



## COURSE DESCRIPTION

### 1. Information about the programme

|                                     |                                                       |
|-------------------------------------|-------------------------------------------------------|
| 1.1 Institution of higher education | Alexandru Ioan Cuza University of Iasi                |
| 1.2 Faculty                         | Faculty of Economics and Business Administration      |
| 1.3 Department                      | Accounting, Business Informatics and Statistics       |
| 1.4 Field of study                  | Business Administration                               |
| 1.5 Level                           | Master                                                |
| 1.6 Study programme/ Qualification  | Software Development and Business Information Systems |

### 2. Information about the course

|                         |                                 |              |    |                        |   |                   |   |
|-------------------------|---------------------------------|--------------|----|------------------------|---|-------------------|---|
| 2.1 Course name         | Science, Technology and Society |              |    |                        |   |                   |   |
| 2.2 Course coordinator  | Prof. dr. Alexandru TUGUI       |              |    |                        |   |                   |   |
| 2.3 Seminar coordinator | Prof. dr. Alexandru TUGUI       |              |    |                        |   |                   |   |
| 2.4 Year of study       | II                              | 2.5 Semester | IV | 2.6 Type of assessment | P | 2.7 Course status | E |

\* C – Compulsory / E - Elective

### 3. Total estimated time (hours allotted to teaching activities per semester)

|                                                                         |    |                       |    |                 |     |
|-------------------------------------------------------------------------|----|-----------------------|----|-----------------|-----|
| 3.1 Number of hours per week                                            | 3  | of which: 3.2 lecture | 2  | 3.3 seminar/lab | 1   |
| 3.4 Number of hours in the curriculum                                   | 42 | of which: 3.5 lecture | 28 | 3.6 seminar/lab | 14  |
| Time distribution                                                       |    |                       |    |                 |     |
| Study of the textbook, coursebook, bibliography and lecture notes       |    |                       |    |                 | 45  |
| Additional research in the library, online and on the field             |    |                       |    |                 | 25  |
| Preparation of seminars/labs, homework, projects, portfolios and essays |    |                       |    |                 | 50  |
| Tutorials                                                               |    |                       |    |                 | 15  |
| Assessment                                                              |    |                       |    |                 | 3   |
| Other activities.....                                                   |    |                       |    |                 | 0   |
| 3.7 Total number of self-study hours                                    |    |                       |    |                 | 138 |
| 3.8 Total number of hours per semester                                  |    |                       |    |                 | 180 |
| 3.9 Number of credits                                                   |    |                       |    |                 | 6   |

### 4. Prerequisites (if applicable)

|                      |                |
|----------------------|----------------|
| 4.1 Curriculum-based | Not applicable |
| 4.2 Competence-based | Not applicable |

### 5. Conditions (if applicable)

|                         |                                                                                                                        |
|-------------------------|------------------------------------------------------------------------------------------------------------------------|
| 5.1 For lectures        | Lecture rooms shall be provided with video projector<br>Students will attend lectures. Cell phones must be turned off. |
| 5.2 For seminars / labs | Seminar rooms shall be provided with video projector<br>MSO, SPSS, INTERNET, INTRANET                                  |

**6. Specific competencies**

|                                  |                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Professional competencies</b> | C4.5 Write the specifications and deploy the modules regarding data, applications and services integration (1.0 credit)<br>C5.5 Elaborate a research project that identifies the trends and challenges within the field of software projects and IT services management (2.0 credits)<br>C6.5 Case study development concerning modeling, design and implementation of business processes using BPM tools (2.0 credits) |
| <b>Transversal competencies</b>  | CT1 – The ability to communicate and collaborate in teams of different professionals (0.5 credits)<br>CT3 – Continuous improvement of specific skills and knowledge towards approaching information systems, development of new software technologies and management of information systems (0.5 credits)                                                                                                               |

**7. Course objectives** (provided by the specific competencies grid)

|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>7.1. Main objective</b>      | To provide the core knowledge, methodologies and technics for research activities in fields of technology and society                                                                                                                                                                                                                                                                                                                          |
| <b>7.2. Specific objectives</b> | <ul style="list-style-type: none"><li>• Knowledge of logic architecture of scientific papers</li><li>• Knowledge and skills for the development of science paper in accord of science methodology</li><li>• Development the capabilities of synthesis and analysis, of integration and communication</li><li>• Ability to identify the technological opportunities for business</li><li>• Development of sensitivity for futurology.</li></ul> |

