The Sustainable Innovation MBA
Course Descriptions: 2017-18 Curriculum
Grossman School of Business, University of Vermont

Pre-Module 1 (August 1-11, 2017)

BSAD 395: Financial Accounting for Sustainable Enterprises (1 credit hour)
The overarching goal of this online self-paced course is to provide students with a basic comprehension of the accounting tools necessary for success in The Sustainable Innovation MBA program, and in sustainable business more broadly. The course is designed both to serve as an introduction to key accounting concepts and to provide a review for students who have studied accounting in the past. Throughout, students will learn accounting principles and skills (e.g., preparing and interpreting different types of financial statements, accounting standards, etc) through examples that pertain to sustainable business contexts. Students will also learn about standard setting bodies for reporting on sustainability, and become familiar with emerging trends in accounting for sustainable enterprises that use profitable business models to address social and environmental challenges.

Module 1 Courses (August 28-October 20, 2017)

MBA 301.01: World Challenges: Physical and Social Realities (1 credit hour)
This course exposes students to major global challenges, and the opportunities for business ventures to provide sustainable solutions that help address them. The course covers both the ecological/biophysical as well as the social aspects of the global sustainability challenge. Students will develop a deeper understanding of the challenges of climate change, resource and natural capital depletion, water scarcity, and the opportunities for much more eco-efficient and sustainable food and energy production, and resource utilization. Students will also develop a deeper understanding of the challenges of population growth, poverty, and income inequality, and the importance of multi-stakeholder engagement when it comes to addressing these challenges. The course culminates in a team assignment to develop a business opportunity addressing one or more of the 17 Sustainable Development Goals.

MBA 301.02: Business Strategy for a Sustainable World (2 credit hours)
As we move toward the third decade of the 21st century, the very nature of corporate and competitive strategy is undergoing radical transformation. Gone are the days when firms could conduct comprehensive industry analyses, craft and implement clearly defined competitive strategies, gain competitive advantage, and protect a long-term position. A number of forces have conspired to make such a rational approach to strategy virtually obsolete, including the:

- accelerating rate of technological change
- information revolution
- blurring of traditional industry boundaries
• opening of previously closed markets
• widening gap between rich and poor
• mounting environmental crisis
• problems of population and poverty
• growing demand for corporate transparency and accountability
• proliferation of new stakeholders

Taken together, these forces make strategic management in the future less a game of planning and analysis and more a game of innovation and entrepreneurship. Business will become increasingly focused on transformation rather than continuous improvement, as the global challenges of sustainability come to dominate the competitive landscape. Over the next decade or two, entire industries will be restructured, with many incumbents losing their positions to new entrants emerging from beyond traditional industry boundaries. Sustainable innovation will become the name of the game.

By 2030, the energy, automobile, chemical, materials, utility, food, and forest products industries will almost certainly look radically different than they do today. The communications, electronics, computer hardware, software, financial services, and knowledge industries will lead the charge in radically redefining the way in which we serve human needs. This is the world in which you will spend your professional careers. Acquiring a map to help navigate these treacherous waters will be essential not just to survive but to thrive through the creation of sustainable value that supports business objectives through fulfilling unmet needs and addressing social and environmental challenges.

MBA 301.03: Finance for Innovators I (2 credit hours)
Finance as a scientific discipline is broadly concerned with how to allocate scarce resources over time when there is uncertainty with respect to the costs and benefits of the allocation decisions. Within finance there are two major strands of study and practice: corporate (or business) finance and investment finance. Business finance is primarily concerned with the decision making process of those who require capital to deliver goods or services. Investment finance is viewed from the perspective of those that provide capital and then manage the investments, often as part of a portfolio. In practice business finance and investment finance are in many ways intertwined, but this taxonomy provides a starting point for organizing the systematic study of the decision-making tools that are invaluable in our market economy, which has an extraordinarily complex financial system.

This course is primarily concerned with decisions to obtain and deploy capital to finance long-term investments that are needed to develop innovative ventures and create sustainable value, and bring profitable ventures that address challenges relating to climate change and social justice to scale. Students will learn, among other things, how to conduct financial analyses of projects and firms, the pros and cons of different types of financial instruments in the context of creating sustainable value, and understand the effects of leverage on a business and the tradeoffs between debt and equity financing.
MBA 301.04: Sustainable Brand Marketing (2 credit hours)
Strong brands are among a firm’s most important assets – how they are managed can influence consumers’ buying decisions in significant ways. To create value and profits for stakeholders in a socially-conscious and environmentally-responsible manner, there is a need to manage brands for both short-term viability and long-term sustainability. By managing brands strategically, firms can increase their competitive advantage and profitability over the long range, thereby allowing them to continue their investments in strategies that create sustainable value and profitable solutions to social and environmental challenges. Students will learn from business leaders who have done just that, such as like Jeffrey Hollender (Founder and Former CEO of Seventh Generation) and others.

