

 <b>FLORIDA ATLANTIC UNIVERSITY</b>	<b>COURSE CHANGE REQUEST Undergraduate Programs</b>		UUPC Approval _____ UFS Approval _____ SCNS Submittal _____ Confirmed _____ Banner Posted _____ Catalog _____
	Department _____ College _____		
<b>Current Course Prefix and Number</b>		<b>Current Course Title</b>	
<i>Syllabus must be attached for ANY changes to current course details. See <a href="#">Template</a>. Please consult and list departments that may be affected by the changes; attach documentation.</i>			
<b>Change title to:</b>  <b>Change prefix</b> From: _____ To: _____ <b>Change course number</b> From: _____ To: _____ <b>Change credits*</b> From: _____ To: _____ <b>Change grading</b> From: _____ To: _____ <b>Change WAC/Gordon Rule status**</b> Add _____ Remove _____ <b>Change General Education Requirements***</b> Add _____ Remove _____ <small>*See <a href="#">Definition of a Credit Hour</a>.</small> <small>**WAC/Gordon Rule criteria must be indicated in syllabus and approval attached to this form. See <a href="#">WAC Guidelines</a>.</small> <small>***GE criteria must be indicated in syllabus and approval attached to this form. See <a href="#">Intellectual Foundations Guidelines</a>.</small>		<b>Change description to:</b>       <b>Change prerequisites/minimum grades to:</b>       <b>Change corequisites to:</b>       <b>Change registration controls to:</b>       Please list existing and new pre/corequisites, specify AND or OR and include minimum passing grade (default is D-).	
<b>Effective Term/Year for Changes:</b>		<b>Terminate course? Effective Term/Year for Termination:</b>	
<b>Faculty Contact/Email/Phone</b>			
<b>Approved by</b> _____ Department Chair _____ College Curriculum Chair _____ College Dean <u>Ken Johnson</u> UUPC Chair <u>Anita Pennathur</u> Undergraduate Studies Dean _____ UFS President _____ Provost _____		<b>Date</b> <u>08/16/2022</u> _____ 8/26/2022 8/26/2022 _____ _____ _____	

Email this form and syllabus to [mjenning@fau.edu](mailto:mjenning@fau.edu) seven business days before the UUPC meeting.



FLORIDA ATLANTIC UNIVERSITY



Rev: 08/11/2022

**QMB 6616**  
**Supply Chain Analytics**  
**TBA**

**Class Time:** TBA

**Professor Information**

Dr. David Menachof  
Fleming Hall 213  
dmenachof@fau.edu  
561-297-6089

**Office Hours**

Tuesday 5:00 – 6:10 PM  
Wednesday 5:00 – 6:10 PM  
And by appointment

**Required Text and Materials**

Hillier, F. and Hillier, M.S., 2018. Introduction to Management Science. A Modeling and Case Studies Approach with Spreadsheets, 6th. Edition. New York: McGraw-Hill/Irwin  
Other materials provided on Canvas

All page references throughout the course are based on editions listed above. If you obtain any other edition of the book, it is your responsibility to find the equivalent page numbers and references for all assignments.

**Course Description**

Develop skills in modeling and optimization techniques for the analysis of strategic, tactical and operational supply chain problems. Problems range from inventory management, distribution planning, facility location to risk management and global sourcing.

**Course Prerequisites and Credit Hours**

*Course Prerequisites:* Admission to an FAU graduate program

*Credit Hours:* 3

### Course Learning Objectives

Much of the learning will be practitioner-oriented and directly applicable to the so-called “real-world”. Informative readings on supply chain analytics topics from journals, experiential learning exercises, and a group project complement the text and lectures in shaping the learning experience in this class.

This course will enable students to:

- Analyse and model supply chain networks
- Understand the key drivers and metrics the drive the supply chain
- Enhance supply chain visibility
- Develop data driven rules to manage volatility
- Plan inventory flow of goods and services
- Employ a broad range of business analytic techniques.
- Forecast demand and to predict and monitor supply and replenishment policies; and
- Strengthen communication skills through oral presentations and written papers/reports.

