

CHRISTINA CARAMBIA

ENTREPRENEUR/OWNER OF
UNDERGROUND GREENS

REFLECTIONS ON SELECT ACADEMIC COURSES



 www.ChristinaCarambia.com

 www.UndergroundGreens.co

Rome, New York
Sackets Harbor, New York

SUNY Polytechnic Institute Interdisciplinary Studies BA Spring 2018

MKT 470 Marketing Research gave me the tools to study the wants and needs within the local community, which will help me to design a marketing plan of action to address food scarcity, food ways, and sustainable options to satisfy those wants and needs, as well as implement the marketing plan, analyze the results, and develop future plans to fulfill unmet needs and wants of the community. In order to build a business or address the needs of a local community, you have to understand the community by studying the statistics of the population and determining the proper way to send messages to the market segments and target markets of the community.

SUNY Polytechnic Institute Interdisciplinary Studies BA Fall 2017

MKT 321 Advertising Management helped me to develop the skills necessary to create effective marketing messages to the intended target and run advertising campaigns to sell products or services. For example, recent studies have shown that conservative Republicans respond better to marketing messages about buying local, organic food if the advertising campaign ties local food purchases to the ability to make traditional meals, like heirloom tomatoes used to make Grandma's sauce. Organizing several commercials to address these new political market segments would increase customer acquisition and help to solidify the success of a new local farm.

Mohawk Valley Community College Business AAS Fall 2014

BM 150 Principles of Entrepreneurship was the first step towards taking my lifelong hobby and transforming it into a business. This course helped me build my entire business plan for Underground Greens. Developing an understanding of what it takes to be an entrepreneur, how to create a business and become sustainable, and how to take on a competitive position within the industry were all valuable lessons. From legal forms to leveraging, we learned the about a variety of startup challenges, and I was able to take my business plan to the New York Business Plan Competition in 2015 and 2016, where I place first in my category at the Regionals and third at the state final in both years.

SUNY Polytechnic Institute Interdisciplinary Studies BA Fall 2018

ANT 303 Cultural Diversity course facilitates a better understanding of local communities through investigations of race, class, gender, economics, traditions, history, and other social constructs that are a part of any community. This class has helped me to form better advertising, marketing, and business strategies to build a successful farming business. Unlike statistics or other formula based marketing tools that ignore outliers or average numbers to arrive at an educated guess, cultural diversity studies is all about the differences that create different needs and wants within each community, and often the minority within the community is ignored. In my area of interest, it is the socioeconomically challenged areas that are facing food scarcity, which has been referred to as food deserts. I've recently learned that the term food desert is frowned upon by those living in the food desert, as they do not view their neighborhoods as empty or barren and the term doesn't address the race, poverty, and inequality problems present in these area. Some people are advocating to use the term "food apartheid", but I have not adequately studied this issue yet, so I will continue with using food desert for now.

SUNY Morrisville Agriculture AAS Spring 1998

HORT 200 Greenhouse Management prepared me to make decisions about how to fulfill greenhouse needs based on plant production needs. This class enabled me to make good product and construction decisions to build a greenhouse that has stood the test of time for over twenty years and develop my current growing methods and structure preferences. One independent lab project involved growing 50 tomato plants for several weeks using 9 different NPK variations and a control set to determine if recommended NPK fertilizer amounts would produce the healthiest tomato plants. It did not. This was one of the earliest indicators for me that agriculturists did not have all of the information necessary to create perfect NPK recipes for all plants, and I set out to find my own soil, NPK, and water recipes by using organic methods.

SUNY Morrisville Agriculture AAS Spring 1997

HORT 102 Botany-Form, Function, Seed, Pit was the door to plant experimentation for me. From cell structure to photosynthesis, I learned that plants have one job on this planet-reproduction. Plants are tough. You can snap a piece of a plant off, put it in a glass of dirty water, and it will grow roots. Pinch the top out of a plant, and it will grow from the sides. The cells of the plant know how to survive, switch gears, and reach for the sun or water or food. Changing the pH of the soil can make flowers change colors. Anatomy, physiology and reproduction all fascinated me, and I experimented for years to push the limits of the plants as far as they could go before they died. I've killed a lot of plants, but I've also breed some very stable varieties of peppers and tomatoes that you will not find on the market today.

