

Operations in Panama: A man, a plan, a canal. Panama

Spring Break: March 15 - 21, 2020

Revised 9/9/2019

This course is by application. Applications due 11/1. (**Details provided on page 8**)

Course Meetings:

This course includes an orientation session, two classes at Stern, and a one-week visit to Panama.

- Orientation session: February 10th from 5-6pm
- Class meetings: March 6th from 6-9pm and & April 3rd from 6-9pm in KMC XXX
- Panama Visit: March 15-21

Instructors

Professor Harry Chernoff | hchernof@stern.nyu.edu

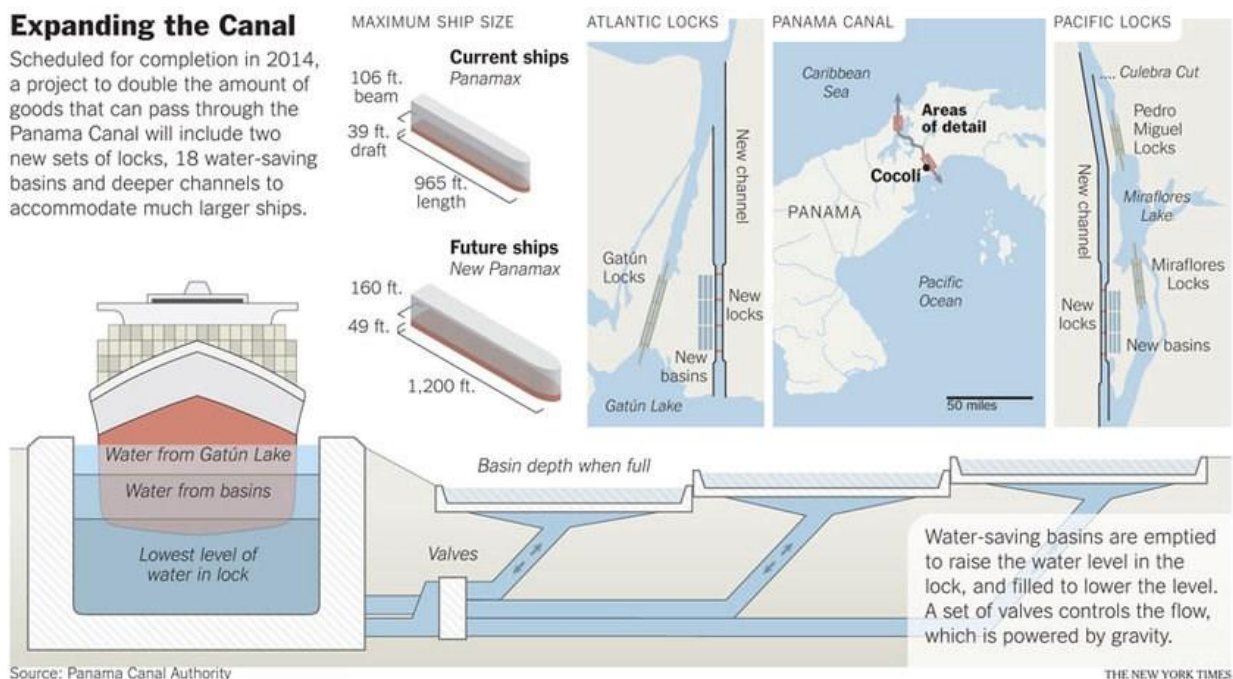
Professor Kristen Sosulski | ksosulsk@stern.nyu.edu



About Panama

With its inauguration in 1914, the Panama Canal changed the world. It had a more astounding effect on global shipping than any other event in the history of world trade. It was the impetus for Panama becoming an independent country, and more recently, a world trade and banking center.

The history of the building of the canal is a most interesting one involving a number of world powers and spanning over 30 years. The French are credited with the start of the canal, and the US with the completion. It was the largest engineering feat of the 19th and 20th centuries, and is recognized as one of the seven modern wonders of the world by the American Society of Civil Engineers. This vital link in the world shipping supply chain is a unique combination of simplistic physics applied on a gigantic scope. It literally changed the world's shipping patterns, influenced developing countries, and has served as the primary driver for economic growth in remote areas. The newly planned Panama Canal expansion project, slated to open in "late" 2014, is having worldwide effects on major ports throughout the United States and the rest of the world.



