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**STEVENS**  
INSTITUTE *of* TECHNOLOGY  
THE INNOVATION UNIVERSITY

MASTER'S OF ENGINEERING IN  
**TECHNICAL LEADERSHIP**

*Empowering the Next Generation of Technical Leaders*

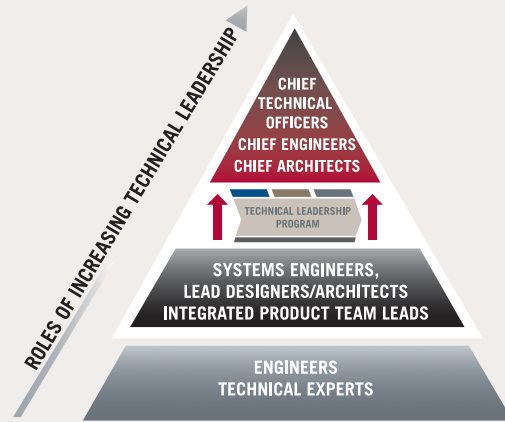


**PROGRAM DESCRIPTION & SCHEDULE\***  
**2011-2013**

*\*As of January 2012. Subject to change. Degree pending approval of the Graduate Curriculum Committee.*

# TECHNICAL LEADERSHIP AT STEVENS

The increasing complexity of modern systems and enterprises demands a new generation of technical leaders who can see and solve problems from multiple perspectives. The traditional career progression of technical leaders begins with domain specialists who grow to become systems engineers, lead designers/architects, or team leads. However, very little formal training exists to prepare technical leaders to reach the top level of leading complex technical organizations in roles such as Chief Engineer, Chief Architect, or Chief Technical Officer. The Technical Leadership Program at Stevens Institute of Technology was developed to meet this need. The program prepares and empowers the next generation of technical professionals with the skills they need to expand their growth opportunities and progress their career into top technical leadership roles and responsibilities.



## PROGRAM ARCHITECTURE

The Technical Leadership Program is modular and architected into three phases (lenses) that align with a technical leader’s career progression. These three lenses – Systems, Business and Enterprise – offer participants an increasingly broader aperture through which to understand and hone their skills as technical leaders. This approach ensures that program participants are exposed to aspects of a technical leadership role that go beyond technology and domain expertise, to include knowing how to enhance business propositions within the context of an enterprise’s culture and strategy. Participants will explore how problems can be solved through the perspectives of the three lenses and develop new skills by applying them to real-world case examples as well as their own organizational scenarios.

Courses in the **Systems Lens** help aspiring technical leaders develop and refine their skills in analyzing complex technical problems, synthesizing holistic solutions and making sound judgments in the presence of high ambiguity, rapid change and challenging non-technical constraints

Courses in the **Business Lens** focus on the business and collaborative dynamics of a complete technical project and the leadership challenges associated with designing, implementing, managing and improving the processes, teaming, and organizational infrastructure through which a complex technical system is realized.

Courses in the **Enterprise Lens** focus on the entire enterprise, the ways the technical leader interacts within it, and the alignment between the enterprise, its businesses, and projects. Its focus is on the leadership challenges encountered in driving sustainable near and long-term enterprise growth, optimizing stakeholder and shareholder value, ensuring enterprise competitiveness, and implementing change initiatives through strategic planning.

Communications, Mentoring, Ethics and Technical Integrity are emphasis themes that cut across all three lenses to ensure that fundamental tenets of self-awareness, team-building and influencing others are pervasive learning threads across the lenses. These **Thread Courses** run in parallel to the Lens Courses.



## SCHEDULE 2011-2013\*

The Technical Leadership program begins Thursday September 8, 2011 with an evening orientation, followed by all day Friday and Saturday Sept 9-10, 2011. It is held in the Stevens Washington DC location approximately one weekend per month over a period of 20 months, with collaborative activities between sessions. The program consists of 12 courses comprising the Systems, Business, and Enterprises Lenses and Threads. Each Lens course consists of two weekends (Session A & Session B), and the Thread courses run in parallel to the Lens courses. The program must be taken in its entirety and results in a Master’s of Engineering in Technical Leadership.

The full schedule is as follows.

