

FALL 2024

mbs.rutgers.edu

# The Insider Course Report

Master of Business and Science (MBS) degree



## Welcome to the new semester!

This newsletter provides an inside look at the courses the Professional Science Master's program will offer in fall 2024. We encourage you to chart your path and choose classes tailored to your personal career goals (remember your odyssey plans, and if you want to learn more about them—attend our [DYL workshop](#)). Read carefully, and don't be afraid to explore new interests. If you need guidance, [schedule an online session with an academic advisor](#). Please pay attention to Canvas announcements and your Rutgers email—we share essential information and exciting events!

And now for the courses...

## Quick Links

[Special Permission Numbers](#)

[Contact an Advisor](#)

[MBS Events](#)

[Rutgers Schedule of Classes](#)



**RUTGERS**

Professional Science  
Master's Program  
MASTER OF BUSINESS AND SCIENCE

# BUSINESS

## Business Required Core Classes:

Every semester, we offer all our core business courses.

- **Principles of Finance & Accounting** (16:137:530) is a general course combining both finance and accounting. It's a great business course for new students.
- The popular **Communication & Leadership** (16:137:502) has options for classes on Mondays or Tuesdays (the Tuesday class is reserved for students with 3+ years of work experience). Consider this course if you plan on making a career move. In this class, you'll have the chance to interview leaders in your field. This is an excellent opportunity to speak with someone who can make a difference in your career—consider interviewing your CEO, your boss's boss, a local business leader, or a professional whom you admire. Give yourself enough time to make these connections! This is an opportunity to make a significant, lasting impact on your professional future. Additionally, this course was featured on [Rutgers Today](#) for Prof. Cashman's innovative assignment, encouraging students to perform random acts of kindness. And get ready to meet an [executive coach](#) – executive coaching is a significant part of this class.
- **Market Assessment for Business & Science** (16:137:507) offers asynchronous online meetings or in-person meetings on Thursday nights. This class includes a [field trip to IKEA](#) (online students will visit their local IKEA). There are guest lecturers who are open to everyone, so make sure to check out our [events page](#).
- The 1 credit **Ethics** (16:137:500) course is also offered.
- **Capstone** (16:137:600) is offered online on Thursday evenings, culminating in a presentation in front of guest judges. We also have a new hybrid version of the class, which will have some class meetings. The final presentation is also open to all students in the program for colloquium credit. We encourage you to join us—especially students who plan to take the capstone in the spring. This is a chance to see what is expected. Save the date for the optional [Capstone Retreat](#) at the Rutgers Inn—September 27th and 28th!

## Course Catalog

For more information on courses, check the [course catalog](#).

MBS students at the Capstone retreat →



# BUSINESS

## Business Electives:

One popular business elective is Project Management –the #1 skill for all science and technical jobs! (16:137:601 **Special Topics:** section 90, Project Management for the Scientific).

TOPICS IN MANAGEMENT: The Topics in Management course is a shell for some tremendous professional courses offered at Rutgers. [Learn more about how to register.](#) The is a popular series of courses given by the Executive Education division of the Rutgers Business School. For those interested in cybersecurity certifications, we have a new certification course **Special Topics: Google CyberCert/Security Plus Prep** 16:137:603 section 02) with Cybersecurity Coordinator Lars Sorensen.

Need some work experience or interested in experiential learning? Take a **professional or research internship** as a business or science elective. This is for students who have just received an internship ([see our internship page here](#)). The internship course [runs alongside a professional or research internship](#) and provides professional development and leadership training from PSM executive coach [Abbe Rosenthal](#). Last but not least—**Externships** are a design-based experience where students work on industry-sponsored projects. [Learn more about externships](#), or attend one of our [externship webinars](#) for more information. You can also [read about the stellar Externship Lightning Talks](#) from spring 2023. Receive credit for the project or complete it simply for experience (participate as “club”—to put on your resume). Externships are available to students in all concentrations and even working students to try something new and build your portfolio! There are even bootcamps where you can try out other careers (like the ever-popular Wall Street Bootcamp!).

## A Note About Externships

You can receive credit for the project or complete it simply for experience (participate as “club” to put on your resume). Externships are available to students in all concentrations and even working students (try the Wall Street Bootcamp).