SUNY Morrisville Agriculture AAS Spring 1998

ENSC 101 Plant Pathology was my first in depth look at microbial interactions within the environment. While I may not have an electron microscope in my arsenal, I do have one that can be hooked up to a large screen T.V. and record video or pictures of the suspected pathogens, and that allows me identify and treat plant diseases very quickly. Understanding the host-pathogen relationship makes the difference between a successful farm and going bankrupt, as some pathogens can cause damage to the soil for years. Identifying pathogens before the damage can take hold is essential to plant production and can cause a tremendous amount of food scarcity if left unchecked, like the *Phytophthora infestans* fungus that caused the Irish potato famine. When planning an indoor farm, many people do not take into consideration pests or diseases, as they underestimate the pathogen's will to infest a healthy indoor crop, seemingly growing in a protected environment. It just takes one person, with contaminated hands, clothes, boots, or even strands of hair to wipe out a crop. A smoker with tobacco residue on their hands can pass on tobacco mosaic virus, even after washing. I believe the ability to identify the symptoms or traces of a pathogen & the knowledge to treat the infected plant have contributed to may past success in indoor growing.

Mohawk Valley Community College Business AAS Spring 2015

BM 129 Business Math provided the basic skills necessary to understand and calculate mortgages, simple interest, compound interest, promissory notes, and other business problems related to capital and cash flow. We worked through many problems that occur in a retail or wholesale environment, like COD, credit, cash discounts, markups, markdowns, sale percentages, and offering credit to customers. While, I have owned and worked at many retail and service venues, this course was the first official business math that I had ever been exposed to, and I believe it really reinforced what I already knew and gave me the tools necessary to make improvements that will save and make money in the future.

Mohawk Valley Community College Business AAS Spring 2016

BM 254 Human Resource Management was invaluable, especially in today's current climate of litigious behavior. As an older female student, I have watched human resource issues evolve in areas like "accepted behavior" and "code of ethics", from thinking it's O.K. for a male to slap a female waitress on the rear end in 1990 to a Denny's waitress in Rome, N.Y. pressing charges against a man for the very same thing and winning. There are too many HR issues to cover in a few sentences, but this course did make me very aware of the issues, and my HR policy for Underground Greens will be crystal clear from day one, with appropriate channels in place to safely express concerns.

SUNY Polytechnic Institute Interdisciplinary Studies BA Fall 2018

In IDS 491, Creativity and Culture, I was challenged by working with a group of students, all in their late teens to early twenties, as part of helping to develop the first Maker Club, on the SUNY Poly campus in Utica. By developing better cross generational communication skills, I will be more prepared to deal with younger entrepreneurs and consumers in the future, as well as be able to develop my maker skills. Many of the assignments became a part of the Underground Greens business plan, in the form of workshops.

Mohawk Valley Community College Business AAS Fall 2015

GL 101 Physical Geology is a very important part of determining the local soil's makeup and value, with regard to farming and growing crops. The ability to identify sedimentary, igneous, and metamorphic rocks found in an area can help to reveal the history of the Earth and provide information about the micro and macro elements that are present in the area due to those rocks weathering and eroding away in the soil. We studied the substrate as well and calculated soil porosity in a lab session. Surface and ground water factors are also important to determine how crops will be irrigated, well placements, well contamination, and the benefits of a free flowing artesian spring, which I have on my property.

SUNY Polytechnic Institute Interdisciplinary Studies BA Fall 2017

COM 308 Analytical Writing and Research was a very intense writing experience for me, and I learned a tremendous amount of information in a very short period of time. I have been digging through free, available research on my own to develop my own ideas about indoor growing, affordable food, and food scarcity caused by distribution and climate issues. I had not been exposed to much scholarly research or articles prior to this class, and I was inspired to research about everything I really want to know, while I was at SUNY Poly and had access to sources. I did my research project in this class on the problems associated with food scarcity, in an attempt to build up a supply of valuable scholarly sources, which would benefit the validity of my business plan for Underground Greens. As a result of this class, I have developed a habit of recording sources in an annotated bibliography and keeping my sources cited and ready to use for the next project.

