training to effectively tackle this task, or with limited training focused solely on the final project as a textual genre. To address this issue, a questionnaire on academic texts was administered to university students to diagnose their training needs and propose innovative teaching methods to comprehensively address these text genres. The results reveal that the students possess knowledge of academic texts that are closely related to their own experiences (such as thesis, final projects, and articles). However, they lack an understanding of the correct structure, lexical-syntactic characteristics, and verbal patterns of these texts. Furthermore, it is worth noting that the students generally hold a negative perception of these textual genres, perceiving them as difficult to comprehend and produce, despite recognizing their usefulness in the classroom. Based on these findings, a teaching innovation focusing on linguistic-contrastive training for these genres was implemented in two courses, culminating in a specially organized conference where students were given opportunities to engage in oral and written interventions in both French and Spanish. This session aims to showcase the implementation, connection between different courses, and discuss the difficulties of academic and scientific writing among students. As teachers, in conjunction with active educational strategies, play a crucial role in the acquisition of professional competences which will help students to better get into the changing labor and scientific contexts.

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Tuesday 11

12.30-14.00

Daria Chekalskaia,
Production Assistant

Virtual Site Visits: The use of immersive and accessible technologies in the teaching of Civil Engineering.

Abstract

The Climate Fresk workshop offers a highly interactive, student-centered approach to climate education, designed to engage participants deeply through collaborative problem-solving and structured reflection. This session utilizes a visually stimulating card-based game that maps the interconnected causes, effects, and solutions of climate change. By guiding students to discover and connect these elements independently, the workshop emphasizes experiential learning, fostering both cognitive and emotional engagement. The session creates an immersive experience that highlights personal relevance and promotes lasting understanding, making it transformative for students and educators alike. This approach meets the demands of modern education by blending interactive methods with real-world applications, building a foundation for climate literacy and motivating actionable solutions. The workshop begins with a brief introduction that sets a welcoming tone, encouraging participants to share their motivations and fostering personal relevance. Participants then work in groups with Climate Fresk cards representing key aspects of the climate crisis, including human activities, environmental impacts, and socio-economic consequences. They independently link these elements to build a “fresk,” or visual map, of climate change. The Climate Fresk format, as a “serious game,” transforms learning into an immersive experience. Participants engage in constructivist learning, building upon prior knowledge through collaborative exploration. This workshop incorporates active, kinesthetic, and informal, student-centered methods to create a personalized journey. The facilitator supports rather than directs, allowing students to discover connections independently. A structured reflection phase follows, offering space for emotional expression, discussion, and critical thinking around climate solutions, empowering participants to see their role in climate action.

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South-Eastern Finland University of Applied Sciences

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Tuesday 11

14.30-15.30

Corina Cimpanu
Lecturer PhD Engineer

Engaging students in e-learning environments for micro-learning: A study case on Machine Learning in Knowledge Representation and Reasoning.

Abstract

Attendee engagement has gained popularity in recent years through the progressive understanding of the importance of considering emotional, intellectual, and behavioral factors in the learning process. However, since most studies mainly evaluate student engagement in onsite, classical learning environments, there needs to be more known about the impact of student engagement in online learning or about effectively measuring it via non-traditional methods. Therefore, the methods proposed for this workshop follow the triangle relations between student engagement, their end performance, and their overall self-motivation by identifying the main impact factors in student engagement, studying the impact of engagement on performance, and exploring the role of self-motivation on both engagement and performance. The workshop session is decomposed according to the micro-learning paradigm into signaled and scored independent units that build up to the final goal. The proposed session explores Support Vector Machines, K-Nearest Neighbors, and Random Forest within the context of knowledge representation and reasoning. Using the Wisconsin Breast Cancer dataset as a practical example, attendees will delve into each model's approach to classification, including boundary-based, similarity-based, and ensemble reasoning. The session includes Algorithm Overviews: Key principles of SVM, KNN, and RF; Hands-on MATLAB Demonstrations: Implementing each model with real data; Model Evaluation and Discussion: Exploring reasoning capabilities and interpreting model decisions for practical decision-making. Attendees will acquire skills in algorithm selection, feature analysis, MATLAB coding, and reasoning-focused model interpretation.

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Gheorghe Asachi Technical University of Iasi

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INGENIUM

Wednesday 12

9.00-10.00

Manol Sokolov
Head of Department of Surgery, Chief of Clinic of Surgery

Opportunities for combining traditional and high-tech innovative and interactive surgical training for medical students.

