



**COMMUNICATIONS MANAGEMENT
FOR ACADEMIA-INDUSTRY
COOPERATION
IN IT-ENGINEERING**

Training



2015

**Ministry of Education and Science of Ukraine
Chernihiv National University of Technology
National Aerospace University "KhAI"**

V.V. Kazymyr, V.V. Sklyar, S.V. Lytvyn, V.V. Lytvynov

**Communications Management
for Academia-Industry Cooperation
in IT-Engineering**

Training

Edited by V.S. Kharchenko

*Prepared within the project TEMPUS CABRIOLET
«Model-Oriented Approach and Intelligent Knowledge-Based
System for Evolvable Academia-Industry Cooperation in
Electronic and Computer Engineering»
(544497-TEMPUS-1-2013-1-UK-TEMPUS-JPHES).*

Chernihiv - Kharkiv
2015

UDC 004.052

C73

Викладено розширений матеріал для тренінг-модулів з управління комунікаціями для кооперації університетів та індустрії у сфері інформаційних технологій (Communications Management for Academia-Industry Cooperation in IT-Engineering), який підготовлено в рамках проекту TEMPUS CABRIOLET «Model-Oriented Approach And Intelligent Knowledge-Based System for Evolvable Academia-Industry Cooperation in Electronic and Computer Engineering» (544497-TEMPUS-1-2013-1-UK-TEMPUS-JPHES).

Присвячено відпрацюванню навичок з персональних комунікації і управління ними у сфері взаємодії університетів та індустріальних компаній.

Для студентів університетів, які навчаються за напрямками комп'ютерної та програмної інженерії, комп'ютерних наук, а також для працюючих у зазначеній галузі фахівців при вивченні питань взаємодії між фахівцями університетів та IT-індустрії, а також може бути корисним для викладачів, які проводять заняття з відповідних курсів.

Рецензенти: Опанасенко Володимир Миколайович, начальник відділу Інституту Кібернетики Національної Академії наук України, доктор технічних наук, професор;
Сидоренко Микола Федорович, головний інженер НТ СКБ «Полісвіт» (Харків, Україна), заслужений винахідник України, кандидат технічних наук, доцент.

ISBN 978- 966-2188-65-3

C73 Kazymyr V.V., Sklyar V.V., Lytvyn S.V., Lytvynov V.V. **Personal Communications Management for Academia-Industry Cooperation in IT-Engineering. Training** / Kharchenko V.S. (ed.) - Ministry of Education and Science of Ukraine, Chernihiv National University of Technology, National Aerospace University "KhAI". 2015. - 133 p.

The manual contains the enhanced material for training modules on communications management for academia-industry cooperation in IT-engineering. This manual was prepared within the project TEMPUS CABRIOLET «Model-Oriented Approach And Intelligent Knowledge-Based System for Evolvable Academia-Industry Cooperation in Electronic and Computer Engineering» (544497-TEMPUS-1-2013-1-UK-TEMPUS-JPHES).

It is dedicated to the training of skills on personal communications and management processes for cooperation between universities and industrial IT-companies.

The manual is designed for university students on computer science, computer and software engineering, as well as for working in these industry specialists in the study of skills of interaction between university experts and industry, and may also be helpful for lecturers of relevant courses.

References – 20 names, figures – 24, tables – 4.

UDK 004.052

ISBN 978- 966-2188-65-3

© Kazymyr V.V., Sklyar V.V., Lytvyn S.V., Lytvynov V.V., Kharchenko V.S.
© Chernihiv National University of Technology
© National Aerospace University "KhAI"

ABBREVIATIONS

GTD (Getting Things Done) - methodology for increasing personal effectiveness

PM (Project Management) - Project Management

PMBOK (Project Management Body of Knowledge) - vault of knowledge project management

R & D (Research and Development) - research and development

RACI (Responsibility Accountable Consulted Informed) - matrix of responsibility for the process of tracking tasks

SMART (Self-Monitoring Analysis and Reporting Technology) - Self-Monitoring Analysis and Reporting

SWOT (Strengths-Weaknesses-Opportunities-Treats)-analysis – dignity, weaknesses, opportunities and threats analysis technology

UBC (University-Business Cooperation) - cooperation between universities and business

WBS (Work Breakdown Structure) – hierarchic work structure

Introduction

This training course is focused on personal communications management for academia-industry cooperation.

Professional and personal success of the modern engineer depends on how well he is able to associate (to communicate) with other people. These skills are called «soft» skills, as opposed to hard skills, which are understood directly as professional knowledge and skills. Soft skills include such skills as knowledge of foreign languages, the ability to manage your time, oratorical skills, leadership, teamwork, learning skills and teaching others, etc. Nevertheless, modern universities that train engineers in the field of information technology, other modern technologies, for which the market is not so far-reaching, rarely include in their program courses on communications. Therefore, young professionals have to learn them during immediate work on the specialty.

