



Carnegie Mellon University
Heinz College of Information Systems & Public Policy
School of Public Policy and Management

91-804-A: FINANCIAL ANALYSIS FOR MANAGERS

Course Information for Fall 2021 Semester

Introduction

Whether you are working in corporations, consulting firms, Not-For-Profit Organizations (NFPOs), governments, or plan to start your own business, the knowledge and skills of financial analytics will always help you make better decisions. This course focuses on the usefulness of financial accounting information and data as well as the applications of financial analytical tools to evaluate the viability, stability, and sustainability of both private and public organizations. It also covers key topics in cost analytics, financial budgeting, investment appraisal, and management control systems. Concepts from financial accounting, managerial accounting and finance will be discussed; primarily in the context of private for-profit sector, not-for-profit sector, and local government.

Prerequisites: None.

Learning Objectives

After completing this course, you should be able to - (a) explain clearly the concepts and techniques of accounting and finance; (b) develop and sharpen analytical skills via the application of analytical techniques on financial data and financial reports information; and (c) use the financial information to make important decisions, such as developing, approving, terminating, or deferring projects - in private (both for-profit and NFPO) as well as public organizations.

Course Structure

Module A: Financial Accounting Data and Analytics focuses on summarizing, reporting and analyzing an organization's financial viability, stability, and sustainability. This module covers a review of financial accounting concepts and principles, development of financial reports, financial analytical methods, financial item analysis, financial ratio analysis, and financial condition analysis.

Module B: Managerial Accounting and Finance focuses on analyzing, developing, implementing, controlling and evaluating an organization's activities. The module introduces cost analytics, breakeven analysis, activity-based costing (ABC), zero-based master budget techniques, financial mathematics, investment appraisal rules, performance measurement systems, variance analysis, and management control systems.

Course Schedule (This U.S. schedule is subjected to change if necessary)

Week	Date	Time: EDT	Topic	Due Date
1	Aug 31	18:20 – 19:30	[1] Concepts and principles of financial accounting	
		19:30 – 19:40	10 minutes coffee/tea break	
		19:40 – 21:10	[2] Review of financial analytical methods	
	Sep 02	17:00 – 18:00	Review session 1	
2	Sep 07	18:20 – 19:30	[3] Statement of Financial Position – Key items	
		19:30 – 19:40	Break	
		19:40 – 21:10	[4] Issues & analysis of Statement of Financial Position	
	Sep 09	17:00 – 18:00	Review Session 2	
3	Sep 14	18:20 – 19:30	[5] Statement of Financial Performance – Key items	
		19:30 – 19:40	Break	
		19:40 – 21:10	[6] Issues & analysis of Statement of Financial Performance	
	Sep 16	17:00 – 18:00	Review Session 3	
4	Sep 21	18:20 – 19:30	[7] Statement of Cash Flows – Key items, issues, and analysis	
		19:30 – 19:40	Break	
		19:40 – 21:10	[8] Notes and Supplementary Information	
	Sep 23	17:00 – 18:00	Review Session 4	
5	Sep 28	18:20 – 19:30	[9] Financial Ratio Analysis	
		19:30 – 19:40	Break	
		19:40 – 21:10	[10] Financial Ratio Analysis	
	Sep 30	17:00 – 18:00	Review Session 5	A1
6	Oct 05	18:20 – 19:30	[11] Financial Condition Analysis for States & Local Governments	
		19:30 – 19:40	Break	
		19:40 – 21:10	[12] Case Study and Revision	
	Oct 07	17:00 – 18:00	Review Session 6	
7	Oct 12	18:20 – 20:00	Mid-Semester Examination	A2
	Oct 14		No Review this week	
8	Oct 19	18:20 – 19:30	[13] Managerial Cost Analysis	
		19:30 – 19:40	Break	
		19:40 – 21:10	[14] Cost Allocation	
	Oct 21	17:00 – 18:00	Review Session 7	
9	Oct 26	18:20 – 19:30	[15] Activity-Based Costing	
		19:30 – 19:40	Break	
		19:40 – 21:10	[16] Case study	
	Oct 28	17:00 – 18:00	Review Session 8	
10	Nov 02	18:20 – 19:30	[17] Budgeting Techniques	
		19:30 – 19:40	Break	
		19:40 – 21:10	[18] Master Budget	
	Nov 04	17:00 – 18:00	Review Session 9	
11	Nov 09	18:20 – 19:30	[19] Case study	
		19:30 – 19:40	Break	
		19:40 – 21:10	[20] Time Value of Money – using financial calculator	
	Nov 11	17:00 – 18:00	Review Session 10	

12	Nov 16	18:20 – 19:30	[21] Investment Evaluation – using financial calculator	
		19:30 – 19:40	Break	
		19:40 – 21:10	[22] Case study – using financial calculator	
	Nov 18	17:00 – 18:00	Review Session 11	A3
13	Nov 23	18:20 – 19:30	[23] Accountability and Control System	
		19:30 – 19:40	Break	
		19:40 – 21:10	[24] Performance Measurement	
	Nov 25	17:00 – 18:00	No Review Session this week	
14	Nov 30	18:20 – 19:30	[25] Variance Analysis	
		19:30 – 19:40	Break	
		19:40 – 21:10	[26] Internal Control Systems and Revision 2	
	Dec 02	17:00 – 18:00	Review Session 12	A4
15	Dec 07	18:20 – 20:00	Final Examination – financial calculator is allowed.	