Abstract

Along with the well-established traditional training in one of the fundamental clinical disciplines - SURGERY for students V and VI year of medicine, we make significant complex efforts in our university to implement modern innovative high-tech methods and techniques for diagnosis and treatment of a number of surgical patholodi. The rapid pace of switching from conventional to minimally invasive - laparoscopic and robotic surgery requires both theoretical and practically oriented interactive training with demonstration and use of devices, apparatus and relevant consumables for such type of procedures. In recent years, our teaching team has purposefully introduced training in the basic principles and certain details of performing laparoscopic visceral surgery for anterior abdominal wall hernias and hiatal/diaphragmatic hernias, laparoscopic cholecystectomy (+ other hepato-pancreato-biliary system procedures), upper GI-surgery, colorectal surgery for benign and malignant diseases. Thus, the confirmation of some of these laparoscopic operative interventions as a “gold standard” in modern surgical practice is also implemented as a special part of the structure of the training horarium of surgical students. Demonstration of similar operations in the OR with interactive discussion of specific clinical cases is provided with the available modern latest generation technical characteristics laparoscopic equipment. The department also has the latest generation laparoscopic console-trainer with built-in software for quality virtual reality for acquiring basic skills in some laparoscopic manipulations through specific exercises of graduated complexity. This strongly motivates students with an interest in surgical specialties as they are drawn into thematic modules.

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Wednesday 12

10.30-11.30

Markus Nohlberg
Associate Professor

Gamifying Cybersecurity Education: Engaging Students Through Active Play.

Abstract

This session introduces Siguru, an innovative approach to cybersecurity education that combines the interactive nature of a card game with a digital platform, addressing the global need for effective and accessible security awareness training. Developed through extensive research, Siguru is grounded in a pedagogical framework informed by educational and security-based studies. Participants will begin with a brief introduction to cybersecurity challenges, examining the need for training methods that are both engaging and educational. This introduction leads into the Siguru game session, where participants experience hands-on interaction with game-based security scenarios. Research by Hamari, Koivisto, and Sarsa (2014) has shown that gamification can significantly increase engagement and learning – principles Siguru incorporates into its gameplay. Siguru is designed for diverse skill levels, encouraging collaboration and knowledge-sharing among participants in both corporate and academic settings. Whitton (2011) underscores that structured gameplay effectively builds critical thinking and decision-making skills, especially among adult learners. Siguru's design facilitates these skills by transforming complex security content into an accessible, enjoyable format. Balancing practical skills with ethical insights, Siguru encourages players to reflect on the ethical implications of cybersecurity, fostering understanding of personal and organizational responsibilities. This unique approach, blending technical knowledge with ethical considerations, makes Siguru an effective tool for security awareness. The session concludes with a group reflection, discussing experiences and exploring how game-based learning can enhance participants' training programs. Siguru's approach addresses common challenges in traditional training, reinforcing understanding through interactive and gamified learning. Positioned to meet the rising demands for security training, Siguru combines immersive gameplay with research-backed learning objectives, offering a scalable, adaptable solution for today's cybersecurity challenges.

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University of Skövde

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Wednesday 12

11.30-12.30

Catharina Lutz & Devin Feng

Designing the Future of Urban Spaces: Living Laboratories and AI-Driven Visualization.

Abstract

This session reveals new ways to employ AI tools for participatory urban design and mobility management education. Participants will explore how living laboratories and generative AI visualization can transform the conceptualization, design, and testing of public spaces. Unlike static pilot projects, living labs evolve through public feedback, fostering community engagement and practical, adaptable design solutions. Examples include projects in Karlsruhe and international summer schools, where students applied these methods to address urban mobility challenges. By engaging with living labs, participants learn to gather, analyze, and apply public input to refine urban designs and enhance their practical skills. Using AI tools, everyone from students to members of the public can generate and refine visuals from simple textual prompts, allowing them to explore multiple alternatives and communicate ideas effectively. This process encourages creativity and collaboration while making visualization accessible to all skill levels. For instance, prompts like “a street in Helsinki where cars have been replaced with seating, bike parking, and greenery” can quickly produce diverse design options for critique and refinement. In this interactive workshop, participants will define the goals of a “good” street space, create AI-driven visualizations, and critique the results in a collaborative setting. Moderators will connect these activities to planning design theories, enhancing understanding and critical thinking. While living labs cannot be implemented directly during the session, teaching about living labs as a participatory and iterative process provides important context for students. Understanding how living laboratories can apply these workflows can help students adapt the ideas for their own applications, especially for work in the public realm. This session equips participants with practical skills in urban prototyping, AI visualization, and stakeholder collaboration. By combining these innovative methods, it offers a fresh approach to sustainable and inclusive urban planning, preparing participants to address the complexities of modern city design.