Lens	Course	Session A	Session B
SYSTEMS LENS	System Lens 1	September 8 - Evening (Orientation); September 9-10, 2011	October 14-15, 2011
	System Lens 2	November 4-5, 2011	December 9-10, 2011
	System Lens 3	January 6-7, 2012	February 10-11, 2012
	System Lens 4	March 2-3, 2012	March 30-31, 2012
BUSINESS LENS	Business Lens 1	April 27-28, 2012	June 1-2, 2012
	Business Lens 2	June 22-23, 2012	July 27-28, 2012
	Business Lens 3	August 17-18, 2012	September 21-22, 2012
ENTERPRISE LENS	Enterprise Lens 1	October 12-13, 2012	November 16-17, 2012
	Enterprise Lens 2	December 7-8, 2012	January 11-12, 2013
	Enterprise Lens 3	February 8-9, 2013	March 15-16, 2013
THREAD COURSES	Thread 1	September 8, 2011 - December 31, 2011 <i>Thread courses run in parallel to Lens courses. Participants enroll in Systems Lens Course #1 and Thread #1 at the beginning of the program, with Thread #1 continuing through end of 2011.</i>	
	Thread 2	January 6, 2012 - March 16, 2013 <i>Thread courses run in parallel to the Lens courses. Thread #2 begins concurrent with Systems Lens #3 in January 2012 and continues through the end of the TL program.</i>	

\* Schedule as of 8/23/11 and is subject to change.

## SYSTEMS LENS

The Technical Leadership Program is modular and architected into three phases (lenses) that align with a technical leader's career progression. These three lenses, Systems, Business and Enterprise offer participants an increasingly broader aperture through which to understand and hone their skills as technical leaders. Courses in the **Systems Lens** helps aspiring technical leaders develop and refine their skills in analyzing complex technical problems, synthesizing holistic solutions and making sound judgments in the presence of high ambiguity, rapid change and challenging non-technical constraints.

The courses in this Lens are taught using a combination of guest lectures, real-world case studies, classroom exercises and discussions, and a complex simulation project.



### COURSE 1

## LSYS 625 DECIDING WHAT TO BUILD AND WHY

### COURSE OVERVIEW

Technical leaders are at their best when the canvas is blank and the possibilities are endless. They understand not only how technical systems work, but the role they play in the larger systems of which they are a part. Creative themselves, they also nurture creativity in others and recognize good ideas when they see them. They understand the pace of technology-evolution and are often able to anticipate its advance. Perceiving ambiguity as opportunity, they champion new ideas and are able to enroll others to enlist their support.

This course presents the fundamentals of systems engineering from the perspective of the technical leader. It establishes the context in which technical systems are conceived and innovation occurs, introduces basic principles of systems thinking, and applies them to the challenge of developing innovative solutions to complex technical problems in the presence of high ambiguity, rapid change and demanding non-technical constraints.

### LEARNING OUTCOMES

At the conclusion of the course, students will:

- Understand the basic principles of systems thinking and how they relate to the challenge of defining and realizing innovative technical solutions
- Apply techniques for systematically identifying, prioritizing and resolving multiple competing stakeholder needs and desires
- Analyze opportunities characterized by high ambiguity, rapid change and challenging non-technical requirements
- Devise novel solutions and develop and communicate a compelling vision that results in a decision to implement.

### SESSION A:

**Day 1** - Overview of the Systems Lens; systems thinking principles and approaches; case study example; the nature of creativity; introduction to the Systems Lens project.

**Day 2** - Defining a problem; identifying and balancing stakeholder needs; understanding emerging technologies; Systems Lens project exercise; preview of the first intersession assignment.

### SESSION B:

**Day 1** - First intersession assignment read-out; systems thinking tools and techniques; dealing with ambiguity; establishing a vision.

**Day 2** - Innovation workshop; Systems Lens project exercise; preview of the second intersession assignment

### COURSE 2

## LSYS 650 BRINGING SOLUTIONS TO LIFE

### COURSE OVERVIEW

Technical leaders know how to get things done. They help their teams manage through complexity by distinguishing the truly important from that which is not. While flexible and agile in the face of changing circumstances, they maintain a singular focus on the goal and a disciplined approach in pursuing it. They develop multiple alternatives to mitigate risk and balance means with ends to ensure that solutions use resources efficiently. Technical leaders can be counted on to deliver what they promise – on time and within budget.

