



Dr. Maryam Zaghian

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MD Anderson Cancer Center

Houston, TX

Date: Friday, March, 03, 2023

Time: 1 - 1:50 pm

Location: D2 LECT 2

Industrial Engineering in Healthcare

Abstract: Industrial engineers contribute to many aspects of infrastructure in a society, including healthcare systems. Industrial engineering in healthcare is an expansive field because it enables hospitals, pharmaceutical developers, and research institutions to provide advanced care to patients in an efficient way. In healthcare, industrial engineering is the practice of design, implementation, and optimization of the clinical and operational processes and logistics involved with providing care to patients. In this seminar, an overview of industrial engineering role in healthcare sector and examples of projects using systems engineering tools will be discussed. The examples will showcase use of methodologies such as operations research, predictive modelling, lean and six sigma for improving resource planning, demand and capacity management, scheduling, and other healthcare processes.

Biography: Maryam Zaghian is an Industrial Engineering PhD and ASQ certified Six Sigma Black Belt with almost 20 years of experience in program/project management, Operations Research, analytics, and continuous quality improvement across various industries (healthcare, energy, and manufacturing). Maryam received her doctoral degree from the Cullen College of Engineering at University of Houston in the fall of 2015. At the Cullen College, she worked closely with her faculty adviser Dr. Gino Lim and developed robust optimization and probabilistic constrained programming frameworks to handle uncertainties and biological effects in radiation and proton therapy treatment planning. The project, a collaboration with MD Anderson Cancer Center, allowed Maryam to tap into her passion of improving people's lives and provided her a deeply rewarding experience. She now works for the Office of Performance Improvement, Healthcare Systems Engineering at MD Anderson Cancer Center and her team supports the institution by facilitating the design, implementation, and improvement of health care systems using proven systems engineering methods and principles.