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Wednesday 12

14.00-15.00

Mercedes Bravo Rebolledo
PRCE

Facilitating Project Based Learning in EFL

Abstract

After ten years of experience teaching EFL, first at the secondary level and later at the university, I am convinced that PBL is a powerful tool for teaching EFL and empowering students because it offers a dynamic and engaging approach that fosters language acquisition, critical thinking, and 21st century skills. My goal is to share how I was able to successfully implement project-based learning for business management students, leveraging my experience teaching secondary school students, to help them acquire confidence in their English and better understand key concepts in their field of study.

Drawing from an analysis of the instructional strategies employed in a course on the fundamentals of management for third year students, I would want to highlight how PBL encourages authentic language use, boosts motivation and engagement, and advances cultural understanding in the classroom. Indeed, the inclusion of real-world scenarios encourages students to use English in a natural and meaningful manner, as they take control of their learning and actively engage in the process. Students who participate in action tasks are prompted to gather information, examine documents, and produce written works in addition to working with peers, presenting their findings, and engaging in discussions. This creates a need for language tools and aids in the development of the five language skills. In addition to encouraging students to think critically and solve problems, real-world applications also push them to make decisions by letting them choose the course of their projects. Finally, coming from a multicultural background, I place a high value on integrating intercultural skills into my curriculum. As such, I would like to highlight how PBL fosters cultural understanding by incorporating projects that look at other cultures and perspectives on a given topic.

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Thursday 13

9.30-10.30

Mrs Maria Fouskaki & Dr Ioannis Metaxas

Chemistry Outreach Group (COG): Building Reflective and Inclusive Educational Outreach Activities in Science Education.

Abstract

Outreach activities serve as a crucial bridge between the scientific community and the public, reinforcing science education across all levels. Chemistry demonstrations, in particular, are a powerful medium for educators, enhancing the accessibility and appeal of scientific knowledge. These demonstrations not only support school education but also forge connections between academia and broader communities. Engaging students in such outreach fosters enthusiasm for science, cultivates critical thinking, and inspires potential career paths in scientific fields. For university researchers, outreach offers a unique opportunity to share their expertise, instill a passion for lifelong learning, and strengthen connections with the community. Through participation in outreach, university students, in turn, experience both emotional and intellectual growth, gaining valuable communication and teaching skills essential for their professional development.

This workshop presents the University of Crete's Chemistry Outreach Group (COG) as a model for inclusive, student-centered science education through public outreach. Established to create a sustainable framework for outreach within the Department of Chemistry, COG exemplifies an adaptable and reflective approach to community engagement. Workshop participants will learn the foundational aspects of establishing similar outreach initiatives, with hands-on experience in designing safe and effective chemistry demonstrations. By showcasing COG's diverse activities, the workshop will illustrate how outreach initiatives can effectively support community engagement, inspire young students, and contribute to broader scientific literacy.

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University of Crete

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Thursday 13

10.30-11.30

Simone Di Plinio
Assistant Professor

Empowering Students through Flipped Classrooms and Autonomous Publications. A Practical Model for University Lecturers.

Abstract

By transforming students into active protagonists, they are encouraged to design their own lessons on topics of personal interest, which are then explored collaboratively in groups, thus promoting autonomy, collaboration, and active learning, and aligning with the principles of the flipped classroom model. An e-learning platform provides educational materials and in-depth resources, allowing students to prepare autonomously before class and supporting a blended learning environment. Tools like Qualtrics are employed for data acquisition and management, enabling students to work with real-world data. Analytical software such as JASP and R/MATLAB allow students to perform advanced data analyses through both graphical interfaces and command-line programming, providing flexibility and deeper analytical understanding. The integration of machine learning and artificial intelligence enriches the curriculum, preparing students for modern research and professional environments. This presentation offers practical insights into implementing similar methodologies in their disciplines. The approach is flexible and can be tailored to various subjects and educational contexts. Educators can enhance teaching effectiveness and improve learning outcomes by focusing on student empowerment and technological integration. Attendees will learn how to guide students through processes that develop critical professional skills, fostering both personal and professional development. This approach engages students with complex quantitative methods while providing educators with effective strategies to enhance their teaching.

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