

**Management Consulting Capstone
Technology and Operations 465**

Course Syllabus

Winter 2026

3 Credit Hours

Instructor: Jeff Sinclair
Schedule: Mondays and Wednesdays, 1:00pm to 2:20pm
Classroom: Blau B3560
Office: Ross 3434
E-mail: icsinc@umich.edu

Course Overview

TO 465 is an action-based learning capstone in which students experience a management consulting engagement from initial problem scoping to presentation of final recommendations. Students are organized into consulting teams engaged to assist the leaders of Velocity Avionics as they seek to accelerate the performance of their aerospace business in the face of ongoing opportunities and challenges facing their customers throughout the world, including Airbus, Boeing, Embraer, and the major airlines and aircraft maintenance companies. The case unfolds in real time, beginning in January 2026, with the students conducting in-person interviews with Velocity's senior executives, assessing internal company information, evaluating publicly available industry research, and analyzing competitors' strengths and weaknesses. They engage with executives throughout the assignment, culminating in the presentation of their recommendations to the Velocity Executive Leadership Team in April. They work together in self-directed teams to define and scope problems, gather and analyze information on the market, customers, and competitors, design and conduct a workshop, develop and evaluate recommendations, and craft and deliver communications. They are encouraged and expected to lever AI in all aspects of their work, as they will do when they enter the workforce upon graduation. The instructor serves as their engagement director, as well as their coach and advisor, helping them build their problem-solving capabilities, team member and leadership skills, and communications effectiveness. The classroom comes to life as a real project team environment where students learn by doing and experience how a consulting engagement is scoped, managed, and delivered by leading management consulting firms.

As a capstone course, students are expected to lever their past coursework and experience to take initiative in refining and completing assignments. They are expected to act as professional consultants, with far less prescriptive instruction than they will have experienced in most of their prior academic courses. This level of autonomy requires students to confront and manage ambiguity and challenge themselves. They must think on their own and contribute to the success of their engagement team, leveraging their instructor as an experienced team member and coach, much as they would work with the engagement partner in an actual consulting engagement. The design of the course provides the students the opportunity to appreciate the realities of serving clients in the management consulting profession as it operates today.

The Velocity Avionics case is set in 2026. Velocity is a mid-sized aviation electronics – also known as “avionics” – supplier serving the commercial aviation industry. They are in the midst of a turnaround following the downturn in their business caused by the combined impacts of the Covid-19 pandemic on air travel and Boeing's production interruptions caused by the 737 Max catastrophe and 787 Dreamliner supply chain bottlenecks and quality concerns. Prior to the pandemic Velocity's Executive Leadership Team (ELT) realized that their operating issues and slow pace of innovation were limiting their growth

and running their profit margins into the ground. After some initial success addressing these challenges, the ELT had grown optimistic that it had the vision, resources, and capabilities to turn around the company's performance. And then Covid hit with a devastating impact on top-line revenue and bottom-line profitability due to the massive cutbacks in the commercial aviation industry – existing aircraft don't need to be maintained, and new ones don't need to be built when airlines aren't flying. The ELT's pre-pandemic optimism was shattered.

From 2022 through 2025 the company engaged TO 465 consultants to design and launch an operational transformation to save the company. The engagements were successful, and Velocity's performance improved significantly. But the turnaround is not yet complete, and Boeing's ongoing safety issues and operational dysfunction coupled with Airbus' supply chain challenges are constraining revenue growth. The CEO has engaged the TO 465 consultants again (welcome to this year's class!) to assist in the design and launch of an aggressive growth strategy to capitalize on the work of the last few years and to drive additional value creation for customers, employees, and shareholders. The company's Executive Leadership Team is seeking to capitalize on their newfound operational capabilities, develop and commercialize new technologies and products, explore entry into new aviation segments, and perhaps enter new markets to thrive in the aviation industry. The owners and leaders of Velocity are seeking to accelerate growth and profitability as their customers in the airline and aircraft manufacturing industries continue to accelerate their growth.

