

Occupational safety, global health, and sustainable development

- short, credit-bearing course -

General information

Number of ECTS: 2

Language: English

Modality: Online

Proposed period: Winter Semester 2027 and 2028

Duration: 3 days online sessions

Target groups: undergraduate, master and PhD students, early-career researchers

Number of Participants: 40 online

Prerequisites: motivation letter

Lecturers: **PhD Maja Petrović, associate professor, Faculty of Technical Sciences,
University of Novi Sad**

**PhD Andrea Ivanišević, full professor, Faculty of Technical Sciences,
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Dr. Omar de la Cruz Vicente, Permanent professor, University of Alcalá

Course Aims

The Occupational Safety, Global Health, and Sustainable Development course aims to equip students with a comprehensive understanding of how modern occupational health and safety (OHS) practices contribute to global economic growth, social inclusion, and sustainability, especially within the framework of European Union regulations. By exploring the intersection of workplace safety with welfare economics, social equity, and environmental sustainability, the course seeks to develop the students' ability to design and implement OHS strategies that not only protect workers but also enhance business competitiveness and resilience. Students will gain insights into key European and global policies, such as the European Pillar of Social Rights, the Green Deal, and the Sustainable Development Goals (SDGs), and learn how these frameworks shape OHS practices across industries.

A focus on social inclusion and equal opportunities will highlight the role of OHS in promoting fair employment practices for marginalized groups, while the integration of sustainability principles will emphasize how workplace safety supports environmental goals and green job creation. Through hands-on workshops, case studies, and group discussions, students will explore cutting-edge tools like the Occupational Health, Inclusion, and Well-being Index (OINBI) and gamification techniques that enhance employee engagement with safety measures. The course also addresses the challenges of globalization, helping students navigate the complexities of managing OHS in multinational organizations and global supply chains. Ultimately, this course prepares students to develop innovative, future-focused approaches to OHS that align with global health priorities, economic growth, and sustainability.

Key Topics

- 1. Occupational Health and Safety (OHS) in the European and Global Context**
- 2. Sector-Specific OHS Applications**
- 3. Economic Dimensions of OHS**
- 4. OHS as a Driver of Social Inclusion and Well-being**
- 5. Occupational Health, Inclusion, and Well-being Index (OINBI)**
- 6. Applied Learning and Case-Based Approaches**
- 7. Sustainability-Oriented OHS Strategies**
- 8. Green Jobs and Environmental Risk Management**
- 9. Decision-Making and Governance in Sustainable Business**
- 10. Collaborative and Strategic OHS Design**

Learning Outcomes

Upon successful completion of the course, students will be able to:

- Explain and critically assess the European and international Occupational Health and Safety (OHS) frameworks, including the European Pillar of Social Rights, EU OHS Directives, and the EU Green Deal, in line with European Qualifications Framework (EQF) principles.
- Analyse sector-specific OHS challenges in manufacturing, healthcare, and construction, and evaluate the impact of OHS policies on productivity, safety, and workforce well-being using evidence-based approaches.
- Apply economic analysis tools, including cost–volume–profit (CVP) analysis, to support informed decision-making in OHS and healthcare economics contexts.

- Design inclusive OHS strategies that promote social inclusion, gender equality, disability accommodation, and active ageing, in accordance with the European Pillar of Social Rights and EU equality and non-discrimination principles.
- Apply the Occupational Health, Inclusion, and Well-being Index (OINBI) to assess workplace inclusion, health, and well-being, and formulate improvement measures based on data-driven evaluation.
- Develop sustainability-oriented OHS strategies that support green jobs, reduce environmental risks, and contribute to the Sustainable Development Goals (SDGs) and EU Green Deal objectives.
- Evaluate governance and collective decision-making processes in sustainable business environments, and propose strategic solutions that align OHS, sustainability, and organizational performance.
- Collaborate effectively in multidisciplinary teams to design, assess, and present OHS solutions through applied learning projects and workshops.

Course content

This three-day intensive course provides a comprehensive and practice-oriented exploration of Occupational Health and Safety (OHS) frameworks, policies, and innovative approaches within European and global contexts. With a strong emphasis on the economic, social, and sustainability dimensions of workplace safety, the course equips participants with analytical tools and practical competencies to assess, design, and improve OHS systems across different sectors and geographical settings. Through a combination of expert-led lectures, real-world case studies, and applied workshops, participants gain an in-depth understanding of the evolving role of OHS in promoting social inclusion, economic resilience, and environmental sustainability. The course balances strategic policy analysis with hands-on application, encouraging participants to critically evaluate sector-specific challenges, apply principles of welfare and health economics, and engage with emerging concepts such as gamification, sustainability governance, and global OHS coordination.

Day 1: Understanding OHS in the European and Global context

The course opens with an overview of the European OHS policy landscape, introducing key initiatives such as the European Pillar of Social Rights, the EU Green Deal, and core EU workplace safety directives. Participants examine how these frameworks influence occupational safety standards and regulatory practices across sectors including manufacturing, healthcare, and construction, as well as their relevance in global contexts.

The second part of the day focuses on the economic rationale for investing in OHS. Through sector-based case studies, participants analyse how preventive safety measures and innovation contribute to productivity, workforce stability, and economic resilience. A dedicated applied workshop on welfare economics enables participants to assess the costs and benefits of OHS investments using structured group exercises and guided analytical tools.

Day 2: Social inclusion, economic stability, and well-being

Day two shifts attention to the social and inclusion dimension of OHS systems. Through lectures and moderated discussions, participants explore how effective OHS policies can act as drivers of social inclusion, addressing issues such as gender equality, disability accommodation, and the needs of an ageing workforce. The session emphasises the strategic design of fair, inclusive, and resilient workplaces.

