

SPRING 2024

# The Insider Course Report

Master of Business and Science (MBS) degree



## Welcome to the new semester!

This newsletter describes the courses the Professional Science Master's program will offer in spring 2024. We encourage you to chart your path and choose classes tailored to your career goals (remember your Odyssey plans!). Read carefully, and feel free to explore electives outside of your concentration. If you need guidance, check out our [student resources](#) and [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...

[mbs.rutgers.edu](http://mbs.rutgers.edu)

## 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 Core Courses

Every semester, we offer all our core business courses.

1. **Principles of Finance & Accounting** is a general course combining finance and accounting (asynchronous online or in-person/hybrid on Tuesdays). It is a great business course for new students.
2. The popular **Communication & Leadership** has options for synchronous online classes on Mondays or Tuesdays (the Tuesday class is reserved for students with work experience). There's also an in-person class offered on Mondays. 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. You can also read some tips from a student on [making the most out of this class](#). And get ready to meet an executive coach—executive coaching is a significant part of this class.
3. **Market Assessment for Business & Science** offers asynchronous online courses or in-person Thursday-night meetings. This class includes [a field trip to IKEA](#) (online students will visit their local IKEAs). There are guest lecturers that are open to everyone—so make sure to check out our [events page](#).
4. The one credit **Ethics** course is also offered this semester.
5. Finally, the **Capstone** course is offered, which culminates in a presentation in front of guest judges. The final presentation is also open to all students in the program for colloquium credit. All Capstone students: Save the date for the [Capstone retreat](#) on 2/16 and 2/17! It will take place at the Rutgers University Inn and Conference Center, offering online students who wish to attend a convenient place to stay. You can also read about [past capstone presentations](#).

## Course Catalog

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

MBS students and staff at the first  
Capstone retreat



## BUSINESS

### Business Elective Courses

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**). Another popular business skill is supply chain—check out our **Sustainable Supply Chain/Green Purchasing** (16:137:606) under the Life Sciences section of this report. For those who want to learn about Business Intelligence or learn Tableau (another very, very popular tool/skill listed in tens of thousands of job postings), **Business Intelligence with Visual Analytics** (16:137:553) teaches BI and visualization using Tableau. It is a must for those in Analytics and Engineering Management and an excellent elective for those in all other concentrations. Prof. Lindy Ryan just finished her new book, so prepare for some new material!

**TOPICS IN MANAGEMENT:** The **Topics in Management** (16:137:650/651/652) course is a shell for some great professional courses offered at Rutgers. [Learn more about how to register](#). The Mini-MBA is a popular series of courses given by the Executive Education division of the Rutgers Business School. In addition to the Mini-MBA, other certification classes are available. These are labeled “CCPD” and include important tech electives such as CompTIA certifications and Certified Ethical Hacker, etc.

Looking for practical work experience or experiential learning opportunities? Take a **professional internship** or **research internship** as either a business or science elective. This is for students who have just received an internship ([see our internship page here](#)). The internship course has an online component taught by Abbe Rosenthal. Working students can complete an internship at their place of work – but it must be in a different division. This is a perfect opportunity to explore another role. Read about a student’s internal internship [on our blog](#).

We also offer **externships**—a design-based experience where students work on industry-sponsored projects. Visit our website to learn more about [externships](#), or attend one of our externship webinars for more information. Read about a recent externship for a local organization, [Kraus Farms](#).

### 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).

Extern team visiting Kraus Farms →





## SCIENCE

### Life Sciences

The **Fundamentals of Personal Care Science** (16:137:570) is now offered both semesters! This spring, it is offered online on Monday nights. While required for the Personal Care Science concentration, this course is excellent as an elective for students in Biotechnology, Drug Discovery and Development, Food Science, and Global Food Technology to learn about cosmetic chemistry. We also offer a follow-up course: **Product Development & Formulations for Personal Care Science** (16:137:571). It is a popular course taught by the energetic Dr. Ricardo Diez online on Tuesday nights. This spring, we will also run **Dermaceutics** (16:137:603 00088) on Tuesday nights. Online students will have the option to take it remotely. We are also running **Special Topics: New Technologies in Personal Care Science** (16:137:603 18096) online on Thursday nights. This course explores advancements in the personal care science industry, examining the science behind different personal care categories.

For those in Food Science: **Global Food Supply & Quality Management** (16:137:579) is excellent for Food Science, Global Food Technology, and Personal Care Science students. **Food Business Innovation** (16:137:575) is also running – and appropriate for personal care and even drug discovery. Lastly, **Special Topics: section 91, Alcoholic Beverage Regulation: Wine, Beer, and Spirits** (16:137:601) is an excellent course for those interested in regulatory and alcohol (sorry, there is no tasting in the class 😊—but you can read more about it on [our blog](#)).

