

# Teaching&Learning E-business in the Ukraine

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**Abstract:** The paper is devoted to the problem of teaching e-business in Ukrainian universities. We would like to answer the question: is there a need for an e-business degree in Ukraine? The answer is affirmative. E-business degree curriculum based on current degrees and courses is proposed. Some ways of introducing e-business skills training are discussed.

## 1. Introduction

E-commerce becomes an important and perspective part of world business activity. Western universities proposed new degree (e-business or similar) (BA/BSc). For example at least 18 universities in United Kingdom instituted e-commerce courses and correspondent degrees [EP00]. If compared with traditional Business Information Technologies courses E-commerce courses are focused on the Internet programming and Networking.

E-commerce (see definition in [Di99]) follows inevitably after development of Internet infrastructure and Internet content resources. Ukrainian Internet zone is now filled sufficiently to generate e-commerce activity and we are witnesses of starting attempts to have benefit from e-commerce in Ukraine. Let's note that these attempts were made without domestic e-cash technologies and nevertheless are successful. That is why prospects of e-commerce in Ukraine may be believed as very good.

Besides objective obstacles the shortcomings of modern Ukrainian e-commerce are implied by non-sufficient skills of staff in common management and marketing as well as in specific e-commerce activity [Ko01].

Ukrainian economy demands e-business professionals: over 50% of the postgraduates students in National Academy of Management have chosen the course "Introduction to e-business" in 2000 explaining that it will be helpful for their future job or business.

Here we'll answer questions:

- 1) Is e-commerce specific enough, spread and self-sufficient field of activity to entitle university degree in Ukraine?

- 2) What knowledge and skills are necessary for future professionals in e-business, i.e. what subjects should be proposed for e-business students?
- 3) What e-business degree curriculum should be adopted in Ukraine to apply the best current experience of teaching business and programming?

## 2. Why e-business degree is necessary in Ukraine?

To answer the first question we may compare e-business with the degrees from the official current list of university degrees in Ukraine. In order to train business skills three different groups ("directions") are being proposed now: Economics, Management and Trade. The group "Economics", for example, includes "finance", "banking", "marketing", "accounting", "international economy" and "economical cybernetics" degrees. E-business in comparison with the list mentioned above covers at least partially all this fields of business activity (for example accounting is touched by Business-Government model of e-business). From this point of view e-business deserves more attention than "marketing", for example.

Previous considerations put another question: may needs in e-business skills be satisfied by extended or modified curriculum of "economical cybernetics"? The universities in Western Europe answered analogous question comparing "business information technologies" (BIT) with e-business. The answer is negative preferably [EP00].

"Economical cybernetics" aimed to train skills in computer-aided governing with enterprise, regional or national economy. E-business training should be focused on networking technologies for performing business-business or business-customer actions. So "economical cybernetics" should be modified fundamentally to cover "e-business" needs. It seems preferably to design new degree syllabus additionally to "economical cybernetics".

One can deny: specialists who are trained at two different fields - business and computing, should promote e-business. This way may be acceptable for large businesses (large companies). Small and middle enterprises need specialist with skills both in business and programming.

The principal argument for separate e-business degree is that e-business needs absolutely new philosophy and thinking. At least following features of e-business impact ([La98], Tu00):

- demonopolization of markets and strengthening of competition;
- globalization of markets, including manpower;
- growth of specific market of pure information products and services;
- exclusive role of technologies;
- interdisciplinary character of e-business, -

show that e-business activity may not be performed by traditional methods.

There are two ways to institute e-business courses in Ukraine. The first one means including basic e-business courses into curriculums of Economics degrees, Management

degrees and to the Computer science degrees. It is only possible if teaching of Internet technologies will be spread in the framework of traditional courses of Informatics and Computing for economists and managers.

The second way predicts instituting of special university degree on e-business.

