

## ***Integrated Management Simulation*** ***MGP 440S-1***

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### **Course Description**

In the simulation capstone course you will be a member of the executive team of a simulated start-up organization and asked to make decisions typical for this level in an organization. You will formulate and defend a strategic vision for your firm and integrate the various functional areas so as to successfully implement this vision. Importantly, you will need to achieve your objectives within a set of financial constraints and imperatives, which will require you to make trade-offs in an effort to optimize your firm's performance. As a manufacturer of carbon fiber bicycles using 3D printing technology, you will be competing in a dynamic market and competitive environment. Not only will you formulate your firm's strategy, but will review and modify your strategy as needed, thereby gaining greater insight into what it feels like to be a member of the executive team of a firm.

The premise of this course is based on the concept of situational awareness and teamwork. Situational Awareness (SA) is defined as the ability to perceive elements within the environment (level 1), to comprehend the meaning of these elements (level 2), and to project the status of these elements in the future (level 3) (Endsley 1988). These levels loosely correspond to Bloom's dimensions of knowledge, comprehension, and analysis (Bloom 1956). Situational awareness in business is defined as the manager's ability to perceive, comprehend, and predict elements in the marketplace (Bonney 2008).

### **Course Learning Outcomes**

After taking this course, students will be able to:

- Integrate the learning content of all business disciplines
- Learn and apply business concepts, principles, analytical tools, and ways of thinking
- Use situational awareness to perceive, comprehend and predict elements in the marketplace
- Develop the business acumen to manage a new venture and the functions of a company
- Develop strategic planning and execution skills
- Gain business skills, knowledge and competence through extended practice in a dynamic market
- Crystallize the links between all business decisions and being an entrepreneur

## Course Materials

**Simulation and Help Files:** Venture Strategy: Bikes, Innovative learning Solutions, Inc. can be purchased online with a credit card. You will be provided with the login page.

**Micro Lecture Presentations:** Selected presentations will be delivered on in-person sessions and made available through Canvas.

## Simulation

Rather than start in the middle of the story (a mature firm), we use a venture situation to start at the beginning of the story. You will see how various tools and ways of thinking become useful as the firm expands its operations and must take on new tasks and responsibilities. Through computer simulation, you will be placed into a very realistic international business setting where you will start up and run a company for one-and-a-half years (six rounds of decision-making). You will be responsible for making decisions relating to all aspects of the business, including manufacturing and supply chain management, forecasting and analytics, marketing and product development, accounting and finance, e-business, HR and social media.

You will be competing against other start-up companies in the same industry. You will manage the company for six quarters, representing a total of six decision sets (one per quarter). The consequences of your decisions are quickly revealed in the simulated marketplace. Players learn to adjust their strategy to become stronger competitors by studying end-user opinions, smart competitive moves and your own operational and financial performance. Over the course of the entire exercise, your understanding of the linkages among the functional areas of business will grow at an exponential rate.

The learning strategy is to gradually build the business and thus, gradually introduce new issues, which must be mastered by you and the other players. Each quarter or decision period has a dominant activity and a set of decisions, which are linked to it. These dominant activities take you through the business life cycle from start-up, to development, to growth, and ultimately to near maturity. As you work through the business life cycle, new decisions and managerial content is phased in as it becomes relevant to the current decisions.

Each quarter's activities not only result in new material being introduced, but also build upon the prior content so that there is considerable repetition. Business activities such as cash flow planning, value creation in product design, production scheduling, profitability analysis, and strategic planning and management require repetitive exercise in order to set them into your natural thinking.

