



Academia de Studii Economice
Departamentul de Informatică și Cibernetică Economică

Calea Dorobanți, 15-17, Sector 1, București, 010552 (camera 2314)

Tel.: +40 21 319 19 00, ext. 319, 336, Fax: +40 21 311 20 66

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Contest Topics for Professor

Position 31, 2017-2018

Disciplines: Economic Informatics, Knowledge management, Integrated Information Systems

Economic Informatics

1. IT&C technology and communication support in business, business management information systems, e-commerce and e-business, virtual corporations and e-activities in the digital economy.
2. Personal computers and mobile devices, architecture, technical and functional features for basic components, computer optimization and configuration selection
3. Computer networks - general structure of a network, principles and communication protocols, basic services offered by a network, LAN, LAN topologies, interconnection equipment LAN, MAN and WAN networks, wireless networks
4. Internet pages and web sites, Internet architecture and services, introduction to HTML, principles of Web pages development, content management systems for websites development
5. CRM - Customer relationship management - a customer-centric business approach, CRM modules, functions, main entities of the database, CRM interface
6. Collaborative working tools for electronic business communication: electronic communication tools, electronic conferencing tools and collaborative management tools (wiki systems, web publishing), electronic calendar, electronic forms, work flows - workflow and project management, spreadsheet electronic document management and communication activities group
7. Storing and managing information in databases, fundamental concepts, DBMS – Database Management Systems, design elements for relational database
8. Creating, updating and operation of databases, SQL elements
9. Corporate computer applications - ERP, ERP - a new vision to address the organization and operation of information systems and management, ERP functions, business processes and ERP modules, overview of the system SAP, Microsoft Dynamics, Oracle
10. Business Intelligence - BI Business Intelligence system components, corporate data warehouses - Data Warehouse for information substantiating decisions, Oracle technologies (Hyperion), Microsoft technologies, Business intelligence features in Microsoft Office, and other BI technologies
11. Operating principles and elements of Microsoft CRM package customization, Sales and MARKETING modules
12. Future development of IT&C technology, issues of IT cloud systems security, software-as-a-Service (SaaS), Web 2.0, Automatic Speech Recognition (ASR), Virtual Reality, holographic equipment's, biometric equipment's – Biometric Security, security of IT systems, security of e-business transactions, generalities on data encryption.



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13. Business communication using multimedia presentations - content, design, customizing presentation dynamics
14. Professional typing common business documents - offers, scientific text, business letters, merging documents, work with templates and styles, including automatically generated content and index, the principles of editing
15. Functions and procedures presentations for working with collaborative software packages
16. Personal computers and mobile devices, assessing technical characteristics and operating systems.
17. Solving economic problems using algorithms with linear or alternative structure in Excel
18. BI Applications in Excel, pivot tables, conditional formatting, scenarios
19. Designing, developing and updating a database, Electronic Forms

Bibliography:

1. Pocatilu, Paul, Vespan Dragos (editori) et. al., *Birotica Profesionala*, ASE, București, 2009, România
2. Julie C. Meloni, *Învață singur PHP, MySQL, și Apache*, Corint, București, 2005, România
3. Lungu, Ion ; Botha, Iuliana ; Bodea, Constanța et. al., *Tratat de baze de date : vol I : Baze de date : organizare, proiectare și implementare*, Editura ASE, 2009
4. Shmueli, Galit ; Patel, Nitin R. ; Bruce, Peter C., *Data mining for business intelligence : concepts, techniques, and applications in Microsoft Office Excel with XLMiner*, Wiley, 2010
5. Tanenbaum, Andrew S., *Computer networks*, Prentice Hall, 2003
6. Nixob, Robert, *Learning PHP, MySQL, and JavaScript : a step-by-step guide to creating dynamic websites*, Wiley, 2009
7. Sandor Kovacs, Dorin Bocu, *Manualul utilizatorului de PC pentru obținerea Permisului European de Conducere a Computerului*, Editura Albastră, 2005
8. Bradford, Marianne, *Modern ERP: select, implement and use today's advanced business systems*, North Carolina State University, 2010
9. Schmitt, Christopher, *HTML5 cookbook*, O'Reilly, 2012
10. Severance, Charles, *Using Google App Engine*, O'Reilly, 2009
11. Microsoft, *Ms Dynamics CRM*, available documents on www.microsoft.ro and <https://www.microsoft.com/en-us/dynamics365/what-is-crm>
12. Oracle, available documents on www.oracle.com
13. Tutorials Point, *Microsoft Dynamics CRM Tutorial*, https://www.tutorialspoint.com/microsoft_crm/index.htm

Knowledge management

1. Knowledge Management - an essential area in the knowledge-based economy. The concept of economy based on knowledge. The role and importance of knowledge and the various stages of the economic evolution of humanity
2. Types of knowledge. Tacit, explicit knowledge. The case of episodic knowledge
3. Communities of practice. Structure and components



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4. The seven steps for creating communities of practice.
5. Early stage of development planning and launch of practice communities
6. Methods of measurement of value generated by organizational organizations at the organizational level
7. Distributed practice communities
8. Knowledge based initiatives at community level
9. Disadvantages of practice communities
10. Software tools used in knowledge management

Bibliography:

1. Awad, M.E., & Ghaziri, M. H, Knowledge management, Prentice Hall, Upper Saddle River, 2004, Statele Unite ale Americii
2. Nonaka, I., & Takeuchi, H., The knowledge-creating company, Oxford University Press, London, 1995, Marea Britanie
3. Wenger, E., McDermott, R., & Snyder, W., A guide to managing knowledge: cultivating communities of practice, Harvard Business School, Boston, 2002

Integrated information systems

1. Theoretical aspects about the integration of computer applications
2. Information Systems for Enterprise Resource Planning (ERP)
3. Information Systems for Enterprise Relationship Management (CRM) and Supply Chain Management (SCM)
4. Data-oriented integration. Data integration standards
5. Information integration technologies
6. Comparative analysis of different tools used for data integration
7. Application-oriented integration. Types of application integration
8. Application integration levels. Standards and architectures for integrating computer applications
9. Application integration information technologies
10. Comparative analysis of different tools used to integrate applications
11. Project management for implementing ERP integrated solutions
12. Methodologies for implementing ERP solutions
13. EAI - Enterprise Application Integration

Bibliography:

1. Lungu I., Bologa A. R., *Integrarea sistemelor informatice*, ASE, Bucuresti, 2007, România
2. Marianne Bradford, *Modern ERP- Select, implement and use today's advanced business systems*, North Carolina State University, 2010
3. Simha R. Magal, Jeffrey Word, *Essentials of business and processes and information systems*, John Wiley & Sons, 2009