SUNY Polytechnic Institute Interdisciplinary Studies BA Fall 2018

IDS 410 Research and Critical Methods really helped to narrow down what it means to be an Interdisciplinary Studies major, and the class helped me to find my preferred research methods, as well as rule out methods that were ineffective. I left this experience with a more focused list of which disciplines will help me reach my goal of creating an urban farm business, which will provide affordable food, food knowledge, and jobs in the food industry, in an area where the impact of such a business will be the most effective. I was able identify food scarcity, as found in food deserts across America, as a complex problem, and I will refine my business plan for Underground Greens from an interdisciplinary perspective with the hope of providing a possible solution to the local food scarcity issues, which exist in the Mohawk Valley. I believe the solution to local food scarcity lies in a holistic solution, which must take into account a variety of factors like consumer habits, behaviors, poverty level, race, employment, education, transportation needs, and the overall economic development goals of the area located in the food desert. This is by no means an exclusive or finished list of factors, but it will certainly take more than opening a Whole Foods store in the middle of a food dessert to fix food scarcity in the Mohawk Valley, which is exactly why food scarcity is a complex problem.

Mohawk Valley Community College Business AAS Fall 2015

PE 172 Health and Wellness provided all of the current information necessary to make informed decisions regarding healthy choices, including food choices. The class offered insights into how media, and even our own food pyramids developed by the USDA, can persuade us to buy unhealthy food and develop poor eating habits. Healthy lifestyles take money, time, commitment, and effort to maintain and poor eating habits are difficult to break, especially if they have been created during a lifetime of poverty and /or discrimination. Fresh food is a healthy food choice because it has experienced a shorter duration of decay. Decay begins as soon as the produce is harvested, and the longer it takes to get to the consumer, the more time it has to decay, which results in a loss of valuable vitamins and nutrients.

SUNY Polytechnic Institute Interdisciplinary Studies BA Fall 2017

IDS 201 Perspectives on Knowledge was a great introduction to interdisciplinary studies, and I learned the basics of finding scholarly research, analyzing the validity of the content, and working with a team of people from various, unrelated fields. The challenges of communicating on a fair playing field, without bias and personal/professional jargon, was challenging. The experience of being in the middle of the head-butting that goes on between academic people (students and professors) from specific fields was a great lesson and example of why we need more people who are willing to seek out disciplinary insights to integrate them into new knowledge and create a possible solutions to complex problems. For example, the people who live in a food desert have developed poor eating habits over time because of a slew of factors, which may include their location, employment, race, and poverty level. By the time a government official recognizes the need to provide an affordable, grocery, retail store in the food desert, the damage has been done. People have developed poor eating habits. Young students are going to school hungry or filled up on unhealthy food, which further reduces their chances of getting a good education, in order to get a good paying job. Opening up a Whole Foods store will not fix this cycle. Food scarcity is too complex for one retail store to solve.

Mohawk Valley Community College Business AAS Fall 2014

BM 252 Supervisory Management gave me the tools necessary to fill a supervisor or manager position in the current business environment. While I have held supervisor positions in the past, some techniques have evolved over time to address how to improve communication, motivate employees, and resolve conflicts. New ethical concerns have come into play in just the last ten years, and these issues must be highlighted in the employee handbook and gone over during employee evaluations and reviews. Appropriate conduct is demanded in today's workplace, and Underground Greens will address these needs in the company handbook.

Mohawk Valley Community College Business AAS Spring 2016

IS 200 Spreadsheets and Concepts was invaluable to the initial set up of the records for Underground Greens. This class allowed me to create my entire inventory system, from vendors to supplies, as well as consumer mailing list templates, before I even thought about opening up the business. Having all of my data ready to go is a huge benefit and time saver. This class is geared toward developing business spreadsheets, and it showed me how to use the functions, format sheets, and use analytical graphics. For example, if I want to know how much money I will lose if I decide to discontinue a product, I can run a sort feature or and if/then command to find out what the result would be, and I could apply a chart to that information to have a visual graphic on hand.

SUNY Morrisville Agriculture AAS Fall 1997

ENSC 101 Agricultural Sciences was a valuable introduction to how farms are expected to work at various levels, like small farms vs. big agriculture. Crop rotation, farm finances, soil health, animal care and requirements, and basic botany were all topics of interest. This class gave me enough information to realize that I am unsure about getting certified organic on my farm, as it does not eliminate all chemicals, and I do not want to own an industrial farm, ever.

