

**MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE**  
**SIMON KUZNETS KHARKIV NATIONAL UNIVERSITY OF ECONOMICS**

**Guidelines**  
**to practical studies, seminars and self-study work**  
**on the academic discipline**  
**"KNOWLEDGE ECONOMY"**  
**for full-time students of training direction**  
**6.030601 "Management"**

**Харків. ХНЕУ ім. С. Кузнеця, 2015**

Затверджено на засіданні кафедри економіки, організації та планування діяльності підприємства.

Протокол № 6 від 09.12.2014 р.

**Compiled by D. Ripka**

G 94 Guidelines to practical studies, seminars and self-study work on the academic discipline "Knowledge Economy" for full-time students of training direction 6.030601 "Management" / compiled by D. Ripka. – Kh. : S. Kuznets KhNUE, 2015. – 28 p. (English)

Plans of practical lessons and seminars, questions for self-study work and consolidation of knowledge are presented.

Recommended for full-time students of training direction 6.030601 "Management".

Подано плани практичних занять та семінарів, запитання для самостійної роботи та закріплення знань.

Рекомендовано для студентів напряму підготовки 6.030601 "Менеджмент" денної форми навчання.

# Introduction

Knowledge is a fluid mix of framed experience, values, contextual information, expert insight and grounded intuition that provides an environment and framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of knowers. In organizations, it often becomes embedded not only in documents or repositories but also in organizational routines, processes, practices, and norms.

Knowledge management might be "hot" as of today, but successful managers have always realized its value. Long before terms such as expert systems, core competencies, best practices, learning organizations, and corporate memory were in vogue, these managers knew that their company's key asset was not its buildings, its market share, or its products, but it lay in its people, their knowledge, and skills. After having tried everything else – from the greatest products and the best technology to virtual monopolies – in their respective markets, more businesses have finally come to the realization that the only sustainable source of competitive advantage is their knowledge. As Drucker fittingly warns us, "those who wait until this challenge indeed becomes a "hot" issue are likely to fall behind, perhaps never to recover".

In this connection development and introduction of the academic discipline "Knowledge Economy" in the curriculum of bachelors of training direction 6.030601 "Management" is actual.

The purpose of studying the academic discipline "Knowledge Economy" is to form the necessary theoretical knowledge and practical skills in providing competitiveness and development of enterprises under the conditions of modern world development – economy of knowledge.

The basic tasks of studying the academic discipline "Knowledge Economy" are accumulation of knowledge of the features of activity and development of enterprises under the conditions of knowledge economy and acquisition of skills in providing competitiveness of enterprises in modern economy.

The object of studying the academic discipline is knowledge economy as a new area of economic science and practical activity of enterprises. The subject is the essence of knowledge economy and methods of knowledge management.

In the process of teaching the academic discipline basic attention is paid to students' getting professional competences. They are:

the ability to find and use sources of knowledge;

the ability to provide active co-operation of economic subjects on the accumulation and use of knowledge with the purpose of raising competitiveness;

the ability to provide co-operation of enterprise's departments on the accumulation and use of knowledge as their competitive advantages;

the ability to determine constituents of the knowledge management system of an enterprise and their functions;

the ability to ground the most expedient technologies of knowledge management of an enterprise;

the ability to ground directions and realize transformations of an enterprise under the conditions of increase of knowledge importance;

the ability to evaluate intellectual capital of an enterprise and ground directions of its development;

the ability to strengthen advantages and remedy deficiencies of development of knowledge economy in the country.

## **Module 1. Theoretical bases of knowledge economy**

### **Theme 1. The concept and classification of knowledge**

#### **General methodical recommendations**

As a result of studying this theme students should know the following: the essence of knowledge and its functions in the knowledge economy; the essence of data, knowledge and information; stages of transformation of data and information into knowledge; classification of knowledge; categories of knowledge; types of knowledge; components of knowledge; sources of knowledge.

#### **Practical tasks**

*Practical task 1.* Read this text and compare tangible and intangible assets of a company taking into account their role in the enterprise activity. Give your examples of companies which use their intangible assets successfully.

#### Walt Disney and Mickey Mouse

Walt Disney has seen the value of intangible assets since the early 1970s. In 1978, the film "Star Wars" generated \$25 million from its box office receipts and a whopping \$22 million from the sales of "Star Wars" logo

merchandise. In 1979, the retail value of goods using characters owned by Walt Disney was estimated to be over \$3 billion. Walt Disney happens to be among a few of the luckier companies that have actually converted their intangible assets into dollar profits. Recent successes have only increased the company's income from such royalties even though the figures are not officially available.

*Practical task 2.* Read this text and provide your example of data, information and knowledge for some economic situation.

### Taking a Flight

Let me give a simple example of typical decision-making "content", wherein the boundaries between knowledge and its predecessors are, at best, hazy. Suppose I am trying to take an urgent flight from Atlanta, Georgia, to Shanghai, China. If I look up information in the timetable shown on a travel agent's Website, I move through the stages of data gathering to knowledge application in the following steps:

1. The Website provides a flight map along with departure times for flights that currently have seats available. Assuming that there are no restrictions such as visa controls that I might need for my trip to China, I must be able to read and interpret what shows up on the page, to effectively collect the raw data needed.

2. I know that the flight will stop over in London. The flight that leaves in an hour is a British Airways flight that stops over at Heathrow Airport in London. The flight that leaves in another two hours is a Delta flight that stops over at Gatwick Airport in London. Comparing the current time with the departure times, I have the necessary information.

3. I know, however, from a previous trip to New Delhi via London, that flights originating in North America have to transfer passengers over to Gatwick Airport for their connecting flights to the Asian continent. I also know that the bus ride from Heathrow to Gatwick airports takes over an hour. So I realize that the plane that leaves first will not arrive before the one that leaves later. I applied what I knew from previous experience, made a judgment based on this knowledge, and took the later flight, which gave me enough time to pack and shave.

Data and information are essential, but it's the knowledge that can be applied, experience that comes into context, and skills that are used at that moment that make the difference between a good and bad decision.

*Practical task 3.* Distribute sources of knowledge presented in Table 1 in two groups.

Table 1

**Sources of knowledge that feed a knowledge management system**

Source	Explicit/Codifiable	Tacit/Needs Explication
Employee knowledge, skills, and competencies		
Experiential knowledge (both at an individual and group level)		
Team-based collaborative skills		
Informal shared knowledge		
Values		
Norms		
Beliefs		
Task-based knowledge		
Knowledge embedded in physical systems		
Human capital		
Knowledge embedded in internal structures		
Knowledge embedded in external structures		
Customer capital		
Experiences of the employee		
Customer relationships		

**The plan of the seminar**

1. The concept of knowledge.
2. Transformation of data and information into knowledge.
3. Classification of knowledge by different criteria.
4. Sources of knowledge.
5. Stages and measures of knowledge development.