This course presents system architecture and design from the perspective of the technical leader. It discusses the strategic role of architecture in developing complex systems and the relationship between system architecture and the organizations that build them, the enterprises that use them, and the ecosystems of which they are a part. The course presents strategies and techniques for managing risk and illustrates the concepts with real-world case studies.

### LEARNING OUTCOMES

At the conclusion of the course, students will:

- Understand the role architecture plays in the development of complex systems and its relationship to the environment in which systems are realized, introduced and utilized.
- Systematically assess, manage and reduce technical risk throughout the development process.
- Effectively balance agility and discipline to implement affordable solutions that are effective in the short term and sustainable over their intended lifetime
- Analyze alternatives, evaluate trade-offs and make sound decisions in the presence of multiple and conflicting objectives

### COURSE 3

## LSYS 605 ENSURING SYSTEMS WORK AND ARE ROBUST

### COURSE OVERVIEW

Technical leaders ensure that customer needs are fully met across a wide range of conditions. They recognize the importance of testing, not only for verifying what was thought to be true, but also for discovering what was unforeseen, and deciding what to do as a result. Not content to deliver systems that work as designed, they foster ongoing collaboration between their teams and their customers to ensure that systems provide full value in use. As a result, they enjoy the respect of customers who can be counted on to repurchase and to recommend them to others.

This course presents system integration and test from the perspective of the technical leader. It addresses testing from the outside in, emphasizing that the goal is ensuring customer needs are met, and when they are not, determining why and taking whatever corrective actions are necessary to diagnose and fix the problems. The course addresses integration holistically in the context of the system architecture, paying particular attention to unforeseen interactions and unintended consequences.

### LEARNING OUTCOMES

At the conclusion of the course, students will:

- Understand the meaning of customer value from the customer's point of view, what it takes to deliver it, and how to determine whether you have
- Design test environments and scenarios that stress systems across the full range of operational circumstances they are likely to encounter
- Analyze the causes of failure and devise, implement and validate corrective actions
- Develop effective customer relations, and successfully manage customer expectations in the face of obstacles and setbacks.

### SESSION A:

**Day 1** - Second intersession assignment read-out; disciplined execution, and how much discipline is enough; development case study; the role of standards in design; maintaining the vision.

**Day 2** - Emerging trends in R&D; agility and model-based design; product-line architectures; Systems Lens project exercise; preview of the intersession assignment.

### SESSION B:

**Day 1** - Intersession assignment read-out; COTS lessons learned; responding to adversity; emerging technology example.

**Day 2** - Managing risk; case study examples; Systems Lens project exercise; preview of the intersession assignment.

### SESSION A:

**Day 1** - Intersession assignment read-out; perspectives on customer value; principles of elegant design; case study example; managing customer expectations and delivering bad news.

**Day 2** - System reliability considerations; modeling systems and analyzing their performance; case study examples; Systems Lens project exercise; preview of the intersession assignment.

### SESSION B:

**Day 1** - Intersession assignment read-out; why projects fail; responding to unanticipated results; system acceptance case study.

**Day 2** - Principles of emergence; emergent properties – good and bad; case study examples; Systems Lens project exercise; preview of the intersession assignment.

## COURSE 4

## LSYS 750 MANAGING EVOLUTION... DECIDING WHAT'S NEXT

### COURSE OVERVIEW

Technical leaders continue to find new ways to win in a game that never ends. They recognize that whenever new solutions are introduced, whether into the marketplace or the battle space, they fundamentally alter the ecosystem into which they are deployed. Successful leaders continually invent new ways to leverage advancing technology to improve existing solutions and develop totally new ones, as competitors adapt and customer expectations grow, thus ensuring that today's innovations do not simply become tomorrow's legacy.

This course presents advanced system architecture modeling and assessment from the perspective of the technical leader. It examines the growing complexity of modern technical systems, expands the discussion to include complex enterprises and socio-technical systems, looks at what it takes to design and build systems that can adapt to unforeseen changes, and projects emerging trends to explore approaches and techniques that might be important in the future as technology continues to evolve.

