

EGRMGMT 590.15 (7160)-Advanced Topics in Engineering Management:

Sales Engineering/Technical Sales

Tuesday and Thursday Afternoons 1:25pm-2:40pm | Location: Hudson Hall 125

Instructor	Contact Information & Office Hours
John Allessio Duke University - Adjunct Associate Professor Master of Engineering Management Program https://www.linkedin.com/in/johnallessio/ john.allessio@duke.edu	<u>E-mail</u> : john.allessio@duke.edu <u>Phone</u> : 919-495-8954 <u>Office Hours</u> : As requested

Course Overview

The role of technology in business is undeniable. It is a crucial tool for a startup business that can launch their business idea out into the world. Technology allows them to introduce their brand and attract customers. The latest development propels them into the worldwide consumer market for small or locally-owned businesses, opening doors to countless opportunities. Medium-scale companies rely on technology to ensure their leverage against the competition as it permits them to innovate and gain a step ahead. Meanwhile, large corporations look to technology for data management and to streamline processes for their vast network and massive organization.

Software companies are where this technology is envisioned, developed, incorporated into solutions for their clients, and deployed into production. There are several key technical roles that exist in every software company including software engineers, product managers, support engineers, testing engineers, architects, services consultants, and sales engineers.

The sales engineers are part of the go-to-market organization that includes sales executives, sales engineers, customer success managers, and marketing professionals.

Sales Engineering exists in every software company, however, there are large number of titles that are used for this role across the software industry. Some titles include sales engineer, solution consultant, solution architect, software architect, value consultant, and pre-sales engineer, to name just a few.

A Sales Engineer is a sales professional responsible for selling complex, technical, and scientific products via a consultative sales process. Sales engineers are a critical sales team member in many companies and industries around the world. They are more than just technical

experts in their respective industries. Highly successful sales engineers must build and maintain parallel expertise in "soft skill" disciplines such as business acumen, presentation skills, building customer relationships, developing an engagement strategy, and having a thorough understanding of the targeted industry. Many companies have difficulty finding people who possess these qualities, plus have extensive technical knowledge.

The Sales Engineering role exists to secure the "technical win". Securing the technical win includes several areas including solution design, removing technical sales inhibitors, ensuring the technical feasibility of the solution, developing an initial success plan with the necessary services and support, and ensuring a smooth hand-off to the post-sales structure.

This course will focus on understanding the key skills, activities, role, key performance indicators, career path, and success factors for software engineers in a typical business-to-business software company. The course will include practical knowledge of this role in the software industry and include case studies and role plays to reinforce the key concepts.

Class Structure

The class meets twice each week for 1 hour and 25 minutes. The class module includes a lecture, in class exercises, simulations or group discussions depending on the content of each module.

Class Participation and Attendance

Participation will be based on both frequency and quality. Frequency is important so that the class can benefit from your own unique experience. Quality is important for comments that are directly relevant and will help advance the knowledge on a topic. It is critical that you make your thinking clear to the class. With clarity the class can productively debate your logic and reasoning. Finally, spontaneity in a discussion is important. Students should come to class well prepared with all the readings as well as be prepared to change your thinking based on how the class proceeds.

Class attendance is MANDATORY. A rubric on how class participation will be graded is provided.

MEM's policy is that campus students are expected to attend class regularly and in person, adhering to Duke's Academic Calendar. Attending MEM classes is mandatory. MEM follows the Graduate dates within the calendar when applicable.

It is especially important that students attend the first day and the last day of class for all courses in which they are enrolled. Unless and until all coursework and examinations (whether comprehensive final exams, quizzes, or otherwise) have been completed for all courses in which a student is enrolled, a student is expected to remain at Duke in person through the end of final exam week as set forth on Duke's Academic Calendar.

In their first classes, faculty set course goals and standards, frame the course's subject matter, form student teams and begin to create the class community.

At the conclusion of the first class of each course, the faculty will report any unexcused absences to the MEM program administration. Thereafter, such students shall be dropped from the course. If students miss the first classes of the semester, they detract from their own educational experience and undermine that of their classmates. Furthermore, they create additional work for the professors and teaching assistants.

Responsibility for regular and punctual class attendance rests with individual students. The course faculty shall refer a student to MEM's administrators in the event of excessive absences.

A student seeking an "excused" absence must work directly with her or his course faculty and must initiate the request in advance and as soon as possible. A student may be excused from attendance due to truly extenuating circumstances such as significant illness, personal/family emergency, or important religious observance. Varsity athletes should submit a NOVAP (Notification of Varsity Athletic Participation) Form to each instructor whenever they are scheduled to miss a class because of athletic participation.

Whether an absence is excused or not, a student will be held fully accountable for any in-class graded participation or assignments an absence caused the student to miss.

Assignments (Class exercises, simulations, or case studies)

- Assignments are tasks that must be done to make sure there is clear understanding of a concept just discussed in class.
- Assignments are given at some point during a class and are expected to be completed either individually or in teams.
- All assignments are expected to be submitted via Canvas and presented during class.
- An assignment can be a classroom exercise, a simulation, or a case study.

