

Syllabus EUCIP Core – PLAN - 3.1

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CATEGORY	TOPIC	REF.	ITEM
A.1 Organisations and their Use of ICT	A.1.1 Organisational Types and Structures	A.1.1.1	Describe organisations and major organisational types in terms of their internal structures such as hierarchical, flat; legal status such as charity, partnership; size such as SME, corporation.
		A.1.1.2	Describe the importance of information in an organisation for operational, tactical and strategic decision-making processes.
		A.1.1.3	Outline how diagrams can demonstrate workflow within different organisations.
		A.1.1.4	Outline the typical uses of ICT within an organisation, such as data processing, automation, personal productivity tools, knowledge sharing, integrated e-business.
		A.1.1.5	Outline how different organisational processing, automation, personal cultures impact on ICT policies.
	A.1.2 Information	A.1.2.1	Outline the difference between data Processing and information.
		A.1.2.2	Outline how diagrams can show information processing systems in terms of inputs, processing and outputs.
	A.1.3 Strategic Positioning	A.1.3.1	Recognise the position of an organisation in terms of industry classification, role in the value chain, market maturity and rivalry, range of products/services, processes.
		A.1.3.2	Describe how an organisation can determine its service strategy, such as Engineer To Order, Make To Order, Assemble To Order, Make To Stock. Outline the impact service strategy will have on planning and control.
		A.1.3.3	Outline external and internal factors affecting an organisation, such as international markets, competitors, stakeholders, the environment.
	A.1.4 Business Plans	A.1.4.1	Outline the typical components of a business plan and its relevance for investors.
		A.1.4.2	Describe the role of performance indicators and analysis techniques, such as SWOT, in relating business strategies to market and environmental factors.
		A.1.4.3	Describe a suitable ICT solution for a given business plan.
	A.1.5 Business Processes	A.1.5.1	Understand the concept of business processes and differentiate between primary and support processes.
		A.1.5.2	Describe major enterprise application types, such as Enterprise Resource Planning, Customer Relationship Management and recognise the business processes that they support.
		A.1.5.3	Recognise the business processes used by organisations in different sectors, such as construction, manufacturing, financial service, sales, public administration, research and development.
		A.1.5.4	Outline key strategies for improving organisational competitiveness, such as knowledge sharing between internal functions, care for the client, and describe how ICT systems can support these initiatives.
	A.1.6 IS Support for Organisational Management	A.1.6.1	Describe the roles and responsibilities of management at strategic, tactical and operational level.
		A.1.6.2	Relate various categories of ICT applications to the different management levels.
		A.1.6.3	Define organisational knowledge, memory and learning.
		A.1.6.4	Outline some common decision-making and business measurement methods, such as Pareto diagram, Ishikawa diagram, Critical Success Factors, Key Performance Indicators, Balanced Score Card.
	A.1.7 Collaborative Technologies	A.1.7.1	Define collaborative technologies and list their main features and applications.
		A.1.7.2	Define the purpose of workflow management systems and their advantages compared to less formal systems, such as blogs, discussion boards.
		A.1.7.3	Distinguish between virtual teamworking and physical, co-located teamworking.
		A.1.7.4	Outline the factors for successful implementation of computer-based collaborative work, such as management support, leadership, organisational culture, technology technical support.availability, usability, adaptability,
	A.1.8 Computer Based Training and e-Learning	A.1.8.1	Describe computer-based training (CBT) and e-learning.
		A.1.8.2	List the technical requirements for using multimedia, CBT, and virtual classrooms.
A.1.8.3		List the advantages and disadvantages of e-learning.	
A.1.9 The Information Society	A.1.9.1	Describe how information and communication technologies have transformed society.	
	A.1.9.2	List the advantages and disadvantages of ICT in society.	
	A.1.9.3	Define the term digital divide.	
A.2 Management of	A.2.1 ICT Strategy	A.2.1.1	Recognise the need for an ICT strategy and outline the purpose of having

