

Course title: Introduction to Science

Teacher: Marko Čanadija (Faculty of Engineering, University of Rijeka, Rijeka, Croatia)

<http://www.riteh.uniri.hr/osoba/marko-canadija>

marko.canadija@riteh.hr

Hours: 9 (3 hours x 3 days)

Program: The course is designed to introduce a new graduate student to scientific research. Elementary research methodology is presented in detail and is designed to facilitate a faster pace of research during the doctoral study. The course begins with an introduction to the scientific method. Its essential elements are discussed: scientific observation, cause and consequence, hypothesis, analysis and synthesis, deduction and induction. All of these elements are illustrated with practical examples. The importance of critical thinking as a fundamental skill of a scientist is emphasized.

This is followed by the discussion on the dissemination of results through the publication of research papers and books. Course participants will learn the basic elements of a research paper: Title, Keywords, Abstract, Introduction, Methods, Results, Conclusions, Acknowledgments, Appendix, References, and receive practical tips for writing these elements. The steps for submitting a paper to a journal are listed. Types of articles and basic statistics on citations are also presented.

The next part of the course deals with peer reviews. Specifically, it covers how to respond to a review of your own work and how to conduct a review of a research paper by other authors.

Participants will also get tips on how to find related research papers and books, and how to manage a personal bibliographic database.

The course ends with a brief presentation of two topics: current issues and problems related to open science and what it means to be a university professor – expectations and reality.