SHORT COURSES AS OF JANUARY 7, 2013

TECHNICAL COURSES		
Introduction to Website Development	4 wks PT	Looking to dip your toe into website development? This course is specifically aimed at those looking to build a foundation of programming skills. In a fictional scenario, students work as independent contractors who have been hired to develop a website for a community organization. Students will learn to use modern HTML and CSS to produce an attractive, informative multi-page website based on the client's requirements. No programming experience needed.
Software and Systems Requirements	14 wks FT	Don't let your software projects get derailed by poorly understood requirements. This course gives students a solid grounding in eliciting, analyzing, and documenting requirements to position projects for success. Students work in teams to analyze a new product concept, assess user needs extracted from in-depth user interviews, and set forth both the functional and non-functional requirements for the proposed product. Students also produce a competitive analysis, and proposals for both a Minimum Viable Product and a traditional first release. Previous experience in professional software development is required, but no programming experience is needed.
Introduction to eCommerce	7 wks FT	Learn how to take a business online. This course takes students through all aspects of building a web-based business, from crafting an online business model to creating a website prototype with an electronic payment system. During the course students will analyze a proposed eBusiness, develop a business case, and build the company's website. Students will come away with the skills to develop and launch an online business – their company's or their own. Ability to do college or entry-level graduate work required.
Web Application Development in Ruby on Rails	12 wks PT	Programmers! Add Ruby on Rails to your skill set. In this course, students use Ruby on Rails to develop an internal "matchmaker" web application to connect projects with specific technical needs to employees with relevant skills or skill goals. In addition to learning Ruby on Rails, students learn (or review) fundamental programming concepts. HTML and CSS experience required, or Introduction to Website Development.
Mobile Web Application Development	6 wks PT	Add responsive design to your skill set! In this course students work on a team hired by a community organization to develop a mobile design for an existing website. They learn to optimize viewability and navigation on mobile devices – smartphones and tablets - while still maintaining complete site functionality on a desktop computer. Students use libraries such as JQUERY and Sencha Touch in addition to incorporating location-based functionality. HTML and some CSS experience required.
Data Analytics for eCommerce/Retail	7 wks FT	Learn how to find patterns and trends in data to solve real business problems related to retail and online sales. In this course students identify the business objectives to predict or optimize and learn how to quantify those objectives, analyze data, build predictive functions based on machine learning techniques, and how to apply these to optimize outcomes. Students will use software tools to explore and analyze data to address targeted

business problems. No programming experience required, but quantitative thinking and a can-do attitude are a big plus.

Search Engine Optimization	6 wks PT	Add SEO to your skill set! In this course students learn what it's like to be on a team of SEO specialists consulting with a company whose website is not ranking highly on search engines. Students practice techniques related to key word selection, key word placement, refactoring web-site content and other optimization methods, and will evaluate results by running a search engine to improve the company's search rankings. HTML experience is required.
Managing Software Professionals	14 wks FT	Many software developers are looking to move into a leadership role and would like to boost their management skills. This course helps tackle this challenging transition by allowing students to practice key "people management" skills in a safe environment. Students will participate in a fictional scenario in which they will hire team members, handle problematic employees, manage confrontation, motivate exceptional employees, and develop the general interpersonal skills required to succeed as a manager in a technical environment.
Setting Software Projects Up For Success	14 wks PT	You are sitting in your cubicle when your manager and a senior executive walk in and say, "We love the work you've been doing. We have a mission-critical project that we need to you manage. When can you start?" How to you respond? In this course students are asked to take on a software project already in progress and learn how to evaluate the feasibility of the project, assess the development methodology, and evaluate the emotional and physical work environments. Students will assess how and when to raise issues and how to mitigate risks, and will learn how to present to and negotiate with management. One year of experience on a software project required; experience as a developer preferred.
Native Mobile Development for Web Programmers	8 wks PT	Learn to create native Java apps for Android. In this course students use Java to develop an Android-based game that communicates with a web service for storing data. Knowledge of Java and object-oriented programming preferred.
Sensor-Based Mobile Applications	7-8 wks PT	By 2015 more than 50 percent of smartphones will include sensors like GPS, accelerometers, a magnetometer, a gyroscope, and optical and touch sensors. Learn how to build applications that take advantage of sensor data in this short course in which students build an application that uses the sensors currently available on mobile devices. This course is for experienced programmers.
Team-based Agile Software Development (for new college grads)	7 wks PT	Are you a recent college graduate looking to experience the Agile software development process? In this course's scenario you and your teammates work for a company that has a serious backlog for their next product and management has asked you to join an Agile team to work through the backlog. The company wants the kind of customer satisfaction that comes from Agile development efforts: the product must be developed quickly, results must surpass security and quality standards, and the product must scale gracefully. Students work as part of an Agile team to plan, estimate

and implement product ready code in sprints, interact with the product owner and other Agile team members and confront and resolve typical Agile project issues.