ICT	A.2.1 ICT Strategy	A.2.1.1	an ICT strategy.	
		A.2.1.2	Describe the importance of aligning ICT strategy with business strategy.	
		A.2.1.3	Describe how ICT can be used to support the business by relating the ICT components of an Information System (IS) to the business processes they support.	
		A.2.1.4	Describe how ICT can be used to increase an organisation's flexibility, such as IT as an enabler of the industrialisation of services (e.g. offshoring), Software as a Service(SaaS), industry specific roles of IT.	
		A.2.1.5	Describe the differing strategic roles of ICT staff in supporting the business, such as CIO (Chief Information Officer), CSO (Chief Security Officer), CKO (Chief Knowledge Officer).	
	A.2.2 The ICT Needs of different Organisations	A.2.2.1	Describe different information sharing models, such as hierarchical, distributed, and the corresponding requirements for the organisation.	
		A.2.2.2	Outline different scenarios showing appropriate matches between organisational need and ICT.	
	A.2.4 Systems Development versus Systems Procurement or Outsourcing	A.2.4.1	Outline the human, technical and financial considerations in systems development.	
		A.2.4.2	Recognise typical examples of ICT procurement or outsourcing.	
		A.2.4.3	List the most common reasons for outsourcing from a business perspective.	
		A.2.4.4	List the advantages and disadvantages of systems development versus outsourcing.	
		A.2.4.5	Outline the factors for consideration prior to taking a build or buy decision.	
	A.2.5 Staff Management	A.2.5.1	Describe the different roles involved in developing and maintaining Information Systems, such as Systems Analysts, Business Analysts, Software Developer, Network Manager, Database Manager.	
		A.2.5.4	Understand the factors involved in retaining skilled staff, such as HR policies, job mobility, workplace environment, compensation, professional development, career planning.	
	A.2.6 IS Quality Management	A.2.6.1	Describe some of the attributes of quality in the context of evaluating Information Systems quality.	
		A.2.6.2	Outline major approaches to quality management, such as Total Quality Management (TQM), Capability Maturity Model Integration (CMMI), International Organization for Standardization (ISO) certification, European Foundation for Quality Management (EFQM), Common Assessment Framework (CAF).	
		A.2.6.3	Define the major risks associated with a lack of quality in an IS.	
		A.2.6.4	Describe the need for monitoring and evaluation of ICT investments.	
		A.2.6.5	Define Total Cost of Ownership (TCO) and list the typical cost items for ICT systems.	
	A.3 Measuring the Value of ICT	A.3.1 The Concept of the Client	A.3.1.1	Define the concept of stakeholders in a business.
			A.3.1.2	Differentiate between different meanings of client as external purchaser, project sponsor or user/recipient of ICT services.
		A.3.2 Business Plans and Feasibility Studies	A.3.2.1	Understand that ICT must support organisational business plans.
A.3.2.2			Describe the process of assessing the feasibility of Information System plans and matching them with business needs/plans.	
A.3.2.3			Define the term economic feasibility.	
A.3.2.4			Define the term technical feasibility.	
A.3.2.5			Define the term organisational feasibility.	
A.3.3 Costs and Benefits		A.3.3.1	Describe the main methods used to evaluate an investment, such as Return on Investment, Internal Rate of Return, Net Present Value.	
		A.3.3.2	Describe how to evaluate the typical benefits of ICT, both tangible, such as cost reduction, schedule improvements and intangible, such as staff satisfaction, improved company image.	
		A.3.3.3	Define and distinguish between capital costs and operational (current) costs.	
A.3.4 Evaluation of ICT Solutions		A.3.4.1	Understand the strategic importance of evaluating all costs and benefits before, during, and after, the delivery of a new solution.	
		A.3.4.2	Outline the major methods used to evaluate ICT solutions, such as feasibility study, budget and control, return on investment, cost benefit analysis, pilot projects, user surveys.	
		A.3.4.3	List examples of costs and benefits that are easy and difficult to measure.	
A.4 The Global Networked Economy	A.4.1 Opportunities from Global Networks	A.4.1.1	Define the concept of globalisation and the opportunities it can provide for businesses.	
		A.4.1.2	Describe the business value of the Internet for commercial organisations.	
	A.4.2 Transforming Processes to e-Business	A.4.2.1	Outline the major effects of e-business on organisations.	
		A.4.2.2	Outline how ICT can be used to drive organisational change.	
		A.4.2.3	Outline how to provide effective customer service and manage customer relationships in e-business operations.	

