

Course Syllabus
INDS 3060 - Complexity & Systems Thinking
Fall 2026

Instructor: Thomas Ryan Brindle, DSc

Clinical Associate Professor - Supply Chain Management
Program Director - B.S. in Industrial Distribution

University of North Texas (Frisco Landing Campus)
12995 Preston Road
Frisco, TX 75033
Cell: 972-585-8835

Email: thomas.brindle@unt.edu (please contact me via email rather than through Canvas)
Office Hours: TBA in-person and online by appointment

Course Description

This course builds upon a conceptual foundation of thinking constructs to ensure that systems are properly defined, conceived, and realized. The class emphasizes perspectives, frameworks, the role of paradox, and connectedness to enable people to see the bigger picture; one in which owners, solvers, solutions, problem-solving methods, and problem descriptions are portrayed as a whole system for resolving complexity. Students will play an active role in learning through live projects, class exercises, class discussions, dialogue with guest speakers, and participating in industry visits.

Course Learning Outcomes

By the completion of this course, the student will be able to critically analyze:

1. the characteristics of social networks and systems, especially as they apply to global economics and supply chain management.
2. key parts of a system that determine its behavior, especially focusing on connections and interdependencies.
3. how a system may react to crises and shocks.
4. systems problems, and the tools available to address them.
5. outcomes of public policy and how complexity is reflected in its implementation.

Textbook & Technology Requirements

Meadows, D. (2008). Thinking in Systems: A Primer. Chelsea Green. ISBN- 9781603580557.

We will also use Microsoft Excel for Linear Programming, VENSIM PLE for diagramming system modeling (<http://vensim.com/download/>), as well as AnyLogic PLE for systems and agent-based modeling (<https://www.anylogic.com/downloads/personal-learning-edition-download/>). *You are required to bring a laptop computer with the necessary software installed to each class each meeting.*

This course has digital components. To fully participate in this class, students will need internet access to reference content on the Canvas Learning Management System and other software. If circumstances change, you will be informed of other technical needs to access course content. Information on how to be successful in a digital learning environment can be found at Learn Anywhere (<https://online.unt.edu/learn>).

Grading

Exam 1 Assignment - 25%	A: 90% - 100%
Exam 2 Assignment - 25%	B: 80% - 89%
Weekly Assignments and Participation - 25%	C: 70% - 79%
Final Exam Assignment - 25%	F: less than 70%

Industrial Distribution students are required to pass all major coursework with a grade of C or higher for credit.

Late Work Policy

Projects and assignments are expected to be submitted by the due date and time specified in Canvas. If you anticipate difficulty meeting a deadline, please contact the instructor *before* the due date to discuss your situation. Late exam submissions will not be accepted.

Late submissions will be penalized 15% of the total possible points for each calendar day the assignment is late. For example, an assignment worth 100 points submitted one day late will have a maximum possible score of 85 points; two days late, 70 points; and so on. Assignments submitted more than six days late will receive a grade of zero. Exceptions to this policy will be considered only in cases of emergencies or other extenuating circumstances at the instructor's discretion.

Tentative Course Schedule

Students will be notified by Eagle Alert if there is a campus closing that will impact a class. This the calendar is subject to change, per Campus Closures Policy (<https://policy.unt.edu/policy/15-006>).

Week 1 - Course Introduction (8/17 – 8/21)

Week 2 - Linear Programming (8/24 – 8/28)

Week 3 - Linear Programming (8/31 – 9/4)

Week 4 - Linear Programming (9/7 – 9/11)

Week 5 - **Review & Exam 1 (9/14 – 9/18)**

Week 6 - Complex Systems Modeling & Simulation (9/21 – 9/25)

Week 7 - Complex Systems Modeling & Simulation (9/28 – 10/2)

Week 8 - Complex Systems Modeling & Simulation (10/5 – 10/9)

Week 9 - **Review & Exam 2 (10/12 – 10/16)**

Week 10 – Agent Based Modeling (10/19 – 10/23)