Here is a list of what you will do:

- Analyze market research data
- Plan and roll out a marketing campaign
- Design and price brands to appeal to different market segments
- Select and develop distribution channels
- Devise advertising, search engine and social media marketing campaigns
- Allocate scarce funds to R&D, manufacturing, advertising, and distribution
- Select and prioritize R&D projects, leading to new product features

- Negotiate strategic partnerships with competitors for new technology
- Initiate and defend lawsuits over false advertising
- Hire employees and set competitive compensation packages
- Schedule production and manage plant capacity
- Manage cash
- Negotiate equity and debt financing for new business development
- Compete head-to-head with other business teams
- Adjust strategy and tactics in response to operational and financial performance, competitive tactics, and customer needs

The specific goal of the exercise is to help you develop an integrated view of the firm which the top executive team needs to make their decisions. In terms of specifics:

- Develop strategic planning and execution skills within a rapidly changing environment
- Crystallize the linkages between business decisions and financial performance
- Instill a bottom line focus and the simultaneous need to deliver customer value
- Internalize how important it is to use market data and competitive signals to adjust the strategic plan and more tightly focus business tactics
- Develop teamwork across functions, opening up new communication links
- Promote better decision-making by helping you see how your decisions can affect the performance of others & organization as a whole
- Facilitate learning of important business concepts, principles and ways of thinking
- Experience the challenges and rewards of the entrepreneur by starting up and running a new business venture
- Build confidence through knowledge and experience

## Team Effort

You will team up with three other students to form an entrepreneurial firm that will compete in a "business war game." During the course, you will take your fledgling business through the natural stages of business growth, including emergence, development, and near maturity. Along the way, you will learn to develop and refine your strategies and tactics.

### Role on the Executive Team

Management of your firm will be a challenging task. Successful firms divide up the responsibility and share the workload. You will take on one or two of the following roles in your firm.

- President
- VP Marketing
- VP Sales Management
- VP Human Resources
- VP Business Analytics
- VP Manufacturing
- VP Accounting & Finance

### **Team Formation**

Prior to the first class, you will be asked to submit a brief form indicating your strengths in functional areas (e.g., finance, marketing, operations, HR, etc.). Additionally, you can indicate up to 2 people you would like to work with on your team. Based on this information, I will form teams to cover all needed functional strengths to succeed in this simulation and to the extent possible form teams of people who have successfully worked together on prior projects. In other words, this is a very realistic process mirroring how teams are often formed in organizations.

### **Executive Team Briefings**

Each quarter I will meet with your team for 15 minutes to discuss results in the prior quarter, key opportunities in this quarter, your strategy for the quarter and answer team questions.” See in the Course Schedule the topics you should be prepared to discuss during the Executive Team Briefing. I may also notify you via a Wall posting if any additional topics are to be prepared and discussed. All team members are expected to attend all Executive Team Briefings and to be prepared to participate in the discussion.

## Course Assessments

This course is letter graded (A,B,C, etc.) and based on a total of 200 points based on the distribution below.

Assignment	Points	Percent of Final Grade
Simulation Performance via Balanced Scorecard	120	60%
VC Presentation	30	15%
Individual Skills Assessment	20	10%
Final Presentation	20	10%
Peer Evaluation	10	5%

### Grading Scale:

A+	198-200			
A	185-197	B-	160-164	F Less than 140
A-	180-184	C+	156-159	
B+	176-179	C	145-155	
B	165-175	C-	140-144	

## Assignment and Assessment Information

### Simulation Performance

A Balanced Scorecard will be used to measure your firm's performance. The team's total business performance will be based upon its financial performance, marketing effectiveness, market performance, manufacturing productivity, human resource management, investments in the firm's future, asset management, creation of wealth, and financial risk. A total score will be computed for each firm.

At the end of the exercise, each team will be ranked in the order of performance for the total score. A point grade will be assigned depending upon the best performing team's BSC score vis-à-vis all other teams that have competed in the simulation, ranking within the course, and how close it is to the team(s) BSC above or below it.

### VC Presentation

Each team will deliver an oral presentation of their business plan and company valuation to a group of VC's for funding in Quarter 4.