**Questions for self-study work**

1. Stair of knowledge.
2. Knowledge in economic theories.
3. Knowledge in management theories.

**Theme 2. Knowledge economy and its features**

**General methodical recommendations**

As a result of studying this theme students should know the following: the essence of knowledge economy; features of knowledge economy; driving forces of knowledge economy development; structure elements and

indicators of knowledge economy; the role of the Government in the development of knowledge economy.

### **The plan of the seminar**

1. The essence of knowledge economy as a new direction of world development.
2. Advantages of knowledge economy.
3. Structure elements and indicators of knowledge economy.

### **Questions for self-study work**

1. Stages of development of society from the cognitive point of view.
2. The character of the processes of transfer to the knowledge economy.
3. Technological modes as an index of development of economy of a state.
4. Institutes of knowledge economy.
5. The index of knowledge economy.

## **Theme 3. Microeconomics of knowledge**

### **General methodical recommendations**

As a result of studying this theme students should know the following: change of the nature of a firm in the new economy; features of knowledge in the system of an enterprise; stages of transformation of knowledge into success of an enterprise; peculiarities of competence of an organization; organization forms of knowledge management.

### **The plan of the seminar**

1. The features of the process of creation and use of knowledge at modern enterprises.
2. Importance of knowledge in raising competitiveness of economic subjects.

### **Questions for self-study work**

1. The change of the nature of a firm in the new economy.
2. The theory of a firm based on knowledge.
3. Competence of an organization.

### **Practical tasks**

*Practical task 1.* The knowledge that you need to manage is that which adds value to your products or to your services. Here are some examples:

Knowledge of a particular job, such as how to fix a fault in a piece of critical manufacturing equipment.

Knowledge of who of company employees knows who solved a similar problem last time.

Knowledge of who is best to perform a particular job or task, who has the latest training or best qualifications in a particular subject.

Knowledge of corporate history – has this process been tried before, what was the outcome?

Knowledge of a particular customer account and knowledge of similar customers.

Knowledge of how to put together a team that can work on a project, who has worked successfully together in the past, what skills were needed on similar projects.

Give your examples of knowledge which are critical to the company.

*Practical task 2.* Read this text and present your examples of enterprise knowledge by every level.

There are four levels of knowledge.

1. **Care-why.** Care-why represents self-motivated creativity that exists in a company. This happens to be the only level that cannot be supported by a knowledge management system. Care-why explains why highly motivated, creative, and energetic groups and companies outperform larger corporations with more money and resources. This level of knowledge exists in a company's culture, and after we have done all we can provide technology support for the other three levels, we must give this one our best shot, since technology is of little or no help at this level. Beliefs, in some respects, fall into this category – hence the difficulty in comprehensively supporting beliefs with a knowledge management system.

2. **Know-why.** A system's understanding represents the know-why aspect of knowledge. It's the deep knowledge of the complex slush of cause-and-effect relationships that underlie an employee's range of responsibilities. This knowledge enables individuals to move a step above know-how and create extraordinary leverage by using knowledge, bringing in the ability to deal with unknown interactions and unseen situations. Examples include a stockbroker who intuitively knows just when to sell and buy, or a baseball player who knows the perfect moment to hit.

Most companies are at one stage below this level of understanding – the know-how stage, where they can use known rules and apply them well.



But the knowledge economy demands more than just that ability. To be able to move knowledge workers from the know-how level, a knowledge management system must support extensive discussion and conversation so that the participants and employees get a feel for the problems rather than simply apply well-known rules that have worked in most situations. Conversation is stressed in meetings and brainstorming sessions, but an alarmingly small number of firms support the same types of conversations in systems intending to leverage their corporate knowledge.

Perhaps, we have bought into the concept of expert systems and conventional decision support systems a little too much. Value creation from knowledge is enhanced if experimentation in the course of problem solving increases know-why and if incentive structures stimulate care-why, rather than solely focusing on know-how.

3. **Know-how.** Know-how represents the ability to translate bookish knowledge into real-world results. Marketing departments, for example, know that advertising during the Superbowl is expensive, but the payoffs are huge. This is a general rule that can be applied very well by a marketer. Being able to compete beyond these rules, which might be common knowledge, requires a shift from a know-how information-oriented environment to know-why, that is, knowledge orientation. Professional know-how is developed most rapidly through repeated exposure to real-world, complex problems. Any networking or knowledge support system that intends to move workers from this level to the know-why level must enable extensive exposure to problem solving.

4. **Know-what.** This represents cognitive knowledge. This is an essential but insufficient basis for competing. An analogy would be the kind of detailed knowledge a college graduate might have when he graduates with a degree in his discipline. He might know what should be done but might not have ever done it in real life.

*Practical task 3.* Form a map of enterprise's knowledge.

## **Module 2. Practice of knowledge management of an enterprise**

### **Theme 4. Knowledge management of an enterprise**

#### **General methodical recommendations**

As a result of studying this theme students should know the following: the category "knowledge management"; the features of knowledge

management; the stages of knowledge management; drivers of knowledge management; structure elements of the knowledge management system.

There are two methods of expert estimation of enterprise knowledge.

1. Analytical estimation of enterprise knowledge.

Estimation of a component of enterprise knowledge taking into account its significance is determined according to the formula:

$$I_i = O_i \times R_i, \quad (1)$$

where  $O_i$  is expert estimation of the component;  
 $R_i$  is the rank (significance of the component).

The total estimation of enterprise knowledge is determined according to the formula:

$$S_i = \sum_{i=1}^n I_i. \quad (2)$$

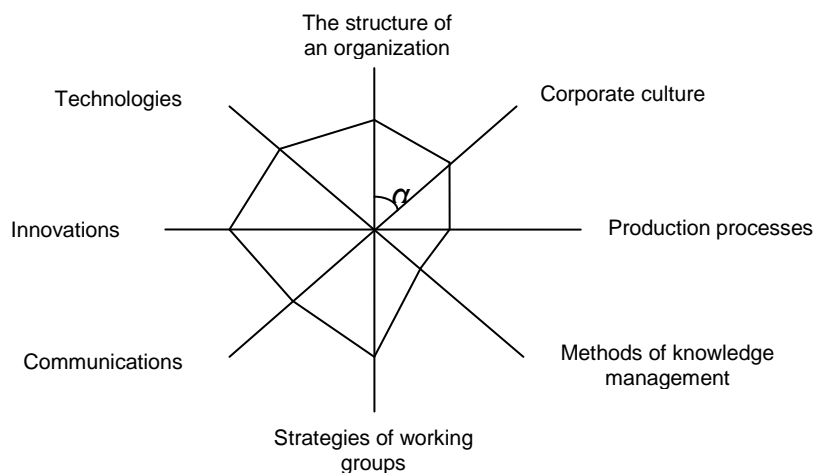
The integral estimation of enterprise knowledge is determined as follows:

$IN = 1$  for  $S_{max}$  – the enterprise-leader;

$IN = S_i / S_{max}$  – other enterprises.

2. Graphic estimation of enterprise knowledge.

The graphic method of estimation of enterprise knowledge consists in the construction of a polygon of knowledge (Fig. 1).