Pre-class readings

Reading assignments are to be read by each student individually. They complement what will be taught in the lectures. Reading helps to increase class participation grade in the event a question is asked from the material read.

Links to pre-reading material are provided for a given topic in the class schedule table.

Harvard Business School (HBS) case studies or articles can be downloaded from the following course pack link at: TBD

Grading

15 % Attendance and participation

25% Midterm Exam

25% Final Exam

20% Assignments – case studies, simulations, class exercises

15% Team Project

Grading Scale

A+	97-100		C+	77-79
A	93-96.99		C	73-76
A-	90-92.99		C-	70-72
B+	87-89.99		D	60-69
B	83-86		F	<60
B-	80-82			

Class Schedule

Date	Topic	Pre-Class Reading/Assignment
Week 1 8/27 8/29	Overview of the Software Industry and the Key Go-To-Market Roles in a typical Business-to-Business Software Company • Marketing • Sales • Customer Success Management	https://www.computer.org/publications/tech-news/trends/50-years-of-software “Improving the Business to Business Customer Experience”, Maechler, Sahni, and van Oostrum. McKinsey and Company. https://www.gartner.com/smarterwithgartner/what-sales-should-know-about-b2b-buyers-in-2019 https://www.gartner.com/smarterwithgartner/gartner-keynote-the-new-imperative-for-b2b-sales-and-marketing-leaders
Week 2 9/3 9/5	Sales Engineering • Role and Key Responsibilities • Skills ○ Sales Skills ○ Technical Skills ○ Product Skills • Interaction with other roles in a typical B2B Software Company • Review a few contemporary examples in the software industry today • Introduction of the 6 Habits of Highly Effective Sales Engineer • Overview Sales Process and Lead Qualification • MEDDPICC Sales Process and the SE Role in MEDDPICC • Sales Process and SE priorities	• https://www.techsalesadvisors.com/blog/what-is-a-sales-engineer • https://www.youtube.com/watch?v=ZJBko9wbU0Y • https://www.youtube.com/watch?v=b4lUHYs6v-A • “The Six Habits of Highly Effective Sales Engineers” by Chris White - Chapter 1 • Mastering Technical Sales: The Sales Engineer’s Handbook 4th Edition – Chapters 1, 2, and 3 • “The Super Sales Engineer” John Case • https://www.linkedin.com/pulse/presales-guide-meddpicc-max-l%C3%BCpertz-obw8e/ • What Customers Want from SEs – MTS Video 3
Week 3 9/10 9/12	• Sales is a team sport – definition of Habit 1 – Partner and Homework Assignment #1 – Partnering with Sales • Technical Discovery – definition of Habit 2 – Probe including case study and/or role play	• “The Six Habits of Highly Effective Sales Engineers” by Chris White Chapter 2 and 3 • “Mastering Technical Sales: The Sales Engineer’s Handbook 4th Edition” by John Care – Chapters 5, 6, 7, and 8

		“Masterclass: Tips for Making Discovery Effective” Session A https://www.youtube.com/watch?v=Cb_dfq3L0aQ
Week 4 9/17 9/19	- Complete Technical Discovery – definition of Habit 2 – Assign: HW#2 – Technical Discovery Scenario - Content vs. script – definition of Habit 3 – Prepare	“The Six Habits of Highly Effective Sales Engineers” by Chris White Chapter 4 “Mastering Technical Sales: The Sales Engineer’s Handbook 4th Edition” by John Care – Chapters 9, 10, and 13 - MTS Video 4 – Your Number One Competitor “Persuasive Client Presentations”, Harvard Business School, 9-423-083, March 24, 2023 - optional “What the Best Presenters Do Differently” by Carmine Gallo, HBS H070GG-PDF-ENG April 27, 2022 - optional https://youtu.be/2-ntLGOyHw4?si=cf5zjus8o1GozB8K
Week 5 9/24 9/26	- Tuesday: Class Presentations on Homework Assignment#2 – Technical Discovery - Gary Williams, President, NSSE, guest speaker - Click every click – definition of Habit 4 – Practice - Demonstration Best Practices – definition of Habit 5 – Perform	“The Six Habits of Highly Effective Sales Engineers” by Chris White – Chapters 5-7 “Mastering Technical Sales: The Sales Engineer’s Handbook 4th Edition” by John Care – Chapters 11 and 18 “What it Takes to Give a Great Presentation”, by Carmin Gallo, HBS: H05CFM-PDF-ENG - Optional
Week 6 10/1 10/3	- Considerations for virtual demonstrations and presentations - Case Study – Homework Assignment 3 - Whiteboarding and Storytelling Techniques	“Mastering Technical Sales: The Sales Engineer’s Handbook 4th Edition” by John Care – Chapters 14, 15, and 16 “Unmute! Effective Virtual Communication” by Nora Grasselli and Geoff Church, HBS ES1981-PDF-ENG Jun 16, 2023 - Required