### Grading Scale

The grading structure will be based on the following fixed increment grading structure:

A= (93-100) %	B- = (80-82.99) %	D+ = (67-69.99) %
A- = (90-92.99) %	C+ = (77-79.99) %	D = (63-66.99) %
B+ = (87-89.99) %	C = (73-76.99) %	D- = (60-62.99) %
B = (83-86.99) %	C- = (70-72.99) %	F = < 60 %

### Course Evaluation Method

Discussion boards/ quizzes/ mini-assignments (4 assignments worth 5% each)	20%
Exam (See CANVAS for date)	20%
Supply Chain Analytics Project (Individual paper)	30%
Presentation on Class Topic	30%
	100%

### Course Outline

Week	Date	Topic	Readings	Location	Critical Items
1		Course Introduction / Syllabus / Policies			Welcome Quiz
2		Intro to SCM: Understanding Drivers and Metrics			
3		Transportation, Assignment and Transshipment Problems			

4		Shortest Path, Maximum Flow, Minimum Cost Flow Problems			
5		Retail Analytics Aggregate Planning, Sales & Operations Planning			
6		Inventory Management Problems			
7		Exam 1			
8		Spring Break		NO CLASS SESSION	
9		Supply Chain Design: Location and Sourcing			
10		Descriptive Modelling with Simulation			
11		Monte Carlo Simulation			
12		Queueing Models/Discrete Event Simulation			
13		Analytics in Global Supply Chains I			
14		Analytics in Global Supply Chains II			

### Additional Course Policies

#### Overlong Assessments

There is no penalty for submitting an assessment that is under the published word-length; as, by not using the full word-length, you may effectively penalize yourself. If, on the other hand, you do submit an assignment that is in excess of the published word-length, then the mark you are awarded will incur the following penalties:

Amount over word limit	Marks deducted
Up to 10%	No deduction
10-20%	10 marks
More than 20%	Mark of 0 awarded

#### Submitting your work

Coursework submission dates are provided on your Canvas site. Deadlines are strictly adhered to. You must submit each assignment on, or before, 10pm on the submission date provided. Please note that a submission will be considered late even if it is only a few seconds after the published deadline.

### **Missing Exams**

Make-up exams will not be given unless the student has a documented serious illness (i.e. hospitalization) or other extreme personal circumstance, or absent due to a University sanctioned event, and must be arranged PRIOR to the scheduled exam period.

### **Late Assignments**

A sliding penalty of 5 points per day late up to 5 business days will be applied to late submissions. Over 5 days late will result in a 0. However, similar to the Missing Exams policy, if you have a documented excuse, exceptions will be made. Please get in touch with me as soon as possible if there are genuine reasons that would cause you to be late on an assignment.

### **Attendance Policy Statement**

Students are expected to attend all of their scheduled University classes and to satisfy all academic objectives as outlined by the instructor. The effect of absences upon grades is determined by the instructor, and the University reserves the right to deal at any time with individual cases of non-attendance.

Students are responsible for arranging to make up work missed because of legitimate class absence, such as illness, family emergencies, military obligation, court-imposed legal obligations or participation in University-approved activities. Examples of University-approved reasons for absences include participating on an athletic or scholastic team, musical and theatrical performances and debate activities. It is the student's responsibility to give the instructor notice prior to any anticipated absences and within a reasonable amount of time after an unanticipated absence, ordinarily by the next scheduled class meeting. Instructors must allow each student who is absent for a University-approved reason the opportunity to make up work missed without any reduction in the student's final course grade as a direct result of such absence.

### **Policy on the Recording of Lectures**

Because of a new Florida Statute in 2021, the following model language is suggested for inclusion in course syllabi, at the discretion of individual faculty:

Students enrolled in this course may record video or audio of class lectures for their own personal educational use. A class lecture is defined as a formal or methodical oral presentation as part of a university course intended to present information or teach students about a particular subject. Recording class activities other than class lectures, including but not limited to student presentations (whether individually or as part of a group), class discussion (except when incidental to and incorporated within a class lecture), labs, clinical presentations such as patient history, academic exercises involving student participation, test or examination administrations, field trips, and private conversations between students in the class or between a student and the lecturer, is prohibited. Recordings may not be used as a substitute for class participation or class attendance and may not be published or shared without the written

consent of the faculty member. Failure to adhere to these requirements may constitute a violation of the University's Student Code of Conduct and/or the Code of Academic Integrity.

### **Etiquette and/or Netiquette Policy**

#### **Classroom Netiquette Policy (for live online sessions)**

It is important to keep in mind that although we are in a "virtual" environment, we still need to interact properly with each other and maintain an appropriate level of etiquette. The term netiquette is used to refer to online etiquette. Be inclusive. Be on time. Disagree respectfully. Be concise. Stay on topic. NO YELLING. Have fun!

### **Anti-plagiarism Software**

Written components of any assignment or project may be submitted to anti-plagiarism software to evaluate the originality of the work. Any students found to be submitting work that is not their own will be deemed in violation of the University's honor code discussed above.

### **Selected University and College Policies**

#### **Code of Academic Integrity Policy Statement**

Students at Florida Atlantic University are expected to maintain the highest ethical standards. Academic dishonesty is considered a serious breach of these ethical standards, because it interferes with the university mission to provide a high quality education in which no student enjoys an unfair advantage over any other. Academic dishonesty is also destructive of the university community, which is grounded in a system of mutual trust and places high value on personal integrity and individual responsibility. Harsh penalties are associated with academic dishonesty.