Externs hand off their final presentations at the Colgate office in Piscataway



## SCIENCE

### General Science Electives:

*These courses can be used as business electives.*

We recently introduced the course **Basics of AI for Science Professionals** (16:137:563). It's perfect for students *without* a computer background. This course teaches "AI for the rest of us." For students with a coding background, see **Applied Artificial Intelligence (AI) from Concept to Market** (16:137:562) in the spring.

In the Sustainability concentration, we also offer **Fundamentals of Sustainability** (16:137:554). This is a project-based course led by Prof. Linky. We invite guest presenters from the private sector to interact with the class in lively discussions. We'll host a sustainability panel in the fall—stay tuned for details!

In today's data-driven landscape, no skill is as ubiquitous as the need to clearly see, understand, and communicate insights hidden within our data. We offer two courses to support students learning how to analyze data and visually communicate insights. Both courses leverage Tableau, the industry-leading data visualization software, but which is right for you?

**Business Intelligence with Visual Analytics** (16:137:553) is required for Analytics concentration students. It focuses on analytics, using Tableau to learn and apply fundamental data visualization, visual analysis, and data storytelling techniques with real-world datasets. This course is software-heavy, and includes minor coding (similar to Excel functions). (Prerequisite: Statistics) *Note: Analytics-concentration students must take this course and cannot enroll in Data Storytelling due to content overlap.*

**Special Topics: Data Storytelling** (16:137:606 section 90) is designed for less technical students and focuses on data storytelling. Students use Tableau at a higher level (zero coding) to build best-practice data visualizations and storytelling presentations that communicate data-driven insights using accessible, real-world data. (Prerequisite: None) Read more about this course on [our blog](#).

## Keep an Eye Out!

We host events throughout the semester tailored for our students. These include networking events, panels with industry experts, series for professional growth, and more! Keep an eye out for emails through Canvas or follow us on [X \(formerly Twitter\)](#), [LinkedIn](#), [Facebook](#), and [Instagram](#).

The Givaudan team visits MBS students →





## SCIENCE

### Life Sciences:

We're offering **Chemistry of Food and Natural Products** (16:137:578), which provides an overview of the chemistry involved in food and personal care products. **Fundamentals of Personal Care Science** (16:137:570) (offered both semesters) will be held online on Monday nights. While required for the Personal Care Science Concentration, this course is great as an elective for students in Biotech, Drug Discovery and Development, and Applied Food Science and Technology to learn about cosmetic chemistry. In addition, **Fragrance Applications in Personal Care Science** (16:137:572) will meet online or in person on Wednesday evenings (Fundamentals of Personal Care Science is a prereq for this course). We'll also offer **Special Topics: Advanced Topics in Personal Care Science and Formulations** (16:137:607), the follow-up to Product Development and Formulations for Personal Care Science, online on Tuesday nights. This is taught by the popular and energetic Ricardo Diez—join the experience!

We also running **Current Regulations and Standards for Foods in Domestic and International Trade** (16:137:577), taught by Ronald Levine, and **Cosmetic Quality, Safety and Global Regulation** (16:137:586) with Dr. Jay Goldring.

Students in any of the life science concentrations can take **Concepts in Global Agriculture** (16:137:576). Covering many aspects of the agri-bio marketplace (hot topic!), this course will be online on Thursday nights. Another phenomenal Food Science course is **Food Safety and Plant Operations** (16:137:602). This course includes training for the FDA-recognized Preventive Controls for Human Food certificate.

For both Drug Discovery and Biotech folks: **Drug Development from Concept to Market** (16:137:510) is offered online on Thursday evenings. This is a foundational requirement for the Drug Discovery concentration. We also offer the courses **Drug Discovery Through Pre-Clinical Development** (16:137:511) (our “practicum” class for Drug Discovery) and **Practical Clinical Trials** (16:137:580). These courses are also great electives for Biotech and Personal Care Science (cosmetic regulatory!) students. **Concepts in Biotechnology and Genomics** (16:137:615) is online on Wednesday evenings. This popular course covers many topics that use biotech—great for those interested in biofuels or agriculture as well! **Statistics in Clinical and Translational Research** (16:137:581) is offered online on Wednesday nights, providing an in-depth overview of statistical procedures used to analyze data from clinical and translational research studies. We're also offering **Fundamentals of Regulatory Affairs** (16:137:582).

## Need to take a semester off?

If you are a current MBS student and you need to take a temporary leave (fall/spring) due to extenuating circumstances such as work travel, illness, etc, register for [matriculation continued](#) (16:137:800) for a maximum of two consecutive terms. This is essentially a placeholder to keep your status active. Please also notify your advisor.