Student consulting teams will interview Velocity's leaders, analyze company information, conduct research on competitors and market opportunities, and experience role plays that realistically simulate a management consulting engagement. Students will perform these activities with the instructor serving as the consulting team's engagement director. Students will prepare and present a comprehensive business transformation strategy to Velocity's Executive Leadership Team, role played by guest industry executives and practicing consultants. As all consulting firms now expect, the teams will be encouraged to lever AI to enhance their work as they see fit, with full transparency and attribution when they do so.

The student teams' final deliverables will be in the form of a consulting firm's written report and presentation, and contain the following components:

- Company vision, strategic direction, and performance metrics and targets over time
- Go-to-market strategy, including growth in existing and creation of new business units
- Strategic and operational initiatives and implementation roadmap
- Human capital requirements and change management plan
- Financial business case
 - Income statement projections, including revenue, gross margin, operating profit
 - Balance sheet impact, including asset investments and debt and equity financing options
 - Cash flow analysis, expected return on investment, and impact on company valuation
- Risk analysis and contingency plan.

To effectively complete the analysis, develop recommendations, and craft communications students will draw upon their prior Ross coursework and work experience. Students will incorporate concepts from:

- Strategy, including strategic differentiation, core competencies, and business planning
- Marketing, including research, segmentation, value propositions, pricing
- Operations, including product development, supply chain management
- Organization, including leadership, organization design, emotional intelligence
- Financial accounting, including income statement, balance sheet, cash flow
- Managerial accounting, including performance management, forecasting, make vs buy
- Finance, including risk assessment, use of debt and equity, cost of capital, valuation.

In addition, students will gain exposure to fundamental consulting techniques including team management, project management, interviewing, financial modeling, workshop design and execution, presentation development and delivery, and client relationship development.

Course Schedule

The course will be fast paced and employ multiple session formats, with an emphasis on action-based learning through role plays, team meetings, presentations, and discussions, as laid out in the following:

Grading

Grades will be awarded in line with the Ross BBA elective grading policy and curve, with the following assignments and weightings:

Course Materials

All materials for this course will be available on Canvas and a TO 465-specific website created and maintained by Kresge Library Services. Students will also be encouraged to be resourceful to identify and access additional sources of information to complete their assignments, leveraging conventional methods and AI as they see fit, as they would in a real consulting engagement.

All materials generated for the course are intended for use only by current students in this class. Any use beyond this class will require the permission of the instructor.

Laptop/Electronic Devices in Class

Use of laptop, tablets, and smartphones is allowed, including in class. While in class students are expected to focus on this course and not to employ their devices for other course work or personal use.

Use of AI

Artificial Intelligence serves as the foundation for a powerful set of tools that all consulting firms are now using. TO 465 students are encouraged to employ AI in all aspects of their work but must acknowledge how and when it is used. Students will be expected to include an explanation of their information sources and uses of AI in all assignments. Failure to do so is in violation of the Ross Academic Honor Code. Use of AI also must be compliant with intellectual property and privacy rights of the university, authors, and publishers.

Although AI-generated content may appear dependable and factual, this is not always the case. Inaccuracies, untruths, and false citations may be missed. Students should use AI outputs as inputs to their work, and not as standalone deliverables. As such, students will be fully responsible for their work and any errors or omissions that may result from their use of AI.

Freedom of Expression

The responsibility of all faculty when teaching a class is to deliver the course content to the best of their ability. The University of Michigan has a deep commitment to free speech and civil discourse, and we support the exchange of ideas in public spaces across our campus. Since classrooms and classroom buildings are not public spaces, faculty will dedicate class time to course-related content and generally steer discussions away from unrelated topics. This statement was developed in close collaboration between Ross leaders and the UM legal team to ensure we all communicate accurately about what spaces are protected by the First Amendment and our obligations under Title VI and other legal requirements.

Academic Integrity

Information regarding expectations and Ross Community Values can be found at [Ross Community Values - Academics \(umich.edu\)](https://www.ross.umich.edu/values-academics). For additional information, please refer to the section on this topic posted in the Canvas site for the course.

Accommodations and Student Wellness

TO 465 has no timed quizzes or examinations. Students entitled to accommodations will have the flexibility to complete their assignments in a manner that suits their learning style and preferences.

For additional information on these topics, please refer to the sections posted in the Canvas site for the course.