### LEARNING OUTCOMES

At the conclusion of the course, students will:

- Understand the concept of complexity, how it differs from complicatedness, and the implications of those differences for engineering systems
- Develop approaches for designing systems that can adapt to meet unanticipated circumstances and evolving needs
- Analyze trends in technology, system architecture and development methodologies and devise strategies for advancing the state of the art to meet future needs.



### SESSION A:

**Day 1** - Intersession assignment read-out; managing complexity; designing for breakthroughs; case study examples.

**Day 2** - Adaptive systems; system sustainment and enhancement; socio-technical systems; case study examples; Systems Lens project exercise; preview of the intersession assignment.

### SESSION B:

**Day 1** - Intersession assignment read-out; technology road-mapping and refreshment; evolving product architectures; case study examples.

**Day 2** - Emerging needs; case study examples; completion of the Systems Lens project exercise.

## BUSINESS LENS

The Technical Leadership Program is modular and architected into three phases (lenses) that align with a technical leader's career progression. These three lenses, Systems, Business and Enterprise offer participants an increasingly broader aperture through which to understand and hone their skills as technical leaders. Courses in the **Business Lens** focus on the business and collaborative dynamics of a complete technical project and the leadership challenges associated with designing, implementing, managing and improving the processes, teaming, and organizational infrastructure through which a complex technical system is realized.

The courses in this Lens will employ lectures, class discussions, individual and team homework assignments, and a team project. Supplemental readings from a variety of sources will be assigned.



## COURSE 1

## LMGT 699 COMPETITIVE STRATEGY DEVELOPMENT AND EXECUTION

### COURSE OVERVIEW

Effective technical leaders not only manage the present, they also strategically plan for the future. They know that their environment changes fast and they can't become too invested in the status quo if they want to succeed.

This course provides the essentials of strategic planning and execution for the creation of sustainable competitive advantages. It focuses on the technical leader's role in creating technical strategies and contributing to the cross-functional business strategies. External environment (e.g., political, regulatory and congressional bodies; emerging technologies; and competitor intelligence) and internal environment issues (human resources, finance, operations, manufacturing, and core technologies) will be examined. Informed by the situation assessment, participants will learn how to create an overall vision and mission of where the business is and where it is going. Participants will also learn how to formulate and execute strategies related to factors such as technology roadmaps, budgeting, human capital, and make or buy.

### LEARNING OUTCOMES

At the conclusion of the course, students will:

- Master the elements of the competitive strategy process, research and theories.
- Learn to apply the competitive strategy process to real business and technology scenarios, and ultimately develop recommendations to help businesses create and sustain competitive advantage.
- Formulate and execute successful technical strategies and contribute to cross-functional decision making with other non-technical business leaders.

### SESSION A:

**Day 1** - Concept of strategy; value creation; mission & vision; major products & services; internal & external stakeholder communication; major goals; self-image & public image; mission & vision challenge; case analysis.

**Day 2** - Environment overview, including the macro environment analysis (e.g., political, regulatory & congressional); industry environment and segmentation; competitor benchmarking & tracking; threat/need identification.

### SESSION B:

**Day 1** - Performance assessment; value chain analysis; competence and competitive advantage assessment.

**Day 2** - Strategy formulation and execution, including business and functional level strategies; technology roadmap; acquisition & procurement; make or buy; financial forecasting; strategy execution & assessing value.

## COURSE 2

## LMGT 615 THE ESSENTIALS OF FINANCIAL DECISION MAKING FOR TECHNICAL LEADERS

## COURSE OVERVIEW

Central to any business's survival and growth is the ability for its leaders to make sound financial decisions. The technical leader must understand his or her role within this business context. This course will demystify and make accessible financial and accounting matters, with a direct focus on what technical leaders should care about and why.

The course explores how the role of the technical leader and the other areas of the organization come together to impact the financial outcomes of the business and enterprise. Tools and techniques will be provided for helping technical leaders decode and understand basic financial data required to effectively execute their charter while at the same time enable them to contribute to the growth of the business.