# SCIENCE

## Computer/Information/Engineering Students

For those in Information Technology, Engineering, Analytics, and UXD, several core and elective courses are offered this fall. Every semester, we run the popular **Python Methodologies** (16:137:552) for anyone who needs to know Python programming and scripting. This course is taught by the ever popular “[Big Lars](#)” – if you thought programming couldn’t be fun (or funny!), check out Lars’s lectures! **Database & Data Warehousing** (16:137:538) covers the basics of database technology – perfect for those in Analytics, UXD, and IT, and for those interested in learning about informatics. Most importantly, it covers the #1 programming skill for almost all science/tech jobs – SQL. **Fundamentals of Analytics** (16:137:550) is offered online on Wednesday nights. We also offer **Introduction to Cloud & Big Data Systems** (16:137:539), **Advanced Analytics and Practicum** (16:137:551), and **Special Topics: Linux System Administration** (16:137:601 section 92).

Another general course is **Mobile Application Development from Concept to Market** (16:137:537). This course covers design principles in both iOS and Android and looks at trends in the App Store and Google Play markets. Last semester, students took on [real projects from industry stakeholders](#). This course is also open to those in the Life Sciences who have an idea for an App – join the course and watch your idea come to life!

Interested in product or experience design? We offer **Introduction to Product Design and Development** (16:137:525), part of the new [Product Design concentration!](#) [Read a recap of the course](#) by three MBS students on our blog. **Introduction to User Experience Design** (16:137:531), required for IT and UXD and one of our most popular courses, will also be running. UXD covers how to think about developing a website/ web presence/ computer application from the user’s perspective. If you are thinking about developing a business that involves the web, whether it is in cosmetics or biomedical devices, this course could help. THIS IS AN INTENSIVE WEEKLONG course – for a reason. This format is truly an experience that you will never forget! This is also a key course for anyone thinking about product management or product design. We are also offering **Usability Evaluation** (16:137:535) and **User Experience Design (UXD) Practicum** (16:137:536) this semester.

## In Case You Missed It

Professor Kathleen Cashman’s course [Principles of Communication and Leadership](#) → was featured in [Rutgers Today!](#)



## SCIENCE

### Computer/Information/Engineering Students Continued

Lastly, **Fundamentals of Systems Engineering for Engineering Management** (16:137:560) covers the design requirements of putting together a big project. It's a fantastic course if you're interested in a business analyst role, systems engineering, UX, engineering management, software engineering, software management, cybersecurity, product management, or IT management. While some IT background is necessary, it is not too tech-heavy and a perfect course for anyone who will eventually have to lead a large project (even from the business perspective) or is part of a technology team (like UXD). This course teaches systems thinking—a hot topic.

### OTHER COURSES OF INTEREST:

Here are some courses of interest to MBS students offered by other Rutgers departments:

- **Supply Chain and Logistics Engineering** (16:540:520) – offered online on Tuesday nights.
- **Quality Management** (16:540:580) – offered online and in person on Thursday evenings by the Industrial and Systems Engineering program, covering the basics of quality and reliability. Appropriate for all engineering, especially engineering management, and those working in the life sciences and bio/pharma area (biotech, drug discovery & development, personal care, food science). Quality Management is a popular area for many jobs in the NY/NJ area.
- **Bioinformatics** (16:765:585) – a basic course in bioinformatics and super-important for those in biotech & drug discovery. For those who are interested in bioinformatics, Python is the language of choice. (Check out our Fundamentals of Python course.)
- **Regression Analysis** (16:960:563) – required for analytics! This course will be held on Thursday evenings on campus in the fall. It's offered every semester (and summer) but needs a prerequisite basic stats class.
- **Healthcare Service Management** (22:799:696) – RBS course that meets on Livingston campus.
- **Negotiation** (38:578:505) is a great business elective.
- **Engineering of Sugars: Glycosciences in Health, Energy, & Materials** (16:155:532) introduces students with limited prior exposure to the interdisciplinary field of glycosciences (or glycoengineering) and its practical relevance to biotechnology. \*Students should have a basic background in organic chemistry and/or biochemistry and/or cell biology and/or microbiology.

## Closing Notes

We are excited for another great semester here at Rutgers. Remember, if you need help with course planning, schedule an appointment with an advisor. For more useful links, see the quick links section at the beginning of this report.