Big Data Essentials	3 wks FT	Learn how to tame the cloud and get big data into your corporation. In this short course students are tasked with taking a company into a cloud-based framework to enable big-data analytics. Students evaluate cloud services provided by Amazon and other companies, learn how to work with Hadoop, assess the trade offs of setting up a company's own cloud versus renting from a cloud provider, and set up an account for cloud services. Students also explore methods to enable analytics on the cloud.
Software Risk Management	5 wks PT	In this non-programming course aimed at project managers and team leads, students learn risk management while running a software project. Students tackle risks such as whether or not a new business venture is viable, whether Agile can reduce development risks while still honoring contractual obligations, and whether architectural risks can be reduced by the adoption of specific frameworks.
Web and Network Security	2-3 wks FT	There has been a security break in at your web site! What are your next steps? In this simulation students must deal with a security break, learning how to close all security lapses while simultaneously assessing the trade offs between security and cost in terms of inefficiency to the organization. Students learn how to look for security gaps, assess policies and practices such as firewalls and passwords, and evaluate different security providers.
Security Policy	1-2 wks PT	Learn to define an effective security policy by critiquing another business's policy.
Understanding Data Analytics for Managers	3 wks FT	Students learn how to be the sponsor and manager of data analytics tasks.
Server-less Mobile Web Apps	2 wks	How to get a new site up very quickly.
Automated Testing of Web and Mobile Apps	2 wks	How to quickly and easily QA a site.
Website Performance Improvement	2 wk	A small business is looking to identify and remove bottlenecks in web apps. In this course students will fix basic mistakes in order to optimize a website's performance.
Agile Development for Business-Critical Apps	14 wks PT	Experience the Agile development process. Your software development company has a serious backlog for their next product. and management has asked you to join an Agile team to work through the backlog. The company wants the kind of customer satisfaction that tends to come from Agile development efforts, but the results must surpass security and quality standards, and the product must scale gracefully. In this scenario students work as part of an Agile team to implement pieces of the backlog, learning to interact with the team and confronting issues that are part of the Agile

development process.

Technology Change Management	4 wks PT	Are you looking to make a technology change within your organization? Adopting and deploying new processes, methods, and tools requires more than just knowledge and skill. It requires a change in the way the work gets done and that means behavior change. In this simulation students work as project leaders who have been tasked with switching from a waterfall development process to an Agile environment. Students learn how to identify all the issues that will influence and lead to the change, and then bringing about the change within the organization.
Agile Service-Oriented Architecture	4 wks PT	Everybody does development for web services using service oriented architecture. This is a course on how to do that kind of project with an agile process. This is a way to compartmentalize a server to do things like be a mobile provider in addition to PC clients.
Integrating Open Source Software into Commercial Products	4 wks PT	The use of open source software is widespread. Project teams in all major software companies are using open source software to create their products. This course explains how to use open source software within commercial product development. Mechanics of using other people's development work, team interactions, legal component, technical aspects of using open source software. Interaction with OSS world (i.e. what if you find a bug in OSS?)
Framework Evaluation for Architects	4 wks PT	How to select and evaluate a framework for a software product. Students search for existing frameworks for service-oriented architecture such as Spring, select and then test the framework to evaluate it for use within a product.
Getting to Scalability Without Driving Yourself Crazy (formerly: building scalable web services)	4 wks PT	You want your product to have lots of mobile and PC clients from day one, but that kind of scalability is hard to achieve. This course focuses on building scalable services and teaches students how to develop web services so they canscale effortlessly. Students begin with a small web services project with scalablity constraints, and must work to ensure scalability is achieved while the product is under development.
The Business of Software		In this course, students prepare the material necessary to pitch a new business to internal or external investors: articulating a value proposition and business model, performing financial analysis, developing a business plan, and preparing a summary presentation for investors.
Process, Tools and Change	7 wks PT	Team leads learn how to set up a new project, select tools, put processes in place and make decisions collaboratively with the team. Students will select an appropriate development methodology, tools (such as bug tracking and, source control), and will need to adapt as the project moves along.
Envisioning a Software Product		Going from an initial assessment of customer and user needs to a realistic achievable vision for a software product. Students create a product vision document.

Software Product Strategy		How to think about all the component strategies one has to have in place, from technical to marketing, to build a new software product.
Cash Crisis	16 wks PT	Students learn to interpret the financial situation of a company and spot potential problems.
Supply Chain	13 wks PT	Managers/soon-to-be Managers in manufacturing industries (perhaps those responsible for one segment of a supply chain in need of better understanding of other supply chain dimensions/interdependencies)
Introduction to Data Analytics		In Introduction to Data Analytics, participants play new Data Analysts staffed on three short data analytics projects in succession, working with a busy engagement manager. Each project requires a different technology to meet the project goals: ACL, SQL (via Microsoft Access), and SAS. For each project, participants email the client IT department to determine the software environment and email the client to clarify scope. They then design the analytics to use to meet project goals and request data. After receiving data, they import it into the system, reconcile it, and perform the analytics they designed. Once the analytics are complete, they export the data and create a client-ready set of results. They present their results to the client, focusing on the relevance of their results and how they arrived at them.
Big Data for Managers		Learn about the implications and impact of Big Data for corporations and other large organizations, including its promises signifcance and limitations. The course will explore deployment options (e.g. private cloud vs renting from Amazon or other provides), e-services delivery, scalable analytics (e.g. for demographics, marketing, finance), and competitive advantages.
Unity 3D		