The canal is now only part of Panama's main engine for economic growth. The country is fostering new developments by global banking corporations and real estate industry giants through new government support systems and tax incentives. At the same time, Panama is promoting the start-up of small entrepreneurial businesses, which are beginning to thrive. It has grown faster than any Latin American economy in recent years, and the *2011 Doing Business Report* ranked Panama the highest in Central America for ease of doing business. With help from The World Bank to promote economic growth, Panama is ripe for new business ventures.



Course Overview

This advanced elective from the IOMS department will be a three (3) credit course studying the major businesses operating in Panama. During a one-week visit, students will observe and study the intricacies of the Panama Canal from an operations management point of view. Process techniques and strategies abound within this fascinating operation. Although the canal is certainly the country's major attraction, financial revenues from the canal have allowed Panama to emphasize other developments including extensive real estate projects and major tourism improvements.

Prerequisite

Competitive Advantage from Operations (OPMG.GB2314)

The specific topics that will be studied include:

- The Panama Canal and its effect on the global shipping supply chain
- History of the building of the canal and independence of Panama
- Real Estate Development
- Economic growth in the tourism industry
- Urban development and infrastructure of major cities

All of the classes, tours, speaker sessions and group meetings must be attended by students for course credit. No exceptions.

The course will be limited in enrollment. Details will be announced.

Course Topics

The specific course details that will be studied are described below. Many of these topics will be explored in the class sessions prior to the trip, and then experienced during the actual tour and presentations at the Canal and other major business centers in Panama.

1. The Canal

Analysis of the process

- The canal is a flow process (i.e. an assembly line) that can be analyzed as such. Through a case study of the canal, cycle times, capacity, throughput estimates and bottlenecks will be identified.
- You will study and analyze a case (Reengineering World Mobility: The Panama Canal Effect), which will allow students to actually calculate these process statistics, convert them into monthly and annual dollar volumes, and develop operating statements. Comparisons will be made between the results that the US experienced (pre-1999) and current financial data of Panama.

Additional operations topics include:

- Scheduling, queuing, supply chain management and yield management
- According to the Panama Canal Authority (PCA), an accurate daily schedule is the determining factor in achieving a successful canal operation. There is considerable research on this (see: Journal of the Operational Research Society (2011) 62, 69-80; Stochastic flow shop scheduling model for the Panama Canal; Jackman, Castillo, Olafsson; 2010). These scheduling issues will be discussed.
- Scheduling projects are being developed to incorporate necessary changes due to the expansion of the canal which opened in 2016.
- To achieve optimal revenue from canal operations, the ships must be passed through the canal with optimal efficiency and minimal waits. Since delay and waiting costs for large commercial ships are extremely high, optimal strategies to minimize queue delays are necessary.
- The canal is the central cog in the world's supply chain for the shipping industry.
- All major world ports will be affected by the 2016 opening of the expanded and widened canal facility. The canal size has been the standard for ship builders for decades, based on the Panamax, the largest size ship that could pass through

the canal. With the expanded size canal locks, and larger size ships being constructed, the major ports of the world will have to make changes to accommodate these increases.

- The costing/pricing strategies of the PCA will be studied and discussed. Setting pricing levels for ships reserving passage way in advance has to be coordinated with reserving space in current schedules for “rush job” ships that show up with less than average lead-times, and can be charged special (last minute) booking fees. Classical yield management techniques that can optimize revenues will be discussed in the course.

2. Real Estate Development

- Since Panama has become such an attractive country for development, it has drawn in many real estate executives desiring to partake in the early stages of development, and benefit from the still inexpensive land and improved property.
- The scheduled RE visits in Panama City include a commercial office building and the largest hotel/condo property in PC. Each of these will be discussed and analyzed from an operational point of view. Development strategies will be studied concerning how the best operating use of the property was determined, and how expected time durations of the projects were calculated. These real estate topics supply students with a learning experience involving property development in foreign markets.

3. Entrepreneurial Businesses

A major part of the course will include the contrasts and comparisons between operating large corporate businesses and small entrepreneurial start-ups. Included in the course will be two of Panama City’s newest small businesses. They will be analyzed and a tour of each will be included. Operating issues will be discussed with the owners.

