

Chiang Kai Shek College

菲律賓中正學院

CKS COLLEGE INSTITUTIONAL VISION-MISSION

Education for excellence, geared towards a united Filipino-Chinese community equipped with the basic academic skills, wisdom, and the virtues of propriety, righteousness, incorruptibility and honor, committed to nation building and international concern.

CORE VALUES

Chiang Kai Shek College challenges stakeholders to lead their lives in accordance to the four Confucian virtues:

- Li (禮, propriety, proper rite)
- Yi (義, righteousness or justice)
- Lian (廉, incorruptibility)
- Chi (恥, honor, sense of shame)

Concomitant to attaining these values are the cultivation and sustenance of the holistic approach to education, an all-around development in five domains:

- Dé (德, moral)
- Zhì (智, intellectual)
- Tì (體, physical)
- Qún (群, team spirit)
- Měi (美, aesthetic)

Based on these Confucian moral values, CKS College simplifies its Core Values as follows:

- Relevant Education
- Good Character
- Committed Service

COLLEGE VISION STATEMENT

To become the preferred Filipino-Chinese college that offers high quality, learner-centered, and outcome-based education to future entrepreneurs, professionals, and managers in the fields of business, IT, and education.

COLLEGE MISSION STATEMENT

CKS College is a preeminent Filipino-Chinese college that seeks to grow, educate, and train future entrepreneurs and leaders who will make significant contributions to society.

It endeavors to create a learning environment that balances theory with practice, so as to equip students with the necessary knowledge, skills, and values that will enable them to succeed in their respective fields.

In partnership with CKS College faculty, staff, and administration, and through stronger linkages with various organizations, CKSC alumni, businessmen, and professionals, it shall continuously make its degree programs more adaptive and relevant to changing educational, social, technological, and business environments, thereby bridging the gap between academe and industry.

It shall supply various sectors with capable, competent, and pro-active educators, accountants, managers, marketers, IT experts, and entrepreneurs who shall be known for their commitment, excellence, passion, and integrity.

CKS COLLEGE INSTITUTIONAL OBJECTIVES

1. To train bright and capable leaders of society
2. To prepare people for the task of building a better and stronger nation
3. To harvest and share great ideas from Eastern and Western cultures
4. To enhance friendship and understanding between Filipinos and Chinese

PROGRAM OUTCOMES (PO)

1. Common to All Programs

- 1.1 Recognize and examine the trends and developments in one's field of specialization.
- 1.2 Effectively communicate orally and in writing using English, Filipino, mother tongue language, and an appropriate Foreign Language required by the industry.
- 1.3 Work effectively and independently in multi-disciplinary and multi-cultural teams.
- 1.4 Act in recognition of professional, social, and ethical responsibilities.
- 1.5 Preserve and promote Filipino historical heritage and cultural values.
- 1.6 Engage in ongoing, voluntary, and self-motivated pursuit of knowledge (lifelong learning).
- 1.7 Demonstrate the values of propriety, righteousness, incorruptibility, and honor.

2. Common to the Business and Management Discipline

- 2.1 Perform the basic management functions, such as planning, organizing, staffing, leading, and controlling.
- 2.2 Apply proper decision making tools to critically, analytically, and creatively solve problems and drive results.
- 2.3 Apply the basic concepts that underlie each of the functional areas of business (marketing, finance, human resources management, production and operations management, information technology, and strategic management) and employ these concepts in various business situations.
- 2.4 Apply information and communication technology (ICT) skills as required by the business environment.
- 2.5 Work effectively with other stakeholders and manage conflict in the workplace.
- 2.6 Employ entrepreneurial skills in planning and implementing business activities.
- 2.7 Demonstrate high personal moral and ethical standards, organizational citizenship, and corporate social responsibility.

3. Specific to the Accountancy Program

- 3.1 Resolve business issues and problems, with a global and strategic perspective using their knowledge and technical proficiency in the areas of financial accounting & reporting, cost accounting & management, management accounting & control, taxation, and accounting information systems;
- 3.2 Conduct accountancy research through independent studies of relevant literature and appropriate use of accounting theory and methodologies;
- 3.3 Employ technology as a business tool in capturing financial and non-financial information, generating reports and making decisions;
- 3.4 Apply knowledge and skills that will enable them to successfully respond to various types of assessments (including professional and certifications);
- 3.5 Confidently maintain a commitment to good corporate citizenship, social responsibility and ethical practice in performing functions as an accountant.
- 3.6 Use financial & non-financial information to conduct sustainability and strategic audit of various business organizations.