**Fig. 1. A polygon of knowledge**

An enterprise which is characterized by the highest level of knowledge will have a polygon with a maximum area:

$$S_i = \sum_{i=1}^n \frac{1}{2} \times I_i \times I_{i+1} \times \sin \alpha_i, \quad (3)$$

where  $\alpha_i$  is the angle of the line slope which corresponds to the component of enterprise knowledge:

$$\alpha_i = R_i \times 360^\circ. \quad (4)$$

## Practical tasks

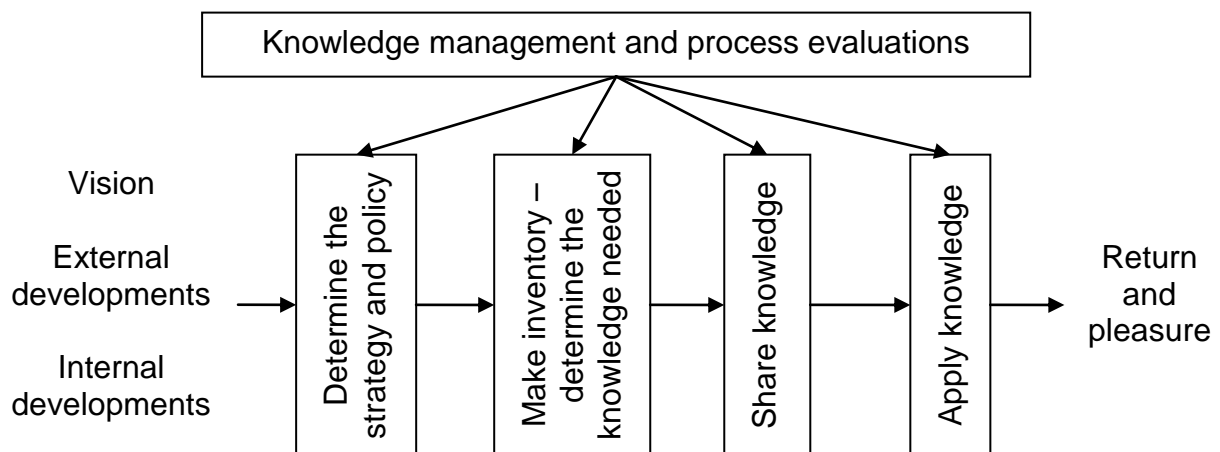
*Practical task 1.* Estimate enterprise knowledge by analytical and graphic methods.

Table 2

**Basic data for calculations**

Components of enterprise knowledge	Expert estimation, $O_i$					Rank (significance of a component), $R_i$	Estimation of a component of enterprise knowledge taking into account its significance, $I_i$				
	Enterprise 1	Enterprise 2	Enterprise 3	Enterprise 4	Enterprise 5		Enterprise 1	Enterprise 2	Enterprise 3	Enterprise 4	Enterprise 5
1. The structure of an organization	3.8	4.0	4.1	4.6	3.1	0.1					
2. Corporate culture	3.9	3.9	4.3	3.8	3.1	0.1					
3. Production processes	3.7	3.8	4.8	3.9	3.2	0.05					
4. Methods of knowledge management	3.6	4.9	3.9	3.7	3.8	0.2					
5. Strategies of working groups	4.0	3.3	4.2	3.4	4.5	0.15					
6. Communications	3.9	3.5	4.0	3.3	4.8	0.1					
7. Innovations	4.2	3.5	4.5	3.2	3.0	0.15					
8. Technologies	5.0	4.0	4.1	4.1	3.5	0.15					
Total estimation of enterprise knowledge						1.0					
Integral estimation of enterprise knowledge											

*Practical task 2.* Analyse knowledge management success systems presented in Fig. 2 – 6 and present your own system of knowledge management of an enterprise.



**Fig. 2. A knowledge management success system (example 1)**

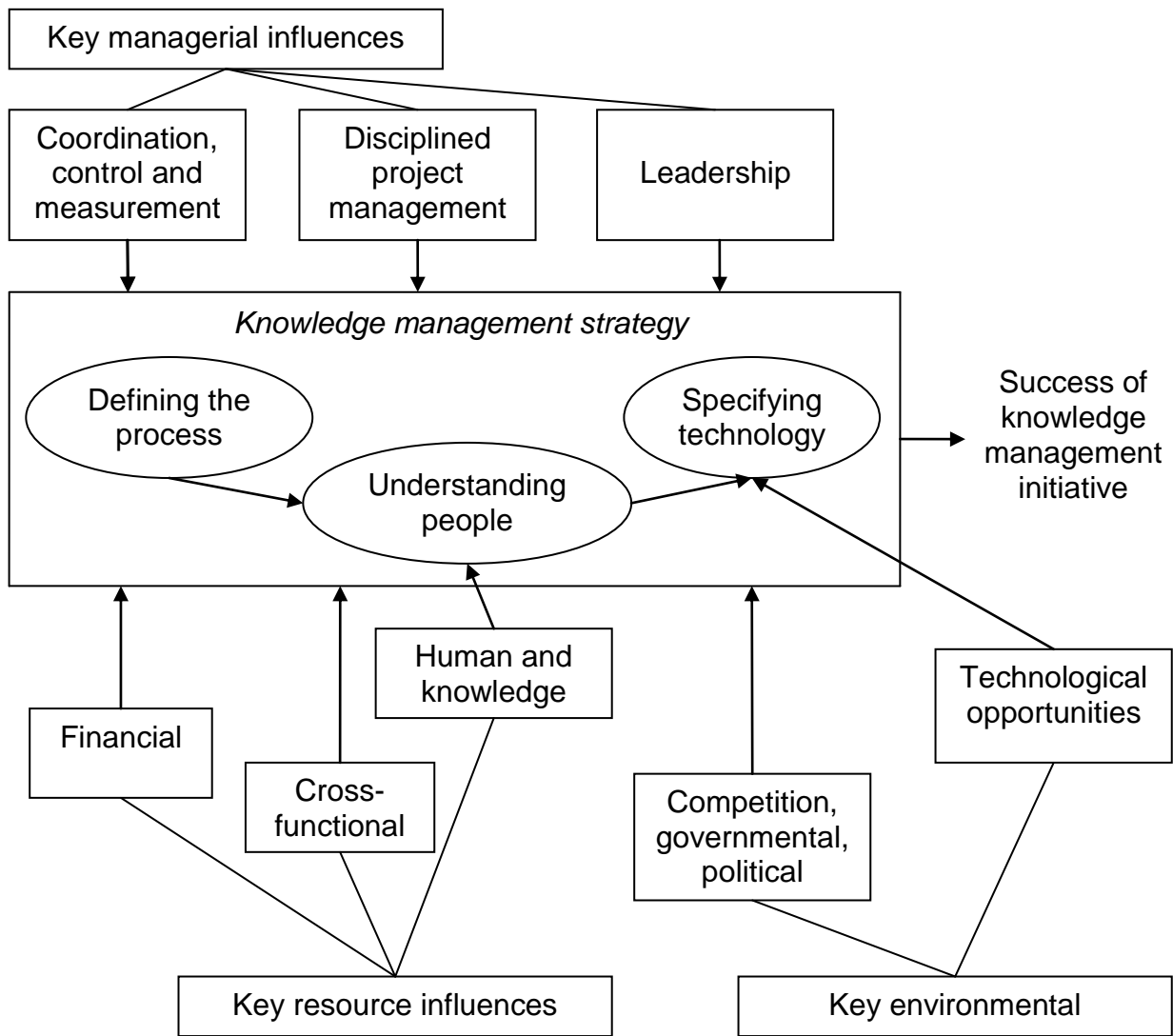


Fig. 3. A knowledge management success system (example 2)