**Format: Presentation: 12-15 minutes – use PowerPoint**

**Participation: Every team member should have a role in the presentation and Q&A**

**Presentation should include:**

1. Review of financial and market performance during the past three quarters
2. Assessment of current situation and the market
  - a. Customers, including size of the market
  - b. Competition

- c. Company's strengths and weaknesses
  - d. Major problems/opportunities to be dealt with over the next three quarters
3. Strategy for the next three quarters in business. This section should include a concise statement of objectives and key strategic thrusts, including key tactics necessary to implement the strategy and success risks.
  4. Financial request
    - a. Amount of money being sought
    - b. Projected ROI at end of Quarter 6
    - c. Desired stock price and share of company being offered
  5. Appendices (Be prepared to reference in response to VC questions)
    - a. Pro forma cash flow, balance sheet, and income statement (Quarters 1 to 6)
    - b. Tactical plan (Quarters 1 to 6)

### Individual Skills Assessment

Before submitting decisions for Quarter 5, you will be asked to answer objective questions regarding the simulation online using a Customized Objective Learning Assessment (COLA) tool created specifically for the simulation. This test is designed to test (1) your knowledge of your business in terms of marketing, manufacturing, human resources, and financial and accounting information, (2) your ability to use the tools of management to understand your current position in the market and (3) your ability to develop an integrative perspective of your business. The good news is no studying

The good news is no studying is needed to prepare for this assessment. However, you do need to be fully engaged in the simulation to succeed. The test will take you between 30 – 50 minutes. You will have an hour to take the test, which is delivered online via the Marketplace simulation. You will not have access to the simulation while the assessment is underway. Results will be made available after the Quarter 5 decisions are processed. The following management skills will be assessed.

Skill	Indicator
<b>Perception/Knowledge</b>	Ability to correctly answer questions about the firm's current operational, market and competitive situation
<b>Comprehension</b>	Ability to correctly identify the firm's strengths and weaknesses relative to market needs and competitive performance
<b>Functional Knowledge and Understand</b>	Ability to correctly perceive, comprehend and predict the firm's performance in each functional area of management
<b>Integration</b>	Ability to correctly perceive, comprehend and predict the firm's performance in all functional areas, compiled as a total score across functions and SA levels
<b>Strategic Alignment</b>	Degree to which team members agree on the strategic direction of the firm, where members independently choose the overall and functional strategies that they believe the firm should pursue going forward

## Final Presentation

Each team will deliver an oral presentation to the class in Week 9.

### **Format: 12-15 minute presentation + 5 minute Q&A**

#### ***The Final Presentation should include:***

1. Highlight the key features of the business plan presented to the VCs, including:
  - a. Marketing Strategy
  - b. Sales Channel Strategy
  - c. Manufacturing Strategy
  - d. Human Resource Strategy
  - e. Financial Strategy
2. Assess your business strategy and performance during Quarters 4 - 6
  - a. Compare actions taken against the business plan
  - b. Discuss departures from the business plan and justification
  - c. Review significant events that affected the company and/or market
  - d. Review goals relative to performance for key performance indicators (include promises made relative to demand, revenue, net income, ROI, etc.)
3. Explain why you were able to achieve or not achieve your goals — what were the causes of your better or weaker than expected performance? (Candidness here is very important)
4. Summarize how you have prepared your firm to compete in the future.
5. What were the lessons learned?
  - a. How did you benefit from participating in the simulation?
  - b. Are there any lessons that you can take into the business world?

## Peer Evaluations

Three (3) peer evaluations are to be completed throughout the course for each person on a team. A peer evaluation is to be turned in at the end of the 3rd quarter, after the VC Fair, and after the Final Team Presentation in Week 9.

The first two peer evaluations are to be used for feedback and team development. The last peer evaluation will be used for purposes of assigning peer evaluation grades. The average ratings from your team peers will be used to calculate your peer evaluation score. From time to time, team members may be contacted to clarify ratings.

