ПРИВАТНИЙ ВИЩИЙ НАВЧАЛЬНИЙ ЗАКЛАД-ІНСТИТУТ
"УКРАЇНСЬКО-АМЕРИКАНСЬКИЙ УНІВЕРСИТЕТ КОНКОРДІЯ"
(УАУК)

PRIVATE HIGHER EDUCATIONAL ESTABLISHMENT-INSTITUTE
"UKRAINIAN-AMERICAN CONCORDIA UNIVERSITY"
(UACU)

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MS Excel in Economics and Business

Syllabus

BOK 2.28
MSEEB-111

Specialty: 073 "Management"
Educational program "Management"

Quarter/Year: Spring/2025 ECTS Credits: 6

Instructor: Liubov Zharova, Ph.D., As. Prof. US Credits: 3

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Prerequisites: -

Course Description

This course is designed for students to develop advanced skills in **Microsoft Excel** for economic and business applications. The course covers **data analysis, financial modeling, business intelligence, and economic forecasting,** integrating theoretical concepts with hands-on exercises. Students will work with real-world datasets, build dynamic models, and apply Excel's powerful tools, including **Power Query, Power Pivot, Solver, VBA, and Monte Carlo simulation**.

Course Outcomes

PH 3. Demonstrate the knowledge of theories, methods and functions of management, modern leadership concepts.
PH 4. Demonstrate the skills to identify problems and justify management decisions.
PH 6. Demonstrate the skills to search, collect and analyze information, calculate indicators to justify management decisions.
PH 7. Demonstrate organizational design skills.
PH 8. Apply management methods to ensure the effectiveness of an organization.
PH 9. Demonstrate the skills of interaction, leadership, teamwork.
PH 10. Have the skills to justify effective tools to motivate the staff of an organization.

PH 11. Demonstrate the skills of situation analysis and establishing and ensuring communication in various areas of an organization's activity.
PH 13. Communicate orally and in writing in the state and foreign languages.
PH 16. Demonstrate the skills of independent work, flexible thinking, openness to new knowledge, be critical and self-critical.
PH 17. Perform research individually and/or in a group under the guidance of a leader.

Competencies
ЗК.3. Ability to abstract thinking, analysis, synthesis.
ЗК.4. Ability to apply knowledge in practical situations.
ЗК.5. Knowledge and understanding of the subject area and understanding of professional activity.
ЗК.7. Ability to communicate in a foreign language.
ЗК.8. Skills in the use of information and communication technologies.
ЗК.11. Ability to adapt and act in a new situation.
СК.2. Ability to analyze the results of the organization, to compare them with the factors of external and internal environment.
СК.8. Ability to plan the activities of the organization and manage time.
СК.12. Ability to analyze and structure the problems of the organization, to form sound decisions.

Internationality: The international aspect of the course includes: International Data Sources, **Multinational Financial Modeling, Cross-Cultural Business Insights**

Communications
For individual issues, students should contact the professor ONLY by given e-mail or by Moodle. In the Subject line they should put: UACUFirstNameLastName. E-mail messages will normally be answered within 24 hours.
Note! Only emails sent from the student's corporate email address will be answered.
Attention! Official and only language used for assessment activities is English. Official and only languages used for communication within the University are Ukrainian and English.

Student Responsibilities
Time Commitment
The study of technical courses is cumulative (i.e., an understanding of earlier material is necessary to grasp concepts covered later). Past experience has shown a high correlation between procrastination and low grades. Students must be committed to completing tasks on time.
Students are responsible for following the schedule, attending classes, completing assignments on time and to the required standards, and maintaining academic integrity. These responsibilities are not open for discussion with instructors or the dean's office.
Technical Aspects
The student is obliged to provide himself/herself with all the necessary technical equipment for the educational process (laptop or computer, webcam, headsets or headphones and microphone), as well as access to the Internet.
Only students signed-in with their own first and last name are allowed into video consultations in Zoom.

Grading Policy
The course is based on mastery of course outcomes. Student grades for this course will be calculated based on performance.
Note: the minimal grade to pass a subject is 60%.