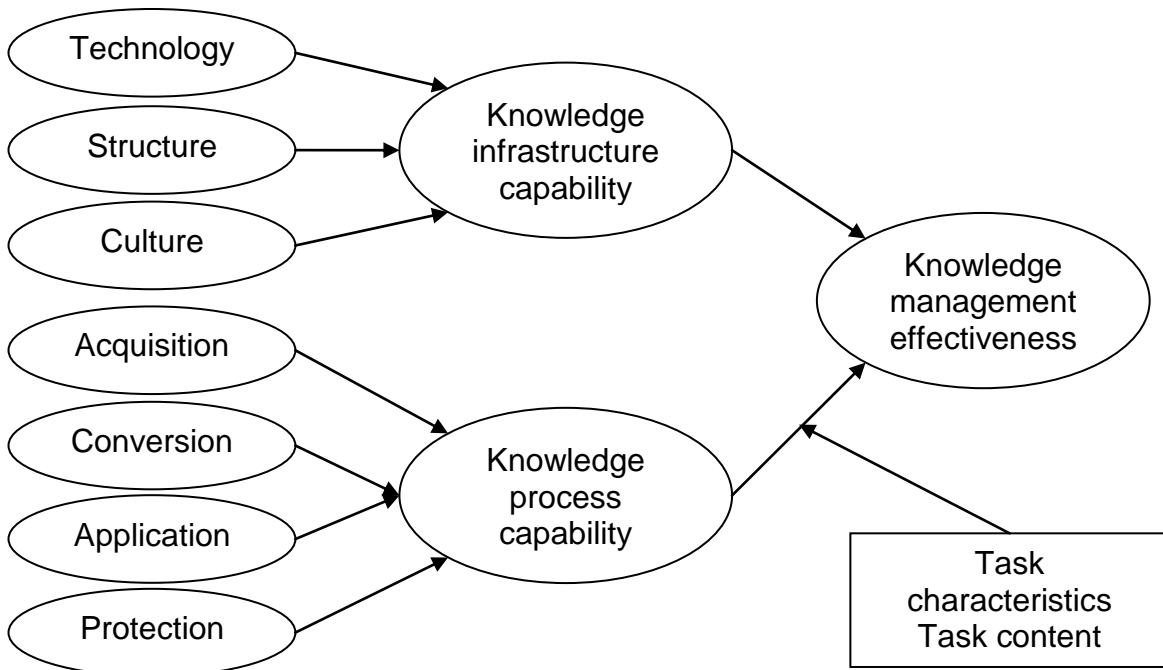
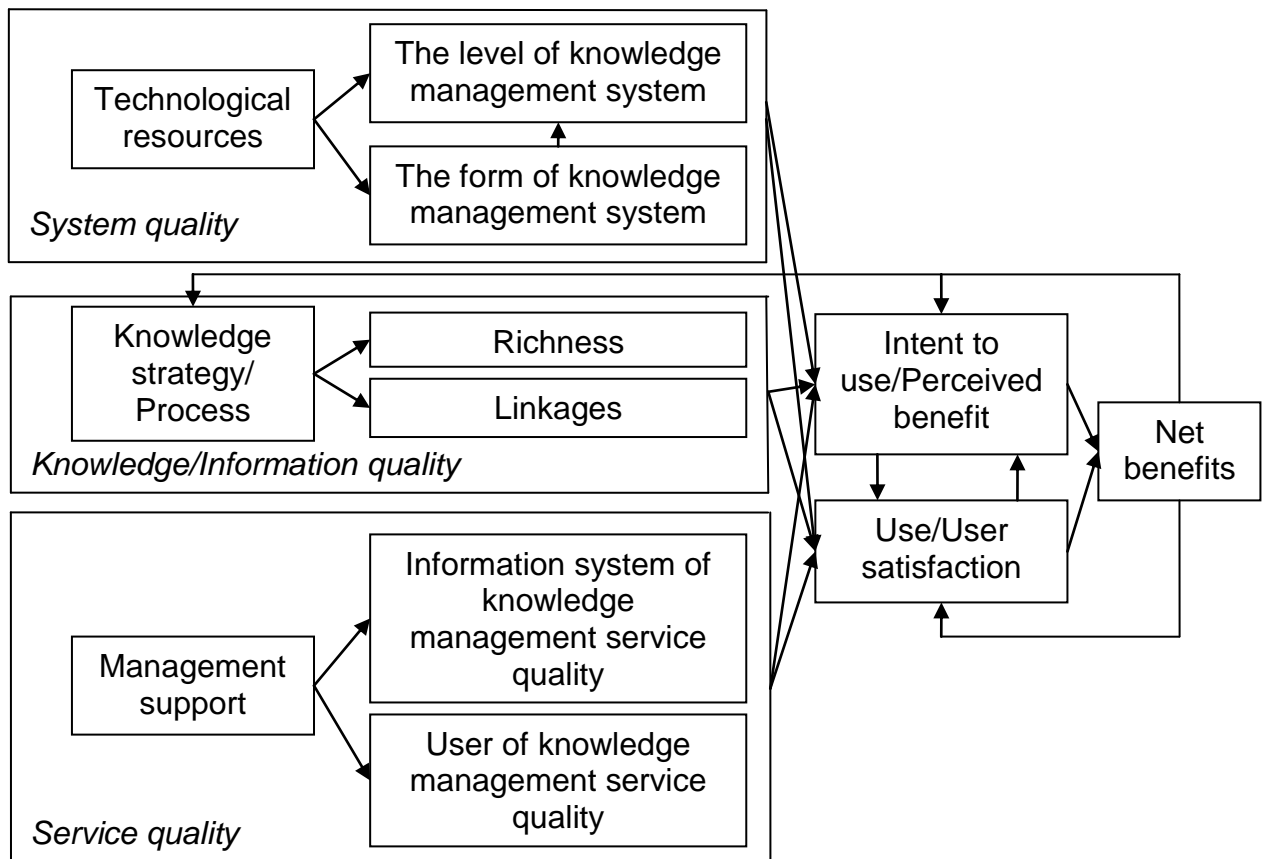
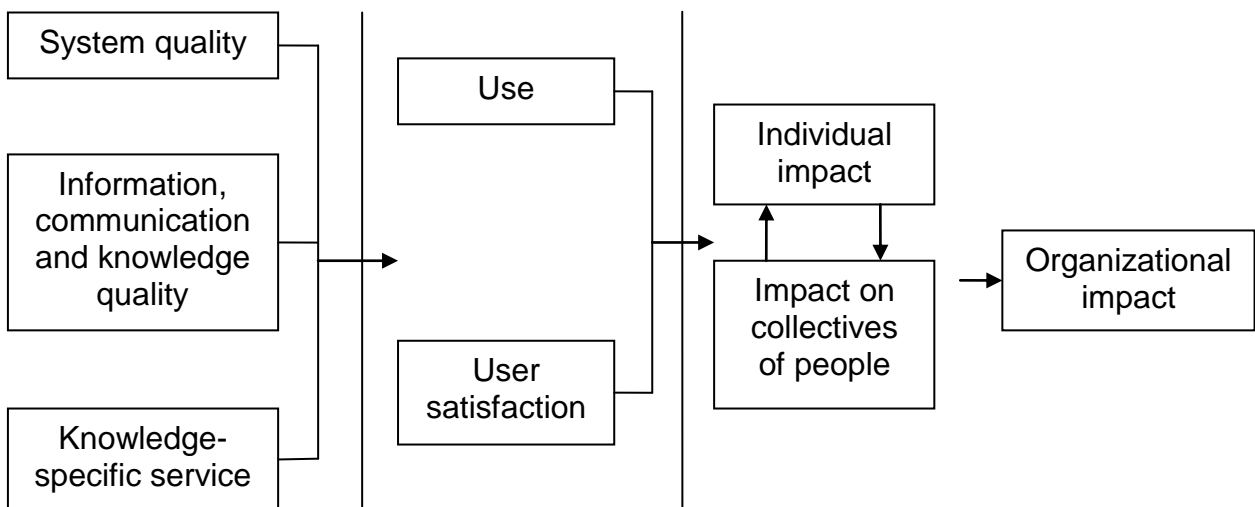


