



RICE UNIVERSITY



# 2024-2025

## Master of Engineering Management and Leadership Online Student Handbook



RICE UNIVERSITY  
Rice Center for Engineering  
Leadership (RCEL)

## Introduction

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This handbook provides general guidelines for graduate students in the Master's in Engineering Management and Leadership (MEML) program. It is intended to supplement the Rice University General Announcements, which contain graduate school regulations governing students, including deadlines and additional requirements. In addition to complying with the regulations stated in this handbook, students must also comply with the General Announcements and the Code of Conduct.

**In case of error, omission, or conflict, policies of the General Announcements supersede those stated within this handbook.** If the policies of the program change during a student's tenure at Rice University, the student can elect to continue studies under the complete set of policies in place at the time of his or her matriculation or may choose to follow the updated policies in full. Students may not choose some regulations from one set of policies and some from another. In rare cases, the faculty may apply a new regulation to all students who have not passed a specific milestone (e.g., candidacy) in their program if such a change will not materially affect the progress of the students. Students will be notified of such revisions.

It is the student's responsibility to be familiar with the rules, procedures, and requirements of the Professional Master's program in Engineering Management and Leadership, the Office of Graduate and Postdoctoral Studies, and Rice University. It is the ultimate responsibility of the student to know and follow all policies and timelines to allow for a timely graduation. A student failing to meet department or university requirements is subject to dismissal from the program.

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## About the

# Master in Engineering Management and Leadership

## Online Degree Program

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### Program Overview

In today's world, all major companies have become technology companies. Therefore, engineers are being increasingly involved in the creation of new ideas, products, and services, across all sectors of society. For companies to take full advantage of this new paradigm, they must hire people who have been extensively educated on the best ways of leading, managing, and inspiring teams of engineers and technical professionals who are digital natives.

Developed by the Rice Center for Engineering Leadership, the **Master of Engineering Management and Leadership (MEML)** program at Rice is a professional, non-thesis master's degree meant for technical professionals with engineering or related technical backgrounds; recent college graduates from engineering and the computational science fields should also apply.

The MEML program is offered online or on-campus, with full-time and part-time options. Students who have a BA or a BS degree in any field of engineering or related study may apply. Students must apply to either the online or on-campus program and will be explicitly admitted to one program or the other.

### Learning Outcomes

Upon completing the MEML degree, students will be able to:

- ***Employ ethical-technical decision making.***  
Understand the susceptibility of engineering teams and organizations to ethical failure and devise creative technical solutions that are constrained by ethics-based boundaries.
- ***Lead and manage engineering teams.***  
Excel at hybrid communications (i.e. to both technical and non-technical persons), managing projects, leading engineering teams, and inspiring people.
- ***Evaluate the economic viability of technology products and ideas.***  
Apply key principles of engineering entrepreneurship to determine if a technical product or idea is valuable and economically viable.
- ***Solve advanced engineering problems.***  
Have a graduate-level understanding of key disciplinary engineering courses. Engineering leaders will lead teams of engineers in a way that leverages the varying degrees of engineering training, from the undergraduate to graduate level. They should have a fundamental understanding and appreciation for the deeper technical skills that graduate-level engineers add to a team.

## Requirements Overview

The Master of Engineering Management & Leadership (MEML) program's non-thesis curriculum requires completing a minimum of 30 credits of approved courses at the 500- level or above.

Students pursuing the MEML degree must complete:

- A minimum of 10 courses (30-32 credit hours, depending on course selection) to satisfy degree requirements.
- A minimum of 30 credit hours of graduate-level study (graduate semester credit hours, coursework at the 500-level or above).
- A minimum of 24 graduate semester credit hours must be taken at Rice University.
- A minimum of 24 graduate semester credit hours must be taken in standard or traditional courses (with a course type of lecture, seminar, laboratory, lecture/ laboratory).
- A minimum residency enrollment of one fall or spring semester of part-time graduate study at Rice University.
- A maximum of 6 credit hours from graduate semester credit hours as transfer credit.
- A minimum of 2 semesters of participation in the Professional Master's Seminar Requirement (RCEL 698 and RCEL 699).

**Courses requirements consist of six (6) courses (18 credits) for the Engineering Manager Leadership Breadth, three (3) Technical Depth courses (9 credits), and a Masters of Engineering Management & Leadership Capstone Project (3 credits).**

MEML students must maintain a minimum overall GPA of 2.67 or higher in all Rice coursework, as well as a minimum program GPA of 3.00 or higher in all Rice coursework that satisfies requirements for the non-thesis master's degree.