**8. Content**

| <b>8.1</b> | <b>Lectures</b>                                                                 | <b>Teaching methods</b>                                   | <b>Observations<br/>(hours &amp; readings)</b> |
|------------|---------------------------------------------------------------------------------|-----------------------------------------------------------|------------------------------------------------|
| 1.         | Part I – Science                                                                |                                                           |                                                |
| 2.         | The fundamentals of scientific papers. Standards, principles, features, species | PPT presentation, explanation, conversation, questioning. | 1 lecture                                      |
| 3.         | Elements of documentary information                                             | PPT presentation, explanation, conversation, questioning. | 0.5 lectures                                   |
| 4.         | Framework standard for a research paper                                         | PPT presentation, explanation, conversation, questioning. | 0.5 lectures                                   |
| 5.         | Styles of writing for scientific papers                                         | PPT presentation, explanation, conversation, questioning. | 1 lecture                                      |
| 6.         | Project 1: Science paper – Trends in business informatics                       | PPT presentation, explanation, conversation, questioning. | 1 lecture                                      |



|    |                                                            |                                                           |              |
|----|------------------------------------------------------------|-----------------------------------------------------------|--------------|
| 7. | Part II – Technology                                       |                                                           |              |
| 8  | What is Technology                                         | PPT presentation, explanation, conversation, questioning. | 1 lecture    |
|    | Technological evolution of society                         | PPT presentation, explanation, conversation, questioning. | 1 lecture    |
|    | Global Information Technology                              | PPT presentation, explanation, conversation, questioning. | 1 lecture    |
|    | Project 2: About technology                                | PPT presentation, explanation, conversation, questioning. | 1.5 lectures |
|    | Part III – Society                                         |                                                           |              |
|    | Environmental implications of technology                   | PPT presentation, explanation, conversation, questioning. | 1 lecture    |
|    | Economics implications of technology                       | PPT presentation, explanation, conversation, questioning. | 1 lecture    |
|    | Health and safety implications of technology               | PPT presentation, explanation, conversation, questioning. | 1 lecture    |
|    | Engineering education in social implications of technology | PPT presentation, explanation, conversation, questioning. | 1 lecture    |
|    | Social-technical future trends                             | PPT presentation, explanation, conversation, questioning. | 1 lecture    |
| 9  | Project 3: Vision about society                            | PPT presentation, explanation, conversation, questioning. | 1.5 lectures |

### Bibliography

1. Avramescu, A., Căndea, V., *Introducere în documentarea științifică*, București, Ed. Academiei, 1960.
2. Bucchi, M. (2004), *Science in Society. An Introduction to Social Studies of Science*, Routledge, London
3. Chelcea, Septimiu, *Cum redactăm o lucrare de licență, o teză de doctorat, un articol științific în domeniul științelor socioumane*, București, comunicare.ro, 2007.
4. Ferréol, Gilles, Flageul, Noël, *Metode și tehnici de exprimare scrisă și orală*, Ed. Polirom, Iași, 2007.
5. Grawitz, Madeleine, *Méthodes des sciences sociales*, Paris, Ed. Dalloz, 1993.
6. Hackett, E., Amsterdamska, O., Lynch, M., Wajcman, J., Bijker, W. (2007), *The Handbook of Science and Technology Studies*, 3<sup>rd</sup> edition, The MIT Press.
7. Saunders, Mark, N.K., Lewis, Philip, Thornhill, Adrian, *Research Methods for Business Students*, Pearson Education Limited, 2000.
8. Schuwer, Philippe, *Tratat practic de editare*, Timișoara, Ed. Amarcord, 1999.
9. Sismondo, S. (2009), *An Introduction to Science and Technology Studies*, 2<sup>nd</sup> edition, Wiley-Blackwell
10. Șerbănescu, Andra, *Cum se scrie un text*, Ed. Polirom, Iași, 2007.
11. Rad, Ilie, *Cum se scrie un text științific*, Iași, Ed. Polirom, 2008.
12. American Psychological Association, *The Publication Manual of the American Psychological Association*, 6<sup>th</sup> ed. Washington, DC, 2009
13. Sternberg, Robert. *The Psychologist's Companion. A Guide to Scientific Writing for Students and Researchers*, 4<sup>th</sup> ed, Cambridge, Cambridge University Press, 2003