Fig. 4. A knowledge management success system (example 3)



**Fig. 5. A knowledge management success system (example 4)**



**Fig. 6. A knowledge management success system (example 5)**

*Practical task 3.* Read this text and give your example of achievement of success through the use of knowledge.

Microsoft and knowledge application

Knowledge management can make a difference when it enables the application of knowledge. In the technology industry, companies that have prospered are not the companies that invented new technology, but those

that applied it. Microsoft is perhaps a good example of a company that had first relied on good marketing, then on its market share, and now on its innovative knowledge – mostly external.

The customer base it built for its Windows operating system was probably its strongest asset when it decided to seriously compete in the Web browser market. Microsoft, a latecomer to the Internet market, came to the sweeping realization that the Internet was going to change everything, including its own product markets. Its strategy took a U-turn in 1995 when it began focusing on the Internet (every software product that Microsoft made in 1999 worked with the Internet in some manner). Microsoft's reputation and strong skills base, coupled with its cash flow provided it with all it needed to compete in the car retail business, then the travel business, and more recently in the toy business as well. Besides a strong brand recognition, the company leveraged its existing collective skills to plan for the future.

When Microsoft began delving into the toy market in late 1998 with its Actimates™ series of electronic toys (including Barney and Arthur), it brought together its competitive advantage from manifold sources within Microsoft: marketing abilities, software capabilities, hardware skills, and its brand value.

Bob Ingle, president of new media for Knight-Ridder, commented in Fortune that "Microsoft is like Godzilla – it screws up but keeps coming!" A good example of a failed attempt was Microsoft's online services division, Microsoft Network, which failed to replace either America Online or the Internet. But the company learned. Microsoft is led by the richest man in the world; a fierce, tireless competitor who hires people with the same qualities. The company has \$10 billion in cash, more than three times Knight-Ridder's annual revenues. With approximately \$6 billion invested in research and development in 1999, Microsoft is an exemplary case of a company that is learning to leverage the biggest competitive advantage of all: knowledge.

Even though there is no publicized KM agenda within Microsoft, it has been essentially managing knowledge all along. The critical difference between Xerox's legendary Palo Alto Research Center (PARC) and Microsoft is that PARC created a lot of knowledge but Microsoft (and Apple) actually applied it to make the difference, create new markets, and generate economic value.

### **The plan of the seminar**

1. Forming a knowledge management system at modern enterprises.
2. Strategies of effective forming and using of enterprise knowledge.

### Questions for self-study work

1. Strategy and tactic of knowledge management.
2. Modern organization forms of knowledge management.
3. Forming competition strategies on the base of knowledge.
4. Consulting in knowledge management.

## Theme 5. Models and technologies of knowledge management of an enterprise

### General methodical recommendations

As a result of studying this theme students should know the following: the model of dynamic transformation of knowledge; methods of knowledge transformation; process models of knowledge management; constituents of knowledge management; peculiarities of motivation of knowledge creation; the conception of talent management; features of learning and self-development; features of intellectual organization; constituents of the infrastructure of knowledge creation.

There are two methods of quantitative estimation of an intellect.

1. Determination of the economic efficiency of a creative employee working at an enterprise.

The economic efficiency of an employee working at an enterprise is determined according to the formula:

$$PV = \sum_{t=1}^n (C_t - I_t) \frac{K1_t}{K2_t}, \quad (5)$$

where  $t$  is periods;

$n$  is the number of periods;

$C_t$  – is the money flow of the net profit generated by an employee in the period  $t$ ,

$I_t$  is investments in an employee in the period  $t$ ,

$K1_t$  is the coefficient of indexation in the period  $t$  ( $=1$ );

$K2_t$  is the discount factor in the period  $t$ .

The money flow of the net profit generated by an employee in the period  $t$  is determined according to the formula:

$$C_t = \sum_{i=1}^m P_i \cdot K_{my}^l \cdot K_g^t, \quad (6)$$

where  $P_i$  is the net (tax-free) profit from realization of the project  $l$  in the period  $t$ ,

$K_{my}^l$  is the coefficient of labour participation of an employee in the realization of the project  $l$  in the period  $t$  ( $=0.2$ );

$K_g^t$  is the goodwill coefficient in the period  $t$ .

The goodwill coefficient is determined according to the formula:

$$K_g^t = \frac{P_g^t}{P_o^t} = \frac{P_o^t - P_m^t}{P_o^t} = 1 - \frac{P_m^t}{P_o^t}, \quad (7)$$

where  $P_g^t$  is the goodwill generated profit of an enterprise in the period  $t$ ,

$P_o^t$  is the general net profit of an enterprise in the period  $t$ ,

$P_m^t$  is the tangible assets generated profit of an enterprise in the period  $t$ .

