KAZAKH-BRITISH TECHNICAL UNIVERSITY
Faculty of Information Technology
Department of Electrical Engineering and Computer Science

APROVED BY
T. Umarov
FIT DEAN
«____»_____2015

SYLLABUS

Programming Technologies

3 CREDITS

Spring 2015

Spring semester

Personal Information	Time and place of classes		Contact Information	
	Lectures:	Office hours	Ph.:	e-mail:
Assoc. prof Beisenbek Baisakov Miyatbekovich	**Lecture(Rm. 365):** **Saturday**: 14:00-16:00 **LW(Rm. 365):** Friday: 16:00-18:00	will be discussed with students.	+7 701 125 76 17	beysenbek@gmail.com

Course duration: 15 two hour lectures, 15 two hour laboratory works; 15 weeks;

Course pre-requisites: No prerequisites

Course Description:

The .NET Framework is an integral Microsoft Windows component designed to support next-generation applications and services. Many fundamentals of the .NET Framework will be familiar to developers who have worked in other object-oriented development environments; however, the .NET Framework also includes many unique elements that will be new to even the most experienced developers. This course provides an overview of .NET Framework programming.

The course goals and objectives:

After the completion of the course, students will learn how to do the following:

- Develop applications that use system types and collections.
- Implement service processes, threading, and application domains to enable application isolation and multithreading.
- Create and deploy manageable applications.
- Create classes that can be serialized to enable them to be easily stored and transferred.
- Create hardened applications that are resistant to attacks and restrict access based on user and group roles.
- Use interoperability and reflection to leverage legacy code and communicate with other

applications.
- Write applications that send e-mail messages.
- Create applications that can be used in different regions with different languages.
- Draw charts and create images, and either display them as part of your application or save them to files.

Literature:

Required:

1. .Net framework. Application foundation development. MCTS 70-536. by Tony Northrup, Shawn Widermuth, etc., Redmond, Microsoft Press 2006, 1078 pages.

Supplementary*:*

2. MSDN library: http://msdn2.microsoft.com
3. C#: the complete reference by Herbert Schildt, McGraw-Hill/Osborne 2003, 752 pages
4. Essential C# by Mark Michaels, Addison Wesley Professional 2006, 768 pages
5. Programming C# Third Edition by Jessy Liberty, O'Relly 2003, 710 pages

Software:

1. Microsoft Visual Studio Express Edition (2005 or higher)
2. .Net framework (2.0 or higher)

Course Calendar 2010 Spring Semester

Weeks	Credit Hours	Class activity	
		Topic	**Assignments**
1	3	Preface. Course introduction and review. Introduction to C# language. .NET framework fundamentals.	Lab #1
2	3	Input/output (I/O)	Lab #2
3	3	Searching, Modifying, and Encoding Text.	Lab #3
4	3	Collections and Generics	Lab #4
5	3	Serialization	Lab #5
6	3	Graphics	Lab #6
7	3	Threading.	Lab #7
8	3	Application Domains and Services	Lab #8, Assignments of Student Project
9	3	Installing and Configuring Applications	Lab #9

10	3	Instrumentation	Lab #10
11	3	Application Security	Lab #11
12	3	User and Data Security	Lab #12
13	3	Interoperation	Lab #13
14	3	Reflection.	Lab #14
15	3	Mail. Globalization.	Lab #15, Presentation of Student Project

Grading policy:

In percents

#	**Name**	**Percent**
1	Lab works	30%
2	Mid/End-term exam	20%
3	Student project	10%
4	Final Exam	40%

Lectures – Lectures and laboratory works will be approximately once a week. Lectures will cover the principles and methods of good programming and I will use PowerPoint for my lectures, the slides will be available online. Most of the core content of the course will be presented in lectures only therefore, attendance of all lectures is required, and you are responsible for all lecture and discussion content.

Assignments, lab works – will consolidate the concepts and materials mastered during in-class activities through solving various problems; they will be as mini problem to solve using mastered material; you will practice you knowledge gained during lessons in laboratory works

Class participation – will be home works, mini classroom projects, tests or case studies which are considered to be individual.

Student project –student project can be finished in group (max 2 student in one group). Theme of project will be given at the beginning of the course. By end of the course students should present to the class their work;

Mid-term exam – an assignment for identifying the students' progress, their strengths and weaknesses, intended to ascertain what further teaching is necessary. It may include multiple choices, true/false and essay questions from the material covered during the seven weeks and extra-points questions with higher level of complexity.

Final exam – comprehensive test designed to identify how successful the students have been

achieving objectives. It may include multiple choices, true/false and essay questions and oral questions from the material covered during the whole semester.

	Type of Assessment	Weeks															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
1	Lab works	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	30
2	Mid/End-term exam								10							10	20
3	Student Project															10	10
4	Final Exam																40
	Grand Total																100

Academic Policy:

- Cheating, duplication, falsification of data, plagiarism is not permitted under any circumstances!
- Attendance is mandatory. Students will be penalized for missing more than 10% of classes. 20% of classes missed without good reason will result in course failure.
- Regular class attendance is expected. Regular class attendance will contribute to success in the class. Please do your best to be in class and on time. If it is necessary to be late or leave early, please try not to disrupt the class unnecessarily.
- Students must participate fully in every class. While attendance is crucial, merely being in class does not constitute “participation”. Participation means reading the assigned materials, coming to class prepared to ask questions and engage in discussion.
- Students are expected to take an active role in learning.
- Written assignments (independent work) must be typewritten or written legibly and be handed in time specified. Late papers are not accepted!
- Students must arrive to class on time.
- Students are to take responsibility for making up any work missed.
- Make up tests in case of absence will not normally be allowed.
- Mobile phones must always be switched off in class.
- Students should always show tolerance, consideration and mutual support towards other students.

Considered in meeting №_____ in «___»_____2015 year.

Author _____ *Baisakov B. M.*

*Head of Department*_____*Akzhalova A. Zh.*

Agreement

Familiarized and agreed with requirements to “Microsoft .NET Framework – Application Development Foundation” course

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