The purpose of this process is to give teams ample opportunity to develop team norms and culture. Teams should take advantage of the first two peer evaluations to provide team members with constructive feedback. Specific areas of evaluation and feedback will include:

- Participation in team activities
- Complete your share of the work
- Performs all tasks in a diligent and timely manner
- Provides useful ideas to the team
- Considers other points of view

- Treats other team members with dignity and respect
- Gives credit to the work and ideas of other team members.
- Is a self-directed and reliable teammate.

### You Can Be Fired

It is permissible to fire a team member who is not making a substantive contribution to the success of the team. Missed meetings, poor preparation, failure to complete assignments, etc. are all indicative of underperformance. Before a person can be fired, the team must give the student an opportunity to correct his or her deficiencies.

In terms of protocol, the President or the team must provide verbal feedback to the team member (usually following the first peer evaluation). If the performance does not improve, the team must provide the student with a written statement of the problems associated with his or her work. A peer evaluation may be used in conjunction with this statement. A timely response from the person should also be provided in writing. If the issues continue, the team can then request that the team member be fired. This request is submitted to the class instructor. Importantly, this must all take place prior to a team submitting their Q5 decisions (at the latest).

When an individual receives a poor performance report, the student must respond in writing as to how he or she will correct the problems cited. If the problems continue, the team may fire the underperforming team member with a letter of dismissal. A copy of all correspondence must be submitted to the instructor for approval.

A person who is fired will be assigned to compete in another simulation where the student is responsible for all the firm's activities, including weekly decisions and executive briefings and the preparation of a Business Plan and Presentation. This new simulation will begin in Quarter 1 and continue through the final quarter. If a student is fired, 20 points will automatically be deducted from the student's final point score for all completed assignments. Thus, if the student earned a final score of 180, then the adjusted final score would be 160 points. The course grade would be based upon the adjusted total score.

Course schedule starts on the next page

## Course Schedule

**Important Note:** Due dates for team decisions will be communicated within the simulation. Each week will list simulation help files and microsimulations that are recommended for progressing through the simulation. Please read simulation help files and microsimulations before meeting with your team to make your decisions.

### Week 1 – Introduction & Team Formation

Recommended Readings (Simulation Help Files): None

Lectures:

- Overview of Course Structure and Journey
- Introduction to Simulation
- Chronology of Simulation Events
- Financial Setting

Activities:

- Team Formation
- Sign-up online for simulation
- View animated simulation demo

**Live Session in Sacramento April 1<sup>st</sup>** - Course expectations and overview, team formation and simulation navigation.

**Virtual Session April 4<sup>th</sup>** - Executive Team Briefing: Review with each team the team norms established, individual roles selected, decision-making and any questions about the simulation

### Week 2 – Quarter 1

Recommended Readings (Simulation Help Files):

- Brand Design
- Internet Marketing
- Sales Territory Design
- Fixed Production Capacity
- Financial Tradeoffs in Capacity Decisions

Lectures:

- Introduction to Quarter 1
- Build a Plant
- Designing Brands
- Distribution Channels

Activities:

- Microsimulation: Fundamentals of Product Design
- Microsimulation: Fundamentals of Strategic Planning
- Submit Decisions for Quarter 1

**Virtual Session April 11<sup>th</sup>** - Executive Team Briefing: Review with each team their decisions with respect to (1) working as a team; (2) strategic direction; and (3) tactical decisions (size of factory, distribution strategy, brand design, and financial position).

### Week 3 – Quarter 2

Recommended Readings (Simulation Help Files):

- Brand Pricing
- Sales Force Management
- Advertising Decisions
- Forecasting Demand and Production Scheduling

Lectures:

- Quarter 2 Overview
- Setting Prices
- Advertising Decisions
- Human Resources and Operations
- Sales Force Management

Activities:

- Microsimulation: Fundamentals of Online Marketing
- Microsimulation: Fundamentals of Pricing
- Microsimulation: Fundamentals of Production Scheduling
- Submit decisions for Quarter 2

**Live Session in Sacramento April 15<sup>th</sup>** - Quarter 2 lectures and team working session.

**Virtual Session April 18<sup>th</sup>** - Executive Team Briefing: Review with each team their marketing, manufacturing, distribution and financial tactics for Quarter 2.

