SEMESTER LEARNING PROGRAM AND ACTIVITY PLAN

RENCANA PROGRAM DAN KEGIATAN PEMBELAJARAN SEMESTER (RPKPS)

AKU5612

Portfolio Theory and Investment Analysis

Master of Accounting

UNIVERSITAS GADJAH MADA
Faculty of Economics and Business
2024

UNIVERSITAS GADJAH MADA

Faculty of Economics and Business

Master of Accounting

SEMESTER LEARNING PROGRAM AND ACTIVITY PLAN

COURSE CODE	COURSE NAME	CREDIT UNIT	SEMESTER	COURSE STATUS	PRE-REQUISITE COURSE
AKU5612	Portfolio Theory and Investment Analysis	3	1	Compulsory	-

GRADUATE COMPETENCY GOALS (CG) ADDRESSED BY THE COURSE

Graduates of the **Master of Accounting program** at FEB UGM shall:

Competency Goals		Learning Objectives		High	Med	Low	Performance Measurement
1	Students demonstrate the ability to communicate effectively	1.1	Demonstrate the ability to write highly organized reports		√		Final Paper
		1.2	Demonstrate the ability to follow standard writing style		√		Final Paper
		1.3	Demonstrate the ability to write with consistent flow of though		√		Final Paper
		1.4	Demonstrate the ability to use visual aids professionally	√			Presentation
		1.5	Demonstrate the ability to present in an organized manner	√			Presentation
		1.6	Demonstrate the ability to answer questions	√			Discussion
2	Students demonstrate the ability to work in teams	2.1	Demonstrate a leadership role in managing the team	√			Presentation
		2.2	Deliver strong efforts and contribute ideas for task completion	√			Presentation Discussion
		2.3	Demonstrate the ability to appreciate opinions from different perspectives	√			Discussion
3	Students are able to exercise professional ethics	3.1	Demonstrate the ability to identify ethical issues in the accounting profession			√	Discussion
		3.2	Demonstrate the ability to apply the appropriate judgment in making ethical decisions		√		Discussion
4		4.1	Demonstrate comprehensive			√	Discussion

				knowledge of accounting standards				
		Students demonstrate the ability to analyze financial statements for decision making	4.2	Demonstrate the ability to make accounting adjustment to conform with economic reality		√		Discussion
			4.3	Demonstrate the ability to predict prospect based on fundamental data	√			Final Paper
			4.4	Demonstrate the ability to apply alternative valuation models	√			Final Paper
	5	Students demonstrate the ability to deal with international exposure	5.1	Demonstrate the ability to write thesis in international topics			√	Final Paper
			5.2	Demonstrate participation in the international environment			√	Final Paper

COURSE OBJECTIVES

Upon the completion of the **Portfolio Theory and Investment Analysis** course, students are expected to be able to:

CO 1	Comprehend concepts of investment, financial instruments, and mutual funds
CO 2	Comprehend the strutucture of capital market and how securities are traded
CO 3	Able to analyze stock and bond based on their valuations.
CO 4	Able to calculate risk and return both individual assets or portfolio.
CO 5	Understand the theory and concept, and be able to apply the optimal portfolio based on Markowitz and single index model.
CO 6	Understand the concept of asset pricing model, systematic risk, market efficiency.
CO 7	Understand the concept of hedging and speculation using option.
CO 8	Understand the process and concept of portfolio management and performance evaluation

COURSE OBJECTIVES TO CGs MAPPING

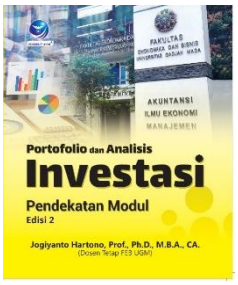
	CO 1	CO 2	CO 3	CO 4	CO 5	CO 6	CO 7	CO 8
CG 1								√
CG 2								√
CG 3	√						√	√
CG 4	√	√	√	√	√	√	√	√
CG 5					√			

COURSE DESCRIPTION

This course will introduce students to major issues currently on financial investments. The past three decades witnessed rapid and profound changes in the investment industry and financial crises of historic magnitude. The vast expansion of financial markets during this period was due in part to innovations in information technology as well as advances in theory of investments. This course will discuss the issue related to modern portfolio theory. In an effort to link theory to practice, this course attempts to make consistent and relevant with that of CFA curriculum. Therefore, it can be a good knowledge and skills for students who want to take CFA certification exam.