### **3. Knowledge and skills demanded for e-business specialist.**

The foundation of e-business skills should be built with knowledge of economics and Internet technologies. Both this parts represent separate degrees. So e-business degree should include carefully selected basic skills from both parts. The following list of skills seems to be principal but not exhaustive:

A) skills and knowledge in economics and management:

- principal of economics;
- econometrics;
- world markets;
- marketing;
- history of economics;
- accounting;
- finance;
- management;
- psychology;

B) Computing skills:

- principals of Informatics;
- programming, including at least two modern programming languages, for example, Pascal or C and Java;
- networking and telecommunications;
- Internet programming (Web-programming);
- Web-design;

C) E-Business skills:

- principals of e-business;
- models of e-business;
- Internet-marketing;
- Internet-advertisement;
- Electronic retailing;
- Information security;
- Internet and e-commerce Law;
- Internet-ethics;
- Internet technologies prospect.

Special skills should include:

- business-planning of electronic enterprise;
- designing of Internet programming project;

- management of electronic enterprise;
- marketing through the Internet.

We offer to strengthen training in information security, legislation, and psychology in comparison with [EP00]. It follows from the fact that just these problems slow down development of e-business in Ukraine.

#### **4. List of courses for e-business degree**

Proposed courses list is based on the traditional courses for economics or computer science degrees in Ukrainian universities. We also must take into account that bigger part of the first year students doesn't have even basic skills in Informatics and Computing. That is why computing subjects start with Principals of Informatics. Programming languages shouldn't be fixed in general: educational institutions will choose appropriate programming languages and programming systems. But programming courses should include basic algorithms, data structures and programming techniques (structured, object-oriented and so on).

Therefore besides general subjects (mathematics, languages, history etc.) the list of basic courses should be as follows.

##### **1<sup>st</sup> year:**

- Economics;
- History of economics;
- Principals of Informatics;
- Programming.

##### **2<sup>nd</sup> year:**

- Accounting;
- Marketing;
- Finance;
- Economics of an enterprise;
- Programming (2<sup>nd</sup> part);
- Web-programming;
- E-business (models).

##### **3<sup>rd</sup> year:**

- Management;
- Microeconomics;
- Networking and telecommunications;
- System and applicable software;
- Computer graphic;
- E-commerce (Internet-retailing).

##### **4<sup>th</sup> year:**

- International economy;
- Macroeconomics;
- Databases and informational systems;

- Marketing in the Internet;
- Information security;
- Internet and E-commerce Law.

The list of additional courses to be selected by students may be as follows:

- Banking;
- Stocks markets;
- Insurance;
- Taxation;
- Artificial intellect technologies;
- System analysis;
- Investment;
- E-banking;
- Business-government technologies;
- E-business technologies for stock market;
- E-business technologies for insurance.

This curriculum coordinates with most of present Economy and Management degrees in Ukrainian universities. So its introduction will only need development of new courses covering e-business and peculiarities of Web-programming for e-business.

## **5. Evaluation of social demand and alternative ways to introduce e-business in Ukrainian universities**

Two years ago students of National Academy of Management who learnt economics and business were asked about needs to learn computer programming. Over 50% answered "yes, I want to learn computer programming". But computing for them isn't alternative to business (economy). The reason to learn computer programming additionally was spread using of business information systems. The reason to use e-business models is more important impact to learn computing as additional to business skills. Taking into consideration that the first e-business specialists will graduate in 45 years we must recognize that instituting of e-business degree had be started at least a year ago.

Now social demands in Internet programming are satisfied by different short-time computer courses. Without basic knowledge of Informatics and programming these courses provide very narrow knowledge of Internet programming which may not be applied to big business project.

That is why some alternative approaches to training e-business professionals should be proposed.

Some introductory courses in e-business for current students who are learning Economics or Management should be recommended. The list may be limited to *Web-programming*, *principals of e-commerce* and one *special course* covering, for example *Internet-marketing*, *e-banking* etc.

Another way to hasten e-business professionals graduating is to introduce Master degree on e-business for Bachelors of Economics or Computer Sciences. Two different curriculums may be offered. The first curriculum is targeted at Bachelors of Economics or Management shall include Web-programming courses and principals of e-business (models, Internet-marketing, Internet-retailing, Business-to-Business technologies). The second curriculum targeted at Computer sciences Bachelors should emphasize on principals of economics, marketing and management (economics, accounting, finance, marketing, management courses) as well as e-business courses listed in chapter 4.

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