Week 11 – Agent Based Modeling (10/26 – 10/30)

Week 12 – Agent Based Modeling (11/2 – 11/6)

Week 13 - Project Presentations (11/9 – 11/13)

Week 14 - Project Presentations (continued) (11/16 – 11/20)

Thanksgiving Break - No Class (11/23 – 11/27)

Week 15 - Final Exam Review (11/30 – 12/4)

Week 16 - **Comprehensive Final Exam Date & Time TBA**

Please use the following link for Final Exam information (<https://registrar.unt.edu/exams/final-exam-schedule/fall.html>)

Attendance & Communication Policy

Attendance is mandatory. Research has shown that students who attend class are more likely to be successful. You should attend every class unless you have a university-excused absence such as active military service, a religious holy day, or an official university function as stated in the Student Attendance and Authorized Absences Policy (PDF) (<https://policy.unt.edu/policy/06-039>).

During busy times, my inbox becomes rather full, so if you contact me and do not receive a response within two business days, please send a follow-up email. Office hours offer you an opportunity to ask for clarification or find support with understanding class material, so schedule time to visit with me. Additional office hours, in person and virtually, will be offered as the semester concludes.

Classroom Inclusion

Every student in this class should have the right to learn and engage within an environment of respect and courtesy from others. We will discuss our classroom's habits of engagement, and I also encourage you to review UNT's student code of conduct so that we can all start with the same baseline civility understanding (Code of Student Conduct) (<https://policy.unt.edu/policy/07-012>).

Academic Success Resources

UNT strives to offer a high-quality education in a supportive environment where you can learn, grow, and thrive. As a faculty member, I am committed to supporting you, and I want to remind you that UNT offers a range of mental health and wellness services to help maintain balance and well-being. Utilizing these resources is a proactive way to support your academic and personal success. To explore campus resources designed to support you, check out mental health services (<https://clear.unt.edu/student-support-services-policies>), visit unt.edu/success, and explore unt.edu/wellness. To get all your enrollment and student financial-related questions answered, go to scrappysays.unt.edu.

- [Dean of Students](#): provides the Code of Student Conduct along with other useful links
- [Office of Disability Access](#): exists to prevent discrimination based on disability and to help students reach a higher level of independence
- [Counseling and Testing Services](#): provides counseling services to the UNT community, as well as testing services, such as admissions testing, computer-based testing, career testing, and other tests
- [UNT Libraries](#)
- [UNT Learning Center](#): provides a variety of services, including tutoring, to enhance the student academic experience
- [UNT Writing Center](#): offers free writing tutoring to all UNT students, undergraduate and graduate, including online tutoring
- [Succeed at UNT](#): information regarding how to be a successful student at UNT

UNT POLICIES

Academic Integrity Policy

According to UNT Policy 06.003, Student Academic Integrity, academic dishonesty occurs when students engage in behaviors including, but not limited to, cheating, fabrication, facilitating academic dishonesty, forgery, plagiarism, and sabotage. A finding of academic dishonesty may result in a range of academic penalties or sanctions ranging from admonition to expulsion from the University.

Enrollment in this course constitutes agreement with the following statement: “I commit myself to honor, integrity, and responsibility as a student representing the University of North Texas community. I understand and pledge to uphold academic integrity as set forth by UNT Student Academic Integrity Policy, 06.003 (<https://policy.unt.edu/policy/06-003>). I affirm that the work I submit will always be my own, and the support I provide and receive will always be honorable.”

ADA Policy

The University of North Texas makes reasonable accommodations for students with disabilities. To request accommodations, you must first register with the Office of Disability Access (ODA) by completing an application for services and providing documentation to verify your eligibility each semester. Once your eligibility is confirmed, you may request your letter of accommodation. ODA will then email your faculty a letter of reasonable accommodation, initiating a private discussion about your specific needs in the course.