### **Please Note the Following:**

- Students in the MEML degree program and in either of the two cohorts (online or on-campus) will be allowed to take up to 3 courses (9 credit hours) in the other modality (on-campus or online) with permission from the Engineering Management and Leadership Program Advisor. Certain restrictions apply for international students:
  - **Online MEML students that are international students living outside of the U.S. may not take on-campus and in-person courses.**
  - **On-campus MEML students that are international students must be sure to meet the full-time semester 9 credit hour minimum for on-campus instruction to meet visa requirements.**

## Degree Requirements

The courses listed in this section satisfy the requirements for the MEML degree program. In certain instances, courses not on this official list may be substituted upon approval of the program’s academic advisor, or where applicable, the department or program’s Director of Graduate Studies. Course substitutions must be formally applied and entered into Degree Works by the department or program’s Official Certifier. Additionally, these must be approved by the Office of Graduate and Postdoctoral Studies. Students and their academic advisors should identify and clearly document the courses to be taken.

<b>Total Credit Hours Required for the MEML Degree</b>	<b>30</b>
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<b>Engineering Manager Leadership Breadth (18 credits)</b>		
<b>Code</b>	<b>Course Title</b>	<b>Credit Hours</b>
RCEL 501	Engineering Management and Leadership, Theory and Application	3
RCEL 502	Engineering Project Management	3
RCEL 503	Engineering Product Management in Industry	3
RCEL 504	Ethical-Technical Leadership	3
RCEL 505	Engineering Economics for Leaders	3
RCEL 506	Applied Statistics and Data Science for Engineering Leaders	3
<b>Technical Depth (Area of Specialization) (9-11 credits)</b>		
<p>The following Areas of Specialization are available to fully online MEML students. Select one (1):</p> <ul style="list-style-type: none"> <li>• Computer Science</li> <li>• Data Science</li> </ul> <p><b>NOTE TO HOUSTON AREA STUDENTS:</b> Students in the MEML degree program and in either of the two cohorts (online or on-campus) will be allowed to take up to 3 courses (9 credit hours) in the other modality (on-campus or online) with permission from the Engineering Management and Leadership Program Advisor. Certain restrictions apply for international students.</p> <p>Learn more in Appendix II on page 19.</p>		



### Capstone Project (3 credits)

MEML students must complete the capstone project. In this project, students will be expected to devise Industry 4.0 solutions to solve real-world problems from companies and other organizations, while exhibiting critical thinking, teamwork, and engineering manager leader skills. Employing MEML's ethical-technical framework, students will demonstrate how data can enhance products, services, and ideas and make them more economically viable. The capstone project can be an opportunity to connect with Rice's world-class faculty, engineering leaders of the industry, and corporate partners of the Rice Center for Engineering Leadership (RCEL).

Code	Course Title	Credit Hours
RCEL 507	Master's in Engineering Management and Leadership Capstone	3

### MEML Professional Masters Seminar Series (0 credits)

Students must participate in a minimum of 8 RCEL-sponsored or faculty advisor pre-approved enhancement activities over the course of two semesters to complete the MEML degree. Examples of acceptable activities include the Rice Engineering Leader Panel/Speaker Series, or other School of Engineering department seminars or presentations (with prior approval).

Code	Course Title	Credit Hours
RCEL 698	MEML Professional Masters Seminar Series I	0
RCEL 699	MEML Professional Masters Seminar Series II	0

### Optional Elective - Curricular Practical Training

Curricular Practical Training (CPT) is a temporary work authorization given to F-1 students to receive training required by a course or program. The training must also be directly related to their major field of study. CPT is available only prior to the completion of the degree program. Students must have a job offer at the time of application. To learn more about CPT, visit <https://oiss.rice.edu/cpt>.

Code	Course Title	Credit Hours
RCEL 541	Internship Practicum for Engineering Leaders (summer)	0

## Attendance

Attendance at class meetings is essential to academic success. Students are expected to take personal responsibility for class attendance and bear the responsibility for the effect that absences may have upon performance and evaluation in the course with consequences up to and including dismissal from the program.

Students are required to attend all scheduled activities for all of the classes for which they are registered during the entire course of the academic semester for which they are enrolled. Students with a legitimate reason to be absent from a class must specifically request permission from the professor in charge, or explain at the next available opportunity why an unforeseen event prevented them from attending. The academic calendar indicates normal class days, recesses, and holidays. Instructors, however, may schedule required activities on other days, including weekends, if required by programmatic needs, such as guest lectures or field trips.

## Transfer Credit

Students pursuing the MEML degree should be aware of the following program-specific transfer credit guidelines:

- No more than 6 credit hours from another U.S. or international universities of similar standing at Rice may apply towards the degree. Transfer coursework must be comparable in content and depth to the corresponding course at Rice, and must not have counted toward another degree.
- Requests for transfer credit will be considered by the Engineering Management and Leadership Graduate Committee Chair and the instructor of the equivalent Rice course.

