

**Department of Agricultural, Food, and Resource Economics  
Rutgers University, New Jersey**

**Graduate Program in Food and Business Economics**

**Industrial Organization of the Food Systems (16:395:504)**

**Spring 2022**

**Instructor:** Dr. Sanjib Bhuyan  
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**Office Hours:** drop by or make an appt (email only) for in-person or Zoom meetings.

**Class Meeting Time and Location:** Thursday, 4<sup>th</sup> and 5<sup>th</sup> period (2:00-5:10 pm), Cook Office Bldg. #118

**Pre-requisite:** Graduate microeconomics (16:220:501 or 16:395:505).

**Course Description and Objectives:** This is a course in industrial organization, i.e., study of firm behavior in markets in general, and in the food marketing system in particular. Industrial organization focuses on firm behavior in imperfectly competitive markets, which appear to be far more common than the perfectly competitive markets students study in microeconomics courses. The field of industrial organization analyzes the acquisition and use of market power by firms, strategic firm behavior and interactions among firms, and the role of government competition policy.

This course is designed as a food industry and business-oriented industrial organization course with less emphasis on regulation and policy. We will approach this subject from both theoretical and applied perspectives. Learning how firms interact in different markets and how to model and measure such interactions, understanding what strategic and non-strategic factors influence the market performance, how firm interaction impact economic welfare, and what and why of public policies related to industrial organization is seen as some of the learning outcomes in this course. Your work throughout the semester should show strong and coherent evidence of these learning objectives, embodied primarily in the writing and thinking you do.

Assuming that you are present, participate in discussions, speak to me about anything and everything related to this course, and that you do the reading and the work required, then by end of the course you will be able to:

- a) Understand the importance of industrial organization in a modern economy
- b) Understand various forms of competition that exists in the market
- c) Understand various forms of strategies that firms employ to compete in the market place
- d) Able to define research questions based on your understanding of the industrial organization of certain markets,
- e) Develop research hypotheses to address those research questions and develop appropriate research design to reflect the research hypotheses, and
- f) Present scientific research-based oral and written reports.

**Course Materials:** The primary text for this course is:

Waldman, Don E. and Elizabeth J. Jensen (**WJ**) *Industrial Organization: Theory and Practice*, 4<sup>th</sup> ed., Boston: Pearson (Addison Wesley), 2013. We will use this text to begin discussion in classes and to frame issues addressed in written work. Additional REQUIRED readings are listed at the end of this syllabus.

**Recommended/complementary:** Students are encouraged to scan the Bloomsburg BusinessWeek, Wall Street Journal, Financial Times, business section of the New York Times, or The Economist magazine for articles relevant to the topics covered in the course.

**COPYRIGHT WARNING!** Students may not **post** ANY class materials, such as syllabus, slides, tests, examinations, and other professor-created documents, including those the notes they take in class (on paper or in electronic media or any media) to sites such as Course Hero. ANY and ALL class materials are subject to the IP rights of the professor as defined in the Rutgers Policy. Sharing class notes via means other than posting, e.g., giving another student a copy of your class notes, is acceptable.

**Sakai:** If you are registered for this course, you should be able to access this course (16:395:504) in your Sakai page (go to <https://sakai.rutgers.edu/portal> and login using your RUID and PW). We will be using Sakai extensively for accessing course materials (syllabus, articles, assignments, quiz/exams from past, etc.), submitting assignments, and communicating with the course instructor. **Make sure you USE the RU email assigned to you – that’s what Sakai uses and I will be using.**

### Class Outline and Assignments

(This is a dynamic outline and is subject to change)

Class meetings	Topics and Reading assignments	HW and Term paper <sup>1</sup>
1	<b>The Foundation:</b> <ol style="list-style-type: none"> <li>1. Industrial organization – what, how, and why? (WJ Ch. 1; articles/handouts)</li> <li>2. The firm and its costs – WJ Ch 2 (self-study)</li> <li>3. Food system industrial organization – what and why? (articles/handouts)</li> </ol>	Course syllabus explained  Review Ch 2 on firms and cost on your own and bring questions to class.  Article discussions (part of HW)
2, 3, 4	<b>Market Structure</b> <ol style="list-style-type: none"> <li>1. Competition and Monopoly (WJ Ch. 3; articles/handouts)</li> <li>2. Market Structure, Market Power and Performance (WJ Ch. 4, except section 4.3; Ch 6; articles/handouts)</li> <li>3. Monopoly practices (WJ Ch. 5; articles/handouts)</li> </ol>	Discuss your <i>thoughts on</i> and <i>plans for</i> your term paper.  Submit <i>term paper</i> outline, receive comments, and finalize <i>outline</i>  HW [(i) end of the chapter problems, one even number problem per chap - consult if encounter problem; (ii) empirical estimation of market power]  Article discussions (part of HW)