SUNY Morrisville Agriculture AAS Spring 1997

HORT 107 Nursery and Garden Center Management prepared me to design the floorplans, layout, buildout, and equipment necessary to open and operate a commercial nursery. The management hierarchy, maintenance schedules, production schedules, and seasonal requirement were all integral parts of the course, which gave me insights as to how I will design my commercial space. For example, the building I have chosen to develop has 40,000 square feet in the basement of a nuclear fallout shelter, high ceilings, a drive in ramp for truck access, and drains in the floor, which are all regarded to be valuable features for an indoor farm.

SUNY Morrisville Agriculture AAS Fall 1997

HORT 100 Intro to Horticulture covered the Botany basics of plant processes, reproduction, and stages of growth. I developed an understanding of sowing schedules, plant propagation, cultural care and other plant requirements necessary to breed and produce plants on a wholesale level. While working in the campus greenhouses, the class was responsible for the development, maintenance, and execution of the plant production, including forcing Easter Lilies, via cold treatment, in time for Easter and growing poinsettias from cuttings in time for Christmas. It was this rigorous scheduling, manipulation of indoor climate, and precise timing of crop production which put me on the path of indoor growing in the first place.

SUNY Morrisville Agriculture AAS Fall 1997

HORT 101 Plant Materials focused on identifying landscape plants; mostly trees, vines, and shrubs, which are typically used in the Northeastern part of the country. The common characteristics of each plant were discussed in class, and then we would have to identify each plant outside, in the landscape, regardless of whether the plant had leaves or not. Among the characteristics we covered were diseases and pests, and I believe looking for and finding signs and symptoms of diseases and pests as part of that curriculum was invaluable field training and very useful for my current work.

SUNY Morrisville Agriculture AAS Spring 1997

HORT 108 Herbaceous Materials class was exactly like the plant materials class, except we were working with annuals, perennials, and tropical foliage plants, which could be located indoors, in a garden, or in a landscape. We covered identification, cultural care, and common uses for all of the plants, as well as the pests and diseases associated with each of them. Learning about maturation dates of produce, as well as season extension via row covers and high tunnels, led to me building my first few experimental greenhouses this summer.

Mohawk Valley Community College Business AAS Fall 2014

AC 115 Financial Accounting taught me how to prepare the income statement, the statement of owner equity, and the balance sheet, and analyze the accounting cycle. This course helped me to develop a working knowledge of how cash, receivables, inventory, long-lived assets, and current liabilities are investigated, recorded, and used to determine the financial status of a business, and I feel strongly that I will be able to utilize these skills in building my business plan for Underground Greens.

Mohawk Valley Community College Business AAS Fall 2015

AC 116 Managerial Accounting was the continuation of my accounting experience at MVCC, and I was able to develop a better understanding of the value of a business by examining the statement of retained earnings, long-term debt, time-value concepts, capital budgeting, cost-volume-profit analysis, and financial statements. I feel that this course had prepared me to move forward with the development of a profitable farm business plan.

Mohawk Valley Community College Business AAS Spring 2015

MA 110 Elementary Statistics introduced me to the study of the basic relationship between subject and population, and how I could use that information to make better business decisions and help provide supporting evidence for those decisions. The emphasis was on the methods of collecting data, summarizing and presenting data, and drawing inferences from data. From histograms to p-values, I have a basic working knowledge that allows me to interpret and create statistical data, which will be an important tool for the success of my business plan, as well as conducting my own studies for future research.

Mohawk Valley Community College Business AAS Fall 2015

AC 131 Business Law 1 covered the concept of commercial law, the law of contracts, the law of sales, and the law of negotiable instruments. I was able to develop an awareness of logic and application of the law through the analysis of case studies and class discussions. I believe I gained the most value from recognizing the importance of the true meaning of the laws as they are written, and contract law will be a very important part of my future as the owner of Underground Greens.

Mohawk Valley Community College Business AAS Fall 2014

BM 251 Organizational Behavior gave me a better understanding of how an organization must be attentive and proactive to the relationship between profit and people. Employee satisfaction and happiness is directly related to performance and loyalty, so having an organizational behavior plan in place prior to opening a business is essential. I was able to develop my plan in this class, for Underground Greens, and I discovered the real need for flexible hours, especially within my community. As a single Mom, with no financial support, I would have jumped at the opportunity to obtain a job with hours that matched my child's school hours and have daycare provided for me at work, until my shift ended. That is just one of the options, discovered in this class, which will be available at Underground Greens and highlighted in my business plan.