You can request accommodations at any time, but it’s important to provide ODA notice to your faculty as early as possible in the semester to avoid delays in implementation. Keep in mind that you must obtain a new letter of accommodation for each semester and meet with each faculty member before accommodations can be implemented in each class. You are strongly encouraged to meet with faculty regarding your accommodations during office hours or by appointment. Faculty have the authority to ask you to discuss your letter during their designated office hours to protect your privacy. For more information and to access resources that can support your needs, refer to the Office of Disability Access website (<https://studentaffairs.unt.edu/office-disability-access>).

Emergency Notification & Procedures

UNT uses a system called Eagle Alert to quickly notify students with critical information in the event of an emergency (i.e., severe weather, campus closing, and health and public safety emergencies like chemical spills, fires, or violence). In the event of a university closure, please refer to Canvas for contingency plans for covering course materials.

Retention of Student Records

Student records pertaining to this course are maintained in a secure location by the instructor of record. All records such as exams, answer sheets (with keys), and written papers submitted during the duration of the course are kept for at least one calendar year after course completion. Coursework completed via the Canvas online system, including grading information and comments, is also stored in a safe electronic environment for one year. Students have the right to view their individual record; however, information about students’ records will not be divulged to other individuals without proper written consent. Students are encouraged to review the Public Information Policy and the Family Educational Rights and Privacy Act (FERPA) laws and the University’s policy. See UNT Policy 10.10, Records Management and Retention for additional information.

Acceptable Student Behavior

Student behavior that interferes with an instructor’s ability to conduct a class or other students’ opportunity to learn is unacceptable and disruptive and will not be tolerated in any instructional forum at UNT. Students engaging in unacceptable behavior will be directed to leave the classroom, and the instructor may refer the student to the Dean of Students to consider whether the student’s conduct violated the Code of Student Conduct. The University’s expectations for student conduct apply to all instructional forums, including University and electronic classroom,

labs, discussion groups, field trips, etc. The Code of Student Conduct can be found at deanofstudents.unt.edu/conduct.

Access to Information - Eagle Connect

Students' access point for business and academic services at UNT is located at: my.unt.edu. All official communication from the University will be delivered to a student's Eagle Connect account. For more information, please visit the website that explains Eagle Connect and how to forward e-mail: eagleconnect.unt.edu/

Student Evaluation Administration Dates

Student feedback is important and an essential part of participation in this course. The student evaluation of instruction is a requirement for all organized classes at UNT. The survey will be made available during weeks 13, 14 and 15 of the long semesters to provide students with an opportunity to evaluate how this course is taught. Students will receive an email from "UNT SPOT Course Evaluations via IASystem Notification" (no-reply@iasystem.org) with the survey link. Students should look for the email in their UNT email inbox. Simply click on the link and complete the survey. Once students complete the survey, they will receive a confirmation email that the survey has been submitted. For additional information, please visit the SPOT website at <http://spot.unt.edu/> or email spot@unt.edu.

Sexual Assault Prevention

UNT is committed to providing a safe learning environment free of all forms of sexual misconduct, including sexual harassment, sexual assault, domestic violence, dating violence, and stalking. Federal laws (Title IX and the Violence Against Women Act) and UNT policies prohibit discrimination on the basis of sex, and therefore prohibit sexual misconduct. If you or someone you know is experiencing sexual harassment, relationship violence, stalking, and/or sexual assault, there are campus resources available to provide support and assistance. UNT's Survivor Advocates can assist a student who has been impacted by violence by filing protective orders, completing crime victim's compensation applications, contacting professors for absences related to an assault, working with housing to facilitate a room change where appropriate, and connecting students to other resources available both on and off campus. The Survivor Advocates can be reached at SurvivorAdvocate@unt.edu or by calling the Dean of Students Office at 940-565- 2648. Additionally, alleged sexual misconduct can be non-confidentially reported to the Title IX Coordinator at oco@unt.edu or at (940) 565 2759.