From our point of view, the main reason of the insufficient cooperation between universities and industry are communication problems. This course is aimed to promote efficient communication between students and representatives of industrial companies through training potential professionals involved in the process of cooperation.

It is known that training is one of the most effective teaching methods in terms of the formation of practical skills. This is due to the fact that people remember best those actions which they perform themselves (see. fig. 0.1).

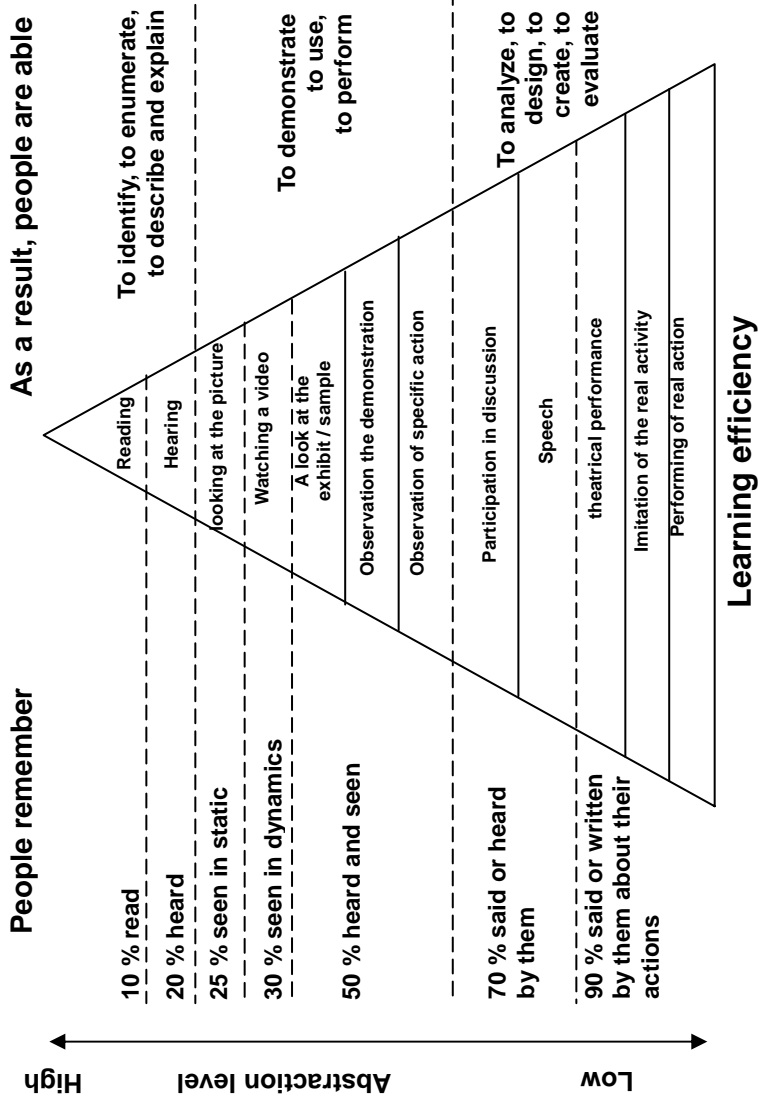


Fig. 0.1 - The dependence of digestible information volume from the learning method

The course contains the description and plan of conducting of seven trainings and doing exercises:

- Goal-setting and strategic planning;
- Time management;
- Preparation of presentations;
- Project management;
- Management of innovation and the creation of innovative businesses;
- Strategy of cooperation between universities and industry.
- Introduction to written communication with foreign partners.

Each of the training is designed for 4 hours, but this time can be reduced as well as increased by the amount of performed studies. Description of each training covers the following topics:

- training program (includes goals, objectives and schedule);
- theoretical material, divided into blocks;
- practical tasks, including tasks for independent work.

The training begins with the organizational part, which includes acquaintance with the audience, presentation of the training and harmonization of the rules for participant interaction with the coach and each other. The last part of lectures contains theoretical material about different forms of written communication in English with training practice.

The course summarizes the experience gained during the teaching of the course "Managing personal communications in the information technology industry" at the Department of Computer Systems and Networks, National Aerospace University named after N.E. Zhukovsky "KhAI" and at the Department of Software Engineering, Chernihiv National University of Technology. Chapters 1-6 are based on the materials published earlier in [В. Скляр. Управление персональными коммуникации для кооперации университетов и индустрии в

сфере компьютерных технологий/ под ред. В. Харченко, МОН Украины, Национальный аэрокосмический университет "ХАИ", 2014, 96с.]. These materials were remade, added (Chapter 7) and translated into English.