This course addresses key areas of brand management including how strong brands are created, and how brand equity is developed and managed over time. Students will learn about fundamental concepts and real-life application through a combination of lecture, examples, cases, and class discussion. Emphasis is placed on sustainability with a focus on brand strategies designed to enhance long-term profitability and firm survival.

MBA 301.05: Teamwork and Collaboration for Sustained Innovation (1 credit hour)
In increasingly competitive, globalized, and complex business environments, few entrepreneurs and business professionals can accomplish their objectives—never mind achieving audacious visionary goals—by working alone. Sustainable business innovations are achieved through teamwork and collaboration, which requires leaders to invest time and energy to build and maintain healthy long-term relationships with key collaborators to achieve sustained innovation.

This course is designed to develop and hone students’ interpersonal skills pertaining to teamwork, collaboration, and relationship building. The interpersonal skills covered in this course focus on:

- Using self-awareness and insights about diverse others to inform team interactions and build healthy collaborative relationships
- Enhancing team cohesion and establishing norms that support team performance
- Giving constructive feedback, and using active listening to receive it
- Working effectively with diverse team members to leverage their talents and work through or around their weaknesses
- Knowing how and when to “step up” and lead a team, and when to “sit down” and be led by others
- Communicating to prevent, address, and resolve conflict
- Overcoming challenges to team decision making and other hindrances to innovation
- Running and facilitating effective team meetings

MBA 301.06: Business Economics (1 credit hour)
This is a “tools” course. You will learn the basics of how to analyze business questions through an economics lens and to begin to see both the benefits and limitations of the economic way of thinking. To develop your individual toolkit, we will spend the majority of our time thinking through business and sustainability problems using economic models, and quantitative and
qualitative analysis. We will develop an understanding of the key factors that affect consumer choices. We will analyze firm costs and consider how firms choose output levels and identify price improvements. We will explore how firms compete against rivals and how firms think about responding to rival choices. Each day we will apply what we are learning to issues of interest to innovators who seek to create sustainable value through business.

**MBA 301.07: Sustainability Tool Kit I (1 credit hour)**
The core of this course is a series of workshops designed to provide tools and develop skills pertaining to sustainable business and innovation, including but not limited to Leadership Stereotypes and Gender Bias, Understanding Privilege and Confronting Bias, the Role of Social Media in Creating Sustainable Value, and Conducting Product Life Cycle Analysis.

**Module 2 Courses (October 23-December 15, 2017)**

**MBA 302.01: Entrepreneurial Leadership and Mindset (1 credit hour)**
Effective entrepreneurship and leadership are the essential ingredients for innovative and sustainable enterprise. Entrepreneurial leadership mindset requires a delicate balance of thoughtful conceptualization and action orientation. Leadership is the capacity to envision something new and mobilize others to help you accomplish it. Both entrepreneurship and leadership imply change and its implementation, the willingness to make tough decisions, act and live with consequences. These skills can be developed through deep understanding of self and others, an ability to sense the environment, visualize a future, and inspire others to devote their best efforts towards the desired end. Both require practice.

Entrepreneurial Leadership is an *experiential seminar course* that examines the intersection of these two disparate yet complementary sets of skills necessary to build sustainable enterprises in today’s complex, globalized, fast-evolving world. The concept of *cognitive ambidexterity* that is balancing between prediction and creation logics lies at the core of entrepreneurial leadership. Course readings and assignments will enable students to understand and apply this concept. Experiential exercises will help students develop a realistic and deep understanding of themselves, their current cognitive styles, and networks. Reflective readings will provide ideas on how to enhance the unique human and social resources you currently possess. The course culminates in student teams identifying and interviewing entrepreneurial leaders who are achieving (or have achieved) sustainable value to understand how this individual built intellectual, skill-based, and social capital to achieve social good through business ventures.

**MBA 302.02: Crafting the Entrepreneurial Business Model (2 credit hours)**
Entrepreneurial activities have a significant impact on individual lives and careers as they enable the growth and sustainability of organizations. By introducing change and innovation into the economic and social system, entrepreneurs force other individuals and organizations to constantly adapt to changing social and environmental contexts. New business models,
products/services, processes and organizational practices make it virtually impossible for business professionals to settle down into routine work and linear career paths.