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COURSE SYLLABUS

Course Code : ACMGSC / QUANTI Course Title : Management Science / Quantitative Techniques in Business Credit : 3.0 Units Instructor : Class Day : Class Time : Classroom : Consultation Schedule :	Course Description: <p>This 3-unit course will introduce students to deterministic and stochastic models in operations research. Students will learn to formulate, analyze, and solve mathematical models that represent real-world problems. In the first two-thirds of the course, deterministic models, in which no uncertainty exists, will be discussed. This section of the course will cover linear programming and the simplex algorithm, as well as related analytical topics. It will also introduce other types of mathematical models, including transportation, integer, and non-linear models. The remaining third of the course will cover stochastic models that handle the randomness inherent in most real systems. Topics will include inventory analysis, forecasting, and decision theory. The key emphasis is on problem formulation, model building, data analysis, solution techniques, and evaluation of alternative designs/processes in complex systems.</p>
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Course Outcomes	Program Outcomes Addressed by the Course Outcomes
Acquire basic knowledge, principles and key theories about management science/operations research.	3.1 Resolve business issues and problems, with a global and strategic perspective using their knowledge and technical proficiency in the areas of financial accounting & reporting, cost accounting & management, management accounting & control, taxation, and accounting information systems;
Apply the various key concepts and principles of operations research to management problems or cases	3.1 Resolve business issues and problems, with a global and strategic perspective using their knowledge and technical proficiency in the areas of financial accounting & reporting, cost accounting & management, management accounting & control, taxation, and accounting information systems;
Realize the role of mathematics and statistics in analytical decision making in business	2.2 Apply proper decision making tools to critically, analytically, and creatively solve problems and drive results. 2.3 Apply the basic concepts that underlie each of the functional areas of business (marketing, finance, human resources management, production and operations management, information technology, and strategic management) and employ these concepts in various business situations.
Appreciate the role of managers as decision makers.	2.2 Apply proper decision making tools to critically, analytically, and creatively solve problems and drive results. 2.3 Apply the basic concepts that underlie each of the functional areas of business (marketing, finance, human resources management, production and operations management, information technology, and strategic management) and employ these concepts in various business situations.
Present written and computer-based solutions to cases orderly, neatly and professionally	2.4 Apply information and communication technology (ICT) skills as required by the business environment. 3.6 Employ technology as a business tool in capturing financial and non-financial information, generating reports and making decisions;

Course Requirements:

- Class Participation. Attendance to all lectures and required alternative activities is highly encouraged. Students are expected to actively participate in discussions and to be respectful of each other’s views, opinions, and insights. It is part of the student’s responsibility to prepare for each class session by reading the assigned materials (textbook, references, journals, websites, hand-outs, etc.), as indicated in the Course Plan.
- Quizzes. Pre-discussion and post-discussion quizzes shall help assess student learning on a more regular basis. Such quizzes are unannounced. Pre-discussion quizzes shall help assess how well the student prepared for the session. They shall help students develop lifelong learning skills. Post-discussion quizzes shall help assess how much students learned from lectures and classroom discussions.
- Long Exams. Two long exams shall be administered before midterms and another two shall be administered after midterms. The schedule for the long exams are indicated in the Course Plan.
- Midterm & Final Exams. The Midterm and Final Exams shall be comprehensive and shall be administered as per the schedule set by the CKS College HEI Deans’ Council.
- Case Analysis. Students shall be assigned to groups and each group shall be assigned a case to work on. Written case reports shall be submitted prior to midterms. Students are required to follow the format provided. The schedules for case presentations and defense are indicated in the Course Plan. Cases are selected and assigned to help students gain a deeper understanding of concepts learned as they observe, analyze, and critique how companies design, implement, and monitor strategies.
- Reporting. Reports are important course output which will give the student an opportunity to synthesize and apply various lessons learned in the course. Proper presentation skills and proper use of presentation materials should also be exhibited during the oral presentation and defense.