Course Instructor and Contact Details

Mail: Dr. T. K. Lim, Ph.D, FCMA, Grad Cert Higher Education
Teaching Professor of Finance and Policy
Carnegie Mellon University
Heinz College of Information Systems and Public Policy
5000 Forbes Avenue, Pittsburgh PA 15213

Australia Campus:

Carnegie Mellon University
220 Victoria Square,
Adelaide, SA5000, Australia.

E-mail: tklim@andrew.cmu.edu

Lectures Tuesday 18:20 to 21:10 via Zoom-91804

Consultation: Tuesday 21:10 to 22:10; or book an appointment via e-mail.

Recitation: Thursday, 17:00 to 18:00pm via Zoom-91804. Attendance is not mandatory, but highly recommended.

Teaching Assistant: Miss Jenny Liu

E-mail: Zelinl@alumni.cmu.edu

Note: Jenny is our CMU alumni who works as a consultant at EY Adelaide, South Australia. Due to time zone difference, she will be available for Zoom consultation from Friday 20:00 to 21:30 (EDT). Her role includes providing consultations and grading of 4 assignments. Please feel free to e-mail Jenny if you need help or advice.

Reference Books:

“*Financial Management for Public, Health, and Not-for-Profit Organizations*” 5th edition, Steven A. Finkler; Daniel L. Smith; Thad Calabrese; Robert Purtell; SAGE, 2017

“Financial Accounting – Tools for Business Decision Making” 8th edition, Paul Kimmel, Jerry Weygandt, and Donald Kiwso, 2016, John Wiley & Sons, Inc.

“Managerial Accounting – Tools for Business Decision Making” 7th edition, Jerry Weygandt, Paul Kimmel, and Donald Kiwso, 2015, John Wiley & Sons, Inc.

“Corporate Finance” 9th edition, Ross and Westerfeld, McGraw-Hill Irwin, 2009

Financial Calculator:

You are recommended to have a Sharp brand EL-738 financial calculator that can perform time value of money calculations. Please note that you can use another brand of financial calculator, such as HP or Texas Instrument, but you need to know how to operate it by referring to the manual.

Lecture Notes and Recordings:

Weekly lecture, recitation notes as well as other reading materials will be posted on Canvas. After the class delivery, all Zoom lecture video will also be available on Canvas.

The Zoom class meeting ID is 94816482874.

Course Assessment:

There are **six** assessment components, namely [1] Financial data analysis, [2] Financial condition analysis, [3] Mid-semester examination, [4] Zero-based master budget, [5] Investment evaluation and management control system, and [6] Final examination. You should attend all lectures as some in-class quiz works will allow participants to earn bonus marks.

After receiving your marks for projects, examinations, or final grade, you may e-mail the instructor for feedback on your result. Alternatively, you may request a formal second review of the result or grade via sending an e-mail to the instructor. However, the new and final result may vary depends on the outcome of the second assessment.

Please be informed that late submission of your work will not be counted unless you have obtained prior approval from the instructor.

Under certain special circumstances, you may request to sit Mid-Semester Exam and/or Final Exam separately from the class. For this request, you will need a medical certificate or other relevant documents that are acceptable by the instructor. Work-related reasons will not be considered. However, even though your request is approved, please note that the questions and problems for this supplementary exam will be different from those in the scheduled exam.

A summary of the assessment components is shown below:

Assignment 1: Financial Data Analysis [12 marks]

You can work individually or form a team of not more than two-persons for this assignment. Everyone will be assigned a public-listed company from healthcare/pharmaceutical industry. The financial data of the companies will be posted on Canvas. You will analyze the data using various analytical methods discussed in class, such as time series analysis, vertical analysis, cross section analysis, as well as peer and industry benchmarking. After you have completed the data analysis as per requirements, you need to upload a power-point file and an excel data file which contains your analysis, findings, and recommendations to Canvas-Assignment site by **30-Sep-2021** before 10PM (EDT). A Step-by-step Guide and PPT templates will be posted on Canvas for your reference and download.