This course focuses on developing a business model to assess the viability of an innovative idea designed to create sustainable value. This exercise enables students to understand the critical role of the business foundations such as accountancy, finance, marketing, management, operations, and sustainable business strategy in order to create new value and new ventures. Students working in their Learning Teams will create their own venture designed to achieve sustainable value. In prior years, for example, teams have created ventures intended to reduce environmental impact, such as ventures that sell non-animal high-protein food products, or pet toys sourced from materials that were otherwise destined for landfills.

**MBA 302.03: Marketing Decision Making Under Uncertainty (1 credit hour)**

Almost all ventures designed to create sustainable value by generating profit through innovative solutions to social and environmental challenges operate in contexts of constant uncertainty. In this context, effective marketing decision-making involves identifying and defining marketing opportunities and problems, generating and evaluating marketing actions, and monitoring marketing performance. This post-introductory course explores how research links the organization to target markets through the collection and analysis of information. Students will learn how to translate a sustainable business problem or opportunity into a researchable question, select a suitable research design, employ valid and reliable measures, and collect, analyze and interpret data using appropriate statistical tools.

**MBA 302.04: Leading for Sustainable Innovation (2 credit hours)**

In today’s increasingly globalized, competitive, and rapidly evolving business environment, an organization’s people can be a valuable source of innovation and sustained competitive advantage. The overarching purpose of this course is to help students develop leadership skills to realize these ends in the contexts of early-stage *entrepreneurial* “startups” and *intrapreneural* enterprises embedded within established organizational contexts and cultures. Emphasis is placed on skills needed to create sustainable value, and visionary leadership practices that harness purpose-driven missions to disrupt business as usual by creating solutions to world challenges that are sustainable because they are profitable.

The capstone experience is a team project about enacting large scale organizational transformation to achieve a bold sustainable business strategy. Students have access to “insider” materials provided by a leading sustainable business that sells 100% recycled aluminum.

**MBA 302.05: Finance for Innovators II (1 credit hour)**

This course builds on the material covered in MBA 301.03 (Finance for Innovators) about obtaining and deploying capital to finance long-term investments that are needed to develop innovative ventures and create sustainable value, and bring profitable ventures that address challenges relating to climate change and social justice to scale.
We build on the earlier course to develop the framework for making decisions to obtain and deploy capital to finance long-term investments. The starting point is discounted cash flow analysis. We then develop decision-making tools to account for the fundamental weaknesses of this approach including real options analysis. We then examine various techniques for identifying the appropriate risk-premium for a project.

**MBA 302.06: Cost Models for the Transformational Enterprise (1 credit hour)**

This course focuses on developing the capacity to make wise, informed, ethical, and sustainably-focused decisions through the use of accounting and financial tools. To these ends, we will:

- apply principles and generalizations already learned in accounting and finance courses to new sustainable business problems and situations;
- synthesize and integrate concepts from nonfinancial classes and current events;
- use costs and other critical success factors in business decision making, and management planning, and operational control;
- Master mental models for the communication of financial information and nonfinancial information;
- Recognize the limitations of accounting and financial models in the highly uncertain contexts that often exist when implementing innovative sustainable business strategies; and
- Explore models that take into account the interests of stakeholders beyond a firms’ customers and owners.

**MBA 302.07: Initial Practicum Project Scoping (1 credit hour)**

The capstone learning experience in this program is a summer Practicum Project—a full-time, hands-on, three-month experiential engagement with established companies or early stage ventures (host organizations) from the US and around the world that are focused on addressing the real-world challenges and opportunities associated with sustainable innovation.

Data will be collected form students to understand their specific interests to inform the projects to which they are assigned. Each practicum project is typically completed by a team of 2-4 students, and all projects are designed to create mutual value for students and host organizations.

Course deliverables include a project description approved by the host organization, and a presentation and slide deck that includes the following elements:

1. Background and context on the organization and project
2. The Sustainable Innovation challenge/opportunity
3. Specific project goals
4. Initial thoughts on timeline and project plan
5. Expected deliverables

Below are four illustrative project descriptions from the prior year.

**FACEBOOK**

*Project Title: Terragraph Business Model*

Facebook Connectivity Lab's mission is to conduct the fundamental research to connect the 4.2 billion people who are without access to the Internet or under-served with limited
connections to the Internet. Using new technologies built by Facebook’s Connectivity Lab, the company seeks to leapfrog traditional methods for connectivity and offer disruptive, innovative projects to connect the “last mile.”

