

UW–Madison  
Interdisciplinary Professional Programs  
**Technical  
Leadership Certificate**



Interdisciplinary  
Professional Programs  
COLLEGE OF ENGINEERING  
UNIVERSITY OF WISCONSIN-MADISON

[interpro.wisc.edu/TLC](http://interpro.wisc.edu/TLC)



# BORN TO LEAD

## Technical Leadership Certificate

course topics were developed with your success in mind, by consulting with hundreds of engineers from leading companies. The mix of courses and topics—taught by UW faculty and industry experts—are constantly updated and improved to meet the needs of our global partners.

## LEAD WITH CONFIDENCE

### COURSES DESIGNED TO:



Focus on applied learning



Strengthen technical teams



Enhance project management skills



Gain actionable knowledge you can apply to your career

Courses may be taken individually or as a path to earning your Technical Leadership Certificate

# Immediate Impact

**Make a difference in your work right away.  
What our participants had to say:**



"Trevor's knowledge about critical conversations was really eye opening to someone like me who is more outspoken and sometimes too brash. I will definitely use these ideals moving forward, as tough as it may be. I also loved all of the "extras" on Zoom. This was the first time I've been part of breakout groups, annotating the page, amongst some other items like that – that was fun."

– Callie Pankow, SubZero

"I really liked the framework on how to present an opportunity. It aligned with a recent 'how to give effective presentations' course I recently took with Dale Carnegie."

– Stephen Klein

"It was real life situations, hands on working situations out, team building with others, down to earth and not over people's heads (no need for Doctorate to understand) also Trevor, Berenice and Jon answered all concerns and were concerned and interested in all of us."

– Susan Betke

# Real World Knowledge

**We are proud to partner with our TLC instructors with decades of hands-on experience**



**Trevor Manning**

Consultant



**Susan Ottmann**

Director of Professional Programs



**Heather Smith, PMP**

Director of Graduate Programs



**Rob Stone, ME, PMP**

Project Manager

## Instructor Highlight

### **Anthony Orzechowski**

Tony instructs courses in Applied Analytics in several master's programs at the University of Wisconsin – Madison and Northwestern University. These course focus on providing students with the immediate ability to lead improvement and innovation in their careers through analytics.

Tony is the recently retired Director of R&D Data Analytics at Abbott Laboratories, where he oversaw a broad spectrum of analytics responsibilities, ranging from statistics, reliability and quality engineering to data management, advanced analytics, and business decision support.

In his new entrepreneurial venture, Tony leads Convergent Analytics, an analytics consulting firm. Here, his focus is on helping companies improve through the use data analytics and maximize these capabilities through generative AI.



**Learn more and and enroll at  
[interpro.wisc.edu/TLC](https://interpro.wisc.edu/TLC)**





# Courses

To earn your certificate complete five of the following courses.

## **Agile for Technical Teams from Principles to Practice**

**April 23 – 24, 2024**

Participants will learn Agile project and product management methodologies and approaches for practical application in their organizations.

## **Business Acumen and Strategy\***

**June 24 – 26, 2024**

This program addresses the full strategy planning cycle. We begin with business acumen to assess the organization and the business environment today. You'll then explore business strategy to evaluate and select winning competitive strategies. Finally, we address strategic choice to identify the actions and metrics for implementing strategy for the long haul. The program uses a combination of interactive discussions, groupwork, case analyses, and peer-based learning to facilitate learning and practice in strategic analysis. You'll gain deep insight into evaluating business situations and making effective strategic decisions.

## **Business Process Improvement Using Lean Six Sigma and Performance Metrics\***

**May 20 – 22, 2024**

This program will explore the five-step process improvement problem solving methodology known as DMAIC (Define, Measure, Analyze, Improve, and Control) as well as the popular Lean/Kaizen Event methodology. At the end of the program, you'll be able to diagnose process performance for the four common workplace inefficiencies as well as use data-driven and group problem solving tools to unearth root causes to poor performance. Finally, you'll be able to identify, prioritize, and choose solutions that best meet customer and organizational needs.