Grading System:		
Midterm Class Standing	=	Quizzes & Exams *70% + Recitation *30%
Midterm Grade	=	Midterm Class Standing *60% + Midterm Exam * 40%
Final Class Standing	=	Quizzes & Exams Before & After Midterms * 50% + Recitation Before & After Midterms * 20% + Project or Research Output *30%
Final Grade	=	Final Class Standing * 60% + Midterm Exam * 20% + Final Exam * 20%

Grade Score Equivalent (GSE):			
Rating	GSE	Rating	GSE
98 to 100	1.00	77 to 79	2.75
95 to 97	1.25	75 to 76	3.00
92 to 94	1.50	< 75	5.00
89 to 91	1.75	No Grade	NG
86 to 88	2.00	Authorized	AW
83 to 85	2.25	Withdrawal	
80 to 82	2.50		

Textbook & References:

Render, B., Stair Jr., R.M. Hanna, M.E. (2017). *Quantitative analysis for management studies* (11th ed.). Jurong, Singapore: Pearson Education South Asia

San Cristobal Mateo, J. R. (2015). *Management science, operations research and project management*. Surrey, England: Gower Publishing Limited.

Srinivasan, G. (2017). *Operations research: Principles and applications* (3rd ed.). New Delhi: Asoke K. Ghosh, PHI Learning Private Limited.

Swift, L., Piff, S. (2014). *Quantitative methods for business, management & finance* (4th ed.). New York, NY: Palgrave Macmillan.

Williams, T.A., Anderson, D.R., Sweeney, D.J., Camm, J.D., Cochran, J.J., Fry, M.J., Ohlmann, J.W. (2016). *An introduction to management science: Quantitative approaches to decision making* (14th ed.). Boston, MA: Cengage Learning.

Course Plan:

Week	Inclusive Date/s	Learning Outcome/s	Topic/s	Reference/s	Teaching-Learning Activities	Assessment Methods
1		<ul style="list-style-type: none">Define MS/OR based on the lecture.Identify the various steps involved in quantitative analysis	<ul style="list-style-type: none">Houserules/Classroom PoliciesGroupings	<ul style="list-style-type: none">Suggested Readings:<ul style="list-style-type: none">Render, Stair, Hanna Chapters 1 and 2.	<ul style="list-style-type: none">LectureDiscussionGroup DynamicsReportingExercises	<ul style="list-style-type: none">RecitationQuizClass Participation
2		<ul style="list-style-type: none">Appreciate the development of MS/OR as a discipline and as a school of thought of studying management	<ul style="list-style-type: none">Houserules/OrientationWhat is Management Science/Operations Research (MS/OR)?History of MS/OR Steps in Quantitative Analysis			
3						
4-6		<ul style="list-style-type: none">Appreciate the role of mathematics and statistics as a tool in effective decision making for managersEmploy the appropriate formulas for decision makingApply one’s knowledge of the basic rules of probability in decision makingConstruct payoff tables proficientlyConstruct decision tree for analysis	<ul style="list-style-type: none">Decision Making Under UncertaintyDecision Making Under RiskDecision Tree Construction and Analysis	<ul style="list-style-type: none">Suggested Readings:<ul style="list-style-type: none">Render, Stair, Hanna Chapter 3.	<ul style="list-style-type: none">LectureDiscussionConsultationCase StudyExercisesLaboratory Exercises	<ul style="list-style-type: none">RecitationQuizSeatworkGraded recitationGroup presentationProblem solving
7		<ul style="list-style-type: none">Perform a simple linear regression and appreciate its use in forecasting demandApply statistical methods to data set with proficiency using a scientific calculator or a spreadsheet.	<ul style="list-style-type: none">ForecastingTime-series AnalysisSimple Linear RegressionCorrelation Analysis	<ul style="list-style-type: none">Suggested Readings:<ul style="list-style-type: none">Render, Stair, Hanna Chapter 4 and 5.	<ul style="list-style-type: none">LectureDiscussionConsultationCase StudyLaboratory Exercises	<ul style="list-style-type: none">QuizCase PresentationSeatworkGraded recitationProblem solving
8						
9		M I D T E R M E X A M I N A T I O N				
10-12		<ul style="list-style-type: none">Determine the economic order quantity that will help a firm minimize its total annual inventory costCalculate the breakeven point for a firm given its revenue and cost data	<ul style="list-style-type: none">Inventory ManagementEconomic Order QuantityBreakeven Analysis	<ul style="list-style-type: none">Suggested Readings:<ul style="list-style-type: none">Render, Stair, Hanna Chapter 6.	<ul style="list-style-type: none">LectureClass DiscussionCase AnalysisLaboratory Exercises	<ul style="list-style-type: none">SeatworkGraded recitationProblem solving
13-15		<ul style="list-style-type: none">Formulate a linear program using the given information in a word problemSolve the linear program formulated using the graphic methodSolve linear programs using the simplex method	<ul style="list-style-type: none">Linear Programming: Graphical MethodLinear Programming: Simplex MethodThe Dual Program	<ul style="list-style-type: none">Suggested Readings:<ul style="list-style-type: none">Render, Stair, Hanna Chapter 7-9	<ul style="list-style-type: none">LectureClass DiscussionDiscussionQuizLaboratory Exercises	<ul style="list-style-type: none">QuizEssay Writing