*The Sustainable Innovation MBA* practicum project team worked with the Facebook team on project Terragraph; one of the Connectivity Lab’s terrestrial Internet solutions. This practicum project continued the work started by a team from a previous class. The focus of the project was on understanding the ecosystem in dense urban slums in India to better understand the value proposition of Terragraph technology, with a particular focus on non-users – particularly women and girls. The team conducted on the ground interviews to uncover challenges and solutions associated with the use and implementation of the technology. The findings assisted Facebook in determining a viable business model for project Terragraph in India and a framework for the rest of the world. The goal of the project is to create mutual value for businesses and the communities they operate in, creating a truly sustainable venture.

**GLOBAL EVOLUTION**  
*Project Title: Elaborating ESG and Sustainable Development Indicators for Emerging Frontier Markets*  
Global Evolution is a Denmark based investment manager specializing in emerging and frontier market sovereign investments. Global Evolution actively promotes responsible investing and integration of environmental, social, and governance (ESG) criteria in their investment decision-making process. They are widely recognized and respected experts and pioneers in this market segment. The focus of the practicum was to 1) Develop an updateable ESG framework supporting impact investing. 2) Create and refine country specific ESG cases for frontier and emerging markets. 3) Present reasons for integration of the information gained (from 1 and 2) into Global Evolution’s investment and research processes.

**EKUTIR**  
*Project Title: ICT – Based Solutions for Smallholder Farmers*  
eKutir, leverages a human digital platform to build a self-sustaining ecosystem to address various challenges of smallholder farmer poverty. Through the development of these digital applications, farmers are able to increase crop yield and profitability by 12-200% and lower costs by 70%. eKutir’s business model has currently engaged more than 70,000 farmers through its partners in three countries – India, Bangladesh, and Cambodia – and is planning to roll out to several Latin American and African countries in the near future. To meet this global demand, eKutir must understand the technological resources, community needs, and regulatory barriers to reach global scale. *The Sustainable Innovation MBA* students worked with eKutir to develop the next generation strategy and business model to encourage more rapid and effective scaling across developing and developed countries.

**THINKMD**
Project Title: Strategy Analysis for a New, Inclusive Health Venture
THINKMD, a social venture founded in 2014, aims to expand healthcare access for everyone, everywhere. THINKMD’s product, MEDSINC, puts clinical assessment capability in the hands of mobile users. MEDSIC empowers minimally-skilled health workers in resource poor regions to accurately measure the sickness of children and automatically generates triage and treatment recommendations leading to accurate and timely interventions. Additionally, the product’s collection of critical public health data could change how the healthcare sector reacts to pandemic threats.

The Sustainable Innovation MBA students joined THINKMD’s team to support their mission. Together they expanded healthcare access and leveraged data to create better health outcomes for all. The students assessed existing and alternative business models to help the THINKMD team hone the company’s corporate strategy as they prepare for commercial scale. The students performed market and competitive landscape analyses to identify and confirm product differentiation and unique value proposition. This informed commercial strategy, partnership objectives, market positioning, and alternative revenue model opportunities.

Module 3 Courses (January 16-March 9, 2018)

MBA 303.01: Strategic CSR for Transformational Sustainability (2 credit hours)
For-profit businesses play a critical function in modern societies by creating wealth that contributes to societal well-being. As companies create this wealth, their actions impact a diversity of internal and external stakeholders who, in turn, shape the rules and expectations that businesses are expected to fulfill. This dynamic interaction between corporations and society can be examined and understood through the lens of Corporate Social Responsibility (CSR).

Through this course, students will engage in a critical discussion of different views on the meaning of CSR, including the triple bottom line, and perspectives on the “proper” role of CSR in business and society. Recognizing that entrepreneurs, business owners, and managers differ in their moral, relational, and instrumental motives for pursuing a CSR agenda, a case will be made for the merits of adopting a strategic lens to manage CSR to best serve any underlying motives. In so doing, CSR can be transformed from practices that are “the right thing to do” or that are “tolerated” when a firm can afford them, into practices that bring medium- and long-term financial returns to the firm while creating meaningful value for its stakeholders and society. In some contexts, strategically-managed CSR can be a major source of competitive advantage, thereby providing greater benefits to more stakeholders that are sustained by market forces. This course is designed to provide students with language and frameworks to analyze, design, and manage CSR activities that contribute to achieving this type of transformational sustainability to profitably address social and environmental challenges.
Students will learn to:

- Appreciate the diverse conceptualizations of CSR and the different views on its ‘proper’ role in business and society, and communicate informed positions about both;
- Describe the relationship between corporate social performance and financial performance, and delineate the potential sources of financial return from CSR practices;
- Integrate CSP with corporate strategy to manage stakeholder relationships, and analyze the strategic value of a firm’s CSP;
- Apply transformational and visionary leadership to create and reinforce an organizational culture that supports CSR/sustainability, attracts talented workers, and engages valued employees;
- Leverage the major motives and reasons business leaders and other stakeholders care about CSR in the design, management, and communication of CSR initiatives;
- Apply frameworks to prioritize stakeholder groups, stakeholder concerns, CSR issues, and sustainability initiatives; and
- Appreciate the challenges of CSR communication and apply effective communication strategies.

**MBA 303.02: Sustainable Operations and Green Supply Chains (2 credit hours)**

The domain of supply chains and operations is where the rubber meets the road (literally!) in the development and delivery of products and services in our economy. The design and management of effective supply chains and operations is a dynamic process of understanding how to (a) obtain access to necessary components (raw materials, technology, information, expertise, relationships, etc.), (b) transform those components through value-added activities into desirable end products or services, and (c) deliver those products or services to your customers.

While many of the fundamental tools that drive and enable effective operations management have been established for years, if not decades, a number of more modern trends are driving sustainable innovation in this discipline, including:

- Consumer/regulatory demand for “sustainability” in products and operations;
- A growing recognition of the limits and consequences of unchecked consumption of natural resources;
- The value represented by the “low-hanging fruit” of internal operational efficiency;
- The tension between long-term optimization vs. short-term efficiency;
- The maturation and ascendance of design thinking as a discipline;
- The information and technology revolution of the past thirty years; and
- The rise of social media and stakeholder swarms.

In this course, we will explore foundational concepts in supply chain and operations management alongside the trends, tools, and innovations that make it possible to embed sustainability more deeply into an organization’s core activities than ever before and position the organization to succeed responsibly and sustainably in the emerging global business environment.
MBA 303.03: Law as a Framework for Entrepreneurial Business (1 credit hour)
The goals of this course are to provide students with an introduction to several of the core legal areas with applicability to entrepreneurial business, including both doctrinal knowledge and an understanding of the application of doctrine to achieve advantageous legal outcomes through such avenues as intellectual property, contracting, and debt and equity finance. Emphasis is placed on legal concepts that are particularly germane to creating and transforming businesses to create sustainable value.

MBA 303.04: Business Sustainability and Public Policy (2 credit hours)
A firm’s business environment has market and nonmarket components. In an earlier course you studied how firms craft a sustainable strategy in the market environment. You learned how firms create added value for its stakeholders (e.g., owners, customers, employees, communities, the natural environment, etc.) through exchange in the market context.

In this course we will analyze critically “market exchange” and explore what is referred to as “market failures.” First, we will briefly explore the benefits of markets and discuss the role of government in facilitating market exchange. Then we will analyze alternative governance mechanisms to address certain types of market failure. The remainder of the course will be focused on understanding the “nonmarket environment.” While the nonmarket environment encompasses the broader political, social, and environmental context in which firms operate, we will emphasize the political context and address public policy issues affecting the natural environment and society as a whole. The political environment of business is increasingly occupying managers’ times and firms’ resources. Managers without exposure to these subjects can be unprepared to develop strategy, at great cost to their firms.

Accordingly, many successful businesses need to formulate strategy not only for their product markets, but also for the political systems in which they operate. This course addresses how businesses manage their interactions with demanders of public policy (e.g. activist interest groups, the public) and suppliers of public policy (e.g. political institutions, legislators, regulators). To pursue this objective, this course provides tools for understanding the political environment, institutions with oversight of common business activities, and the ways firms and other interest groups shape the political process that determines public policy that affects sustainable business strategies and the creation of sustainable value.

MBA 303.05: Financing a Sustainable Venture (2 credit hours)
This course will explore methods for financing innovative sustainable entrepreneurial ventures including angel investment, venture capital investment, as well as bank and alternative lender financing. Emerging topics in entrepreneurial finance such as crowdfunding, Vermont Small Business Offering Exemption and business plan competitions and acceleration programs will be discussed. The importance of aligning the interests of capital providers with the interests of the founding team and management will be stressed.

The course is meant to be a helpful primer for students interested in financing an innovative start-up or early stage venture as well as for students who are planning to work for an early stage
entrepreneurial company designed to create sustainable value. We will discuss how sustainable entrepreneurs, investors, and lenders create value and we will discuss how the interests among the three groups do not always coincide or align. We will discuss why it is important for sustainable entrepreneurial ventures to choose their sources of capital well.