This course covers the discussions about the characteristics and analysis of individual securities, as well as with the theory and practice of creating portfolios. It will deal with an understanding of the investment environment, instruments and processes. The investment environment includes the kinds of securities market that exist where securities can be bought

	and sold. The investment instruments discussed are bonds, stocks, and other assets such as options. The investment processes concern with certain decisions an investor has to make. The decisions concern how much to invest and when to make the investment.
Learning Method	The class will utilize student-centered learning (SCL) approach. The role of the lecturer is as a facilatator. Students have to be active in the class. To make this approach works, students are required to prepare thoroughly all the material assigned before coming to the class. Active involvements are encouraged in the class discussions. In every session, there will be chapters and "news" discussion. The quality of the discussions is measured how well you offer your analysis with a well established reasoning on issues being discussed. Your analysis in the discussions is a signal how well you have understood the topics. For the class discussions, students will be divided into some groups. Each group has to submit a weekly text book summary report and power points for the corressponding chapters and "news", and be prepared to lead the class discussions. The report has to be handed to my email (jogimaksi@gmail.com) in a day before the start of the session.
Course Materials	1. Overview. 2. The Investment Environment, Asset Classes, Financial Instruments, and Mutual Funds and Other Investment Companies 3. Capital Market and How Securities are Traded 4. Equity Valuation Models 5. Risk, Return, and The Historical Record 6. Risk, Return for Portfolio 7. Capital Allocation to Risky Assets and Efficient Diversification 8. Single Index Models 9. The Capital Asset Pricing Model, Arbitrage Pricing Theory and Multifactor Models of Risk and Return 10 Beta 11. Bond Prices, Yields and Managing Bond Portfolios 12. The Efficient Market Hypothesis 13. Options Markets and Option Valuation 14. Portfolio Performance Evaluation and The Theory of Active Portfolio Management
References	1. Bodie, Kane, and Marcus. *Investment*. McGraw-Hill International, 12rd Edition, 2020. 2. Hartono, Jogiyanto. Portofolio dan Analisis Investasi: Pendekatan Modul, Yogyakarta: Penerbit Andi, 2022 (e-book). 3. Hartono, Jogiyanto, Teori dan Praktik Portofolio dengan Excel, Jakarta: Salemba Empat, 2014. 4. Hartono, Jogiyanto. Teori dan Praktik Investasi Obligasi, Yogyakarta: Penerbit Andi, 2023.



ASSESSMENT METHODS AND LINKAGE TO COURSE OBJECTIVES

ASSESSMENT CRITERIA	PERCENTAGE (%)	COURSE OBJECTIVES							
		1	2	3	4	5	6	7	8
Assignment (Individual and Group)	25	√	√	√	√	√	√	√	√
Mid-term exam	25	√	√	√	√				
Final exam	25					√	√	√	√
Final project	25	√	√	√	√	√	√	√	√

Mid-term and Final Exam
The mid-term and final examinations will be conducted to test the student's knowledge, understanding, comprehension, and capability to apply the course material in solving investment problems.

Final-paper
Topic of the final paper can be chosen freely so far related to the materials discussed in the class. Final paper due to the same day with the final exam day.

GRADING

Grade	Range	Cumulative Weighted Grade
A	90-100	4.0
A-	85-89,99	3.75
A/B	80-84,99	3.5
B+	75-79,99	3,25
B	70-74,99	3
B-	60-69,99	2.75
C	50-59,99	2
D	30-49,99	1
E	0-29,99	0

Below is the explanation for each grade:

Grade	Explanation
A	Like A-, with consistent evidence of substantial originality and understanding in identifying, producing and communicating conflicting arguments, perspectives or problem-solving approaches; critically evaluate the problem, its solutions and the implications of the problem.
A-	Like A/B, with much evidence of originality in defining and analyzing issues or problems and in creating solutions; using levels, styles and suitable communication means to the discipline of science and audience.
A/B	Demonstrate a substantial understanding of basic concepts in various contexts; develop or adapt convincing arguments and provide a comprehensive justification; communicating information and ideas adequately in terms of disciplinary conventions.
B+ and B	Demonstrate adequate understanding and application of basic concepts from the field of study; building arguments or decisions and providing acceptable justification; communicating information and ideas adequately in terms of disciplinary conventions.
B-	Demonstrate a superficial or partial or erroneous (faulty) understanding of basic concepts of the field of study and the limited ability to apply the concepts; giving an unsupported or improper argument; communicate information or idea with unclear and inconsistent compliance with disciplinary conventions.
C	Demonstrate a real shortcoming in understanding and applying underlying concepts; communicate the ideas and information in incomplete ways or confusing and give just little attention the conventions of the science field.
D	Fail to demonstrate the major part or the whole part of learning goals.
E	There is no work that can be graded.