The tangible assets generated profit of an enterprise in the period  $t$  is determined according to the formula:

$$P_m^t = (C_m^t - C_{nma}^t) \cdot K_m^t, \quad (8)$$

where  $C_m^t$  is the asset value of an enterprise in the period  $t$ ,

$C_{nma}^t$  is the intangible asset value of an enterprise in the period  $t$ ,

$K_m^t$  is the average rate of return on the tangible assets in the period  $t$ ,

The size of investments in an employee is determined according to the formula:

$$I_t = Z_t + \Delta I_t, \quad (9)$$

where  $Z_t$  is the salary in the period  $t$ ,

$\Delta I_t$  is additional investments in an employee in the period  $t$ .

The discount factor is determined according to the formula:

$$K2_t = 1 + \frac{i_t}{100} \cdot t, \quad (10)$$

where  $i_t$  the rate of discount in the period  $t$  ( $=18\%$ ).

The size of remuneration of an employee is determined according to the formula:

$$V = \sum_{t=1}^n (C_t - I_t) \frac{K1_t}{K2_t} \cdot \frac{R_t}{100}, \quad (11)$$

where  $R_t$  is the rate of royalty in the period  $t$  ( $=15\%$ ).



2. Estimation of the intellect of an employee in the case of his passing to another enterprise (transfer of an employee).

Estimation of the intellect is implemented according to the formula:

$$PV = \sum_{t=1}^n \frac{C_t}{1 + \frac{i_t}{100} t}, \quad (12)$$

where  $C_t$  is the average annual economic efficiency of an employee;  $n$  is the duration of the contract for the transfer (=3 years).

$i_t$  is the rate of discount in the period  $t$  (=18 %).

### Practical tasks

*Practical task 1.* It is necessary to evaluate the intellect of an employee by two methods:

1. Determination of the economic efficiency of a creative employee working at an enterprise.

2. Evaluation of the intellect of an employee in the case of his/her passing to another enterprise (transfer of an employee).

Financial year	General net profit of the enterprise, UAH	Assets value of the enterprise, UAH	Intangible assets value of the enterprise, UAH	Average rate of return on tangible assets	Salary, UAH	Additional investments in the employee, UAH
1	71 579.00	477 869.00	37 512.00	0.10	5 968.00	1 492.00
2	78 616.00	497 257.00	45 165.00	0.09	4 641.00	1 989.00
3	86 540.00	513 470.00	52 711.00	0.07	5 649.00	1 413.00
4	88 920.00	640 144.00	61 362.00	0.05	4 476.00	497.00
5	79 720.00	665 152.00	79 065.00	0.06	4 964.00	0.00

### The plan of the seminar

1. Advantages and disadvantages of different models of knowledge management of an enterprise.

2. Advantages and disadvantages of modern technologies of knowledge management of an enterprise.

### Questions for self-study work

1. The European model "Constituents of knowledge management".

2. The model "The Chain of knowledge creation".

3. The model of "Phases of knowledge management".

4. The conception "Management talents".

5. The conception of a self-learning organization.

## **Theme 6. Reengineering of business processes on the base of cognitive technologies**

### **The general methodical recommendations**

As a result of studying this theme students should know the following: the concept of reengineering of business processes; methods and principles of reengineering; the features of cognitive reengineering as an instrument of enterprise management; the stages of the process of management of changes; cognitive technologies in the practice of management; peculiarities of intellectual analysis of data and information.

### **The plan of seminar**

1. The importance of reengineering of business processes of an enterprise under modern conditions.
2. The essence and peculiarities of cognitive technologies of changes.
3. Reengineering of business processes under conditions of the growing role of knowledge in raising competitiveness.

### **Questions for self-study work**

1. The concept of reengineering of business processes.
2. Methods and principles of reengineering of business processes of an enterprise under modern conditions.
3. Management of changes at modern enterprises.

## **Theme 7. Intellectual capital of an enterprise**

### **General methodical recommendations**

As a result of studying this theme students should know the following: the essence and structure of intellectual capital: organization capital, human capital, marketing capital; peculiarities of evaluation of intellectual capital; the essence and structure of intellectual property; subjects and objects of intellectual property of an enterprise; peculiarities of commercialization of intellectual property; features of estimation of objects of industrial property.

For evaluation of the intellectual capital of an enterprise it is possible to use Tobin's coefficient.

Tobin's coefficient is determined according to the formula:

$$Kt = Kgw / Q + Kh + Ko + Kex, \quad (13)$$

where  $K_{gw}$  is the goodwill coefficient;

$Q$  is the coefficient of contribution of company tangible assets to the annual receipts of a company;

$K_h$  is the cost of human capital in relation to the cost of tangible assets;

$K_o$  is the cost of organizational capital in relation to the cost of tangible assets;

$K_{ex}$  is the cost of the advertising campaign and other outlays on the expansion of the client base in relation to the cost of tangible assets.

$$K_{gw} = C_{gw} / V, \quad (14)$$

where  $C_{gw}$  is the cost of the company business image (the goodwill cost),

$V$  is the annual receipts of the company.

$$Q = C_m / V, \quad (15)$$

where  $C_m$  is the tangible assets of the company.

$$K_h = C_h / C_m, \quad (16)$$

where  $C_h$  is the cost of the human capital.

$$K_o = C_o / C_m, \quad (17)$$

where  $C_o$  is the cost of the organizational capital.

$$K_{ex} = C_{ex} / C_m, \quad (18)$$

$C_{ex}$  is the cost of the client capital (outlays on the advertising campaign, development of the client network and other additional measures).

The cost of the intellectual capital can be evaluated in accordance with the formula:

$$IC = C_a - C_m, \quad (19)$$

where  $C_a$  is the market value of all the shares of the organization;

$C_m$  is the cost of the tangible assets of the organization.

The intellectual potential of an organization can be determined in accordance with the formula:

$$IP = K_k \cdot (C_{ip} + C_{mark}), \quad (20)$$

where  $K_k$  is the coefficient of quality of the human capital;

$Cip$  is the market value of the intellectual property of the organization;  
 $Cmark$  is the market value of the marketing assets of the organization.

The coefficient of quality of the human capital is determined in accordance with the formula:

$$Kk = (Ca - (Cm + Cn)) / (Cip + Cmark), \quad (21)$$

where  $Cn$  is the market value of the part of intangible assets which is formed by the property rights (the right to the use of land, resources and other similar rights).

### Practical tasks

*Practical task 1.* Define Tobin's coefficient for two companies.

Index	Company 1	Company 2
The annual receipts of the company, UAH	2 000 000	2 300 000
The tangible assets of the company, UAH	1 800 000	1 950 000
The goodwill cost of the company, UAH	35 000	30 000
The annual salary fund of the company workers, UAH	250 000	195 000
Additional remuneration of workers, UAH	60 000	75 000
The cost of the software, UAH	25 000	70 000
The outlays on the organizational teaching of functional commands, UAH	15 000	12 000
The expenses for the advertising campaign, development of the client network and other additional measures, UAH	85 000	70 000

*Practical task 2.* The given data:

The tangible assets of an organization: 12 650 000 UAH.