Graduate Grading Guidelines
The assignment of a letter grade for a course is an indication of the student's overall success in achieving the learning outcomes for the course. The course letter grade may be viewed as a summary statement of the student's achievement in individual assessments (assignments & activities). These assessments are intended to identify for students their strengths as well as those areas in need of improvement. Student work is assessed according to the guidelines below.

Course-level Grading guidelines:
Bachelor

Grade	ECTS Grade	International Grade
90% - 100%	A	5 (Excellent)
83% - 89%	B	4 (Very Good)
75% - 82%	C	4 (Good)
70% - 74%	D	3 (Good)
60% - 69%	E	3 (Acceptable)
35% - 59%	FX	Not acceptable, possible repetition of course

Master

Grade	ECTS Grade	International Grade
90% - 100%	A	5 (Excellent)
83% - 89%	B	4 (Very Good)
75% - 82%	C	4 (Good)
70% - 74%	D	3 (Good)
35% - 69%	FX	Not acceptable, possible repetition of course

Criteria for grading:

ECTS grade	Requirements for the student
A	The student demonstrated a comprehensive systemic and in-depth knowledge of program material; processed basic and additional literature; obtained a solid grasp of the conceptual apparatus, methods, techniques and tools provided by the program; found creative abilities in the presentation of the educational program material both on this issue and on related modules of the course and related courses, or the student had a current control of 90-100 points
B	

C	The student demonstrated good knowledge of program material; processed the basic literature, mastered the conceptual apparatus, methods, techniques and tools provided by the program, but with some inaccuracies
D	The student showed mediocre knowledge of the core program material; learned information mainly from a lecture course or just one textbook; mastered only certain methods, techniques and tools provided by the program
E	
FX	The student has significant gaps in knowledge of the main program material; fragmentary mastered the basic concepts, techniques and tools; significant mistakes are made when using them

Maximum total possible points – 300 points incl. (Midterm and Final exam are 70% of overall evaluation, where Midterm – 30% and Final – 40%)
Test / Assignment / Project – 3/3/3 points (several times during the course)
Consultations – 15 points (10-15% of the total for the course are allocated for consultations)
Midterm exam – 90 points
Final exam – 120 points

Student Workload
It is assumed that for each out of 17 class sessions a student spends about 10.5 academic hours of work. This includes 3.5 academic hours of working on lecture materials (including consultations) and 7 academic hours of personal work. Personal work includes working on course materials, preparation to assessment activities.
Please pay attention that 1 academic hour equals to 40 minutes.

Assignment Format
• All work should be shown in time. If the student misses the deadline – the task is failed.
• Midterm covered topics from previous lectures (weeks 1-6). It included multiple choice questions and cases (essays) and took about 1.5 hours.
• The Final exam covered all course material and included multiple choice questions and cases (essays). It lasts for 1.5 hours. Admission to the Final exam is possible only if all the tasks of the curriculum are covered.
• After the Midterm and Final is graded a student has access to the grade only. Access to the attempt, corrects answers and information whether the answer is correct cannot be granted.

Academic dishonesty
Academic integrity is submitting one's own work and properly acknowledging the contributions of others. Forms of academic dishonesty include:
1. Plagiarism – submitting all or part of another's work as one's own in an academic exercise such as an examination, a computer program, or written assignment.
2. Cheating – using or attempting to use unauthorized materials on an examination or assignment, such as using unauthorized texts or notes or improperly obtaining (or attempting to obtain) copies of an examination or answers to an examination. Including the use of artificial intelligence and pre-prepared answers to the questions of tasks is prohibited (unless otherwise specified in the task itself or allowed by the instructor).

3. Facilitating Academic Dishonesty – helping another commit an act of dishonesty, such as substituting for an examination or completing an assignment for someone else.
4. Fabrication – altering or transmitting, without authorization, academic information or records.