## LEARNING OUTCOMES

At the conclusion of the course, students will:

- Understand and demonstrate ability to present past financial results of the business externally and internally.
- Develop capability to use financial ratio analysis to analyze operational results over time and relative to competitive and market benchmarks.
- Internalize how financial value is created in the business and recognize how the core financial theories of a) incremental analysis; b) risk-return trade-offs; c) time value of money; c) Net Present Value and IRR; d) indifference (or break-even analysis); e) Capital Budgeting; and f) Capital Structure are combined to effect valuation of the firm
- Demonstrate ability to apply accounting and financial principles to valuing the firm's assets, liabilities and equity accounts
- Understand accounting information and apply financial principles to investment and capital budgeting decisions.

## SESSION A:

**Day 1** - Fundamentals of finance and accounting; emphasis on balance sheet and connection to the organization and technical enterprise.

**Day 2** - Breakdown of balance sheet and assets pertinent to technical leaders, such as: long term tangible and intangible assets; current assets and other investments; depreciation methods; goodwill; impairment concept; accounts receivable and inventory; consolidation methods.

## SESSION B:

**Day 1** - Liabilities, debt, and stock; debt instruments; bond valuation and pricing; connection between stock price and earnings.

**Day 2** -Capital structure, shareholders equity, leverage analysis, cost of capital; financial ratio analysis; optimal capital structures; stock; retained earnings; dividends; DuPont Model; financial models; activity based costing; market pricing.

## SESSION A:

**Day 1** - Management challenges of emerging technologies; incumbents & emerging technologies; class discussion.

**Day 2** - Assessing emerging technologies; class reading; group case discussion, topics will include Innovations in healthcare and the project value chain.

## SESSION B:

**Day 1** - Identification and monitoring emerging technologies; discuss video "Catching the Wave," disruptions in the disc drive industry, DuPont's Kevlar case analysis.

**Day 2** - Scenario planning in disruptive technologies; case analyses include Napster Case, "Only the Paranoid Survive," "The Innovator's Solution," Kodak Case; discuss disruptive technology in student industry; final project.

## COURSE 1

## LMGT 685 ENTERPRISE STRATEGY AND ANALYSIS: SHAPING THE ORGANIZATION

## COURSE OVERVIEW

Effective technical leaders actively align their projects and systems, with the business and larger enterprise in which they operate. This requires knowledge of the decisions made at the enterprise level, and a respect and appreciation for how those decisions influence the technical leader's role.

This course focuses on how the most senior technical leaders, in concert with the rest of enterprise leadership team, make strategic decisions including portfolio-related decisions such as acquisition, divestiture, internal investment, and interactions with other enterprises (strategic alliances; joint ventures). The course also covers strategies such as congressional interfacing and human resource policies that have a multi-business impact. This orientation is in contrast to the Competitive Strategy course, which focuses on strategies for a single business.

## LEARNING OUTCOMES

At the conclusion of the course, students will:

- Possess the cognitive ability to contribute to the formulation and implementation of corporate strategy for top-tier performance.
- Learn how to apply the concepts, tools and exercises to real corporate situations, and to make proposals that enhance the growth potential of the corporation.
- Develop oral and written communication skills that enhance the potential of proposals to be carefully considered by others on the management team.
- Formulate and execute successful technical strategies applicable to the corporate level of the firm, and to successfully integrate those strategies to the other functions of the firm

## ENTERPRISE LENS

The Technical Leadership Program is modular and architected into three phases (lenses) that align with a technical leader's career progression. These three lenses, Systems, Business and Enterprise offer participants an increasingly broader aperture through which to understand and hone their skills as technical leaders. Courses in the **Enterprise Lens** focuses on the entire enterprise, the ways the technical leader interacts within it, and the alignment between the enterprise, its businesses, and projects. Its focus is on the leadership challenges encountered in driving sustainable near and long-term enterprise growth, optimizing stakeholder and shareholder value, ensuring enterprise competitiveness, and implementing change initiatives through strategic planning.

Courses in this Lens will employ lectures, guest lectures, class discussions, real-world cases, and a complex team project. Supplemental readings from a variety of sources will be assigned.



## COURSE 3

## LMGT 671 TECHNOLOGY & INNOVATION MANAGEMENT

## COURSE OVERVIEW

Effective technical leaders see around corners. They know before others what technologies are shifting, evolving, or becoming obsolete. They're also able to understand and react successfully to how these technologies can impact their solutions, their businesses, and the markets in which they compete.

