

**Ana-Maria DEMETRIAN**



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# **English for Specific Purposes: Informatics**



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TO MY FAMILY



## *Acknowledgements*

Embarking upon such a challenging journey of teaching ESP is not an easy task. Over the years I have come to a deeper understanding of what is usually termed as ESP. Despite the difficulties encumbered by such a task – here including the shortage of relevant bibliography in the Romanian libraries, and the overwhelming financial burden of attending relevant conferences in the field (both in the country and abroad) – I have to say that if I were to do it all again I would.

First of all, I should like to thank all my collaborators from Romania and from abroad for allowing me to get an insight into the field of Informatics and of Business.

Second, I should mention the help and support of my friends from England, with whom I lived and worked during my teaching in Birkenhead, and of my friends from America, with whom I worked between 2000 and 2004. My friends from England helped me obtain valuable material and books on the field and always encouraged me in pursuing my endeavor. My friends from the U.S.A. contributed significantly to my development as a professor and as a person.

Last but not least, I should like to thank my family – both very young and not so young – for bearing with me. There have been moments of elation and difficulties, but they were with me. If they felt neglected, I apologize. If my little daughters felt Mammy had not enough time for them, I apologize. If my husband felt I should have done more, I apologize. If my mother ever felt that I was passing the whole burden upon her, I apologize. I know and I feel they will be forgiving.

Thank you!

The Author



## ***Instead of Foreword***

*English for Specific Purposes: Informatics* is a university course intended for the study of the English language and vocabulary by the students in Informatics as well as by those computer people that need to improve their English language, their vocabulary, and their communication skills.

One of the referees stresses that this course “gives students the opportunity not only to work on their accuracy and fluency in the English language but also to build thinking skills and learn about the importance of teamwork, social and emotional intelligence, creativity, attention to detail, quickness of mind” (Mihai Coșoveanu, Lecturer with a Ph.D.). In addition, Lecturer Mihai Coșoveanu points out that the selection of texts covers “a wide variety of themes” of tremendous interest in IT and beyond. The other referee affirms that this course is characterized by “a solid theoretical background supported by numerous applications in the IT field” and that it “offers grammar and vocabulary notions both for class study and for self-study, being a course which has the qualities of a reference book too” (Aloisia Șorop, Lecturer with a Ph.D.). Moreover, Lecturer Aloisia Șorop points out that *English for Specific Purposes: Informatics* opens new directions of investigation which are of great interest to everybody and develops communication skills which are so necessary to us all, especially to the ones in the computer world.

Conceived as an ESP course, *English for Specific Purposes: Informatics* introduces basic grammar structures in the English language as well as the vocabulary and the information necessary in the domain of Informatics plus general notions useful in communication. There is special focus on the language problems which appear frequently in learning the English language and in the same time on the issues related to the writing process in the technical domain of IT. Most of the texts are authentic but there are also texts which have been modified to better serve the purpose of the unit in which they are included. Critical and constructive thinking are encouraged.

Each unit consists of a wide variety of activities aimed to help students with their reading and listening comprehension, with their speaking and writing skills.

The course can be used mainly by students with a C1/C2 level of English. Nevertheless, students with a B1/B2 level of English can understand it under the guidance of a professor.

This university course will be studied along with other books of grammar and vocabulary exercises which can be found in the bibliography list.

# UNIT 1

## INFORMATICS

### *1.1. Zooming in on Facts: An Introduction to Informatics*

#### Warming-Up Activity

Brainstorm as many ideas as possible about Informatics.

#### ***Informatics: Short Definitions***

Put the words below in the blanks from the text.

social, informatics, mathematics, computer science, free encyclopedia,  
computational, information

The Oxford Dictionary of Computing defines Informatics as “the subjects that relate to information technology, such as computing, technology and .....” (p. 188). Wikipedia, the ....., describes it as “the science of computer information systems” and adds that as “an academic field it involves the practice of information processing, and the engineering of information systems” explaining that “the field considers the interaction between humans and ..... alongside the construction of interfaces organisation, technology and system” and highlighting the fact that “it also develops its own conceptual and theoretical foundations and utilizes foundations developed in other fields” because “the field of ..... has great breadth and encompasses many individual specializations, including disciplines of....., information system, information technology and statistics” given the fact that “since the advent of computers, individuals and organizations increasingly process information digitally” and “this has led to the study of informatics with ....., mathematical, biological, cognitive and ..... aspects, including study of the social impact of information technologies.”

#### ***Informatics: Detailed Definitions***

#### Reading Activity

Read the text below and extract the main ideas.

#### ***Informatics***

According to a landmark report on Informatics Education in Europe<sup>1</sup> published on the Informatics Europe site, Informatics is the science behind

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<sup>1</sup> <http://www.informatics-europe.org/images/documents/informatics-education-acm-ie.pdf>

IT and is variously called “Computer Science” (the most common term in the US), “Computing Science” and “Informatics” (the most common in continental Europe).

The University of Washington, Information School<sup>2</sup>, says on its site that “the term ‘informatics’ – a word not widely used in the U.S. for the study of the science behind IT –broadly describes the study and practice of creating, storing, finding, manipulating and sharing information.” Moreover, The Information School also offers the definition of Informatics provided by the Institute of Education Science in the Classification of Instructional Programs (CIP) in order to support its view and to make the meaning of the subject clearer: “(Informatics is) a program that focuses on computer systems from a user-centered perspective and studies the structure, behavior and interactions of natural and artificial systems that store, process and communicate information. (It) includes instruction in information sciences, human computer interaction, information system analysis and design, telecommunications structure and information architecture and management.”

The University of Edinburgh, School of Informatics<sup>3</sup>, writes on its site that “Informatics is the study of the structure, behaviour, and interactions of natural and engineered computational systems” and continues with the fact that “Informatics studies the representation, processing, and communication of information in natural and engineered systems” which explains why informatics “has computational, cognitive and social aspects” and why “the central notion is the transformation of information - whether by computation or communication, whether by organisms or artifacts” as it is highlighted on the same site. School of Informatics from Edinburgh states:

“Understanding informational phenomena - such as computation, cognition, and communication - enables technological advances. In turn, technological progress prompts scientific enquiry. The science of information and the engineering of information systems develop hand-in-hand. Informatics is the emerging discipline that combines the two. In natural and artificial systems, information is carried at many levels, ranging, for example, from biological molecules and electronic devices through nervous systems and computers and on to societies and large-scale distributed systems. It is characteristic that information carried at higher levels is represented by informational processes at lower levels. Each of these levels is the proper object of study for some discipline of science or engineering. Informatics aims to develop and apply firm

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<sup>2</sup> <https://ischool.uw.edu/academics/informatics/what-is-informatics> Accessed in June 2015

<sup>3</sup> <http://www.ed.ac.uk/files/atoms/files/what20is20informatics.pdf> Accessed in June 2015