

Professional Certificate Program in
Health & Humanitarian Supply Chain Management (HHSCM)
Coming Spring 2027

Course Instructors:

- **Dr. Ozlem Ergun**, Professor of Mechanical and Industrial Engineering, Northeastern University; Co-founder, Center for Health & Humanitarian Systems (CHHS)
- **Dr. Pinar Keskinocak**, H. Milton and Carolyn J. Stewart School Chair and Professor, Georgia Tech; Co-founder, Center for Health & Humanitarian Systems (CHHS)
- **Dr. Julie Swann**, Department Head and the A. Doug Allison Distinguished Professor in the Fitts Department of Industrial and Systems Engineering at NC State; Co-founder, Center for Health & Humanitarian Systems (CHHS)
- **Dr. Dima Nazzal**, Associate Chair for Academic Administration and Director of Professional Practice and Director of Education and Projects, Center for Health & Humanitarian Systems
- **Dr. Paulo Gonçalves**, Professor of Management, Università della Svizzera italiana, Founder and Director of the Master in Humanitarian Logistics and Management (MASHLM) and Master in Humanitarian Operations and Supply Chain Management (MASHOM), Università della Svizzera italiana

Dates and detailed schedule to be announced. All times shown are in Eastern Time (ET) and are subject to change.

HHSCM Program Introduction

Orientation Session 1

10:00 –11:30 am	Canvas platform introduction session
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Orientation Session 2

10:00 –11:30 am	Canvas platform introduction make-up session (recorded)
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Program Introduction Session

10:00 –12:00 pm	Program introduction and supply chain overview (Keskinocak)
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Excel Solver Introduction Session

10:00 – 11:30 am	Excel solver introduction
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Course 1: Responsive Supply Chain Design and Operations

Schedule to be announced

Session 1

10:00 – 11:30 am	Supply Chain Optimization Overview (Ergun)
11:30 – 11:45 am	Break
11:45 am – 1:15 pm	Distribution & Network Design, Multi Commodity Network Flows, Time Expanded Networks, Bottlenecks (Ergun)
1:15 – 1:30 pm	Q&A / Extra Time

Session 2

10:00 – 11:30 am	Introduction to Forecasting (Swann)
11:30 – 11:45 am	Break
11:45 am – 1:15 pm	Forecasting (Swann)
1:15 – 1:30 pm	Q&A / Extra Time

Session 3

10:00 – 11:00 am	Distribution & Network Design Time Expanded Networks, Bottlenecks (Ergun)
11:00 – 11:15 am	Break
11:15 – 1:15 pm	Managing Uncertainty (Ergun)
1:15 – 1:30 pm	Q&A / Extra Time

Session 4

10:00 – 11:30 am	Infectious Disease Modeling to Inform Intervention or Resource Allocation Decisions – Examples from Covid-19 (Swann & Keskinocak)
11:30 – 11:45 am	Break
11:45 am – 1:10 pm	Allocating Scarce Medical Staff to Long-Term Care Facilities in response to COVID-19 Case (Ergun)
1:10 – 1:40 pm	Assessment/Evaluation

Session 5

10:00 am – 1:00 pm	Optional extra time / Office Hours
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Preparation for Courses 2 & 3

Schedule to be announced

Team assignments and preparation details will be announced before Courses 2 and 3. Please plan to work with the instructors and your team on pre-course assignments and course work.

Attendance is required.

Preparation Session 1

10:00 am – 1:00 pm	Course 2 & 3 Preparation
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Preparation Session 2

10:00 am – 1:00 pm	Course 2 & 3 Preparation
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Preparation Session 3

10:00 am – 1:00 pm	Course 2 & 3 Preparation
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Preparation Session 4

10:00 am – 1:00 pm	Course 2 & 3 Preparation
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Course 2: Inventory Management and Resource Allocation in Supply Chains

Schedule to be announced

Session 1

10:00 – 11:30 am	Intro to Inventory Management (Swann)
11:30 – 11:45 am	Break
11:45 am – 12:45 pm	Single-period inventory decisions under uncertainty (Newsvendor) (Swann)
12:45 – 1:15 pm	Introduction to Economic Order Quantity (EOQ) Models (Swann)
1:15 – 1:30 pm	Q&A / Extra Time

Session 2

10:00 – 11:30 am	Introduction to Warehousing: Flow, Space, Time (Guest lecture: Dima Nazzal)
11:30 – 11:45 am	Break
11:45 am – 2:00 pm	Big Depot/game (Keskinocak)

Session 3

10:00 – 11:00 am	Multi-period inventory decisions under uncertainty (Q, R) (Swann)
11:00 – 11:15 am	Break
11:15 am – 12:30 pm	Multi-period inventory decisions under uncertainty (Q, R)
12:30 – 12:45 pm	Break
12:45 – 1:30 pm	Managing Pharmaceutical Supply Chains under Disruption (Ergun)

Session 4

10:30 am –12 :15 pm	Malaria game (Keskinocak)
12:15 –12:30 pm	Break
12:30 –1:10 pm	Network Design & Pooling (Swann)
1:10 – 1:40 pm	Assessment/Evaluation

Session 5

10:00 am– 1:00 pm	Optional extra time / Office Hours
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Course 3: Systems Operations and Strategic Interactions in Supply Chains

Schedule to be announced

Session 1

10:00 – 11:00 am	Intro to Collaboration & Coordination (Swann)
11:00 – 11:30 am	Intro to Game Theory (Swann)
11:30 – 11:45 am	Break
11:45 am – 12:15 pm	Game Theory (Swann)
12:15 – 1:15 pm	Supply Chain Network Game (Swann)
1:15 – 1:30 pm	Q&A / Extra Time

Session 2

10:00 – 11:30 am	Supply Chain Network Game (Swann)
11:30 –11:45 am	Break
11:45 am – 1:15 pm	Supply Chain Network Game (Swann)
1:15 – 1:30 pm	Q&A / Extra Time

Session 3

10:00 –11:00 am	Performance Measurement (Swann)
11:00 –11:15 am	Break
11:15 am –1:15 pm	System Dynamics (Guest lecture: Dr. Paulo Goncalves, University of Lugano)
1:15 – 1:30 pm	Q&A / Extra Time

Session 4

10:00 – 12:30 pm	System Dynamics (Goncalves)
12:30 – 12:45 pm	Break
12:45 – 1:15 pm	Assessment/Evaluation

Session 5

10:00 am–1:00 pm	Optional extra time / Office Hours
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