

PREFACE

Information Engineering is an emerging discipline which lies at the intersection of information systems, computer science and management science. The focus is on information and knowledge organization, structuring and use, involving human and social factors.

The Technical University of Budapest established its Department of Information Engineering in the summer of 1992. This brand-new department was constituted to supplement the technical aspects of Information Technology by placing information systems in the context of organizational and social complexity of real world problems. The department is involved in a national educational program which is to establish and realize an Information Engineering curriculum for three Hungarian universities.

Research in the department is concentrated under seven broad headings:

Computer Supported Cooperative Work (CSCW)

Computer assisted human decision making

AI-based decision support

Case-based and analogical decision making

Hypermedia information and decision systems

Historical aspects of information systems and social communications.

Social and human factors in information technology.

The courses at the University are designed on a modular basis. Four of the modules are compulsory for M.Sc. courses in Electrical Engineering and in Information Technology, and some other modules can be chosen from a list of options. All modules include formal lectures, seminars and tutorials, and opportunity of research work for completing a dissertation for the M.Sc. or Ph.D. degrees. The content of the modules is as follows:

Introduction to Information Engineering: User-oriented information systems, human, organizational and cultural aspects, problem analysis and modelling, conflict analysis and resolution, decision support, 'mindware' and 'orgware', communication networks and telecom development, data security and protection, natural and artificial intelligence.

Information systems analysis, specification and design: A further course: problem analysis methods, approaches and techniques for eliciting and modelling user requirements, order of defining system-criteria,

commercial development environments, aspects of human-computer interaction.

Decision analysis and decision support systems: Classification of decision problems and conflict situations, problem structuring and modelling for decision, normative decision techniques, computer supported decision making, single-user and group decision support systems, decision conferences.

Information and society: Broad sense of information and communication systems, information systems and political structures, historical aspects of information systems, impact of modern information technology on society, concept of information society.

Information systems and large organizations: Types of large data-manipulating organizations - banks, insurance companies, state administration; function analysis, organization of information by mainframe and network, data security and data protection.

Knowledge engineering and expert systems: Knowledge acquisition, conceptual modelling, knowledge representation techniques, uncertainty, basics of logical inference: deduction, induction, abduction; knowledge-based systems, expert systems, shells, building systems from shells.

Communication systems: ISDN, intelligent network-based services, requirements for communication and specification of systems, new techniques, synchronous and asynchronous teleconferences, special e-mail systems for asynchronous messages, social impact of information networks.

Information systems in small enterprises: Design of information systems in small companies, investment analysis, feasibility study, competitive tenders, project management, project monitoring, complex information systems.

The department currently employs 3 full time academic staff, although further appointments are proposed for the immediate future. 4 part time (invited) lecturers also participate in the lecturing work. There are also several industrial experts involved in the research and teaching activities of the department. In addition to the permanent staff, there are at present 5 research students registered for Ph.D. or M.Sc. research degrees.

Their 8 longer and shorter studies hand over a special sort of intellectual visiting cards to the inquirers. These writings would like to make the Reader acquainted with that few segment of problem-universe of informatics (or the French l'informatique, which rather means the social and human factors of Information Systems), which are examined by the lecturers and other collaborators of the Department.

Let's call upon their works to speak.