INSTRUCTOR

Prof. Jogiyanto Hartono, MBA, CA, Ph.D

STUDENT'S RESPONSIBILITIES

1. Students have to come into the class punctually and not allowed to join the class more than 10 minutes late.
2. Students have to read and comprehend course materials before class meetings.
3. No recording of sessions.
4. Do all course assignments.

	5. Students are expected to attend all the scheduled meetings on time. Absenteeism policy follows the regulation stipulated by the academic office. 6. Follow all academic rules. 7. Final Paper is submitted at the final exam day. 8. Late submissions will not be accepted without prior approval by the lecturer. Extension only by granted for medical reasons upon receipt of a medical certificate. 9. Uphold academic integrity during studies.		
ACADEMIC INTEGRITY	Universitas Gadjah Mada does not tolerate any form of plagiarism as this is a severe violation of academic integrity. Plagiarism encompasses presenting someone else's words, work, opinions, or factual information as one's own without giving proper acknowledgment. When you copy someone else's work, you are plagiarizing. You must not copy sections of work (such as paragraphs, diagrams, tables, and words) from any other person, including another student or any other author. Cutting and pasting is a clear example of plagiarism. All discovered instances involve the negative grading of the assignment and result in a failure of the course (Grade = E). In the case of group work, the entire team members will fail the course (Grade = E). Participation is a fundamental part of the course. Punctuality and regular attendance in class are of prime importance for the successful completion of this course. Students will be expected to attend the class on time and remain in class until the end of the class session. It is imperative for students to comply with all assessed activities. If you have an emergency that leads you to come late, you should contact your instructor in advance.		
AUTHORIZATION	DATE	COURSE COORDINATOR	HEAD OF THE STUDY PROGRAM
	15 Agustus 2024	Prof. Jogiyanto Hartono, MBA, CA, Ph.D	

WEEKLY LEARNING ACTIVITY PLAN

Session	Course Sub-Objective	Topic	Material	Assignment	Facilitator
1	Explaining the syllabus	Overview of the syllabus	Lccturer Ppt	-	Lecturer
2 CO1	- After completing this session, students should have an understanding of the overall investment process. - Students should understand differences in financial and real assets and be able to identify the major components of the investment process. - Student should have a thorough understanding of the various financial instruments available to the potential investor. - Students should be able to identify key differences between open-end and closed-end investment companies.	**The Investment Environment, Asset Classes, Financial Instruments, Mutual funds and Other Investment Companies:** - Definition of Investment - Investment and Consumption - Understanding Utility - Direct and indirect investment - Kind of Financial Assets - Investment Company - Types of Mutual Funds - Hedge Funds	- Bodie – Ch 1,2 and 4) - Jogiyanto Modul 1, 2	**Unsynchronous:** - Self learning for the assigned materials. - Do the quiz in eLok. - Do the discussion in eLok forum. **Synchronous:** - Do the discussion in class meeting. - **Project#1 Data collection**: Collect monthly closing stock prices for 3 years period in the LQ-45. Calculate their descriptive statistics (*mean, standard deviation* dan *skewness*) and normality for the stock returns. - Submit all the projects (project#1 to #9) through eLok.	Lecturer Grup 3
3 CO2	- Student should have an insight as to the interpretation, composition, and calculation process involved in the various market indexes. Students should have considerable insight as to how securities are traded on both the primary and secondary markets. Students should understand the mechanics, risk, and calculations involved in both margin and short trading.	**Capital Market and How Securities are Traded:** - Money Market, Capital market, and Derivative market - How the securities market works - The Primary Markets and The Secondary Markets - Stock Market Indexes - Margin trading - Long sale and Short Sales	- Bodie Ch. 3 - Jogiyanto Modul 3 - 7	**Unsynchronous:** - Self learning for the assigned materials. - Do the quiz in eLok. - Do the discussion in eLok forum. **Synchronous:** - Do the discussion in class meeting. - **Project#2:** Collect IPO data for one year and calculate their initial returns.	Lecturer Grup 4
4 CO3	After studying this materials, students should be familiar with the role of a security's intrinsic value within the context of fundamental analysis. Students should be able to value a firm using the appropriate dividend discount model and the dividend discount-derived	**Equity Valuation Models:** - Book value, market value, nominal value, and intrinsic value of Common stock - Stock valuation	- Bodie Ch.18 - Jogiyanto Modul 8 - 10	**Unsynchronous:** - Self learning for the assigned materials. - Do the quiz in eLok. - Do the discussion in eLok forum. **Synchronous:**	Lecturer Grup 5