Any violation of these rules constitutes academic dishonesty and is liable to result in a failing grade and disciplinary action. In case of any academic dishonesty a student is not allowed to continue or retake the assessment activity and for the Final the unsatisfactory grade ("0") is assigned for the course total. Cases of the academic dishonesty are not considered by the Academic Council.
Midterm and Final are valid only if they are taken on-campus (room defined by the dean's office) and on UACU's computer/laptop or online on the student's computer/laptop using Zoom and other conditions defined by the dean's office to avoid the cases of academic dishonesty. Students who will not meet this requirement will be expelled from the course with grade "0".
In case of missed Midterm or Final exam (for a valid reason like sickness or an emergency) a request to repeat the exam is possible. Permit to repeat a midterm or final exam is done through a letter to the dean's office with request and approval of subject lecturer.
Submission or retaking of any assessment activities after deadlines are forbidden.

Submission & Return Policy
Assignments must be submitted to the professor on or before the due date indicated in the Course Schedule. The assignments submitted after the due dates receive zero points.
**** NO MAKE –UP QUIZZES AND EXAMS ****

Schedule

Lecture #	Research Projects	Assignments Due	Points
Lecture 1	1. Functional Capabilities of MS Excel for Economic Data Analysis o Overview of functions, working with data arrays, custom formulas. .	Test Assignments	3/3
Lecture 2	2. Data Optimization Methods: Power Query and Power Pivot o Importing, processing, and aggregating large datasets. .	Test Assignments	3/3
Lecture 3	3. Statistical Analysis in Excel: From Descriptive Statistics to Forecasting o Using Analysis ToolPak, histogram creation, hypothesis testing. .	Test Assignments	3/3
Lecture 4	4. Time Series Forecasting in Excel o Exponential smoothing, ARIMA models, scenario analysis. .	Test Assignments	3/3
Lecture 5	5. Financial Mathematics in Excel: Time Value of Money	Test Assignments	3/3

	o PV, FV, NPV, IRR functions and their applications in investment analysis.		
	Midterm (7th or 8th class) 30% out of total amount of points for the course	Test	90
Lecture 8	6. Company Valuation Using Excel o DCF analysis, valuation multiples, scenario modeling.	Test Assignments	3/3
Lecture 9	9. BI Tools in Excel: Power BI, Power Pivot, Power Query o Interactive dashboards, data visualization.	Test Assignments	3/3
Lecture 10	10. ABC/XYZ Analysis and Data Clustering in Excel · Inventory optimization, customer segmentation.	Test Assignments	3/3
Lecture 11	11. Business Process Modeling: Building Dynamic Models · Case studies on production and logistics process management.	Test Assignments	3/3
Lecture 12	12. Machine Learning in Excel Using Add-ins · Regression, clustering, trend forecasting.	Test Assignments	3/3
Lecture 13	13. Excel in Economic Modeling: Macroeconomics Case Studies · Regression models for GDP and inflation forecasting.	Test Assignments	3/3
Lecture 14	14. Game Theory in Excel: Modeling Competitive Strategies · Nash equilibrium, pricing models.	Test Assignments	3/3
Lecture 15	15. Supply Chain Analysis and Inventory Management · EOQ models, demand and supply analysis.	Test Assignments	3/3
Lecture 16	16. Big Data and Process Automation in Excel · VBA, macros, automated analysis of large datasets.	Test Assignments	3/3
	Final (17th class) 40% out of total amount of points for the course	Test	120

Recommended Materials

1. **Winston, W. L.** – *Microsoft Excel Data Analysis and Business Modeling* (6th Edition, 2021)
2. **Benninga, S.** – *Financial Modeling* (4th Edition, 2014)
3. **Mather, B.** – *Mastering Power Query in Power BI and Excel* (2020)

Coursera та edX:

4. Excel Skills for Business (Macquarie University, Coursera)

5. Financial Modeling in Excel (Wharton, Coursera)

6. Data Analysis and Visualization with Excel (Delft University, edX)

** The above schedule and procedures are subject to change in the event of extenuating circumstances.*

Протокол засідання кафедр № 1 від 28.01.2025 року

Проректор з навчально-методичної роботи Л.І.Кондратенко

Завідувач кафедри Л.В.Жарова

Викладач Р.В.Селезньова