<sup>1</sup> Some HW assignments will involve team work to encourage cooperative learning.

5, 6, 7	<b>Oligopoly and Game Theory</b> 1. Game Theory and Firm behavior (WJ Ch. 7; articles/handouts). 2. Oligopoly (WJ Ch. 8 and 9; articles/handouts)	HW [(i) end of the chapter problems, one even number problem per chap - consult if encounter problem; (ii) empirical estimation of price and quantity reaction functions)]  Article discussions (part of HW) Discuss progress on the term paper and get feedback, and revise term paper as needed
8, 9, 10, 11, 12, 13	<b>Firm strategies, Firm conduct, and Non-price competition</b> 1. Entry Deterrence (WJ Ch. 11 & 12; articles/handouts) 2. Vertical Integration and Horizontal Merger (WJ Ch 17 plus section 4.3 from Ch 4; articles/handouts) 3. R&D (WJ Ch 15; articles/handouts) 4. Product differentiation and Advertising (WJ Ch 13 and Ch 14; articles/handouts) 5. Price Discrimination (WJ Ch. 16; articles/handouts)	HW [(i) end of the chapter problems, one even number problem per chap - consult if encounter problem; (ii) empirical analysis of issues on integration and mergers; empirical analysis of impact of advertising on price and profitability)]  Discuss progress on the term paper in class and get feedback.  Submit draft term paper and get feedback to revise as needed.  Article discussions (part of HW)
14	<b>Public Policy toward Industries</b> Antitrust and Regulation (WJ Ch 18; articles/handouts)	HW [(i) end of the chapter problems, one even number problem per chap - consult if encounter problem; (ii) write a brief on the major antitrust cases involving the US food firms)]  Revise term paper for the oral presentation.  Article discussions (part of HW)
15	<b>Oral presentation of the term paper</b>	Prepare the final written term paper for submission (see due dates elsewhere in this syllabus).

**Teaching Methods and Expectations:** A variety of methods will be used to accomplish the course objectives. These methods include instructor's lectures, case discussions, exams, videotapes, group presentations and papers, and most importantly class discussion. Lectures and discussions will be used to integrate the topics covered in the course, to explain and amplify information contained in the reading assignments, and to present supplementary material. When possible, outside guest lecturers will be invited to speak to the students on relevant topics. The

course is designed to elaborate and clarify the material in the textbook and outside material, stimulate your thinking about key issues related to food marketing, and relate the covered material to real world situations. Emphasis will be placed on active student participation and discussions. Ideally, I will like to create an open atmosphere in which we can creatively and imaginatively analyze ideas and concepts. In the process we will add to our intellectual skills and become more analytical in our thinking about events related to (or not) food marketing.

You are expected to come to class prepared to discuss the relevant issues. You are strongly encouraged to and are expected to participate actively during class discussions and analyses. You are responsible for the material in the reading assignments and materials handed out in class. It is particularly important that you do the application readings and prepare any discussion questions BEFORE CLASS. These form the basis of class discussion, in which you are expected to participate and which will be graded. ***This is a graduate course and as a graduate student, it is expected that you will step beyond what is taught in class, read additional and relevant materials, and also pursue topic(s) of interest in-depth.*** Note that for each hour of the class, you may need to devote at least 2/3 hours outside the classroom.

**Evaluations:** The main question of interest here is “What did you learn in this class that you did not know before?” One enrolls in a course to learn something new or to expand the horizon of something already learnt, and I hope this course will be able to offer students exactly that. To evaluate student understanding and progress, there will be **2 tests**. Each test will include both multiple-choice and short essay-type questions focusing on relevant concepts, theories, facts, analytical procedures, and models. In addition, there will be **homework and a term project** during the semester. Details of the term project are given separately.

