

Module 1

Course Introduction: Strategic Leadership in Complex Environments

Please click on the following links to have direct access to the modules. Modules 1 - 15 are indicated.

[M 1](#)
(<https://canvas.vt.edu/courses/168287/pages/module-1>)

[M 2](#)
(<https://canvas.vt.edu/courses/168287/modules/358672>)



Overview

Welcome to our first module: Module 1. This module will last from Monday, January 16 @ 12:01 AM until Sunday, January 22 @ 11:59 PM. This module covers the first part of the introduction to the course and is designed to familiarize you with the basic concepts and challenges of strategic leadership in complex environments.

The foundational premise of this course is that innovation and technology strategy problems in companies most often manifest as complex problems that are difficult for leaders to solve since they are difficult to understand and to respond to with "linear" strategic planning. Instead, leaders often have to approach complex problems with an iterative, learning-based approach to strategic action that requires their firms to respond rapidly to complex changes in the external environment. For these reasons, complex problems are particularly difficult for leaders to solve and require a new way of strategic thinking and action to resolve.

At the same time, powerful new technologies, broadly situated under the category of "artificial intelligence" are emerging which offer the possibility of providing organizational leaders with new tools for navigating complex and uncertain environments. For example, Generative AI is generating a ton of hype right now about the transformative impact of this instance of AI on organizations. A recent interview with Nina Schick discusses the exponential changes this instance of AI will create over the next few years.

<https://www.youtube.com/watch?v=DgYCcdwGwrE>  (<https://www.youtube.com/watch?v=DgYCcdwGwrE>)



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The purpose of this module is to introduce you to the challenges of navigating complex decision environments that are so critical for strategic leadership. For the purposes of this class, we will define complex strategic leadership problems as follows:

- Influenced by a large number of factors (**D**iagnostics complexity): Which factors matter?
- These factors interact in numerous ways (**I**nteractive complexity): How do these factors interact/interrelate?
- The interactions of these factors yield unexpected outcomes (**N**onpredictability): What are the likely outcomes of these interactions?
- These nonpredictable interactions among a large number of factors can result in rapid change (**E**xponential change): When and at what speed are these changes likely to influence my decision environment?

(I'm not a big fan of acronyms -- mostly since they tend to proliferate at universities! -- but perhaps the following one will help you remember these dimensions of complex problems: **D.I.N.E.**).

Complex problems stretch our abilities as managers and leaders because they challenge our abilities to diagnose key problems in our environment accurately. This occurs for several reasons that we will discuss in our lectures this week as the basis for understanding how to formulate and execute effective technology strategies in the age of artificial intelligence.

Enjoy!

Objectives



Upon completion of this module, students will be able to:

- Identify and understand the key challenges of strategic leadership in complex environments
- Identify and understand the importance of framing strategies for contending with complex problems




Readings (3 hours)

Required:

- Read the overview for Module 1
- **Technology Strategy: pp. 1-24**  (<https://hbsp.harvard.edu/import/1017370>) (from the HBSP Coursepack)
- Complete the **Case Analysis Coach**  (<https://hbsp.harvard.edu/import/1017370>) (from the HBSP Coursepack): This comprehensive tutorial will help you prepare to work on the strategy cases we will cover this semester.

Optional:

- (Forbes): **Using AI to Solve Complex Problems**  (<https://www.forbes.com/sites/maxartechnologies/2021/02/17/artificial-intelligence-and-machine-learning-to-solve-complex-challenges/?sh=70f4ec0217bb>)
- (McKinsey): **The State of AI in 2022**  (<https://www.mckinsey.com/capabilities/quantumblack/our-insights/the-state-of-ai-in-2022-and-a-half-decade-in-review>)




Watch (45 minutes)

These short videos provide an overview of the key principles and concepts of strategic leadership in complex environments.

- **Lecture 1.1: Strategic leadership in complex environments (Watch)**  (<https://youtu.be/g4V9bwbQW18>)



(<https://youtu.be/g4V9bwbQW18>)

- **Slide Deck for Lecture 1.1** (<https://canvas.vt.edu/courses/168287/files/26483887/download?wrap=1>)
- **Lecture 1.2: Strategic analysis of complex problems (Watch)**  (<https://youtu.be/P6g6QqoHo50>)





(<https://youtu.be/P6g6QqoHo50>)

- **Slide Deck for Lecture 1.2** (<https://canvas.vt.edu/courses/168287/files/26483893/download?wrap=1>)



Class Activities

These activities list the material, assignments, and resources covered throughout this module and are intended to provide you with a "checklist" of activities you will complete each week.

- Complete **Getting Started** (<https://canvas.vt.edu/courses/168287/pages/getting-started>) Activities
- Read Overview for Module One
- Review the **syllabus** (<https://canvas.vt.edu/courses/168287/assignments/syllabus>)
- **Quiz #1** (<https://canvas.vt.edu/courses/168287/quizzes/421342>)
- Complete Assigned Readings
- Watch Lectures 1.1 and 1.2
- **Complete the Case Analysis Coach (HBSP Website):**  (<https://hbsp.harvard.edu/coursepacks/957170>) This online tutorial will help you prepare to conduct the weekly case analyses for the class.
 - The HBSP link above only work if you've already purchased the coursepack. If you haven't done that yet, please visit the following link to purchase the course materials: <https://hbsp.harvard.edu/import/1017370>  (<https://hbsp.harvard.edu/import/1017370>).
 - Please note that **everything is required** -- including the optional materials. I designated the books as 'optional' in case you want to purchase physical copies or digital copies from your favorite bookseller.



Assignment (3 hours)

These are the graded components of the Class Activities listed above.

- Complete **Getting Started** (<https://canvas.vt.edu/courses/168287/pages/getting-started>) Activities
- **Quiz #1** (<https://canvas.vt.edu/courses/168287/quizzes/421342>)
- **Complete Case Analysis Coach on HBSP Coursepack Website** (<https://canvas.vt.edu/courses/168287/assignments/1681432>)




Recitation (Optional: 1 hour)

We will hold weekly office hours and case discussions using the Zoom links listed below.

Please note that you are not required to attend the weekly online optional office hours each Thursday evening from 7-8 PM on Zoom. The point of these meetings is to provide you with an opportunity to ask questions and/or seek clarification on course content. More details will be provided in our first session regarding the case discussions. All weekly Zoom meetings will be recorded and once the

video finishes processing (usually 24-48 hours after the session is recorded) the link will appear under "Media Gallery (Course)" just to the left and probably up the list of pages in Canvas.

Once we start the case discussions, we will hold two sessions weekly: Thursdays from 8-9 PM with Dr. T. and Sundays from 7-8 PM with one of the DLIs. More information will be provided on these case discussion sessions in Module 2.

- [Click Here to go to MGT 5804 Optional Office Hours on Zoom](https://virginiatech.zoom.us/j/81038408606) 
(<https://virginiatech.zoom.us/j/81038408606>)

Optional Materials

Please find the following optional materials for the module.

- Eric Berlow: [Ted Talk on Simplifying Complexity](#) 