### Week 4 – Quarter 3

Recommended Readings (Simulation Help Files): Accounting (7 Files)

Lectures: Quarter 3 Overview

Activities:

- Microsimulation: Fundamentals of Accounting
- Complete SWOT Analysis
- Review Quarter 2 performance results
- Submit Decisions for Quarter 3
- Submit peer evaluation online after submitting Quarter 3 decisions

**Virtual Session April 25<sup>th</sup>** - Executive Team Briefing: The President presents an overview of the firm and its opportunities. Also, each member of the executive team should prepare a thoughtful analysis of what went right and wrong within their area of responsibility and what will be done to improve the situation.

## Week 5 – Quarter 4

Recommended Readings (Simulation Help Files):

- Finance (5 Files)
- Preparing a Tactical Plan
- Preparing Pro Forma Financials

Lectures:

- Introduction to Quarter 4
- Licensing Technology
- Venture Capital Funding Overview
- Valuation of the Firm
- Venture Capital Presentation

Activities:

- Microsimulation: Online Paid Advertising
- Review Quarter 3 performance results
- Complete a Tactical Plan for Quarters 4 – 6.
- Run Pro Forma for Quarters 4 – 6.
- Set a price for your stock
- Calculate a return on investment based on your stock price and pro forma
- Begin developing your presentation to VCs.

**Live Session in Sacramento April 29<sup>th</sup>** - Quarter 4 lectures and team working session.

**Virtual Session May 2<sup>nd</sup>** - Executive Team Briefing: Q & A regarding VC presentation and steps in developing your presentation.

## Week 6 – External VC Funding (Quarter 4)

Recommended Readings (Simulation Help Files): None

Lectures: None

Activities:

- Work with team on VC presentation
- Explore cross-licensing agreements
- Submit VC PowerPoint presentation
- Participate in VC presentation
- Negotiate equity funding
- Submit decisions for quarter 4

**Virtual Session May 9<sup>th</sup>** - Teams present funding request to VCs and negotiate equity investment in your firm.

## Week 7 – Quarter 5

Recommended Readings (Simulation Help Files): None

Lectures: Licensing Technology refresher

Activities:

- Microsimulation: Profitability Analysis
- Review Quarter 4 Results
- Explore licensing agreements
- Complete Skills Assessment
- Submit Decisions for Quarter 5

**Live Session in Sacramento May 13<sup>th</sup>** - Quarter 5 lecture and teams can explore licensing opportunities with other teams by visiting other teams in their break-out rooms.

**Virtual Session May 16<sup>th</sup>** - Executive Team Briefing: Q & A regarding Q5 licensing agreements and investment in future growth.

## Week 8 – Quarter 6

Recommended Readings (Simulation Help Files): None

Lectures: None

Activities:

- Review Quarter 5 Results
- Submit Decisions for Quarter 6

**Virtual Session May 23<sup>rd</sup>** - Executive Team Briefing: Drilling down into weaknesses and opportunities.

## Week 9 – Presentation to Class

Recommended Readings (Simulation Help Files): None

Lectures: None

Activities:

- Work with team on final report
- Submit PowerPoint presentation
- Participate in final presentation

**Live Session in Sacramento May 27<sup>th</sup>** – Teams work on final presentation with rotation and feedback.

**Virtual Session May 30<sup>th</sup>** – Teams present final presentation to class.

## Week 10 – Simulation Experience Debrief

Recommended Readings (Simulation Help Files): None

Lectures: None

Activities: Complete peer evaluation online

***Virtual Session June 6<sup>th</sup>*** - Small group discussion debriefing simulation and class experience