Students undertake an extensive study of the various methods of financing a business venture including loans, alternative debt, and equity financing, angel financing, and venture capital. Study will focus on the fund-raising cycles of a business, the process of raising money for entrepreneurial ventures, and emerging enterprises.

Module 4 Courses (March 19-May 11, 2018)

MBA 304.01: Technology Commercialization and Entrepreneurship (2 credit hours)
This class is designed to provide business professionals with skills for and insights into the processes of transferring research from the university to the marketplace, and transforming new technologies into a sustainable products or services that create new economic, social, and/or environmental value. However, exploiting a new and unproven technology to create value involves substantially more risk and uncertainty than traditional entrepreneurial opportunities, and this class will help you to better engage in and overcome these challenges in your future career, either inside or outside of academia.

In this class students learn about commercialization in real-time with real-world technologies:
- At the start of the module, UVM researchers come to class and pitch their technologies that create social and/or environmental value.
- Students then form consultant teams around their preferred technology and researcher.
- Over the module, teams collaborate with researchers to develop a commercialization plan.
- By module’s end, teams will deliver a portfolio of commercialization analyses and recommendations to their research collaborators.

MBA 304.02: Driving Innovation from the Base of the Pyramid (1 credit hour)
The Base of the Pyramid (BoP) is a socio-economic designation for the more than 4 billion people living on less than $8 a day. It is also a business strategy that focuses on products, services, and enterprises to serve this demographic in a way that is culturally sensitive, environmentally sustainable, and economically profitable. There are tremendous potential benefits to companies who begin focusing on the poor as business partners and innovators, as well as, value-demanding customers. Companies and entrepreneurs who choose to serve these new markets will join a unique group of bold visionaries that not only embrace a new brand of corporate social responsibility, but will also experience a new mode of growth and profitability.

As we witness growing inequality and accelerating environmental degradation around the world (including right here in the US), commercial attention in the years ahead will inevitably come to focus more on breakthrough and disruptive innovations that directly confront these challenges.
Increasingly, competitive advantage will hinge on innovations incubated from the base of the pyramid (BoP)—the ability to create tomorrow’s sustainable enterprises from the bottom up, by commercializing new, disruptive technologies through innovative business models focused on the underserved at the base of the world income pyramid. Ultimately, some of these innovations will also have the potential to “trickle up” to (and transform) the top of the pyramid through reverse innovation.

This course examines the emerging next-generation strategies that will reinvent industries and create new markets around the world in the coming decade—leapfrog, disruptive strategies, and business models that include and lift the four plus billion poor at the base of the income pyramid. Emphasis is placed on the new skills and capabilities that are required to succeed in this challenging new business space, including abilities to engage local communities, co-create new value propositions, design new business models, scale pilot business experiments, and assess triple bottom line impacts.

Through a combination of readings, case discussions, videos, projects, and examples from actual BoP initiatives; this course will critically examine these emerging strategies as vehicles for more effectively positioning companies for the 21st century. The goal is to develop the knowledge and capacity to effectively pursue such strategies, both within existing corporations (as intrapreneurs) and in start-up settings (as entrepreneurs).

**MBA 304.03: Entrepreneurial Family Business (1 credit hour)**

Family businesses (FB) are the predominant form of business organizations in the world contributing an estimated 70-90% of the global GDP. In the United States, family enterprises contribute over 64% of GDP and generate 62% of employment. And, in other parts of the world, their contribution is even higher. The greatest part of global wealth lies with family controlled firms. These firms are distinguished from other enterprises by the significant influence of the controlling family on the creation, continuity, mode and extent of growth, and exit of a business.

Long-lived family firms that sustain over generations of leaders, economic and industry life cycles, embrace transgenerational entrepreneurship and innovation as part of their culture, making them an important vehicle for social and environmental change through innovative business models.

In this seminar course, we learn about the unique dynamics and dilemmas of FB. Such an understanding is helpful to work effectively and professionally, in and with enterprising families, to launch and create sustainable new ventures. Course readings and case studies shed light on issues faced and strategies adopted by leaders of the most progressive long lived enterprises. At the end of the course, each study group team will present lessons learnt from a Henokien—an association of family firms with over two hundred years of continuous operations.

