

COURSE: HOW TO PRODUCE, PROCESS, AND DELIVER SAFE AND NUTRITIOUS FOOD – SUSTAINABLE FOOD SYSTEM IN EVERYDAY LIFE
AUTHOR: PUK - PEDAGOGICAL UNIVERSITY OF KRAKOW
THEME: <ul style="list-style-type: none"> – RENEWABLE ENERGY, – SUSTAINABLE HOUSING, – <u>SUSTAINABLE FOOD SYSTEM</u>, – CIRCULAR ECONOMY: <ul style="list-style-type: none"> ○ DESIGN AND PRODUCTION, ○ CONSUMPTION, ○ RECOVERY AND WASTE MANAGEMENT.
MODULE: SUSTAINABLE FOOD SYSTEM
SESSION:
LECTURE TOPICS: SUSTAINABLE FOOD SYSTEM <ol style="list-style-type: none"> 1. INCREASING DEMANDS ON FOOD INDUSTRY - FROM FARM TO FORK 2. THE CONCEPT OF THE SUSTAINABILITY OF THE FOOD INDUSTRY 3. CONSUMER AS A KEY AGENT IN THE TRANSITION TOWARDS SUSTAINABLE FOOD SYSTEMS
TARGET GROUP: SEE MEMBERS, STUDENTS, HE TEACHERS
INTEGRATION INTO CURRICULUM: possible integration into the course „Sustainable production and consumption”, “Concepts and strategies for sustainable development” on Bachelors’ and Masters’ degree in the field of Social Economy; the element of the diploma seminar’s subject
LEARNING OUTCOMES: <i>maximum 5 learning outcomes based on Bloom’s Taxonomy in terms of students’ knowledge, comprehension, application, analysis, synthesis.</i> <ul style="list-style-type: none"> • <u>Knowledge</u>: to explain the pressures put on the food industry in the face of contemporary challenges; • <u>Comprehension</u>: to understand the mechanism and consequences of the transition toward sustainable food system; • <u>Application</u>: to provide the approach of every day decisions in analysing the key role of consumer in leveraging the sustainability of food system; • <u>Analysis</u>: to analyse the consumer and producer behaviours against the background of the demands put on food industry; • <u>Synthesis</u>: the main endeavours to transform the food industry toward more sustainability.
LECTURE OBJECTIVES: The aim of the module is to explain the concept of the sustainability of food system and illustrate with real-life examples how it can be adopted into every-day-life thinking and acting.
LECTURE DURATION: 25 LESSONS HOURS (10 HOURS WITH TEACHER & 15 HOURS SELF-LEARNING)
GREEN SKILLS ADDRESSED: (KEEP RELEVANT ONES FROM THE LIST) <u>DESIGN SKILLS</u> , LEADERSHIP SKILLS, <u>MANAGEMENT SKILLS</u> , CITY PLANNING SKILLS, LANDSCAPING SKILLS, <u>ENERGY SKILLS</u> , <u>FINANCIAL SKILLS</u> , PROCUREMENT SKILLS, <u>WASTE MANAGEMENT SKILLS</u> , COMMUNICATION SKILLS
SDGS ADDRESSED: GOAL 2: ZERO HUNGER, GOAL 12: RESPONSIBLE CONSUMPTION AND PRODUCTION
LECTURE DEVELOPMENT
BEFORE: <i>preparation prior to the lesson</i>

PICK UP SOME DISH YOU OFTEN CONSUME AND TRY TO TRACE THE DELIVERY ROUTE STARTING FROM PRODUCING AND PROCESSING. PLEASE, TRY TO DISTINGUISH THE ONES WITH THE SHORTEST AND THE LONGEST WAYS

INTRO: *ideas for activating the student's background knowledge or ice breaker:*

USING A BRAINSTORMING TECHNIQUE, FIND 15 FACTORS THAT DETERMINE THE LENGTH OF THE DELIVERY ROUTE (FROM FARM TO FORK) OF THE DISHES CONCERNED

DURING:

1. INCREASING DEMANDS ON FOOD INDUSTRY - FROM FARM TO FORK

TIME	TYPE OF ACTIVITY	LEARNING ACTIVITIES	(VISUAL) AIDS
45 minutes	reading – analysing	reading and analysing data materials about the food systems and global food systems contributing to increase of footprint of a food products /OECD data on food systems https://www.oecd.org/food-systems/data/	hard copy or digital version of materials
20 minutes	writing	list the data with the strongest pressures on the demands (ex. % or amount of adults that are obese in different countries, % or amount of population that is malnourished)	Paper and pencil/ computer
25 minutes	discussion	discussion in small groups on the agriculture, health, growth of population, consumption styles and other factors being derived from the data	Paper and pencil/computer, flipchart
45 minutes	reading	reading scientific materials about the relation of the food systems/food supply with the protection of the environment; contributing to widespread environmental damage, compromised health and livelihoods of global population, amounts of energy used to produce, process, package, store, transport food, water use, pollution, reduction of fish stock /i.e.: (Woodhouse et al., 2018); (Jurgilevich, 2016); (Baldwin, 2015)/	hard copy or digital version of materials