The intangible assets of an organization: 1 787 090 UAH.

The value of the intellectual property: 1 780 000 UAH.

The marketing assets: 1 250 UAH.

The property rights of an organization: 5 840 UAH.

The primary value of the coefficient of the human capital quality is 1. In the course of the year the value of organization's shares has increased by 5 %. It is necessary to determine how the coefficient of the human capital quality has changed and in what way it has influenced the organization intellectual potential.

*Practical task 3.* Estimate the rights to an invention under the following conditions. A company has a patent on an invention. The company has experience in the sale of licenses for the right to production. The size of the

rate of royalty is already set. The economic term of validity of the patent is estimated at 10 years. The given data:

calculation sales in the 1st year are \$5 000, in the 2nd year they make \$7 500, in the 3rd they amount to \$10 000, from the 4th to the 10th year they are \$5 000 annually;

the rate of royalty in the 1st year is 7 %, in the 2nd year it is 6 %, in the 3rd year it is 5 %, from the 4th to the 10th year it amounts to 7 %;

the rate of discount is 19 %.

*Practical task 4.* Estimate the rights to the trade mark under the following conditions. A firm produced and sold products for 100 UAH per unit. After some time the firm purchased the right to the trade mark for these products and conducted a large-scale advertising of this brand. After that the price of a unit of products of the same quality grew to 120 UAH. The given data:

the number of the sold units of products in the 1st year is 100 thousand, in the 2nd year it is 150 thousand, in the 3rd year it makes 200 thousand, in the 4th year it is 100 thousand;

the rate of discount is 18 %.

*Practical task 5.* Estimate the rights to the work of literature under the following conditions:

the period of validity of the agreement on the transfer of the author's rights on the manuscript to the publisher is 2 years;

the edition of the first year is 2 000 copies, in the second year it is 3 000 copies;

the cost of one copy is 150 UAH;

the rate of royalty is 15 %.

### **The plan of the seminar**

1. The differences between the intellectual potential and the intellectual capital of an enterprise.
2. Methods of evaluation of the intellectual capital of an enterprise.
3. Commercialization of intellectual property.

### **Questions for self-study work**

1. Intellectual potential of an organization.
2. Intellectual potential of workers.

3. Creation and its kinds.
4. Copyright.
5. The right of industrial property.
6. Brand-management.
7. Now-how: concept and features.
8. Correlation of concepts: intellectual capital, intellectual property, intangible assets.
9. Conceptions of social and intellectual capitals.
10. Different approaches to the determination of the intellectual capital structure.
11. Diagnostics of intellectual capital.

## **Theme 8. Development of knowledge economy in Ukraine and other countries**

### **General methodical recommendations**

As a result of studying this theme students should know the following: a general description of knowledge economy of the developed countries; weakness of the internal bases of knowledge economy in developing countries; problems of development of knowledge economy in Ukraine; institutes of knowledge economy; the features of the scientific potential of a state; the essence of innovative strategy; constituents of the innovative infrastructure.

### **The plan of the seminar**

1. Features of becoming and development of knowledge economy in different countries of the world.
2. Prospects of becoming of knowledge economy in Ukraine.

### **Practical tasks**

*Practical task 1.* Form a matrix of strategic balance of strengths and weaknesses of knowledge economy development in Ukraine.

### **Questions for self-study work**

1. Scientific potential of a state.
2. The European innovative scale.
3. Innovative strategy: directions, tasks and prospects for the economy of Ukraine.

## The themes for an essay

1. Industrial and postindustrial society: similarities and distinctions.
2. Informative society as a stage of development of a state.
3. Tangible and intangible assets of a company: similarities and distinctions.
4. From data and information to knowledge.
5. The role of knowledge in modern society.
6. Features of becoming of the economy based on knowledge.
7. Explicit and implicit knowledge: similarities and distinctions.
8. Driving forces of the knowledge economy development.
9. The role of the government in the development of knowledge economy.
10. The structure of the success knowledge management system of an enterprise.
11. Sources of knowledge in the internal and external environment of an enterprise.
12. Cognitive reengineering as an instrument of enterprise management.
13. Problems of commercialization of intellectual property.
14. Methods of motivation of personnel for creation of knowledge at an enterprise.
15. Personal and organizational barriers to creation.
16. Modern forms and structures of knowledge management.
17. Evaluation of the intellect of an employee.
18. Problems of development of knowledge economy in Ukraine.
19. Development of innovative strategy of an enterprise and a country.
20. Constituents of the innovative infrastructure in knowledge economy.
21. Knowledge in economic and management theories.
22. Stages of development of society from the cognitive point of view.
23. The character of the processes of transfer to the knowledge economy.
24. Technological modes and their peculiarities.
25. Formation of institutes of knowledge economy.
26. Change of the nature of a firm in the new economy.
27. Competence of an organization.
28. Strategy and tactic of knowledge management.
29. Modern organization forms of knowledge management.
30. Forming competition strategies on the base of knowledge.

31. Consulting in knowledge management.
32. Constituents of knowledge management.
33. The chain of creation of knowledge.
34. Phases of knowledge management.
35. Management of talents.
36. Peculiarities of a self-learning organization.
37. Formation of a map of knowledge of an enterprise.
38. Intellectual potential of an organization and workers.
39. Copyright and the right of industrial property as constituents of intellectual property.
40. Correlation of concepts: intellectual capital, intellectual property, intangible assets.

### **Control questions for self-diagnostics**

1. Describe postindustrial society.
2. What is information society?
3. What are intangible assets? Give examples.
4. What is data, information and knowledge?
5. How can data be transformed into information and information into knowledge?
6. Describe the role of knowledge in modern society.
7. Describe the features of becoming of the economy based on knowledge.
8. What are the sources of knowledge?
9. Present a classification of knowledge.
10. What is explicit knowledge? Give examples.
11. What is implicit knowledge? Give examples.
12. What is knowledge economy?
13. Describe the features of knowledge economy.
14. Present the driving forces of the knowledge economy development.
15. Describe the structure elements and indicators of knowledge economy.
16. Describe the role of the government in the development of knowledge economy.
17. What is knowledge management?
18. Present the structure of the knowledge management system of an enterprise.
19. Describe the sources of knowledge in the internal and external environment of an enterprise.
20. Present the drivers of knowledge management.



