ENVIRONMENT AND HEALTH
Ljiljana Blagojevic

This book contains the material required by the syllabus of the course: Environment and Health at the Faculty of Occupational Safety in Nis. It is addressed to graduate students, but can be also useful for a post-graduated and PhD students and for anyone who is interested in studies on influence of the environment on health.

In the first chapter, the definitions of: environment, working environment, pollution, ecoepidemiology and psychophysiology of work were given. Theories on pathogenesis of diseases with emphasis on the multifactorial mechanism and definition of public health were also shown in this chapter.

The contents of this book include the introduction to all natural resources: air, water and soil. The influence of air pollution and climatic factors on health were showed in the second chapter. This chapter gives basic knowledge for the evaluation of the influence of climate on health and describes the effects of the air pollution on general population and on sensitive subgroups.

In the third chapter, the importance of water and its influence on general morbidity was pointed out. This chapter explains the epidemiological importance of water and its significance for the human organism, as well as the ways of its purification.

Soil and waste are described in the fourth and fifth chapter. The fourth chapter gives knowledge for assessment of the influence of the soil on human health and the role of the soil pollutants in the pathogenesis of human disease. The fifth chapter helps to understand the importance of the waste and its negative effects on the environment and human health. It also describes the types of waste and the ways of their elimination.

Physical and chemical agents and their influence on health were examined in the sixth, seventh and eight chapters. Negative effects of the noise, radiation and chemical pollutants were described. The mechanisms by which these noxious agents affect human health were explained, as well as the process of assessing the exposition and evaluating health outcomes in relation to the intensity of exposition. In these chapter the preventive measures against physical and chemical agents were also described.

Health outcomes (morbidity, hospitalization and mortality) in exposed population and use of biomonitoring for the assessment of health risk and exposition were also considered.

The importance of nutrition, the principles of adequate nutrition and consequences of inadequate incorrect nutrition as well as the diseases caused by spoiled food were shown in the ninth chapter.

The influence of housing on health was described in the tenth chapter. This chapter gives knowledge for the assessment of the most frequent pollutants in residential and working environment and for the assessment of the effects of indoor air pollution. The WHO recognized health disorder called “sick building syndrome” was also described in this chapter.

The management of emergency situations and their influence on health were explained in the eleventh chapter. In addition to the detailed indications for emergency situation management, the thorough description of prevention of environmental pollution and health damage was given. The knowledge given by this textbook will enable students to assess the influence of environmental risk factors on health. Students will be able to determine which factors may have harmful effects on the environment and to assess the ways of penetration of noxious agents into human organism. Their absorption, transportation, distribution, temporary storage, biotransformation, accumulation and elimination. Moreover, students will learn the notions of toxokinetic and toxodinamic effects of harmful agents on human organism. They will also be able to evaluate and organize health risk prevention.

This book resumes successfully the newest scientific knowledge and doctrinaire medical statements concerning living and working environment and their influence on health, with an especial consideration on prevention and risk management.

Prof. Radunka Mitrovic
Faculty of Medicine, University of Nis