For Biotech: **Fundamentals of Biological Chemistry in the Biotech Industry** (16:137:514) is offered online on Wednesday nights. **NextGen Biotech/Genomics** (16:137:616—online on Thursday nights) and **Bioinformatics: Tools for Genomic Analysis** (16:137:617—in-person on Wednesday afternoons) are great electives for those in Drug Discovery and Development, Food Science, Personal Care Science, and Chemistry. If you want to strengthen your skills in bioinformatics, consider taking the Python, regression, database, and BI courses offered.

## 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](#).

MBS Flavors and Fragrances Panel →



## SCIENCE

### Life Sciences Continued

For Drug Discovery and Development: we offer **Drug Discovery Through Pre-Clinical Development** (16:137:511 – our “practicum” class for Drug Discovery), **Fundamentals of Regulatory Affairs** (16:137:582 ), and **Practical Aspects of Clinical Trial Design/Conduct** (16:137:580). These courses are also great electives for biotech and personal care science (cosmetic regulatory!) folks. **Fundamentals of Biological Chemistry in the Biotech Industry** (16:137:514 – online Wednesday nights) is a biochemistry course that studies biochemical pathways as they relate to the discovery of new drugs in several therapeutic areas, such as oncology. The course is suitable for students in any of the life science concentrations.

For Sustainability: we offer **Sustainable Supply Chain/Green Purchasing** (16:137:606). Professor Kevin Lyons leads this project course. This is an excellent course for engineering management students and sustainability students (and counts as a science course). It is open to all other students who want to do a project around sustainability, supply chain, and green purchasing (especially for food science and global food – Lyons will discuss case studies related to the food industry). Students will work with companies and implement sustainability solutions.

## 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 IT, Engineering, Analytics, and UXD, several core and elective courses are offered this spring. The **Essentials of Cybersecurity and Secure Systems** (16:137:561) course covers the fundamentals of cybersecurity and building secure systems. The ever-popular **Enterprise Software Architecture** (16:137:541), offered online on Monday nights, provides comprehensive coverage of the IT industry and where IT is used. It is also great for those in cybersecurity, as one of the skills that came up for Cyber (and for analytics) is the ability to design and analyze software systems. This class also covers Agile Development, a crucial skill for Product Managers (another popular skill in job postings!). For those in cybersecurity, please give yourself time to take the certifications (like CompTIA) offered through the Topics in Management course.

Every semester, we run the popular **Python Methodologies** (16:137:552). This course is appropriate for anyone who needs to know Python programming and scripting. The course is offered entirely asynchronously or asynchronously with a few in-person meetings. It 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, 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. **Applied Regression Analysis** (16:137:602) is provided online with a synchronized office hour/lecture on Fridays – this is an MBS regression class that uses SAS and R to teach regression. **Applied Artificial Intelligence from Concept to Market** (16:137:562) is also offered online on Tuesday nights. It utilizes Google TensorFlow. This hands-on class is essential for any science or engineering student who wants to learn AI. If you have Python, you can take this AI course. This spring, we also offer Introduction to **Cloud & Big Data Systems** (16:137:539) and **Advanced Analytics and Practicum** (16:137:551).

Professor Kathleen Cashman leading an  
Industrial Advisory Board/Student Mixer



## SCIENCE

### Computer/Information/Engineering Students Continued

For those in analytics, check out **Data Structures and Algorithmic Problem Solving in Python** (56:198:501). This course covers the fundamentals of data structures. If you are interested in data science, computing, or want to understand computer science fundamentals – take this course! It is the only data structures course in Python. Remote students can still take this course—the lectures are live-streamed. The course is offered through Rutgers - Camden.

Introduction to **User Experience Design** (16:137:531), required for IT and UXD and one of our most popular courses, is online in the spring (the 1-week in-person section is in the fall). UXD covers how to think about developing a website/ web presence/ computer application from the user's perspective. If you are thinking about growing a business involving the web, whether in cosmetics or biomedical devices, this course could help! **Contextual Inquiry** (16:137:532, a course in UXD sequence) is running this semester. This is a required course for those in UXD and an elective for those interested in learning more about UXD. We are also offering **User Experience Design Practicum** (16:137:536) and **Introduction to Visual Design for User Experience** (16:137:533).

## OTHER COURSES OF INTEREST:

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

- (22:799:691 16719) **Project Management** is an in-person RBS course open to non-RBS students.
- (16:540:520) **Supply Chain and Logistics Engineering** – offered online on Tuesday nights.
- (34:970:523) **Environmental Law & Policy** – offered through the Bloustein School of Planning and Public Policy, meets Tuesdays in downtown New Brunswick.
- (16:790:583) **Public Health Infrastructure and National Security** – This class is part of the MA in United Nations Studies from the political science department. They have some great courses about the politics of different science issues (cyber, food, water), etc. This course is perfect for those in Cybersecurity and IT.
- (16:540:580) **Quality Management** – This course is offered by Industrial Engineering and covers 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).

## 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.