| 8.2 | Seminars / Labs                         | Teaching methods               | Observations (hours & readings) |
|-----|-----------------------------------------|--------------------------------|---------------------------------|
| 1.  | Explanations for project specifications | PPT presentation, Explanationa | 2 h                             |



|     |                                                                                                                 |                                                 |       |
|-----|-----------------------------------------------------------------------------------------------------------------|-------------------------------------------------|-------|
| 2.  | Part I – Science                                                                                                |                                                 |       |
| 3.  | Case study: Framework standard for a research paper: Title, Authors, Abstract, Introduction.                    | Demonstration, discussions, Case study analysis | 2 h   |
| 4.  | Case study: Framework standard for a research paper: Methods, Results                                           | Demonstration, discussions, Case study analysis | 2 h   |
| 5.  | Case study: Framework standard for a research paper: Discussions, Conclusions, Acknowledgement, Notes, Appendix | Demonstration, discussions, Case study analysis | 2 h   |
| 6.  | Writing Styles                                                                                                  | Demonstration, discussions, Case study analysis | 2 h   |
| 7.  | Part II – Futurology                                                                                            |                                                 |       |
| 8.  | Future of science                                                                                               | Discussion, presentation                        | 1 h   |
| 9.  | Future of technology                                                                                            | Discussion, presentation                        | 1,5 h |
| 10. | Future of society                                                                                               | Discussion, Scripts and code execution          | 1,5 h |

**Bibliography**

1. Avramescu, A., Căndea, V., *Introducere în documentarea științifică*, București, Ed. Academiei, 1960.
2. Bucchi, M. (2004), *Science in Society. An Introduction to Social Studies of Science*, Routledge, London
3. Chelcea, Septimiu, *Cum redactăm o lucrare de licență, o teză de doctorat, un articol științific în domeniul științelor socioumane*, București, comunicare.ro, 2007.
4. Ferréol, Gilles, Flageul, Noël, *Metode și tehnici de exprimare scrisă și orală*, Ed. Polirom, Iași, 2007.
5. Grawitz, Madeleine, *Méthodes des sciences sociales*, Paris, Ed. Dalloz, 1993.
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6. Saunders, Mark, N.K., Lewis, Philip, Thornhill, Adrian, *Research Methods for Business Students*, Pearson Education Limited, 2000.
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9. Rad, Ilie, *Cum se scrie un text științific*, Iași, Ed. Polirom, 2008.
10. American Psychological Association, *The Publication Manual of the American Psychological Association*, 6<sup>th</sup> ed. Washington, DC, 2009
11. Sternberg, Robert. *The Psychologist's Companion. A Guide to Scientific Writing for Students and Researchers*, 4<sup>th</sup> ed, Cambridge, Cambridge University Press, 2003

**9. Corroboration of the course content with the expectations of community representatives, professional associations and representative employers from the programme's related field**

The content of this discipline has been decided upon by taking into account both the curricula of some prestigious universities: 1. The Part I according Bologna standards, The Part II and Part III according with the content of the same course from MIT și Stanford University

**10. Assessment**

| Type of activity                                     | 10.1 Assessment criteria                                       | 10.2 Assessment methods | 10.3 Weight in final grade (%) |
|------------------------------------------------------|----------------------------------------------------------------|-------------------------|--------------------------------|
| 10.4 Lectures<br>10.5 Seminars/ Labs                 | Project 1: Science paper – Trends in business informatics      | <b>Essay</b>            | <b>35%</b>                     |
|                                                      | Project 2: About technology<br>Project 3: Vision about society | <b>Essay</b>            | 35%                            |
|                                                      | Project 3: Vision about society                                | <b>Essay</b>            | 30                             |
| 10.6 Minimum performance standard                    |                                                                |                         |                                |
| Minim grade is 5(five) for every part of evaluation. |                                                                |                         |                                |

Date

Course Coordinator

Seminar Coordinator

20.09.2020

Prof. dr. TUGUI Alexandru

Prof. dr. TUGUI Alexandru

Date of approval

Head of Department

Prof. dr. DUMITRIU Florin