BUSINESS COURSES		
From idea to market opportunity (Entrepreneurship)		Could your idea be the next Facebook or Twitter? If you've got a technical background and are looking to get into business, this is the course for you. Students analyze an existing business hypothesis and a technological roadmap in order to develop a business model vision. Using the model, students develop a sales and marketing plan, plan for overhead costs, and ultimately finalize a financial plan for the company. You'll also develop an elevator pitch and practice pitching your business plan in a formal presentation.

Mini MBA for Technologists (Part 1) Fundamentals of Financial Analysis	4 wks PT	While playing the role of financial analysts called in to assist a winery experiencing a severe cash crisis, participants organize and analyze key financial data and ultimately produce a report that identifies problems revealed by the data and speculates on root causes.
Mini MBA for Technologists (Part 2) Business Strategy, Performance and Market Challenges	2 wks PT	Participants play the role of a business analyst for a consulting firm who must determine whether a key client will meet its five-year financial goals given its current state and strategy direction. Participants conduct their own research, perform analyses, and craft a final report outlining their recommendations.
Mini MBA for Technologists (Part 3) Communicating the Business Case for Your Work	4 wks PT	Participants play the role of technology consultants at a large consultancy who have been called in to respond to an RFP related to the implementation of one or more tech solutions. Participants need to communicate and position complex and detailed technical messages within a business context, making an effective business case for their recommendation.
Ethics and the Corporate World	4 wks PT	Become familiar with the underlying issues related to change management, corporate governance, intercultural communication, negotiation, and business ethics. In this course, participants read and debate the details of a fast-paced, entertaining novel focusing on the ups and downs of the Healiox Corporation, a fictional pharmaceutical company engaged in an acquisition of a Japanese firm. As they read, they critique the decisions of the major characters, make predictions regarding the consequences of those actions, and formulate alternatives that might better resolve the problems and opportunities the characters are facing.
Making Connections: Networking Essentials	2 days	In this intensive workshop, participants use tools and practice strategies that help them establish new business relationships and further develop existing ones. Participants are introduced to networking as a process, with defined goals and steps, requiring both planning and execution.
Project Management Bootcamp	2 wks PT	Participants play the role of project manager responsible for shepherding an engagement from inception to conclusion. During the simulation, participants must identify and contend with team and client issues that threaten the success of the engagement. In order to succeed participants must get up to speed on the details of the engagement, plan and delegate work, track budget and work progress, report status (internally and externally and set expectations and resolve emerging issues.
Be A Better Coach	4 X 3 hour sessions (includes 30 min of prework). Participants could pick and choose which sessions to attend.	Coach others to achieve excellence. Through planning, practice, just-in-time coaching, feedback, and debriefs, gain valuable experience applying strategies and tools to common coaching situations. In working through simulated coaching conversations, you'll determine not only how best to conduct a coaching conversation, but also consider the appropriate level and type of coaching interaction a situation requires, the best balance of check-ins versus independent work time, and how to coach virtually.
LEARNING SCIENCES		

Training needs analysis	7wks PT	
Design and Development of Story-Centered Curricula	7wks PT	Students play the role of learning design and development teams who develop a detailed training course design for a corporate client, using the Story-Centered Curriculum Approach. Following a proven design and development approach, students build the first several learning tasks and associated student and mentor materials.
Managing a Course Development Project	7wks PT	Students learn to plan, track, and troubleshoot Story-Centered Curriculum development projects through all key stages of development, from inception, through needs analysis, prototyping, preliminary releases, testing, delivery, and maintenance. Students begin by working as a manager assigned to a complex project that is still in the proposal phases. They perform all the functions required to manage the project, beginning with development of project milestones document to estimate the cost of the work, then moving to selection of specific staff with appropriate skills; forming detailed project plans based on detailed course design; adapting those plans as additional constraints and learning needs are discovered; managing client expectations; fighting scope creep; and deciding how to respond when schedules begin to slip.
Introduction to eLearning Development	7wks PT	Students learn the basics of developing web-based e-learning courses, using one of two different teaching architectures: "Turn-Taking," and "Observe and Critique." Students develop the learning programs in an HTML editing tool using standard templates and demo their final products to compare their approach with that of their colleagues.
Advanced Design and Development Seminar	7wks PT	In this advanced course, students develop their own Story-Centered Curriculum or e-Learning Project. Students plan and develop documentation and other relevant program materials for each stage of the course design and development lifecycle. Experienced Learning Sciences faculty mentor students as they work.