This course is focused on emerging technologies and the role of the technical leader in identifying, evaluation, and leveraging emerging technologies. A broad overview of emerging technologies will be evaluated through analysis of potentially industry transforming technologies, student company examples, case studies, guest speakers, and emerging technology videos. Also discussed will be the accuracy of past technology forecasts, how to improve them, international perspectives on emerging technologies, future customer trends, and forecasting methodologies including scenario planning/construction. The course ends with a final case project integrating all the elements of the course into an emerging technology assessment and forecast strategy.

## LEARNING OUTCOMES

At the conclusion of the course, students will:

- Identify, screen, monitor and select emerging technologies using trend extrapolation, technology forecasting and expert opinion.
- Critically analyze real world management examples of successful and unsuccessful approaches to managing emerging technologies.
- Determine appropriate market assessment and organizational models to effectively manage emerging technologies.
- Communicate the importance of emerging technologies to management.
- Work effectively in teams

## SESSION A:

**Day 1** - The role of the technical leader in creating value through leveraging resources and minimizing transaction costs

**Day 2** - The role of the technical leader in creating value through geographical expansion

## SESSION B:

**Day 1** - The role of the technical leader in creating value through product expansion

**Day 2** - The role of the technical leader in obtaining additional resources needed for value creation as well as the leader's role in enterprise leadership.

COURSE 2

LMGT 630  
GLOBAL BUSINESS AND MARKETS

COURSE OVERVIEW

Competing and operating in an international rather than a domestic arena presents business and technical leaders of enterprises with many new opportunities. Multinational scope in operations gives an enterprise not only access to new markets, and low-cost resources, but also opens up new sources of information, knowledge, and technology that even further expands the enterprise's strategic options in competing against both its domestic and international rivals. Along with these opportunities, however, come the challenges of managing strategy, organization, operations and innovation in an inherently more complex, diverse, and uncertain worldwide context.

This course provides tools, techniques and strategies to help technical leaders managing these challenges appropriately, while at the same time realizing the opportunities presented by the global marketplace.

LEARNING OUTCOMES

At the conclusion of the course, students will:

- have developed a framework for understanding the forces that drive the rapidly increasing globalization of economic activity
- have developed a framework for analyzing the impact of varying country-level cultures, political systems, legal systems, micro and macro economic policies, and social architecture policies on the economic opportunities and threats facing local and multinational business firms
- have developed skill in applying these frameworks to the specific strategic opportunities and threats facing established, emerging and potential high-tech multinational firms.

SESSION A:

**Day 1** - International strategy for competitive advantage

**Day 2** - How countries differ and "so-what?" for international competition

SESSION B:

**Day 1** - Assessing country markets for entry and choosing entry strategy

**Day 2** - Organizing the multinational corporation - the transnational model

COURSE 3

LMGT 654  
GUIDING THE ENTERPRISE THROUGH CHANGE

COURSE OVERVIEW

Evolving the business is necessary to its survival. Good technical leaders recognize and can demonstrate the need for change. And they can drive to make it happen. This course focuses on what it means to take on those challenges – especially at an enterprise level – and pays particular emphasis on the social, and interpersonal communication challenges such efforts present. It includes theories, tools and techniques for understanding and diagnosing organizations as dynamic social systems and methods for leading change.

This course will leverage principles of self-awareness to focus on the participant as the agent of change, such as communicating a compelling case for change, overcoming resistance to change, and to overseeing its strategically aligned implementation. It emphasizes the importance of understanding the impact that stakeholders have on the enterprise, and will provide strategies for how to interface with, influence, and manage stakeholders in a way that is beneficial for the enterprise.

LEARNING OUTCOMES

At the conclusion of the course, students will:

- Utilize key change models, e.g., Kotter's 8 steps and McKenzie 7s, to evaluate an organization.
- Learn to lead positive change and articulate vision
- Master how to lead the transition,
- Apply strategies to identify, influence and manage stakeholders
- Consider how to institute the change, including human capital, culture, and environment
- Identify and develop change leadership skills, including communicating a successful case for change, overcoming resistance, and overseeing the strategically aligned implementation for change.