Week	Inclusive Date/s	Learning Outcome/s	Topic/s	Reference/s	Teaching-Learning Activities	Assessment Methods
16-17		<ul style="list-style-type: none"> Formulate the dual program from a given primal program Develop the transportation tableau from source to destination for a given case or problem. Develop an initial solution and test a solution to the transportation problem for improvement of cost. 	<ul style="list-style-type: none"> The Transportation Model: An Extension of the Linear Programming Model Northwest Corner Rule/Stepping Stone/Modified Methods 			
18		FINAL EXAMINATION				

Course Policies:

Academic Integrity	CKSian values include propriety, righteousness, incorruptibility, and honor. Students should exercise such values both inside and outside the classroom. Students are expected to value the importance of education and should recognize that such involves hard work and sacrifice. Academic dishonesty— whether in the form of plagiarism (intentional or unintentional), cheating in exams and assignments, non-contribution to the group project, or the like— shall not be tolerated and shall strictly be subjected to the penalties indicated in the CKS College Student Handbook.
Tardiness	A student who incurs more than 12 hours of absences or twenty (20) percent of the prescribed number of class periods during the semester would be given a failing grade and given no credit for the course or subject. A student may be accepted in class even if he/she arrives late provided that it is not more than 25% of the class/session. A recorded tardiness is considered 1/3-absence, which if added to two other recorded tardiness will be equivalent to a full absence recorded against a student.
Use of Mobile Devices	Once inside the classroom, the student is expected to focus on his role as a learner. Distractions should be avoided. Students are not allowed to use mobile phones, tablets, or other gadgets in class. Mobile phones should be switched off or placed in silent mode.
Make-Up Quizzes/ Exams	No make-up quiz shall be given to a student who is absent for the class period. For pre-discussion quizzes administered at the beginning of the class period, students are not allowed to enter the classroom in the middle of the quiz. Latecomers are advised to wait outside the classroom until the students present are finished taking the quiz. No make-up quiz shall be given to latecomers. For long exams, make-up exams may be given only upon presentation of an approved Application for Excuse Absence. For students who are unable to take the Midterm or the Final Exams, an approved Application for Excuse Absence and an approved Application for Special Examination should be submitted to the instructor before the make-up exam can be scheduled and administered.
Group Contribution in Project/s	The groupings for the project/s shall be determined at the beginning of the semester. Once assigned to a group, students shall not, under any circumstance, be allowed to switch groups. Students are expected to exercise teamwork and contribute meaningfully to the group project. A duly accomplished peer evaluation form shall be submitted by each group member along with the group's written report.
Consultation	If needed, students are highly encouraged to schedule consultation with the faculty within the consultation schedule provided. Such shall be conducted at the consultation area in the CKS College Faculty Room.
Others	Both student and faculty are responsible for maximization of class contact hours to ensure satisfaction of course learning outcomes. Once the class period has started, no one is allowed to leave the classroom, unless officially requested by the Administration Office and/or allowed by the instructor. Leaving the classroom at any time within the scheduled class period, whether for short or extended periods of time, is strongly discouraged. Students should go to the toilet before or after class, or during the scheduled break within 3-hour class periods.

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