	price/earnings ratio. Students should understand the limitations of each of these models.	- The Dividend Discount Model - The Multiplier Approach		- Do the discussion in class meeting. .	
5 CO4	After covering the materials, students should be able to understand and calculate risk and return statistical measures, such as holding period returns, average returns, expected returns, and standard deviations.	**Risk, Return, and The Historical Record:** - The components of return - Realized return versus expected return - Arithmetic versus geometric means - Measuring Risk - Coeficient of Variation	- Bodie Ch. 5 - Jogiyanto Modul 15, 16	**Unsynchronous:** - Self learning for the assigned materials. - Do the quiz in eLok. - Do the discussion in eLok forum. **Synchronous:** - Do the discussion in class meeting.	Lecturer Grup 1
6 CO4	Students should be able to calculate standard deviation and return security portfolios. Students should have a full understanding of systematic and firm-specific risks. Students will demonstrate how diversification can reduce the amount of firm-specific risk in the portfolio by combining securities with differing patterns of returns. The student should be able to quantify this risk-reduction concept by calculating and interpreting covariance and correlation coefficients. Finally, the student should be able to conceptualize the importance of diversification.	**Risk, Return for Portfolio:** - Return and Risk - Return and Risk for two assets Portfolio - Return and Risk for many assets Portfolio - Diversification concept in portfolio	- Bodie Ch.5 - Jogiyanto Modul 17 – 19	**Unsynchronous:** - Self learning for the assigned materials. - Do the quiz in eLok. - Do the discussion in eLok forum. **Synchronous:** - Do the discussion in class meeting. - **Project#3 Stock Performance:** Calculate Returns, Risks and CVs for all LQ45 stocks using the data collected.	Lecturer Grup 2
7 CO5	After the completion of this session, students should be able to construct an optimal portfolio using a computer software. Students should also be able to work with a portfolio that allocates funds between a risky asset to determine a new efficient frontier.	**Capital Allocation to Risky Assets and Efficient Diversification:** - Attainable set and efficient set - Selecting optimal portfolio of risky assets - New efficient set	- Bodie Ch. 6, 7 - Jogiyanto Modul 20 - 22	**Unsynchronous:** - Self learning for the assigned materials. - Do the quiz in eLok. - Do the discussion in eLok forum. **Synchronous:** - Do the discussion in class meeting. - **Project#4 Diversification concept:** Create a portfolio containing randomly chosen 1 stock, then add with one more	Lecturer Grup 3

				stock until 20 stocks. Calculate risk for each portfolio containing 1, 2, 3, to 20 stocks and then plot.	
	Midterm				
8 CO5	- Upon completion of this session, students should have a full understanding of how to simplify Markowitz complex risk calculation using single index method. Students can also demonstrate to create an optimal portfolio using this simplified method.	**Single Index Models:** - Purpose of the single index model - Variance and covariance of single index model - Unique risk and systematic risk according to single index model - Portfolio risk using single index model - Portfolio optimal using single index model	- Bodie Ch.8 - Jogiyanto Modul 23, 24	- Self learning for the assigned materials. - Do the quiz in eLok. - Do the discussion in class meeting. - Do the discussion in eLok forum. - **Project#5 Portofolio Optimal:** Create an optimal portfolio using Markowitz model using Excel Solver	Lecturer Grup 4
9 CO6	After finishing this session, students should be able to explain the theory of the capital asset pricing model (CAPM), and be able to construct and use the capital market line and security market line. Students should also have a thorough understanding of factor models and the arbitrage pricing theory (APT) and to be able to use APT to identify mispriced securities.	**The Capital Asset Pricing Model, Arbitrage Pricing Theory and Multifactor Models of Risk and Return:** - Assumption of Capital Asset Pricing Models - Derivations of the model - The capital market line - The security market line - Test of the CAPM - Arbitrage Pricing Theory	- Bodie Ch. 9, 10 - Jogiyanto Modul 29	**Unsynchronous:** - Self learning for the assigned materials. - Do the quiz in eLok. - Do the discussion in eLok forum. **Synchronous:** - Do the discussion in class meeting.	Lecturer Grup 5
10 CO6	After completion of this session, students should be able to understand the concept of beta as a measure of systematic risk and also various kind of betas. Students also expected to be able to test the biasness of the beta and be able to make a correction of it.	**Beta:** - Concept of Beta - Market, fundamental and accounting betas - Bias in beta and its corrections	- Jogiyanto Modul 25, 26	**Unsynchronous:** - Self learning for the assigned materials. - Do the quiz in eLok. - Do the discussion in eLok forum. **Synchronous:** - Do the discussion in class meeting. - **Project#6 CAPM:** Plot all stocks in LQ45 along the Security Market Line.	Lecturer Grup 1