This manual also provides support for the course "Conditions of employment" proposed for reading for graduate students by the Ministry of Education and Science of Ukraine.

The course is intended for university students studying in the areas of computer science, computer and software engineering, for professionals working in this industry in the study skills of interaction between universities and the IT industry, and for teachers instructing at the appropriate courses.

It may be useful for students of other specialties who begin their professional career, working in teams of developers at enterprises of different profiles.

CONTENT

ABBREVIATIONS	3
INTRODUCTION	4
1. GOAL-SETTING AND STRATEGIC PLANNING	8
1.1 Training Program	8
1.1.1 Training purpose	8
1.1.2 Training objectives (expected results)	8
1.1.3 The plan of the training	8
1.2 Theoretical material	10
1.3 Practical tasks.....	19
2 TIME MANAGEMENT.....	24
2.1 Training program	24
2.1.1 Training purpose	24
2.1.2 Training objectives (expected results)	24
2.1.3 Training Plan.....	24
2.2 Theoretical material	25
2.3 Practical tasks.....	35
3. PREPARATION OF PRESENTATIONS	40
3.1 Training program	40
3.1.1 Training purpose	40
3.1.2 Training objectives (expected results)	40
3.1.3 Training plan	40
3.2 Theoretical material	41
3.3 Practical tasks.....	47
4. PROJECT MANAGEMENT.....	50
4.1 Training program	50
4.1.1 Training purpose	50
4.1.2 Training objectives (expected results)	50
4.1.3 Training plan	50
4.2 Theoretical material	51
4.3 Practical tasks.....	61
4.4 Cases solution	61

5 MANAGEMENT OF INNOVATION AND CREATING INNOVATIVE BUSINESS	63
5.1 The training program	63
5.1.1 The training purpose	63
5.1.2 The problems of training (expected results)	63
5.1.3 Training Plan.....	63
5.2 Theoretical material	64
5.3 Practical tasks.....	67
5.4 Innovative game "box"	67
6 STRATEGY OF THE DEPARTMENT COOPERATION WITH INDUSTRIAL PARTNERS	69
6.1 Training program	69
6.1.1 The training purpose	69
6.1.2 The problems of the training (expected results)	69
6.1.3 Training Plan.....	69
6.2 Theoretical material	70
6.3 Practical tasks.....	79
6.4 Template of strategy and UBC working program.....	81
6.5 Template to the analysis and descriptions of UBC cases	82
7. INTRODUCTION TO WRITING COMMUNICATIONS WITH FOREIGN PARTNERS	85
7.1 Writing informal letters of invitation.....	85
7.2 Writing informal and formal thank–you letters	89
7.3 Writing informal and formal letters of apology.....	96
7.4 Writing informal and formal letters asking for information .	97
7.5 Writing informal and formal letters of giving information..	99
7.6 Writing informal and formal letters asking for advice.....	102
7.7 Writing informal letters giving advice.....	106
7.8 Writing personal advertisements.....	107
7.9 Filling in the forms.....	112
7.10 Writing curriculum vitae (CV)	123
7.11. Letters of application for a job/course (Covering letters) ...	128

Автори:

В.В. Казимир, В.В. Скляр, С.В. Литвин, В.В. Литвинов

**Управління комунікаціями для кооперації
університетів та індустрії у сфері ІТ-інженерії**

Тренінги

(англійською мовою)

Редактор

В.С. Харченко

Комп'ютерна верстка

І.С. Посадська, Л.Д. Харченко

Зв. план, 2014

Підписаний до друку 03.06.2015

Формат 60x84 1/16. Папір офс. №2. Офс. друк.

Умов. друк. арк. 7,73. Уч.-вид. л. 8,11. Наклад 300 прим.

Замовлення 16. Ціна вільна

Національний аерокосмічний університет ім. М. Є. Жуковського

"Харківський авіаційний інститут"

61070, Харків-70, вул. Чкалова, 17

<http://www.khai.edu>

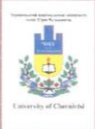
Віддруковано ФОП Лисенко І. Б.

61070, Харків-70, вул. Чкалова, 17, моторний корпус, к. 147

Свідоцтво про внесення суб'єкта видавничої справи в державний реєстр

видавців, виготовлювачів і розповсюджувачів видавничої продукції

ДК №2607 от 11.09.06 р.



- **Goal-setting and strategic planning**
- **Time management**
- **Preparation of presentations**
- **Project management**
- **Innovation management**
- **Creating of innovative business**
- **Strategy of university-industry cooperation**
- **Communication with foreign partners**