For Rice University's policy regarding transfer credit, visit <https://ga.rice.edu/graduate-students/academic-policies-procedures/regulations-procedures-all-degrees/>

Some departments and programs have additional restrictions on transfer credit. Students are encouraged to meet with their academic program's advisor when considering transfer credit possibilities.

## Progress Review

Earning an advanced degree implies a high level of scholastic performance.



In order to evaluate progress, the records and research performance of each graduate student will be reviewed annually. If the results of this review are not satisfactory, the program will either specify additional course of study or the student may be dismissed from the university.

## **Leave of Absence**

A leave of absence may be granted only by the Office of Graduate and Postdoctoral Studies upon recommendation of the program and is granted only to students in good standing. Leave must be approved in advance of the academic semester in question. Normally, a leave of absence is granted for no more than two consecutive semesters. No work toward a degree may be done at Rice (or involve Rice faculty/facilities) during a student's leave of absence.

## **Financial Aid**

There is no financial aid available from Rice University for students in the MEML degree program at this time.

## **Guidelines for Dismissals, Petitions, Appeals, Grievances and Problem Resolution**

Students are encouraged to download and read the Office of Graduate & Postdoctoral Studies' guidelines for dismissal, petitions, appeals, grievances and problem resolution that can be obtained from the web site: <https://ga.rice.edu/graduate-students/academic-policies-procedures/regulations-procedures-all-degrees/>

In accordance with these guidelines, petitions, appeals, grievances and problems will be handled by the Directors of the Rice Center for Engineering Leadership/ MEML program. They will conduct an investigation of the circumstances and reach a decision regarding the case. Any decision they make can be appealed to the Dean of Engineering. The Dean will look at every case after viewing a written report from the co-directors of the MEML program and any written report the student wants to provide. The written report from the co-directors of the MEML program will describe the circumstances, the decision, and the rationale for the decision. The written report will be made available to the student, except for redactions to protect the privacy of other students.





## Meet the MEML Faculty

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Drawn from Rice's George R. Brown School of Engineering and the Rice Center for Engineering Leadership, MEML faculty have demonstrated track records of technical leadership, engineering project management, and research expertise in many relevant engineering areas. At the same time, they also possess the technical and problem-solving skills and inventive spirit that is the hallmark of great engineers. Our award-winning faculty have served in leadership roles working for Fortune 500 companies and the U.S. Armed Forces. They bring unique leadership experience and a desire to share their understanding of engineering management with their students.



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## About Rice University

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Boasting a 300-acre tree-lined campus in Houston, Rice University is ranked among the nation's top 20 universities by U.S. News & World Report. Rice has a 6-to-1 undergraduate student-to-faculty ratio, and a residential college system, which supports students intellectually, emotionally and culturally through social events, intramural sports, student plays, lectures series, courses and student government. Developing close-knit, diverse college communities is a strong campus tradition, which is why Rice is highly ranked for best quality of life and best value among private universities.

### **RICE UNIVERSITY MISSION STATEMENT:**

*As a leading research university with a distinctive commitment to undergraduate education, Rice University aspires to pathbreaking research, unsurpassed teaching, and contribution to the betterment of our world. It seeks to fulfill this mission by cultivating a diverse community of learning and discovery that produces leaders across the spectrum of human endeavor.*

## The General Announcement

The Rice University General Announcements contain graduate school regulations governing students, including deadlines and additional requirements. In addition to complying with the regulations stated in this handbook, students must also comply with the General Announcements and the Code of Conduct. In case of error, omission, or conflict, policies of the General Announcements supersede those stated within this handbook. View the General Announcement here: <https://ga.rice.edu/>

## Using ESTHER to Register for Classes

ESTHER is the web application for students, faculty, and staff. Students will use this application to register for classes, and retrieve certain data such as grades and account information. Using ESTHER, students can: indicate confidentiality preference, update contact information; register, add and drop courses; access final grades; view holds on accounts, etc.

See <https://registrar.rice.edu/students/registration>

## Honor Code

The Honor System is one of the oldest traditions at Rice. Adopted by a vote of the student body in 1916, the system requires each Rice student to help ensure the validity of all examinations and assignments by adhering to a strict code of academic integrity. The Honor System reflects one of our strongest shared community values. It provides benefits such as take-home and unproctored exams. The Honor System also elevates our common experience by placing academic honesty at the center of our curriculum and by asking each of us to live by our honor code on a daily and continuing basis. The Honor System expresses our belief that the integrity of each individual is vital to the integrity of our entire community.