SESSION A:

**Day 1** - Change models such as Kotter's 8 Steps and McKenzie's 7S mode; apply one model to a change in organization; create a positive organization climate, readiness for change, and urgency for change.

**Day 2** - Reactions to change, resistance to change, and articulating a vision for a positive future; responses to organizational change and maximizing effectiveness.

SESSION B:

**Day 1** - Commitment to change; leading transition and strategies to identify, influence and manage stakeholders; strategies for building commitment to change and creating powerful support structure: a transition management team; analyze key stakeholders and challenges of managing stakeholders.

**Day 2** - Institutionalizing change; developing human capital; shaping the environment driving change cross cultural ethics; developing skills as a change leader.

THREAD COURSES

The **Thread Courses** run in parallel to the Lens Courses in the Technical Leadership program. Each course will employ lectures, class discussions, individual and team homework assignments, and a team project. Supplemental readings from a variety of sources will be assigned.

COURSE 1

MGT 810  
PERSONAL EFFECTIVENESS FOR TECHNICAL LEADERS

COURSE OVERVIEW

Successful technical endeavors depend, to a great extent, on working with, through, and for other stakeholders - the human side. This course develops the participant's skills and abilities with respect to influencing others and fostering collaborative problem solving. Interpersonal communication, conflict management, and personal and team development will all be covered with a particular emphasis on how they relate to technical projects, programs and business decisions. The participant is an important subject for this course. Each person will be guided through a process for analyzing his or her own strengths and development needs when it comes to dealing with complexity, influencing, developing others and building relationships.

LEARNING OUTCOMES

At the conclusion of the course, students will:

- Identify strengths and development needs when it comes to leading and managing others in technology driven projects and programs
- Apply a process for ongoing self-awareness and personal development
- Establish comprehensive personal development plans based upon self-assessments, workplace feedback, peer feedback and personal reflection and analysis.
- Utilize key theories and principles relating to the study of leadership, collaboration and team effectiveness to analyze your own leadership skills and to help others develop

Major topics that will be addressed in Thread #1 include:

- Defining Leadership: Leaders, Situations and Followers
- Self-Awareness and Being an Effective leader
- Authentic Leadership: Self-awareness, Values, Ethics
- Attitudes towards Change, Ambiguity and Complexity
- Personal Skills Analysis & Development Planning
- Using Supportive Communication to Build Relationships
- Using Power and Influencing without Authority
- Leveraging Interpersonal Conflict
- Team Dynamics and Dysfunctions
- Decision-making in Complex System Environments
- Creative Problem-Solving
- Personal Leadership Development

COURSE 2

MGT 800  
ORGANIZATIONAL EFFECTIVENESS THROUGH OTHERS

COURSE OVERVIEW

High performing technical organizations are led by people who turn complexity and uncertainty into creative collaborations. These leaders stimulate imagination, and build structures and processes that enable people to innovate and drive business results. This course builds individual awareness and explores the science behind leadership techniques, interpersonal skills and organizational strategies for developing others, managing complex system decision-making, fostering creativity and negotiating collaboratively. Its overall goal is to strengthen the participant's ability to lead others to address meaningful problems and possibilities wherever they are found. The course builds upon the development planning and principles of self-awareness introduced earlier in the Technical Leadership program.

LEARNING OUTCOMES

At the conclusion of the course, students will:

- Identify and develop talent among team leaders and members by using proven techniques for selecting effective team leaders and team members, and by understanding the dynamics of talent management and how to leverage potential.
- Develop your capacity lead others in complex executive level decision-making by recognizing the types of complexity that can obscure ethical reasoning, sound judgment and decision-making.
- Develop you capacity to communicate in compelling ways that ensure understanding and foster commitment.
- Identify and analyze why programs fail by looking across levels of analysis (individual, group, organizational structure and culture) and enhance your capacity to prevent such occurrences in the projects and programs that you lead.

Major topics that will be addressed in Thread #2 include:

- Personal Ethics in Business
- Ethical Dimensions of Power, Authority and Bad Leadership
- Using Storytelling to Influence
- Empowering Teams and Individuals
- Selecting and Managing Talent; Developing Potential
- Coaching Dynamics
- Decision-making and Program Failures