Examination dates are given below so that you can plan accordingly.

<b>March (end of the week before spring break)</b>	<b>1<sup>st</sup> exam (take home)</b>
<b>April end/beg May</b>	<b>2<sup>nd</sup> exam (take home)</b>

**Grading:** It is my responsibility to prepare appropriate evaluation to evaluate your progress in learning and give feedback regularly. Grading will be based on written work (tests, homework, and term paper) and class participation. I aim for fairness in grading. Please remember that grading is a subjective process whose end is not always satisfactory to everyone. Also please remember that your grade in this course is not a prediction of your success after graduation, nor is it an evaluation of your worth as a person. The final grade for the course will be based on:

Two exams @100 per exam	200
Term project (see points breakdown under “Important term paper deadlines”)	100
HW, including review and discussion of articles in class	50
<b>TOTAL</b>	<b>350</b>

**Grades:** A: GE 90% and F: LE 60%. *Improvement during the semester will be taken into consideration in determining course grades in borderline cases. University policy regarding incomplete grades will be followed.*

**My commitment regarding Teaching and Learning:** I see my role as a teacher to be a facilitator of learning. My goals include, among others, the transfer and discovery of knowledge and the development of YOUR abilities to think critically and analytically. This is accomplished through both theory and practical work in- and outside the classroom. Teaching and learning require a collaborative effort where I assume the primary responsibility for guiding the learning process and YOU assume the personal responsibility for learning. In this collaborative approach, I expect YOU to participate actively and provide feedback throughout the semester to improve my teaching and your learning.

Even after a decade of teaching this and other courses, I still consider myself learning continuously how to teach better. Therefore, I am committed to continuous improvement in the quality of teaching and learning. To achieve this, I will use several mechanisms. First, you are invited to speak to me freely at any time about any aspect of the

course. Second, we may conduct a mid-terms evaluation of the course. At any time, you may also indicate the merits and demerits of the course and your suggestions for improvements. Your feedback will help me gauge how the course is progressing and make it a worthwhile learning experience for you. I will share the summary of your feedback with you and will try to make the necessary adjustments in my teaching based on your feedback. Finally, course evaluation forms will be administered at the end, and I encourage you to write comments on the back in addition to filling up the bubbles. This will be particularly helpful for making effective changes in future.

**Your Responsibilities:** Some of YOUR responsibilities, as a student in this class, include:

1. **Be** committed to and **responsible** for learning. This includes using all the college-level skills you have for reading, writing, thinking, listening, and the “grit.” For instance, prepare for each class by **READING** assignments **BEFORE** class, ask relevant questions, and study adequately for quizzes, exams, and term papers.
2. Use the principles of **critical thinking** when completing assignments, e.g., analysis of articles and term paper. Some of the elements of critical thinking include: relevancy (your statements must be relevant to the question), accuracy (statements presented as facts and used to support your position must be accurate and clearly supported with evidence), clarity (expand on your idea and provide examples or illustrations to explain what you meant), depth (address the complexity of the problem), breadth (consistently and thoughtfully consider alternative points of view and interpretations), logic (your line of reasoning needs to be logical, and your conclusions must follow your logic), and significance (you must draw conclusions from the experience) [adapted from *Foundation for Critical Thinking* by Richard Paul, 1996].
3. Do your assigned work **on time**. If you think you will need help in the class, get it as soon as possible. The longer you wait to get help, the harder it gets to catch up with the class.
4. **Participate** in class discussions. *There are credits to be earned!* You are strongly encouraged to provide feedback to the Instructor throughout the semester in order to improve this class.
5. If you are having difficulty learning in this class, or having any class-related problem, or just want to stop by, I expect you to **see you in my office**.
6. You have chosen to enroll in this class, therefore, **you are expected to** arrive on time and attend every class session for its entirety. Absence from class does not excuse you from being responsible for contents missed.
7. **Be mindful** of your neighbor. Notify me if you are having any difficulty in class.
8. Your active engagement in the following is **PROHIBITED** during class: any portable electronic devices (e.g., laptop, cell phone and similar devices), newspaper, and similar other items. IF you must make or take a call/mssg, please step outside the classroom without disturbing other students or the instructor. *Continuing to conduct prohibited activities in class after being warned may include but not limited to dismissal from the class.*
9. **Academic dishonesty** will not be tolerated. You are expected to follow all applicable University, School, and Departmental policies and regulations. You may be asked to sign an honor pledge with each assignment, including HW, Quiz, and Exams. All students are expected to abide by the *academic honor system* followed at Rutgers. Any form of cheating, including plagiarism in reports, will be handled accordingly. Please visit <http://academicintegrity.rutgers.edu/integrity.shtml> for more details. **Each examination may include questions based on the RU academic integrity policy.**
10. *Those students with learning or other disabilities should contact the instructor at the beginning of the semester with appropriate paper work.*
11. Last but not the least, kindly note that **this syllabus is a type of contract** for enrolling in this course. If you decide to continue with this course beyond the point of drop and add, I shall consider that all rules, policies etc. outlined in this syllabus and/or discussed in the class are acceptable to you.

