*Euro-Inf Framework Standards and Accreditation Criteria for Informatics Programmes New Programme Outcomes, as of 12.10.2015*

**EB. Outcomes for First Cycle Degree (FCD) Programmes**

**EB1. Underlying Conceptual Basis for Informatics**

Graduates of a First Cycle degree should be able to:

*EB11*: describe and explain the essential facts, concepts, theories and mathematical methods relevant to computing, computing equipment, computer communication and informatics applications as appropriate to their programme of study

*EB12*: outline the characteristics of relevant state-of-the-art hardware and software and their practical application

*EB13*: outline relevant historical and current developments in informatics and show insight into possible future trends and developments

*EB14*: apply and integrate knowledge and understanding of other informatics disciplines in support of study in their own specialist area(s)

*EB15*: demonstrate awareness of the need for deep domain knowledge when creating informatics applications in other subject areas

**EB2. Analysis**

Graduates of a First Cycle degree should be able to:

*EB21*: use a range of techniques to identify the requirements of real-world problems, analyse their complexity and assess the feasibility of their solution using informatics techniques

*EB22*: describe a problem and its solution at varying levels of abstraction

*EB23*: select and use relevant analytic, modelling and simulation methods

*EB24*: choose appropriate solution patterns, algorithms and data structures

*EB25*: analyse the extent to which an informatics system meets the criteria defined for its current use and future development

**EB3. Design and Implementation**

Graduates of a First Cycle degree should be able to:

*EB31*: specify and design computing/network hardware/software which meet specified requirements

*EB32*: describe the phases involved in different life cycle models used for specifying, building, testing and commissioning new systems and for maintaining existing systems

*EB33*: select and use appropriate process models, programming environments and data management techniques for projects involving traditional applications as well as emerging application areas

*EB34*: describe and explain the design of systems and interfaces for human-computer and computer-computer interaction

*EB35*: apply relevant practical and programming skills to the creation of computer programs and/or other informatics artefacts

**EB4. Economic, legal, social, ethical and environmental context**

Graduates of a First Cycle degree should be able to:

*EB41*: demonstrate awareness of the need for a high level of professional and ethical conduct in informatics and a knowledge of professional codes of conduct

*EB42*: explain how commercial, industrial, economic and social contexts affect informatics practice

*EB43*: identify relevant legal requirements governing informatics activities, including data protection, intellectual property rights, contracts, product safety and liability issues, personnel issues and health & safety

*EB44*: explain the importance of information privacy and security issues in relation to the design, development, maintenance, monitoring and use of informatics-based systems

**EB5. Informatics practice**

Graduates of a First Cycle degree should be able to:

*EB51*: demonstrate an awareness of appropriate codes of practice and industry standards

*EB52*: describe and explain management techniques appropriate to the design, implementation, testing, deployment and maintenance of informatics systems, including project management, configuration management, change management, etc., and including relevant automated techniques

*EB53*: identify risk issues, including security, health & safety, environmental and commercial risk, and explain risk assessment, risk reduction and risk management techniques

*EB54*: undertake literature searches and reviews using databases and other sources of information

*EB55*: design and conduct appropriate practical investigations (e.g. of system performance), to interpret data and draw conclusions

**EB6. Other Professional Skills and Competences**

Graduates of a First Cycle degree should be able to:

*EB61*: organise their own work independently, demonstrate initiative and exercise personal responsibility

*EB62*: communicate effectively both verbally and using a variety of communications media to a variety of different audiences

*EB63*: plan self-learning and improve personal performance as a foundation for lifelong learning and ongoing professional development

*EB64*: identify different ways of organising teams and the various roles within a team

*EB65*: participate effectively in informatics group-working