Design of the Course

1. Meetings

The course includes a week visit to Panama and two full-class (three-hour) sessions at Stern (one prior, and one after, the trip). The two, 3-hour sessions at Stern are scheduled for **Friday, March 2nd and Friday, April 3rd**. Exact details of the classes will be discussed with the class once the students are selected. These initial sessions will include an overview of the course and discussion of student obligations, responsibilities and deliverables. Included in the initial class session will be a discussion of a new hotel, restaurant and bar (recently opened) in the increasingly chic, Casco Viejo, or old city region of Panama City. The class will also discuss the topics to be studied during the visit, and confirm specific logistics of the trip.

Students will spend seven days exploring Panama during Spring Break 2019. They will visit the canal and other major business centers of Panama City and Colón, and experience presentations and Q&A sessions with executives from various industries. Speakers from two of the newest real estate developments in Panama City will give tours of their properties and have discussion sessions with the class. These properties include a number of new commercial buildings.

To explore entrepreneurial new ventures in Panama, the class will tour and be presented with operating details of three small businesses in Casco Viejo, the old city of Panama City: *Tántalo*, a new hotel, bar and restaurant, *Granclement*, a unique French import in the retail ice cream industry, and Teatro Amador, a new nightclub.

Historical facts and points of interest will be supplied by readings and class discussions. These topics will include Panama's strategies for infrastructure and tourism development. A most interesting Walking Tour of the old city and a hike to the top of historic Cerro Ancon, a hill providing stunning views of the entire city and the canal, will be included in the week visit.

Students will arrive in Panama City on **Sunday, March 15th** and can plan to return to NYC on **Saturday, March 21st**. There will be a final class at Stern on **Friday, April 3rd**. At the last class, presentations will be made by student groups on topics learned during the trip. Attendance is mandatory.

2. Assignments/Deliverables

Readings

There are two required readings for the course:

1. The Path Between the Seas; David McCullough; Simon & Schuster; 1977
2. The Big Ditch; Noel Maurer and Carlos Yu; Princeton University Press; 2011

Available at the NYU Bookstore or Amazon

Case study

Reengineering World Mobility: The Panama Canal Effect; Harry Chernoff and Kristen Sosulski; 2012

Available in digital form at the NYU Bookstore

Projects

1. Pre-trip.
A pre-trip assignment, in preparation for the visit, will further familiarize students with Panama. Details to be discussed.
2. Post-trip.
A post-trip assignment will be prepared by groups, based on learning that occurred during the trip, and presented to the class after we return from Panama. Details to be discussed.

Course Fees

- 1) The course will require the normal Stern tuition expenses for a three (3) credit course
- 2) Panama Program Fee (\$1600). This program fee covers:
 - a. Lodging (based on double occupancy for 6 nights), Group tours and activities
 - b. Six breakfasts and some of the group dinners
 - c. Course materials and administration
- 3) **NOT** included in the Program Fee are these additional costs, which must be covered by the student:
 - a. Round trip airfare to Panama City (about \$500)
 - b. Individual ground transportation (to-from airports, getting around during free-time)
 - c. Some meals
 - d. Airport fees
 - e. Personal incidentals

For further information, please contact Professor Kristen Sosulski and Professor Harry Chernoff.

Application for the Course

Enrollment for the course will be applied for by submitting your letter to Professor Sosulski (ksosulsk@stern.nyu.edu) and Professor Chernoff (hchernof@stern.nyu.edu) The letter should be submitted no later than **November 1, 2019**.

ONE page is sufficient, and it should not exceed TWO pages) stating:

- 1) Your expected date of graduation from Stern
 - First choice will be given to students graduating prior to May 2020 - This will be verified by Registrar
- 2) Your stated Specializations
- 3) Any courses you have completed in Operations, Global Supply Chain Management, Hospitality Industry areas, Real Estate Development, Entrepreneurial studies and any other courses that you feel are relevant to your request
- 4) Any work experience that relates to any of these areas, including any global shipping, commerce or hospitality industry experience in Latin America or specifically related to the Panama Canal.

Your application should focus on arguments and support of why this course will benefit you in your MBA studies, and be directly beneficial to your future professional career.

In addition to your application: Explain the interesting sub-title of the course, A man, a plan, a canal: Panama.