## ASSIGNMENT, EXAM, AND ANY CLASSWORK RELATED POLICIES

1. **Formatting related:** If your HW and/or any written work has more than one page, properly number the pages and staple the report *before* you submit. Folding pages at the corner is not considered stapling. I am not responsible for any lost or missing pages in your written work. Do not forget to write your name on any submitted work.
2. **Labeling related:** Clearly label items that needs labeling (e.g., \$, lb, ft, proper nouns, etc.). Points may be deducted if completed work is not properly labeled.
3. **Show work details:** Getting the answer correctly is not sufficient, you need to show how you got to the correct answer, i.e., show your work, particularly in work that involves math. Points may be deducted if completed work is missing details.
4. **Penalty for non-completion:** Complete and submit ALL assignments, whether individually or in a group, in a timely manner and in a suitable/professional format. Non-submission of homework and other assignments on the due date will result in a @20% deduction of points per calendar day AFTER the due date, i.e., if you submit the day after the due date, you will lose 20% points for that assignment, and so on.
5. **Getting acknowledgement:** If you submit your completed assignments by email, make sure you receive my acknowledgment of receipt. If you drop off your completed assignment in my mail box, make sure to get a written acknowledgment from one of the Secretaries in my Department. If you are sliding your completed assignment under my office door, it is your responsibility to obtain an acknowledgment from me.
6. **Missing examinations and quizzes:** *There are NO make-ups for missed exams.* IF you must **miss an exam** and have a valid, documented excuse (e.g., illness documented by a physician's note is a valid excuse), you have the option of (i) writing a short paper on a class-related and instructor approved topic, or (ii) increase proportionately the weight of the other exams and having the final grade determined accordingly. Without any documented valid excuse, you will be given zero grade for the missed exam(s).
7. **Plagiarism** carries severe penalty, including but not limited to, suspension and expulsion. Be aware that as a graduate student, you are held at a much higher level of standards compared to undergraduates. **Note that Rutgers subscribes to a service ([www.turnitin.com](http://www.turnitin.com)) that can and will detect and verify plagiarism and all faculty members have access to this service. I will be using Turnitin to check the originality of your term paper. The cutoff point is 25% in terms of the 'similarity index.' So, if your report is flagged by Turintin as above 25% in its originality report, you will lose 75% of total points; and if your paper is flagged at 50% or above, you will be reported to the proper authorities who handle academic integrity issues at Rutgers.** Visit <http://turnitin.rutgers.edu/> for more information. Please consult Rutgers University's policies on academic integrity for details.

**If you have questions regarding this syllabus, or class policies, or about the course, or any class material, please do not hesitate to contact me.**

### TERM PROJECT

Because of the time constraints generally faced by students during a semester, it is a good idea to start working on your term paper ASAP. If you have any questions or concerns or are having problem with finding a topic or finding references, please consult me immediately.

**Term Paper Topic areas** (this is NOT an exhaustive list):

1. **Own topic:** you may select your own topic, but it must relate to an industrial organization topic/issue. Please see me to discuss the specifics and possible references.
2. **Survey paper:** select a section of the course outline/readings that interest you and write a survey paper

on that section. Explain the main issue and why it is important, outline the evolution of economists thinking on the subject, state our current knowledge on the subject, and indicate what is left to be studied or understood.