**MBA 304.04: Business, Communities, and Sustainability (1 credit hour)**

The purpose of the course is to provide basic understanding of entrepreneurial sustainability in the community development process and explore how this approach can facilitate improving the quality of life and well-being of general people. The course will foster the role of businesses in
the sustainable community development process. It will further explore how business innovation and entrepreneurship are the most effective tools to lead a community towards sustainability in both rural and urban settings. The course participants will have an excellent opportunity to reinforce different theoretical approaches to sustainability, gain real life experiences in national and international development, and design suitable business models for sustainability by working in groups and engaging with team members, faculty and community members. This course combines lectures, field trips, group works and discussion formats.

**MBA 304.05: Sustainable Energy Technology and Policy (1 credit hour)**

In *Reinventing Fire*, Amory Lovins notes “electricity is poised for a profound leap in importance as the key enabler of the transitions in transportation, buildings, and industry….”. This course will explore the challenges and opportunities for transition to smart energy technologies and policies with a primary focus on how increased electrification is leading to global environmental improvement. Based on diverse organizations’ experience, this course will explore how sustainable energy technologies and associated smart policies offer real promise for supercharging energy efficiency, democratizing demand response, electrifying transportation, and preparing for ubiquitous distributed clean energy technologies -- all in the name of greening our energy footprint and forging environmental progress.

In recent years, leading corporations such as Google have set the gold standard in renewable energy procurement and today’s top renewable energy leaders “reads like a directory of corporate America.” In 2016, the Renewable Energy Buyers Alliance was formed by Business for Social Responsibility, Rocky Mountain Institute, World Resources Institute and the World Wildlife Fund. The organization’s goal is to drive 60 GW of new corporate renewable energy in the U.S. by 2025. The group announced that more than 60 companies are involved in the group’s initiatives. Eighty-eight leading companies have now joined RE100, which encouraged its members “to set a public goal to procure 100% of their electricity from renewable sources of energy by a specified year.” RE100's members include such diverse companies as Apple, Bloomberg, Coca Cola Enterprises, Facebook, General Motors, Google, Microsoft, Pearson, Proctor and Gamble, Starbucks, Walmart, Wells Fargo and many others. The course will introduce you to the new technologies, explore the key laws and policies impacting these technologies and discuss strategies for achieving leadership in sustainability.

**MBA 303.06: Systems Tools for Sustainability (1 credit hour)**

To create sustainable businesses, leaders and entrepreneurs will need to work across traditional strategic boundaries and develop solutions that address complex challenges such as climate change, gender inequality, hunger, and poverty. These are “wicked problems” because they are hard to define, there are competing objectives, and making progress requires changing peoples’ values, beliefs, or behavior. They are also complex systems challenges because they involve a tangle of interdependencies that make it hard to decipher cause and effect. These kinds of problems can’t be solved by tackling one piece at a time in isolation using linear thinking. Doing so may produce short-term results, but it usually leads to unintended negative consequences.

When our attempts to solve wicked problems fail it’s a sign that our mental models don’t align with how the world actually works. This disconnect can occur when feedback about our past
actions is missing, delayed, or distorted. As a result, the intuition (mental model) we develop about how a system will respond to our intervention may be wrong. Even well-meaning change agents – seeking to bring about positive change in the world – can inadvertently act in ways that make things worse rather than better. The goal of systems thinking – and of this course – is to help you think and learn in new ways so that you can develop better mental models.

The toolkit included in this course includes thinking skills and modeling tools that can help you analyze the key cause-and-effect relationships that determine a system’s behavior over time. You will have the chance to practice these skills during class and in a project with your practicum team.

By the end of the course, you will be better able to:

- Reframe a vexing challenge as a systems problem to engage stakeholders and avoid blame
- Create a map to help stakeholders see an integrated view of the whole system
- Sketch behavior-over-time graphs that focus on patterns of change rather than isolated events
- Use simple “stock and flow” diagrams to elucidate how structure (key interrelationships in the system) drives behavior
- Draw causal loop diagrams that depict key feedback loops and delays within the system
- Use systems archetypes (stories) as a way to explain why problems persist and explore possible interventions
- Identify points of leverage that can increase the positive impact of interventions on the system in the long term
- Use simulations and prototyping to test solutions before implementing them

Becoming familiar with these tools will help you become a more effective change leader who can address both short and long term goals and balance the interests of people, profit, and planet. In the immediate future, this course will support your practicum project by helping you refine and test your mental models as you engage with your company’s stakeholders.

**MBA 304.07: Sustainability Toolkit II (1 credit hour)**

The core of this course is a series of workshops designed to provide tools and develop skills pertaining to sustainable business and innovation, including but not limited to Mission Driven Careers, four workshops working with a tomato farm in Mexico to embed triple bottom line approaches throughout their operations, Biomimicry, Creating Sustainable Communities, and Using Appreciative Inquiry to Create Sustainable Change.