Assignment 2: Financial Condition Analysis [10 marks]

Using the same financial data of the assigned company, you or your team will perform the financial condition analysis using various financial ratio analytical techniques, such as time series analysis, vertical analysis, cross section analysis, as well as peer and industry benchmarking. After you have completed the financial condition analysis as per requirements, you will need to upload a power-point file and an excel data file which contains the analysis, findings, and recommendations to Canvas-Assignment site by **12-Oct-2021** before 10.00PM (EDT). A Step-By-Step Guide and PPT templates will be posted on Canvas for your reference and download.

Assignment 3: Costing and Master Budget of an assigned 'business idea or project [12 marks].

You or your team will conduct an activity-based costing and prepare a zero-based master budget for a unique 'self-sustaining project'. Everyone or team must submit a project that is different from others and received approval from the instructor. After you have completed the cost analysis and master budget as per requirements, you will need to upload a power-point file and an excel data file which contains the costing and master budget to Canvas-Assignment site by **18-Nov-2021** before 10PM (EDT). A Step-By-Step Guide and PPT templates will be posted on Canvas for your reference and downloading.

Assignment 4: Investment Evaluation and Performance Measurement System [10 marks].

There are two parts in this assignment. The first part is based on the master budget prepared in Assignment 3, you or your team will perform investment appraisal using the common appraisal rules. You can apply the PB, NPV, IRR, ARR and PI rules. In conclusion, you will provide justifications and explanations on the feasibility of the 'business' or 'project'. In the second part of this project, you will design a balanced scorecard (BSC) system for the unique business in Assignment 3. After you have completed the investment evaluation and the design of a BSC as per requirements, you will need to upload a power-point file and an excel data file which contains your finding and the BSC to Canvas-Assignment site by **2-Dec-2021** before 10PM (EDT). A Step-By-Step Guide and PPT templates will be posted on Canvas for your reference and downloading.

Mid-Semester Examination [28 marks].

Mid-Semester Exam would be held on Tuesday, 12-October-2021 from 6.20pm to 8.00pm (EDT). Duration for this online Canvas exam with lock-down browser is 100 minutes. It includes 10 minutes reading time and 90 minutes exam time. The exam paper has 10 multiple-choice questions [10 marks], 3 short-answer questions [6 marks] and 3 problems [12 marks]. The scope of this exam covers all topics presented and discussed from Lectures 1 to 6. Please bring a normal calculator.

Final Examination [28 marks].

Final Exam would be held on Tuesday, 7-Dec-2021 from 6.20pm to 8.00pm (EDT). Duration for this online Canvas exam with lock-down browser is 100 minutes. It includes 10-minutes reading time and 90-minutes exam time. The exam paper has 10 multiple-choice questions [10 marks], 3 short-answer questions [6 marks] and 3 problems [12 marks]. The scope of this exam covers all topics presented and discussed from Lectures 8 to 14. Please bring a **financial calculator**.

Table below summarizes the distribution of marks across the 6 assessment components: Note that **the date and time are based on Adelaide time zone**.

A) Assignments	Scores	Due date & time
1. Financial Data Analysis	12 marks	30-Sep-2021: 10:00PM
2. Financial Condition Analysis	10 marks	12-Oct-2021: 10:00PM
3. Costing and Master Budget	12 marks	18-Nov-2021: 10:00PM
4. Investment Evaluation & BSC	10 marks	02-Dec-2021: 10:00PM
B) Examinations		
5) Mid-Semester Examination*	28 marks	12-Oct-2021: 6.20PM to 8.00PM
6) Final Examination*	28 marks	07-Dec-2021: 6.20pm to 8.00pm
<u>Total score:</u>	<u>100 marks</u>	

*Online Canvas exam with lockdown browser and Zoom invigilation.

Guideline for Grading Scale and Score Range:

Grade	Description	Points	Score Range (in marks)
A+	Exceptional	4.33	97 to 100.00
A	Excellent	4.00	93 to 96.99
A-	Very Good	3.67	90 to 92.99
B+	Good	3.33	86 to 89.99
B	Acceptable	3.00	80 to 85.99
B-	Fair	2.67	76 to 79.99
C+	Poor	2.33	70 to 75.99
C	Very Poor	2.00	66 to 69.99
C-	Minimal Passing	1.67	60 to 65.99
R	Fail	0.00	0 to 59.99

Please note that there is no rounding up of your marks. The following descriptive statements are guidelines used to grade your assessment components:

- **Grade A+ (Exceptional)** Extraordinary piece of work for a graduate student. Work at this level is distinctively outstanding, ultra-high level of critical thinking, innovative ideas, crystal clear yet precise explanations with solid justifications and references, very sophisticated methodologies with professional level of writing and communication skills. Work is extraordinary; attain the highest academic and professional quality.
- **Grade A (Excellent)** Excellent work of a graduate student. Work at this level is unusually thorough, very high-level of critical thinking, innovative, superior explanations/justifications, sophisticated methodologies, well written and superb presentation. Work is of outstanding, professional quality.
- **Grade A- (Very Good)** Strong work for a graduate student. Work at this level shows high-level of critical thinking, some signs of creativity, is thorough and well-reasoned, good presentation, indicates strong understanding of appropriate methodological or analytical approaches, and meet the professional standard.
- **Grade B+ (Good)** Competent and sound work for a graduate student; well-reasoned and thorough, good presentation, reasonable level of critical thinking, methodologically sound, but not especially creative or insightful or technically sophisticated. This is the graduate student grade that indicates the student has accomplished the objectives of the course, with acceptable professional standard.
- **Grade B (Acceptable)** Fair work for a graduate student. Moderately thorough, some level of critical thinking, well-reasoned, demonstrating competency in the key course objectives but showing some indications that understanding of some key issues is less than complete. Methodologically or analytical approaches used are adequate but student has shown one or more weaknesses or limitations.

- **Grade B-** (Fair) Basic work for a graduate student. Meets the basic expectations for a graduate student in the course; low level of critical thinking, understanding of salient issues is somewhat incomplete, methodological or analytical work performed in the course is basic, although adequate.
- **Grade C+** (Poor) Inadequate work for a graduate student; barely meets the basic expectations for a graduate student in the course. Work is inadequately developed or flawed by some errors and misunderstanding of important issues. Methodological or analytical work performed is deficient and barely demonstrates the knowledge or technical competence expected of graduate students.
- **Grade C** (Very Poor) Weak work for a graduate student; hardly meet the basic expectations for a graduate student in the course. Work is very poorly developed or flawed by numerous errors and lack of understanding of important issues. Methodological or analytical work performed is very weak and fails to demonstrate the knowledge or technical competence expected of graduate students.
- **Grade C-** (Minimal Passing) Very weak work for a graduate student; hardly meet the minimal expectations for a graduate student in the course. Work is carelessly developed or full of errors and missing the important issues. Methodological or analytical work performed is mostly wrong and fails to demonstrate the knowledge or technical competence expected of graduate students.
- **Grade R** (Fail) Work fails to meet even minimal expectations for course credit for a graduate student. Performance has been consistently weak in methodology and understanding, with serious limits in many areas. Weaknesses or limits are pervasive.
- **Grade I** (Incomplete)

Academic Integrity

The Heinz College takes very seriously its mission to produce graduates who are committed to ethical behavior in all phases of their professional lives. In this regard, the college views any cheating and plagiarism as serious offences. You are required to review thoroughly the material on academic integrity presented in master's program handbooks and to monitor your own actions carefully to prevent even the appearance of violations of academic integrity guidelines. Any violations of academic integrity in this class will have the following consequences: (a) zero mark for assignments or exams; and (b) in more serious offences, failing the class.

You are encouraged to consult the instructor or Teaching Assistant on assignments or case studies when you have doubts. Group collaboration is defined as “group discussions or brain-storming on the issues of an assignment or a case, followed by submission of independent work **with your own words**”. It is wrong for you to submit an assignment in which one or more answers represent the work of other classmates, or materials from internet, or any sources without the written permission of the instructor.

Course Web Page

This course has set up the following URL: <http://cmu.edu/canvas> which represents an entrance point to an integrated course management system called Canvas.

All students who are registered for 91-804 may login using their Andrew ID and passwords. After log-in, you will enter a Canvas “homepage” with links to all CMU courses (such as this one) that have developed custom Web pages using Canvas LMS technology. Click on “91804-Financial Analysis for Managers”, and you will be transferred to a Canvas web site for this course.

The site allows you to access a number of resources, including:

- Course syllabus
- Lecture notes in power point file
- Course updates and announcements
- Links to other Internet resources

You should form a habit to check the course web page at least twice a week to stay current with course issues. Please use the on-line help to familiarize yourself with Canvas features.

Accommodations for Students with Disabilities:

If you have a disability and are registered with the Office of Disability Resources, I encourage you to use their online system to notify me of your accommodations and discuss your needs with me as early in the semester as possible. I will work with you to ensure that accommodations are provided as appropriate. If you suspect that you may have a disability and would benefit from accommodations but are not yet registered with the Office of Disability Resources, I encourage you to contact them at access@andrew.cmu.edu.

Statement of Support for Students' Health & Well-being

Please take good care of yourself. Do your best to maintain a healthy lifestyle this semester by eating well, exercising, avoiding drugs and alcohol, getting enough sleep and taking some time to relax. This will help you achieve your goals and cope with stress.

If you or anyone you know experiences any academic stress, difficult life events, or feelings like anxiety or depression, we strongly encourage you to seek support. Counseling and Psychological Services (CaPS) is here to help: call 412-268-2922 and visit <http://www.cmu.edu/counseling/>. Consider reaching out to a friend, faculty or family member you trust for help getting connected to the support that can help.