3. **Industry/Market study:** conduct market analysis for the food industry/market selected or assigned. This must include a size and growth rate terms of sales growth and profitability, market structure analysis in terms of selected industry's competitive environment, number of firms, how the industry structure have changed over time, including concentration, and reasons for such change, how the changing industry structure is affecting the producers and consumers, including examination of welfare effects, common pricing and distribution strategies, use of coordination and alliances, product availability and new product introduction, merger & acquisitions and its impact on the competitive environment, global market expansion and the impact of globalization including the role played by non-U.S. firms, and recent industry developments. Use sections or sub-sections to divide your report to clearly present your market analysis.

**List of available food industries/markets (for USA; names and identification numbers may be different for different countries):** Food & drinking places (NAICS 722), Grocery stores (4451), Animal food manufacturing (3111), Breakfast cereal (31123), Sugar (31131), Chocolate (31132), Frozen food (31141), Dairy products (3115), Animal slaughtering (3116), Snack food (31191), Coffee and tea (31192), Soft drinks (312111), Bottled water (312112), Breweries (31212), Wineries (31213), and Tobacco (3122). There are more of such industries under NAICS 311. NAICS=North American Industry Classification System which replaced the SIC (Standard Industrial Classification) system in 1997.

4. **Methods study:** select a method of analyzing an aspect of market organization (e.g., market performance), develop economic and econometric models which are integral to this method, and show how it has been used to analyze that aspect of market organization in a particular industry. Explain why you think this industry needs to be studied.
5. **Strategy study:** select a market strategy, e.g., price discrimination, vertical restriction, product differentiation, and examine (with theory and empirical evidence) how firms use such strategies in the market and whether such strategies pay off, e.g., impact of advertising strategies on profitability, price, among others.

### Important reminders!

Once you have selected a term paper topic, use the RU libraries (mainly Alexander – Ryan Womack is the person to see at Alex, and Kilmer) and resources at their reference desks for your research. These library resources will be of great help to you during your term paper research and reporting. Some of the most commonly used literature and data sources include **Econolite**, **ABI Info**, **Dow Jones**, **MarketLine**, **Compustat**, **ERS/USDA**, **Moody's Industrials**, and trade publications such as *Progressive Grocer*, *Advertising Age*, and *Consumer's Research*. At any time feel free to consult me as deemed necessary.

Your term paper grades will depend upon how thoroughly you survey the relevant literature, the quality of your analysis, and the quality of your economic rhetoric and arguments. Be succinct - you will be graded on what you say, not what you mean to say. Assume your reader knows a little but not everything about the subject. Rewrite your papers – most published papers are rewritten at least 5 times.

If you plan to comment on someone else's work, do not attack the person, but his/her work. Make sure you are accurate in your criticism, and you have substantiated your comments/criticisms.

### Important Term Paper Deadlines

1. **Jan and first two weeks of Feb:** Discussion on term paper topic and plan of action to complete it. By now you know the course content and what is ahead. Now come up with ideas for your term paper (what topics are eligible are listed above). **Your idea should contain tentative title(s), rationale, objectives, section outline, and a plan of action.** **Submit your prelim ideas to Dr. Bhuyan by first Sat of Feb.** Dr. Bhuyan will return with comments, then revise and finalize your topic, complete some prelim research on



the topic, then submit a prelim outline with prelim information on each section **by the second Sat of Feb. (2.5 points)**. *Any change in topic afterwards needs prior approval of Dr. Bhuyan.*

2. **Feb – last two weeks:** revise your draft term paper using comments from Dr. Bhuyan **and resubmit on the last Sat of Feb. (2.5 points)**.
3. **March (before Spring break):** Term paper progress report #1. Discuss your term paper progress as of today in class – 10 mins. **(2.5 points)**.
4. **March (after spring break):** Term paper research progress report or RPR #2. Discuss your term paper progress as of today in class – 10 mins.

**Submit a written draft at the end of March.** Dr. Bhuyan will return it with comments for you to revise. **(10 points)**.