Davis & Elkins College Theater

THR 304 Play Directing allowed me to hone the skills necessary to create story boards, find my "shot" and "light", write scripts, direct actors, and pre-plan blocking and direction for actors/actresses. When you know what emotions you want your audience to experience in order to feel a connection to and desire for the product or service you are offering, you can direct the actors and actresses to find and express that emotion while providing all of the pertinent information about what you are trying to sell. Artfully delivering the marketing message in an unforgettable way has created an entire genre of cult, commercial, classics, like "Where's the beef?" delivered by an old lady in a Wendy's commercial.

REFLECTIONS ON SELECT ACADEMIC COURSES CHRISTINA CARAMBIA

SUNY Morrisville Agriculture AAS Spring 1997

AGRO 110 Soil Science was all about the fundamental building blocks of soil, including inorganic minerals, composted organic matter, air and water, which are responsible for plant growth, microbial communities, and chemical decomposition. How the soil was formed, as well as the physical and chemical properties, will determine how well and what kind of plants will thrive in it. The soil on my land, on the shores of Lake Ontario, was formed near the end of the last ice age, when Lake Iroquois extended well beyond the boundaries of present-day Lake Ontario. As the lake evaporated, it left behind rich, fertile, organic, which has never been farmed before I started growing on it. All of the property searched showed no farming, and we are the fourth family to own the property since it became a part of America, as a result of the Macomb purchase. I essentially farm on pure, glacial soil.

SUNY Morrisville Agriculture AAS Fall 1998

HORT 201 Plant Propagation involved the evaluation, analysis, and application of the scientific theoretical and technical practices of sexual and asexual plant propagation. Observation and experimentation included division and separation, layering, grafting, budding, cuttings, micro propagation, and seed propagation. I have implemented many of these techniques into my plant production methods, including saving seeds from high performers and using cuttings to speed up production. I would like to incorporate micro propagation into my future production schedule, but I would have to build a clean room, which is cost prohibitive.

SUNY Morrisville Agriculture AAS Spring 1998

ENSC 107 Integrated Pest Management was a valuable source to me, as an organic grower, and I have been able to adapt the principles taught in this course to organic methods, which I use instead of traditional pest controls. Organic growers adopt organic methods out of dedication to our environment and a love for growing healthy, non-toxic food. I learned about natural methods for biological controls, and how to use forecasting, monitoring and my knowledge of the pest lifecycles to prevent crop and lessen damage in outdoor field crops, greenhouse crops, and indoor crops.

SUNY Morrisville Agriculture AAS Fall 1998

ENSC 105 Entomology covered insects, economic loss caused by pests, impacts to crops and plant production problems in general.

Lifecycle, biology, taxonomy, insect orders were all part of the curriculum. Classification, identification, damage assessment, and control of insects through integrated pest management (IPM) was stressed. Field work, collection, electron microscope work, identification of arthropod pests, and pinning emphasized in lab and final project. As a result of taking this class, my IPM strategies for organic pest control and identification skills have been refined over the years, and I have managed to prevent, control, and stop many infestations before entire crops were destroyed. One reason why so many indoor farms fail is because management does not expect to encounter pests within an indoor system, and/or they don't find a pest problem fast enough to save the crop, and they lose everything. An aquaponics farm in this area went out of business because of an aphid infestation, regardless of having a greenhouse manager.

SUNY Morrisville Agriculture AAS Spring 1997

ENSC 106 Pesticide Use and Handling was integral to my decision to grow organically, as it outlined the use of inorganic pesticides, herbicides, and fungicides, and the allowable application amounts, days to harvest, and toxicity levels of a variety of commonly used products. The safety gear needed to apply and mix the products was foreboding, and the rules to immediately wash your clothing, separately, was intimidating. If you have to wash your clothes to protect your skin after applying these products, I do not want to eat anything that the product has been applied to, regardless of washing the produce or not. I had never used inorganic products before on anything, and, especially after taking this course, I will not be using them in the future