The second session introduces the Occupational Health, Inclusion, and Well-being Index (O²INBI) as an analytical tool for evaluating workplace inclusion and employee well-being. During a hands-on workshop, participants apply the index to real or simulated organisational contexts. Building on this exercise, the afternoon session focuses on case-based analysis, where participants propose concrete improvement measures based on real-world examples. The day concludes with a policy-oriented discussion linking workplace well-being to societal welfare, economic stability, and macroeconomic growth, including the role of public policy and incentives in promoting healthy and inclusive work environments.

Day 3: Sustainability, innovation, and Global OHS challenges

The final day addresses the forward-looking dimensions of OHS, with particular emphasis on its alignment with sustainability transitions, digital innovation, and globalisation. The morning session examines the role of OHS in supporting environmental protection, green job creation, and risk reduction, explicitly linking OHS practices to EU sustainability policies, the EU Green Deal, and the UN Sustainable Development Goals (SDGs).

Participants then engage in a practical workshop focused on developing sustainability-oriented OHS strategies. Through group-based exercises, they design frameworks that simultaneously minimise environmental impact and ensure worker safety in sectors undergoing green and digital transitions.

The afternoon session introduces gamification and participatory approaches as tools for strengthening safety culture, employee engagement, and compliance. The course concludes with an interactive simulation exercise in which participants assume the role of EHS leaders managing global operations. They address challenges related to cross-border OHS compliance, cultural diversity, and ethical dilemmas in global supply chains. Final group presentations showcase integrated strategies for achieving fair, effective, and globally harmonised OHS systems.

Teaching Methods

The course applies a student-centred and practice-oriented teaching approach, combining theoretical instruction with applied learning and real-world problem solving. The methodology is designed in line with European higher education standards, promoting active learning, critical thinking, and competence-based outcomes in the field of Occupational Health and Safety (OHS).

Interactive lectures. Each teaching block starts with structured lectures introducing key theoretical concepts, policy frameworks, and analytical tools related to OHS. The lectures integrate

EU policy instruments (such as the European Pillar of Social Rights, EU OHS Directives, and the EU Green Deal), international standards, and relevant research findings. Visual presentations, policy examples, and sector-specific cases are used to support understanding and link theory to practice.

Case-based learning and guided discussions. Real-world case studies from manufacturing, healthcare, construction, and emerging green sectors are analysed during guided discussions. Students critically examine regulatory, economic, and social dimensions of OHS challenges, compare alternative approaches, and reflect on policy and organisational implications in different contexts.

Collaborative workshops. Facilitated workshops enable students to work in small groups on problem-solving tasks related to inclusion, well-being, sustainability, and risk management. These workshops emphasise teamwork, peer learning, and the practical application of theoretical concepts to sector-specific and cross-sectoral OHS scenarios.

Applied learning projects. Throughout the course, students engage in applied learning activities and mini-projects that simulate real workplace or policy situations. These projects require the integration of economic analysis, social inclusion principles, and sustainability considerations. Analytical tools such as the Occupational Health, Inclusion, and Well-being Index (O²INBI) are used to assess workplace conditions and to design evidence-based improvement measures aligned with EU directives and sustainability objectives.

Reflective learning and feedback. Continuous instructor feedback and structured reflection sessions support students in evaluating their learning progress, refining analytical skills, and strengthening their ability to apply OHS concepts in professional and policy-oriented settings.

Course design and Assessment Criteria for Students:

1. Tests (40%).

(1) Multiple-Choice Test (20%): A test covering key concepts, regulations, and policies related to OHS in the EU. It will assess students' understanding of topics such as the European Pillar of Social Rights, the Green Deal, economic impacts, and welfare economics. This test would be held after Session.

(2) Short Answer/Essay Test (20%): After Session 3, a test will require students to apply critical thinking to topics like sustainability, social inclusion, and globalization of OHS. Questions will focus on case studies discussed in class, including the O²INBI index and the role of gamification in improving workplace safety.

2. Active Participation (40%)

Group Exercises and Case Studies (20%): Participation in group activities, including analyzing how EU policies impact different industries, calculating cost-benefit analyses, and developing OHS strategies for inclusion and sustainability. Groups will be graded based on their presentations and contributions to discussions.

Workshop and Presentations (20%): Students' participation in the OINBI index workshop, gamification brainstorming sessions, and group presentations on globalization and OHS. The assessment will focus on creativity, teamwork, and the ability to propose actionable solutions.

3. Final Project (20%)

Capstone Project (20%): Students will work in groups to develop a comprehensive OHS strategy for a hypothetical multinational company. They will address issues such as sustainability, social inclusion, and global compliance. The project will be submitted as a ppt, and each group will present their solutions to the class.

Grades Marking scale:

The marking scale provides clear expectations for students, helping them understand what is required to pass and how their performance will be evaluated throughout the course.

Fail (0 - 49%): The student did not demonstrate sufficient understanding of key OHS concepts or failed to engage meaningfully in group activities. Students must retake the tests and/or participate in additional assessments to pass the course.

Pass (50% and above): The student demonstrated a satisfactory understanding of the course material and engaged actively in group discussions and exercises. Students who score 50% or higher across all components will pass the course and may receive additional feedback for improvement.

Overall Assessment Criteria

Understanding of Key Concepts: Demonstrated through tests and contributions to discussions.

Engagement and Participation: Assessed through group activities, workshops, and presentations.

Application of Knowledge: Evaluated in the final project, showcasing the ability to develop practical OHS strategies.

Lecturers:

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Guest professor: Dr. Omar de la Cruz Vicente, Permanent professor, omar.delacruz@uah.es