For more information, please see FAU Regulation 4.001 at: [FAU Regulation 4.001](#).

### **Disability Policy Statement**

In compliance with the Americans with Disabilities Act Amendments Act (ADAAA), students who require reasonable accommodations due to a disability to properly execute coursework must register with Student Accessibility Services (SAS) and follow all SAS procedures. SAS has offices across three of FAU's campuses – Boca Raton, Davie and Jupiter – however, disability services are available for students on all campuses. For more information, please visit the SAS website at <http://fau.edu/sas/>

### **Counseling and Psychological Services (CAPS) Center**

Life as a university student can be challenging physically, mentally and emotionally. Students who find stress negatively affecting their ability to achieve academic or personal goals may wish to consider utilizing FAU's Counseling and Psychological Services (CAPS) Center. CAPS provides FAU students a range of services – individual counseling, support meetings, and psychiatric services, to name a few – offered to help improve and maintain emotional well-being. For more information, go to <http://www.fau.edu/counseling/>

### **Religious Accommodation Policy Statement**

In accordance with rules of the Florida Board of Education and Florida law, students have the right to reasonable accommodations from the University in order to observe religious practices, observances, and beliefs with regard to admissions, registration, class attendance and the scheduling of examinations and work assignments.

For further information, please see FAU Regulation 2.007 at: [FAU Regulation 2.007](#).

### **University Approved Absence Policy Statement**

In accordance with rules of the Florida Atlantic University, students have the right to reasonable accommodations to participate in University approved activities, including athletic or scholastics teams, musical and theatrical performances and debate activities. It is the student's responsibility to notify the course instructor at least one week prior to missing any course assignment.

### **Incomplete Grade Policy Statement**

A student who is passing a course, but has not completed all work due to exceptional circumstances, may, with consent of the instructor, temporarily receive a grade of incomplete ("I"). The assignment of the "I" grade is at the discretion of the instructor, but is allowed only if the student is passing the course.

The specific time required to make up an incomplete grade is at the discretion of the instructor. However, the College of Business policy on the resolution of incomplete grades requires that all work required to satisfy an incomplete ("I") grade must be completed within a period of time not exceeding one calendar year from the assignment of the incomplete grade. After one calendar year, the incomplete grade automatically becomes a failing ("F") grade.

### **Withdrawals**

Any student who decides to drop is responsible for completing the proper process required to withdraw from the course.

### **Grade Appeal Process**

A student may request a review of the final course grade when s/he believes that one of the following conditions apply:

- There was a computational or recording error in the grading.
- Non-academic criteria were applied in the grading process.
- There was a gross violation of the instructor's own grading system.

The procedures for a grade appeal may be found in [FAU Regulation 4.002](#).

### **Disruptive Behavior Policy Statement**

Disruptive behavior is defined in the FAU Student Code of Conduct as *"... activities which interfere with the educational mission within classroom."* Students who behave in the classroom such that the educational experiences of other students and/or the instructor's course objectives are disrupted are subject to disciplinary action. Such behavior impedes

students' ability to learn or an instructor's ability to teach. Disruptive behavior may include, but is not limited to: non-approved use of electronic devices (including cellular telephones); cursing or shouting at others in such a way as to be disruptive; or, other violations of an instructor's expectations for classroom conduct.

### **Faculty Rights and Responsibilities**

Florida Atlantic University respects the right of instructors to teach and students to learn. Maintenance of these rights requires classroom conditions which do not impede their exercise. To ensure these rights, faculty members have the prerogative:

- To establish and implement academic standards
- To establish and enforce reasonable behavior standards in each class
- To refer disciplinary action to those students whose behavior may be judged to be disruptive under the Student Code of Conduct.

### **Additional References:**

Hillier and Lieberman (2015) Introduction to Operations Research, 10th Edition, , McGraw Hill Education.  
Winston (2003) Operations Research: Applications and Algorithms, 4th Edition, , Cengage Learning, 2003.  
Chopra and Meindl (2015) Supply Chain Management: Strategy, Planning, and Operation, 6th Edition, , Prentice Hall.  
Simchi-Levi, Kaminsky and Simchi-Levi, (2007) Designing and Managing the Supply Chain: Concepts, Strategies and Case Studies, 3rd Edition, McGraw Hill Education.  
Fisher M. and Raman A. (2008). The new Science of Retailing: How analytics are transforming the supply chain and improving performance, Harvard Business Press, Boston, Massachusetts, USA.  
Feigin G. (2011). Supply Chain Planning and Analytics: The right product to the right place at the right time, Business Expert Press, New York, USA.  
Stephen G. Powell and Kenneth R. Baker (2017), Business Analytics: *The Art of Modeling with Spreadsheets*, 5<sup>th</sup> Edition, John Wiley and Sons