		• “Five Ways to Improve Communications in Virtual Teams” by Hill and Bartol, HBR SMR706-PDF-ENG – optional • “A Refresher on Storytelling 101”, by Schramm, HBS: H011E0-PDF-ENG - Optional
Week 7 10/8 10/10	• Tuesday: Synthesizing how all of the 6 habits work together and guest lecture with Chris White • Constant Improvement – definition of Habit 6 – Perfect • Role of a Distinguished Engineer/Architect • Role of a Fellow	• “The Six Habits of Highly Effective Sales Engineers” by Chris White – Chapters 8 Anshu Kak guest speak on 10/10
Week 8 10/17	• Typical Sales Engineering Career Paths • Sales Engineering Management and Executive Roles • Suggestions for Mid-Term Preparation	NO CLASS ON TUESDAY, OCT 15th due to Fall Break Class resumes on Thursday, Oct 17th Chris Montgomery guest speak on 10/17
Week 9 10/22 10/24	• Mid-Term Exam – 10/22 • Typical Sales Engineering KPIs • Typical Sales Engineering Compensation Models	• “Mastering Technical Sales: The Sales Engineer’s Handbook 4th Edition” by John Care – Chapter 27 and 33 • https://www.powerhousesalesengineering.com/sales-engineering/maximising-sales-engineer-performance

Week 10 10/29 10/31	- Persuasion Overview, Exercise, and Debrief 10-29 - Persuasion / Sales Leadership / Negotiation Skills Best Practices 10-31	Kathie Amato guest lecturer “How to Negotiate Virtually”, by Movius, HBR: H05000-PDF-ENG - imbed in lecture. Optional “The Necessary Art of Persuasion”, by Jay Conger, HBR: 4258-PDF-ENG - Required
Week 11 11/5 11/7	- Case Study: Commercial Sales Transformation at Microsoft 11/5. Homework Assignment 4 - John Care Guest Lecture – 11/7 - How to become a trusted advisor	- HBR Case Study on Sales Transformation at MS. The main teaching themes of the case are: The challenges of implementing a strategic sales transformation at a large sales organization. The pros and cons of deploying an inside/digital sales function within a sales organization. How to define the right measure of success. How to align the sales management/strategy with the overall firm strategy. How to change the sales management instruments to successfully transform from selling on-premises software to selling cloud-based solutions - Required - John Care Guest Lecture – 11/7
Week 12 11/12 11/14	- Livecase Simulation: iSense – Revenue Generation 11/12 – Case Introduction 11/13 – Complete Homework Assignment 5 11/14 – Review Simulation Results	Step into the Chief Revenue Officer role at iSense, a leading IoT company. Drive revenue growth and tackle sales challenges in manufacturing, logistics, transportation, and infrastructure. Achieve annual goals, expand revenue streams, and navigate the sales cycle with finesse. Gain insights into revenue generating opportunities and customer-centric selling. - Required
Week 13 11/19 11/21	- Group Project Presentations - Course Summary - Final Exam Preparation	
Week 14	Final Exam	Tuesday, Dec 3 or Thursday, Dec 5 th (if you need an extra day)

Team Assignments

Students will be assigned to teams and will not get to choose who their team members are. This is to reflect the just “real world” project team experience. We will do our best to make sure that each team is composed of a mix of personal / cultural backgrounds, undergraduate degrees, and experiences as reflective of the marketplace.

Canvas:

- Lectures, case solutions, and others class materials will be posted on Canvas a day before the class takes place.
- Students place their submissions individual or team submissions in Canvas.

Student Success

If you are having trouble completing assignments or understanding the materials, please consult with me about appropriate course preparation and readiness strategies as needed. Either send me an email or visit office hours describing the personal or academic difficulties you are facing. I may also direct you to other resources on campus.

- The [Academic Resource Center](#) (ARC) offers free services to all students, including peer tutoring, learning consultations, ADHD/LD coaching and [help with online learning](#).
- If you are concerned about your physical or mental health, [DukeReach](#) can connect you with departments across campus to get you help, and you can contact [Counseling & Psychological Services \(CAPS\)](#) directly for counseling services. You can also reach 24/7 mental health support through [Blue Devils Care](#).

Academic Accommodations

If you need to request accommodation for a disability, you should contact the [Disability Management System \(DMS\) office](#). I will work with that office to provide you with equal access to course materials and make accommodations for exams and other assessments.

Academic Integrity

As a student, you should abide by Duke's [Community Standard](#), which states: Duke University is a community dedicated to scholarship, leadership, and service and to the principles of honesty, fairness, respect and accountability. Citizens of this community commit to reflect upon and uphold these principles in all academic and nonacademic endeavors, and to protect and promote a culture of integrity.

To uphold the Duke Community Standard:

- I will not lie, cheat, or steal in my academic endeavors.
- I will conduct myself honorably in all my endeavors; and
- I will act if the Standard is compromised.

It is the responsibility of the student to understand and follow Duke policies regarding academic integrity, including doing one's own work, following proper citations of sources, and adhering to guidance around group work. Please speak with me to get any clarification about this course.