25	writing	try to group the data you have found and connect them with the broad world changes in the areas concerned	Paper and pencil/computer
20	discussion	discuss in the small groups about the possible mechanism to emerge and their perceived consequences; presentation the result for class	Paper and pencil/computer, flipchart
2. THE CONCEPT OF THE SUSTAINABILITY OF THE FOOD INDUSTRY			
TIME	TYPE OF ACTIVITY	LEARNING ACTIVITIES	(VISUAL) AIDS
45 minutes	reading	reading scientific materials about the conceptualization of the sustainability of the food system as a system “ <i>to produce and consume food in a way that supports the well-being of generations</i> ” /i.e. (Baldwin, 2018); (Muthu, 2019)/	hard copy or digital version of materials
45 minutes	writing	Write the most important stimulators of the conception	Paper and pencil/computer,
45 minutes	discussion	discuss in the small groups about factors that arose organically (spontaneously) and those were stimulated by the public policy (constructivistic)	Paper and pencil/computer, flipchart
3. CONSUMER AS A KEY AGENT IN THE TRANSITION TOWARDS SUSTAINABLE FOOD SYSTEMS			
TIME	TYPE OF ACTIVITY	LEARNING ACTIVITIES	(VISUAL) AIDS
45 minutes	reading	reading scientific materials about the attitudes of consumer in the	hard copy or digital version of materials



		transition towards sustainable food systems /i.e. (do Canto, 2021)	
25 minutes	writing	analyse the consumer role in terms of behaviour, consciousness, practices, green products' demand	Paper and pencil/computer,
65 minutes	discussion	discussion in small groups about the differences according to the availability of various technologies of producing, processing, delivering etc.	Paper and pencil/computer, flipchart
15 hours	homework	See below	Paper and pencil/computer,
<p>BEYOND:</p> <p>Homework: Analyse your daily meals and try to group them according to the length of the delivery route. Then, make the list of those with the longest delivery route that you could give up. On the other hand, point out the ones that have the shortest delivery route and apply one-week shopping plan to get them as the only ones in your consumption basket. While applying the plan, put down your own costs and benefits as well as the costs and benefits you have presumed/spotted for more global community.</p> <p>At the same time please, try to focus on the answers for the following questions:</p> <ul style="list-style-type: none"> – Is there any possibility you would keep doing shopping based on the shortest delivery route? – What is the most serious cost you expect? – Is there any feeling that you have about the global costs and benefits, or you generally don't really care? – If so, what could possibly persuade you? <p>Assessment: A written report after the assignment will be reviewed by the course leader.</p> <p>Recommended additional materials: <i>any website or video material that can be provided as additional material, categorize them (website, video, podcast, etc. and include a description of the material, e.g. TED Talk about creative thinking and turning harmful pollution into something useful:</i></p> <p>1. Webpages:</p> <p>https://www.frontiersin.org/journals/sustainable-food-systems</p> <p>https://ciat.cgiar.org/about/strategy/sustainable-food-systems/</p> <p>https://www.unscn.org/en/topics/sustainable-food-systems</p> <p>https://farmingfirst.org/food-systems#home</p>			

<https://www.ifad.org/en/agroecology-for-sustainable-food-systems>

<https://foodwise.org/learn/sustainability/>

https://research-and-innovation.ec.europa.eu/strategy/support-policy-making/scientific-support-eu-policies/group-chief-scientific-advisors/towards-sustainable-food-system_en

<https://www.oecd.org/food-systems/>

2. Scientific papers (on-line available):

Woodhouse A., et al., Sustainability checklist in support of the design of the food processing, *Sustainable Production and Consumption* 2018, 16, p. 110-120; <https://doi.org/10.1016/j.spc.2018.06.008>.

Quantification of Sustainability Indicators in the Food Sector, ed. Subramanian Senthilkannan Muthu, series title: *Environmental Footprints and Eco-design of Products and Processes*, Spring Nature Singapore Pte Ltd 2019, <https://doi.org/10.1007/978-981-13-2408-6>.

Jurgilevich A., Birge T., Kentala-Lehtonen J., Korhonen-Kurki K., Pietikainen J., Saikku L., Schosler H., Transition towards Circular Economy in the Food System, *Sustainability* 2016, 8, 69, <https://doi.org/10.3390/su8010069>.

do Canto N. R., Grunert K. G., De Barcellos M. D., Circular Food Behaviors: A Literature Review, *Sustainability* 2021, 13, 1872, <http://doi.org/10.3390/su13041872>.

Baldwin Ch. J., *The 10 Principles of Food Industry Sustainability*, Wiley Blackwell 2015, doi:10.1002/9781118447697.

Annunziata A., Agovino M., Mariani A., Measuring sustainable food consumption: A case study on organic food, *Sustainable Production and Consumption*, Volume 17, 2019, Pages 95-107, ISSN 2352-5509, <https://doi.org/10.1016/j.spc.2018.09.007>.

Quoquab F., Mohammad J., Sukari N. N., A multiple-item scale for measuring “sustainable consumption behaviour” construct: Development and psychometric evaluation, *Asia Pacific Journal of Marketing and Logistics*, vol. 31, no. 4, pp. 791-816, <https://doi.org/10.1108/APJML-02-2018-0047>.

Fanzo J., Healthy and Sustainable Diets and Food Systems: The Key to Achieving Sustainable Development Goal 2? *Food Ethics* 2019, 4, pp. 159-174.





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