21. How can knowledge be transformed into success of an enterprise?
  22. Describe the model of dynamic transformation of knowledge.
  23. What are the methods of knowledge transformation? Describe them.
  24. What is reengineering of business processes?
  25. What are the methods and principles of reengineering?
  26. What is cognitive reengineering as an instrument of enterprise management?
  27. Why is it important to change business processes of an enterprise in modern economy?
  28. Describe the cognitive constituents of changes.
  29. Present the stages of the process of management of changes.
  30. Describe the cognitive technologies in the practice of management.
- What is intellectual analysis of data and information?
31. What is intellectual organization?
  32. What is intellectual potential of an enterprise?
  33. What is intellectual capital of an enterprise? What is its structure?
  34. Present the constituents of organizational, human and customer capital of an enterprise.
  35. How is intellectual capital of an enterprise estimated?
  36. Describe the objects of intellectual property of an enterprise.
  37. Describe the peculiarities of the process of estimation of objects of intellectual property.
  38. What is commercialization of intellectual property?
  39. Describe the methods of motivation of personnel for creation of knowledge at an enterprise.
  40. What are the personal and organizational barriers to creation?
  41. Present the principles of forming a creative team.
  42. Analyse the modern forms and structures of knowledge management.
  43. What is intellect?
  44. How can the intellect of an employee be evaluated?
  45. Disclose the essence of the intellectual potential of a worker.
  46. Disclose the essence of the intellectual potential of an enterprise.
  47. What is the general description of knowledge economy of developed countries?
  48. Describe the problems of development of knowledge economy in Ukraine.
  49. What is innovative strategy?
  50. Describe the constituents of the innovative infrastructure in knowledge economy.

## Recommended literature

### Main

1. Абдикеев Н. М. Управление знаниями корпорации и реинжиниринг : учебник / Н. М. Абдикеев, А. Д. Киселев. – М. : ИНФРА-М, 2011. – 382 с.
2. Букович У. Управление знаниями: руководство к действию / У. Букович, Р. Уильямс ; пер. с англ. – М. : ИНФРА-М, 2002. – 504 с.
3. Геєць В. М. Інноваційні перспективи України / В. М. Геєць, В. П. Семиноженко. – Х. : Константа, 2006. – 272 с.
4. Дресвянников В. А. Построение системы управления знаниями на предприятии : учеб. пособ. / В. А. Дресвянников. – М. : КНОРУС, 2006. – 344 с.
5. Инновационное развитие: экономика, интеллектуальные ресурсы, управление знаниями / под ред. Б. З Мильнера. – М. : ИНФРА-М, 2010. – 624 с.
6. Мильнер Б. З. Управление знаниями в инновационной экономике / Б. З. Мильнер. – М. : Экономика, 2009. – 599 с.
7. Экономика знаний / В. П. Колесов, В. Л. Макаров, Л. Г. Белова и др. – М. : Инфра-М, 2008. – 432 с.

### Additional

8. Баранчеев В. П. Управление знаниями в инновационной сфере : учебник / В. П. Баранчеев. – М. : ООО "Фирма "Благовест-В", 2007. – 272 с.
9. Брукинг Э. Интеллектуальный потенциал / Э. Брукинг. – СПб. : Питер, 2001. – 276 с.
10. Глухов В. В. Экономика знаний / В. В. Глухов, С. Б. Коробко, Т. В. Маринина. – СПб. : Питер, 2003. – 528 с.
11. Джанетто К. Управление знаниями / К. Джанетто. – М. : Добрая книга, 2005. – 192 с.
12. Друкер П. Задачи менеджмента в XXI веке / П. Друкер. – М. : Вильямс, 2001. – 256 с.
13. Ефимов В. В. Управление знаниями : учеб. пособ. / В. В. Ефимов. – Ульяновск : УлГТУ, 2005. – 111 с.

14. Казакова Н. В. Экономика и знания / Н. В. Казакова. – Саратов : СГТУ, 2002. – 172 с.
15. Кастельс М. Информационная эпоха: экономика, общество и культура / М. Кастельс. – М. : Мир России, 2000. – 133 с.
16. Кови С. Семь навыков высокоэффективных людей: мощные инструменты развития личности / С. Кови. – М. : Альпина Бизнес Букс, 2008. – 374 с.
17. Лабоцкий В. В. Управление знаниями / В. В. Лабоцкий. – Мн. : Современная школа, 2006. – 392 с.
18. Лессер Э. А. Как превратить знания в стоимость: решения от IBM Institute for Business Value / Э. Лессер, А. Прусак. – М. : Альпина Бизнес Букс, 2006. – 248 с.
19. Мариничева М. К. Управление знаниями на 100 %: путеводитель для практиков / М. К. Мариничева. – М. : Альпина Бизнес Букс, 2008. – 230 с.
20. Махлуп Ф. Производство и распространение знаний в США / Ф. Махлуп. – М. : Прогресс, 2006. – 320 с.
21. Мильнер Б. З. Управление знаниями / Б. З. Мильнер. – М. : ИНФРА-М, 2003. – 178 с.
22. Николаева Т. П. Основы информационной экономики / Т. П. Николаева. – СПб. : Питер, 2001. – 234 с.
23. Румизен М. К. Управление знаниями / М. К. Румизен. – М. : ООО "Издательство "Астрель", 2004. – 318 с.
24. Томах В. В. Економіка знань : конспект лекцій / В. В. Томах. – Х. : ХНЕУ, 2011. – 135 с.
25. Nonaka I. Managing industrial knowledge: creation, transfer and utilization / I. Nonaka, D. J. Teece. – London ; Thousand Oaks, Calif. : Sage Publications, 2001. – 344 p.

### **Information resources**

26. Статистика України [Електроний ресурс]. – Режим доступу : [www.ukrstat.gov.ua](http://www.ukrstat.gov.ua).
27. Статистична звітність емітентів України [Електроний ресурс]. – Режим доступу : [www.smida.gov.ua/db/emitent](http://www.smida.gov.ua/db/emitent).
28. Экономика и управление на предприятиях: научно-образовательный портал. – Режим доступа : [www.eur.ru](http://www.eur.ru).

EDUCATIONAL EDITION

**Guidelines**  
**to practical studies, seminars and self-study work**  
**on the academic discipline**  
**"KNOWLEDGE ECONOMY"**  
**for full-time students of training direction**  
**6.030601 "Management"**

Compiled by D. Ripka  
Editorial director *O. Iastremska*  
Editor *Z. Zobova*  
Proof-reader *Z. Zobova*

НАВЧАЛЬНЕ ВИДАННЯ

**Методичні рекомендації**  
**до практичних, семінарських занять**  
**та самостійної роботи**  
**з навчальної дисципліни**  
**"ЕКОНОМІКА ЗНАНЬ"**  
**для студентів напряму підготовки**  
**6.030601 "Менеджмент"**  
**денної форми навчання**  
**(англ. мовою)**

Укладач **Ріпка** Дар'я Олександрівна  
Відповідальний за випуск *Ястремська О. М.*  
Редактор *Зобова З. В.*  
Коректор *Зобова З. В.*

План 2015 р. Поз. № 47.

Підп. до друку 02.09.2015 р. Формат 60x90 1/16. Папір офсетний. Друк цифровий.  
Ум. друк. арк. 1,75. Обл.-вид. арк. 2,19. Тираж 50 пр. Зам. № 141.

---

Видавець і виготівник – ХНЕУ ім. С. Кузнеця, 61166, м. Харків, просп. Леніна, 9-А

*Свідоцтво про внесення суб'єкта видавничої справи до Державного реєстру*  
**ДК № 4853 від 20.02.2015 р.**