## **Critical Conversations: Results-Based Communication**

**September 18 – 19, 2024**

To achieve good outcomes in the workplace, we need all stakeholders to have open, clear and honest conversations with their team, bosses, peers and customers. Often conversations go wrong through misunderstandings and perceptions of ulterior motives. People are often aware that their conversations are not achieving the results they want but do not have any specific tools to improve them.

## **Data Analytics for Technical Leaders**

**February 19 – 22, 2024**

Data analytics and data visualization are key techniques to drive more effective leadership decisions. In this course you will learn the fundamental topics of descriptive, causal, predictive, and prescriptive analytics. With hands-on exercises, you will learn the basics of data optimization and communicating with data.

## **Effectively Managing Technical Teams**

**February 26 – March 1, 2024**

**September 11 – 13, 2024**

Technical teams present many challenges for engineering managers. Team leaders must often give up some of their technical authority to focus on strategic management, operational planning and human resource management. They also need solid communications skills and know how to represent the team across the organization and at a high level. In this hands-on course, you will learn strategic and operational planning tools to set goals, establish objectives and build defensible budgets from an instructor who has actually "walked the talk" of this course with his own experiences.

## **Finance and Accounting for the Non-Financial Professional\***

**June 17 – 19, 2024**

Through expert instruction, engaging discussion, a business simulation, and real-world case studies, this program will help you master the financial language of business and discover how to make decisions that lead to financial success for your department and your organization. Teams, through a business simulation, will run a company for four years. Along the way will be challenges of working capital, finding sales growth, eroding margins, and budgeting for success. The simulation will be the foundation for the exploration of basic financial concepts and financial statement reporting. Additional activities will develop financial analytical skills.

## **Foundations of Artificial Intelligence and Machine Learning**

**April 10 – 18, 2024**

Learn machine learning and artificial intelligence fundamentals for more effective technical management of project leveraging AI/ML technologies. Taught online in four sessions of four hours over two weeks for the busy decision maker.

## **Leadership Beyond Your Team:**

## **Managing Up and Managing Across**

**March 4 – 7, 2024**

**September 16 – 17, 2024**

Many management courses, including our own course: Managing Technical Teams, teach you how to deal with direct and indirect reports. To be successful, however, you also need to manage (or strongly influence) the behavior of those who are at your level or higher. But they may not understand your needs or may be indifferent to them. In this course, you will learn how to make yourself heard when you do not have direct authority, and how to change others' behavior to make them reliable partners in your programs and projects.

## **Leading for Sustainability and Profitability**

**May 7 – 9, 2024**

This course is a 3-day, highly interactive program that highlights the route to achieve the two biggest organization's objectives – to be profitable and sustainable. Profitability stems from the fiscally responsible utilization of assets and sustainability is predicated on the ability to guarantee the performance of those assets well into the future.

## **Mastering the Transition from Technical Expert to Leader**

**May 8 – 9, 2024**

Moving into a management role can be challenging, especially for those who have spent years completing technical work without direct reports or those who are new to the workforce. In this course, you'll develop the skills and knowledge to succeed as a manager through practical discussions of management and leadership fundamentals and tools that will aid in your transition. Classroom exercises along with a tactical action plan will allow you to immediately make a positive impact.

## **Principles of Engineering Project Management**

**April 9 – 12, 2024**

Whether you are new to project management or have many years of experience, there's always room to improve. Learn how to effectively initiate, plan, execute, control and close out projects.

## **Root Cause Analysis Tools for Technical Applications**

**May 1 – 2, 2024**

This course will provide you with the skills to dig deep into a particular situation and to develop strong countermeasures and resolution plans to improve your operation, product, or system. Root cause analysis leads to elimination of repeat errors, improved efficiencies, enhanced quality products and services, and improved morale.

\* Courses from The Center for Professional And Executive Development through the UW-Madison School of Business are also available to fill requirements for the Technical Leadership Certificate.