	A.4.3 Customer-Centricity and Virtual Organisations	A.4.3.1	Define the concept of a virtual organisation and describe how virtual organisations operate.
		A.4.3.2	Describe how ICT can redefine organisational boundaries and how it can be used to increase organisational flexibility.
		A.4.3.3	Define the unique customer concept and its main technological implications.
	A.4.4 Enterprise Applications	A.4.4.1	Describe the scope and use of Customer Relationship Management systems.
		A.4.4.2	Describe the scope and use of Supply Chain Management systems.
		A.4.4.3	Describe the scope and use of Enterprise Resource Planning systems.
A.5 Project Management	A.5.1 IS Projects	A.5.1.1	Outline how ICT projects differ from other business projects in terms of being agents of change, difficulty in measuring progress, intangibility of ICT outputs, poor understanding of ICT by clients.
		A.5.1.2	Relate the concepts of project management to ICT and IS, including pure development, pure deployment, and mixed projects.
		A.5.1.3	List the major factors that ensure successful IS project management.
		A.5.1.4	List the major factors that hinder successful IS project management.
	A.5.2 Time, Cost and Quality	A.5.2.1	Describe the impact time, cost and quality have on each other and on project management.
		A.5.2.2	List the major factors of uncertainty that affect time, cost and quality of IS projects.
	A.5.4 Project Planning, Monitoring and Control	A.5.4.1	Understand the structure, content, and purpose of a project plan.
		A.5.4.2	Outline the main objects used in international project management methodologies, such as activities, dependencies, critical path, Gantt chart.
		A.5.4.3	List the main functional elements of computer-based project management tools.
		A.5.4.4	Describe the rationale behind earned value analysis and related performance indexes.
		A.5.4.5	Describe the elements of project control, such as activities, resources, deliverables, plans, actual progress.
	A.5.5 Project Evaluation	A.5.5.1	Describe the main concepts of risk management that apply to a project proposal, such as risk assessment, risk control.
		A.5.5.2	Describe the importance of planning assumptions regarding scope, constraints, technical and organisational aspects, and outline how time, cost and quality might be affected by unforeseen factors.
		A.5.5.3	Outline the issues related to project budgeting and cost accounting.
		A.5.5.4	Outline the difficulties in measuring some project benefits.
	A.5.6 Project and Contract Management	A.5.6.1	List the phases of a typical IS project.
		A.5.6.2	Outline the importance of gaining formal agreement on various project documents, including statements of work and contracts.
		A.5.6.3	List the items that should be covered in a contract, such as deliverables, dates, cost, methods, staff expertise, quality assurance, penalties.
		A.5.6.4	Describe the need for milestones, checkpoints, reviews.
		A.5.6.5	Recognise the impact of European public procurement directives on IS procurement.
	A.5.7 Quality Assurance	A.5.7.1	List the benefits derived from quality assurance in IS.
		A.5.7.2	Outline variables that can be used to measure IS/ICT quality, such as user satisfaction, robustness, security, bug free software.
		A.5.7.3	Distinguish between the roles of a project manager, quality assurance manager and project assurance group within an organisational structure.
		A.5.7.4	List the main categories of software quality analyses, such as static and dynamic testing techniques.
	A.5.8 Innovation of Information Systems	A.5.8.1	Describe the concept of innovation in information systems.
		A.5.8.2	Outline the organisational and managerial challenges in planning and benefiting from innovation.
		A.5.8.3	Recognise environments which foster and develop IS innovation, such as a flat management structure, promoting open communication, encouraging a cross functional team approach, integrating innovation into core business values and processes.
A.6 Collaboration and Communication	A.6.1 Teams	A.6.1.1	Define the concept of groups and teams, and describe their different motivational levels.
		A.6.1.2	Recognise different team roles and distinguish between those involved in creating content as well as supporting the work of the team.
		A.6.1.3	Outline the main challenges of collaboration and co-operation in teams and groups.
	A.6.2 Globally Distributed Teams	A.6.2.1	Describe the business value derived from globally distributed teams.
		A.6.2.2	List typical business functions that can be exploited by globally distributed teams.
		A.6.2.3	Outline the organisational and managerial challenges presented by globally distributed teams.