11 CO3	After studying this session, students should have a thorough understanding of the pricing, characteristics, and risk determinants of bonds. Students should be able to calculate yields and prices of various types of bonds and be able to identify factors used by the rating agencies in rating bonds. Also, students should have a thorough understanding of duration and how to calculate it for various bond portfolios. Students will be able to construct immunized bond portfolios.	**Bond Prices, Yields and Managing Bond Portfolios:** - Measuring Bond Yields - Bond Prices - Bond risk - Bond Strategies and Techniques - Bond theorem - Duration - Estimating bond price using duration Immunization	- Bodie Ch.14, 16 - Jogiyanto Modul 11 – 14	**Unsynchronous:** - Self learning for the assigned materials. - Do the quiz in eLok. - Do the discussion in eLok forum. **Synchronous:** - Do the discussion in class meeting. - **Project#7 SIM:** Create an optimal portfolio using SIM.	Lecturer Grup 2
12 CO6	After completion of this session, students should thoroughly understand the concept of market efficiency and how to make rational investment decisions based upon efficient markets. Students also understand the difference between informationally efficient market with decisionally efficient market. Students should have a thorough understanding of the many tests of market efficiency, the forms of market efficiency, and observed market anomalies.	**The Efficient Market Hypothesis:** - The Concept of an Efficient Market - Informationally efficient market - Decisionally efficient market - Types of market efficiency - How to Test for Market Efficiency - Evet study - Market Anomalies	- Bodie Ch.11 - Jogiyanto Modul 30 - 32	**Unsynchronous:** - Self learning for the assigned materials. - Do the quiz in eLok. - Do the discussion in eLok forum. **Synchronous:** - Do the discussion in class meeting.	Lecturer Grup 3
13 CO7	After completion of this session, students should be able to calculate potential payoffs and profits resulting from various option trading strategies. Students should also understand the difference between hedging and speculation using put and call otpions. Students should have an understanding of the factors affecting option prices. Students will be able to compute option prices using the Black Scholes value of an option.	**Options Markets and Option Valuations:** - Understanding options - Payoffs and Profits from Basic Option Positions - Some Basic Options Strategies - Option Valuation - The Black-Scholes model - Stock Index Options	- Bodie Ch. 20, 21 - Jogiyanto Modul 27, 28	**Unsynchronous:** - Self learning for the assigned materials. - Do the quiz in eLok. - Do the discussion in eLok forum. **Synchronous:** - Do the discussion in class meeting. - **Project#8 Event Study:** Calculate abnormal returns 1 week surrounding a specific important event.	Lecturer Grup 4

14 CO8	After studying this chapter, the student should be able to understand the concept and steps in managing portfolio based on CFA model. Students should be able calculate various measures and use these measures to evaluate investment performance.	**Portfolio Performance Evaluation and The Theory of Active Portfolio Management:** - Portfolio management process - Rebalancing a Portfolio of Financial Assets - Jensen alpha - Sharpe ratio (RVAR) - Treynor ratio (RVOL) - Jogi ratio (RMAR and RDIV) - M^2	- Bodie Ch 21, 22 - Jogiyanto Modul 33, 34	**Unsynchronous:** - Self learning for the assigned materials. - Do the quiz in eLok. - Do the discussion in eLok forum. **Synchronous:** - Do the discussion in class meeting. - **Project#9 Portfolio Evaluation:** Calculate performance of several mutual funds.	Grup 5
	FINAl EXAM				