

## ENVIRONMENTAL SCIENCE PARADIGM CHANGE

### *Course of lectures*

**Horarium:** 15 academic hours

**Lecturer:** Prof. dr. Vasil Simeonov, DSc

**Affiliation:** Faculty of Chemistry and Pharmacy, University of Sofia "St. Kliment Okhridski", Sofia, Bulgaria

**Time:** February 3 – February 21/2020

**Abstract.** The development of the environmental science in general followed its major paradigm for at least 6 decades: to study environmental processes in their huge variety, to contribute to the environmental protection, to introduce sustainable development as the best possible model for social development and to legalize the green politics as a useful tool in the political spectrum.

In the last two decades the turbulent explosion of new ways of communication and technical skills the environmental science paradigm was subject to significant rapid changes and efforts for further ideological development in the society, politics and protection of the natural heritage.

The major goal of the present course of lectures will be to summarize some of the substantial changes of the environmentalism both on scientific and social level. The course will present the increasing role of environmental history, environmental legislation, environmetrics and sustainability in all branches of human life, on one hand, as well as the contribution of green movements, politics, health issues and alternatives, on the other in the efforts to ensure the future of the environmentalism as major moving force in social development.

#### ***Lectures (each lecture – 1 academic hour, extended lectures are outlined)***

1. Tribute to Environmental history – social and scientific significance **(2 hours)**.
2. Environmental legislation packages – principles of local and international ecological laws.
3. The need of sustainable development – definition and models of sustainability.
4. Environmetrics – to classify, model and interpret environmental data **(3 hours)**.
5. Green science, green movements and green politics.
6. Environmental symbolism in science and society.
7. Life and engineering sciences as subject to environmental protection.

8. Environmental humanitarian science – what is this exactly?
9. Environment, health and alternative medicine – are they related?
10. Environment and Art.
11. Fake environmental science – does it exist?
12. The future of environmentalism.

### ***Seminars to the course of lectures***

***Horarium:*** 15 hours (each seminar – 1 academic hour; extended seminars are outlined)

***Lecturer:*** Prof. Dr. Vasil Simeonov, DSc

1. Case studies from environmental history: garbage, colonial politics and ecology, early Japan technologies for the environment. **(2 hours)**
2. Case studies from environmetrics: modeling of monitoring data sets (water, air, soil, biota, clinics). **(2 hours)**
3. Principles of design of experiment in environmental science **(3 hours)**
4. Symbols in environmental sciences.
5. Women as environmentalists – past, present and future.
6. How to teach environmental sciences?
7. Environmental engineering problems.
8. Nutrition, pharmacy and ecology.
9. In-door pollution problems.
10. Social engagements in environmentalism – Club of Rome, Limits of the Growth, Something new under the sun
11. The Environment in literature, art, music.

### *Consultations to the course and seminars*

**Horarium:** 30 hours

The students will be encouraged to present their own ideas in the field of environmental issues in relation to their present and future tasks in the dissertation. It will be especially useful in exploratory data analysis, data modeling by multivariate statistics and data interpretation. In the time of consultations different projects will be offered and considered. A final meeting will be organized where all of the participants will use the opportunity to share visions and specific problem solving with respect to environmental issues.

Consultation hours will be performed by student's initiative after arranging meeting with the lecturer using e-mail address [vsimeonov@chem.uni-sofia.bg](mailto:vsimeonov@chem.uni-sofia.bg) or [vasil.simeonov70@gmail.com](mailto:vasil.simeonov70@gmail.com)

<b>Termin</b>	<b>Dzień tygodnia</b>	<b>Godzina</b>	<b>Miejsce</b>
03.02.2020	Poniedziałek	09.15 – 12.00	Minicentrum Konferencyjne WCH
04.02.2020	Wtorek	09.15 – 12.00	Minicentrum Konferencyjne WCH
05.02.2020	Środa	09.15 – 12.00	Minicentrum Konferencyjne WCH
06.02.2020	Czwartek	09.15 – 12.00	Minicentrum Konferencyjne WCH
07.02.2020	Piątek	08.15 – 11.00	Minicentrum Konferencyjne WCH
10.02.2020	Poniedziałek	09.15 – 12.00	Minicentrum Konferencyjne WCH
11.02.2020	Wtorek	09.15 – 12.00	Minicentrum Konferencyjne WCH
12.02.2020	Środa	09.15 – 12.00	Minicentrum Konferencyjne WCH
13.02.2020	Czwartek	09.15 – 12.00	Minicentrum Konferencyjne WCH
14.02.2020	Piątek	08.15 – 11.00	Minicentrum Konferencyjne WCH