	A.6.3 Social Networking	A.6.3.1	Describe social networking technologies and outline their main features.
		A.6.3.2	Recognise business applications of social networking technologies, such as new advertising/marketing strategies, creation of new business networks, more productive collaboration in virtual environments.
		A.6.3.3	Recognise the impact of social networking technologies on the creation of new forms of collaboration and social involvement.
	A.6.4 Presenting the Case for Change	A.6.4.1	Describe the role of effective communication in articulating shared objectives.
		A.6.4.2	List interpersonal communication forms and recognise the need for a common understanding of jargon and ICT terminology.
		A.6.4.3	List motivating factors for the acceptance of new technology.
		A.6.4.4	List the reasons why there might be resistance to change.
	A.6.5 Audio-visual Tools	A.6.5.1	List the most widely used audio-visual (AV) tools.
		A.6.5.2	Outline where AV tools might be used.
		A.6.5.3	Outline the benefits of using AV tools.
		A.6.5.4	List technical requirements for the use of AV tools.
	A.7 Legal and Ethical Issues	A.7.1 Intellectual Capital and Property Rights	A.7.1.1
A.7.1.2			Recognise common breaches of intellectual property rights.
A.7.1.3			Outline methods to protect intellectual property rights.
A.7.1.4			Define ownership of copyright in an ICT context.
A.7.1.5			Recognise common breaches of copyright.
A.7.1.6			Define the term software piracy.
A.7.2 Legal Issues		A.7.2.1	Outline the main legal issues related to the use of ICT, such as privacy, copyright, software licenses, contracts.
		A.7.2.2	Outline the principles contained in national legislation related to the legal issues in ICT.
		A.7.2.3	Outline the principles contained in EU legislation related to the legal issues in ICT.
A.7.3 Ethics and Codes of Conduct		A.7.3.1	Outline how all levels of decisions can be considered from an organisational, ethical and moral perspective.
		A.7.3.2	Outline personal and professional privacy issues associated with the use of ICT systems.
		A.7.3.3	List typical topics covered by codes of professional conduct regarding the use and development of ICT systems.
A.7.4 Security		A.7.4.1	Outline the potential threats to IS and ICT infrastructure.
		A.7.4.2	Identify specific methods and technologies that will protect a system from unlawful, malicious attack and accidental damage.
		A.7.4.3	Describe the scope and function of a security policy.
		A.7.4.4	Outline the role of a security officer.
		A.7.4.5	Distinguish between various levels of security policies and relate them to severity of risk.
		A.7.4.6	Outline appropriate security considerations for a given scenario.
A.7.5 Health and Safety		A.7.5.1	Describe the special health and safety (H&S) considerations pertinent to IT use, such as sharp edges, hot surfaces, usage and disposal conditions, waves, electric shocks, cables, screen flicker, repetitive strain injury.
		A.7.5.2	List actions to minimise or eliminate potential H&S hazards.

Nota

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