**MBA 304.07: Practicum Scoping and Prep (1 credit hour)**

This course provides students time and space to continue their scoping work for their summer Practicum Project—a full-time, hands-on, three-month experiential engagement with established companies or early stage ventures (host organizations) from the US and around the world that are focused on addressing the real-world challenges and opportunities associated with sustainable
innovation. The course deliverables are a practice presentation and a final presentation in which students will present their final coping work to the project host organizations.

**Practicum Project (May 21-August 10, 2018)**

**MBA 305.01: Practicum Project Course (7 credit hours)**

The capstone learning experience in this program is a summer Practicum Project—a full-time, hands-on, three-month experiential engagement with established companies or early stage ventures (host organizations) from the US and around the world that are focused on addressing the real-world challenges and opportunities associated with sustainable innovation. Students will deliver a draft report to their faculty advisors, and a final report and presentation to their project’s host organization. Below are four illustrative practicum projects completed in the prior year.

**FACEBOOK**  
*Project Title: Terragraph Business Model*

Facebook Connectivity Lab's mission is to conduct the fundamental research to connect the 4.2 billion people who are without access to the Internet or under-served with limited connections to the Internet. Using new technologies built by Facebook’s Connectivity Lab, the company seeks to leapfrog traditional methods for connectivity and offer disruptive, innovative projects to connect the “last mile.”

The Sustainable Innovation MBA practicum project team worked with the Facebook team on project Terragraph; one of the Connectivity Lab’s terrestrial Internet solutions. This practicum project continued the work started by a team from a previous class. The focus of the project was on understanding the ecosystem in dense urban slums in India to better understand the value proposition of Terragraph technology, with a particular focus on non-users – particularly women and girls. The team conducted on the ground interviews to uncover challenges and solutions associated with the use and implementation of the technology. The findings assisted Facebook in determining a viable business model for project Terragraph in India and a framework for the rest of the world. The goal of the project is to create mutual value for businesses and the communities they operate in, creating a truly sustainable venture.

**GLOBAL EVOLUTION**  
*Project Title: Elaborating ESG and Sustainable Development Indicators for Emerging Frontier Markets*

Global Evolution is a Denmark based investment manager specializing in emerging and frontier market sovereign investments. Global Evolution actively promotes responsible investing and integration of environmental, social, and governance (ESG) criteria in their investment decision-making process. They are widely recognized and respected experts and pioneers in this market segment. The focus of the practicum was to 1) Develop an updateable ESG framework supporting impact investing. 2) Create and refine country
specific ESG cases for frontier and emerging markets. 3) Present reasons for integration of the information gained (from 1 and 2) into Global Evolution’s investment and research processes.

EKUTIR

Project Title: ICT – Based Solutions for Smallholder Farmers

*eKutir*, leverages a human digital platform to build a self-sustaining ecosystem to address various challenges of smallholder farmer poverty. Through the development of these digital applications, farmers are able to increase crop yield and profitability by 12-200% and lower costs by 70%. eKutir’s business model has currently engaged more than 70,000 farmers through its partners in three countries – India, Bangladesh, and Cambodia – and is planning to roll out to several Latin American and African countries in the near future. To meet this global demand, eKutir must understand the technological resources, community needs, and regulatory barriers to reach global scale. *The Sustainable Innovation MBA* students worked with eKutir to develop the next generation strategy and business model to encourage more rapid and effective scaling across developing and developed countries.

THINKMD

Project Title: Strategy Analysis for a New, Inclusive Health Venture

THINKMD, a social venture founded in 2014, aims to expand healthcare access for everyone, everywhere. THINKMD’s product, MEDSINC, puts clinical assessment capability in the hands of mobile users. MEDSINC empowers minimally-skilled health workers in resource poor regions to accurately measure the sickness of children and automatically generates triage and treatment recommendations leading to accurate and timely interventions. Additionally, the product’s collection of critical public health data could change how the healthcare sector reacts to pandemic threats.

*The Sustainable Innovation MBA* students joined THINKMD’s team to support their mission. Together they expanded healthcare access and leveraged data to create better health outcomes for all. The students assessed existing and alternative business models to help the THINKMD team hone the company’s corporate strategy as they prepare for commercial scale. The students preformed market and competitive landscape analyses to identify and confirm product differentiation and unique value proposition. This informed commercial strategy, partnership objectives, market positioning, and alternative revenue model opportunities.