5. **April - mid month:** Term paper progress report #4. Discuss your term paper progress as of today – 10 mins. **(2.5 points)**.
6. **April - last two weeks:**
  - a. **Submit your final revised draft term paper** by the Sat before the last week of April (April 23<sup>rd</sup> in 2022). **(15 points)**.
  - b. You'll **present your term paper orally** in class in the last week of April **(15 points)**. You'll be given about 20 mins max to present your completed term paper in class, so be well prepared (ppt recommended; send the ppt file to Dr. Bhuyan prior to the presentation day).
7. **May:** **Submit the completed term paper** (in MS Word or similar) as an email attachment by 9 pm on the due date, typically last day of scheduled classes **(50 points)**. See "Term Paper Requirements" below for submission requirements.

#### **Term Paper Technical Requirements:**

1. Written reports **must be typed** (at least 11 pt Times Roman or similar type faces). Quality is more important than length. All projects require library research for economic data and information. All projects require to you to study and analyze such economic data, i.e., you will have to discuss the economic meaning and implications of the information you gather. Your report should not exceed 20-25 typed, one-sided, double-spaced of text.
2. You must provide **proper citations and a reference in your term paper** even if you only rewrite someone else's writing. You must reference at least 5 journal articles (not business magazines or from the Web). Wikipedia is good place to start for some information, but it is NOT an acceptable source of reference.
3. Plagiarism implies academic dishonesty and if caught, you will be penalized accordingly.
4. If you are attaching any appendix material (e.g., data print out), make sure that they are well defined and submitted in an organized manner.
5. Write your reports in the **style of a professional report**. For example, each page, except the title page, should be numbered and stapled properly. On the title page, identify yourself (if individual assignment), and write the project title clearly.
6. Submit a soft copy (e.g., as an email attachment) of each report.
7. Last but not the least, **REVISE, REVISE and REVISE** *before* you submit any report.

#### **Recommended Content and Style for the Term Paper**

Major effort in the written report should be devoted to the research question, consequent research methodology, analyses, and results sections. Professionalism in the presentation of the written report will count. The final written report should consist of the following sections.



1. **Title Page:** appropriate, descriptive, title? Researcher identified, i.e., is your name there?
2. **Table of Contents:** well organized? Consistent with headings/subheadings in paper?
3. **Abstract:** summary of the project, including purpose of research, in 150 words or less.
4. **Introduction:** good background but concise? Is problem well defined, i.e., does it clearly state the research question? Objectives clearly related to the problem statement? Objectives clear and precise? Hypothesis, if any, clearly explained?
5. **Literature Review:** relevant? Updated? Focuses on the objectives of the study?
6. **Research Methodology:** Research design clearly stated? Data and model well explained?
7. **Analysis and Discussion of Findings:** Summary of raw data and Statistical analyses used and their explanation provided? Is analysis appropriate for the objective(s)? Discussion clear and informative? Appropriate use of tables/graphs to support discussion? Was any hypothesis tested? Avoids claiming findings not supported by procedure? Avoids opinions and biased presentation of results? Findings clearly related to objectives?
8. **Summary and Conclusions:** Strategic implications, based on your analyses of the data? Major conclusions clearly summarized in logical order? Have all objectives listed earlier been accomplished? Honest discussion of shortcomings? Easy to understand?
9. **Recommendations** Recommendation clearly related to conclusions?
10. **References:** a complete set of references included? Follow a consistent style, e.g., adopt either Chicago or APA style of referencing. Sample in Canvas.
11. **Appendix Material:** Description and explanation of appendix material sufficient to inform reader of its importance and role?

**Statement on Diversity:** This course aims to satisfy the learning needs of ALL students from ALL backgrounds by providing a welcoming environment that respects Rutgers University's diverse student body. It is understood that different students may need different levels of support and thus, structured this course that promotes interaction, collaboration, critical thinking, self-reflection, and evidence-based respectful debates. Diversity among students is an asset and much is gained, and our educational experience is enriched by students with various backgrounds and experiences working together. If you have a documented learning difference that may prevent you from fully realizing your abilities, please contact Rutgers Office of Disability Services at 848-202-3111 ASAP; additionally, contact me at [bhuyan@sebs.rutgers.edu](mailto:bhuyan@sebs.rutgers.edu) to discuss accommodations that may enable you to successfully complete this course.

***Good Luck and Best Wishes!***

**If you have questions regarding this syllabus, or class policies, or about the course, or any class material, please do not hesitate to contact me: [bhuyan@sebs.rutgers.edu](mailto:bhuyan@sebs.rutgers.edu).**