The Honor System is administered by the student Honor Council, whose members are elected annually by the student body. Students agree to report any suspected violations of the Honor Code to the Honor Council, which is responsible for investigating reported violations and recommending penalties where warranted. ***As a reminder of their commitment, students write and sign the following pledge on all work covered by the Honor Code: “On my honor, I have neither given nor received any aid on this (exam, paper, project, assignment).”***

All students at Rice University agree to abide by the Honor Code, which covers such matters as plagiarism and giving or receiving aid on exams. It is the obligation of every student at Rice to read the “Honor System Handbook,” and to understand and maintain the honor system at all times. Specific information on the Honor Code can be found at: [honor.rice.edu](http://honor.rice.edu).

## Code of Conduct

The Office of Student Judicial Programs oversees the judicial system, enforces the Code of Student Conduct. Students are expected to govern their conduct by standards of considerate and ethical behavior so as not to harm or discredit themselves, the University, or any other individual. Moreover, just as the learning environment does not end at the classroom door, neither is the exercise of individual responsibility, civility, and honor limited to the academic domain.

More information on this can be found on the Rice University Student Judicial Programs page here [sjp.rice.edu/code-of-student-conduct](http://sjp.rice.edu/code-of-student-conduct).



## **Office of International Students and Scholars**

The Office of International Students & Scholars is here to support all Rice internationals and the Academic Departments with all matters related to immigration, international compliance, and cultural adaptation.

Visit <https://oiss.rice.edu/> for more information.

## **Title IX**

Rice encourages any student who has experienced an incident of sexual, relationship, or other interpersonal violence, harassment or gender discrimination to seek support. There are many options available both on and off campus for all graduate students, regardless of whether the perpetrator was a fellow student, a staff or faculty member, or someone not affiliated with the university.

Students should be aware when seeking support on campus that most employees are required by Title IX to disclose all incidents of non-consensual interpersonal behaviors to Title IX professionals on campus who can act to support that student and meet their needs. The therapists at the Rice Counseling Center and the doctors at Student Health Services are confidential, meaning that Rice will not be informed about the incident if a student discloses to one of these Rice staff members. Rice prioritizes student privacy and safety, and only shares disclosed information on a need-to-know basis.

If you are in need of assistance or simply would like to talk to someone, please call Rice Wellbeing and Counseling Center, which includes Title IX Support: (713) 348-3311 Policies, including Sexual Misconduct Policy and Student Code of Conduct, and more information regarding Title IX can be found at [safe.rice.edu](http://safe.rice.edu).

## **Graduate Student Association**

The Graduate Student Association (GSA) is comprised of degree-seeking graduate students at Rice University. The GSA mission is to enrich the graduate student experience and to represent, support, and promote graduate student interests and values. Visit [gsa.rice.edu](http://gsa.rice.edu) to learn more.

## Quick Resources

- Academic Calendar: [registrar.rice.edu](http://registrar.rice.edu)
- Award Opportunities: [engineering.rice.edu/gradopps](http://engineering.rice.edu/gradopps)
- Counseling Center: [wellbeing.rice.edu](http://wellbeing.rice.edu)
- Course Catalog: [courses.rice.edu](http://courses.rice.edu)
- General Announcements: [ga.rice.edu](http://ga.rice.edu)
- Graduate and Postdoctoral Studies Office: [graduate.rice.edu](http://graduate.rice.edu)
- Graduate Studies Form Library: [graduate.rice.edu/forms](http://graduate.rice.edu/forms)
- Honor System and Code of Student Conduct: [honor.rice.edu](http://honor.rice.edu)
- International Student Information: [oiss.rice.edu](http://oiss.rice.edu)
- International Student Forms: [oiss.rice.edu/forms](http://oiss.rice.edu/forms)
- Language and Communications: [capc.rice.edu](http://capc.rice.edu)
- Fondren Library Resources: [library.rice.edu](http://library.rice.edu)
- Map of Campus: [rice.edu/campus-maps](http://rice.edu/campus-maps)
- Parking: [parking.rice.edu](http://parking.rice.edu)
- Professional Development Workshops: [graduate.rice.edu/profdevelopment](http://graduate.rice.edu/profdevelopment)
- Student Wellbeing Office: [wellbeing.rice.edu](http://wellbeing.rice.edu)
- Recreation Center: [recreation.rice.edu](http://recreation.rice.edu)
- Registration: [graduate.rice.edu/registration](http://graduate.rice.edu/registration)
- Rice Counseling Center: [wellbeing.rice.edu/rice-counseling-center](http://wellbeing.rice.edu/rice-counseling-center)
- Rice Help Desk: [oit.rice.edu/get-help](http://oit.rice.edu/get-help), or email [helpdesk@rice.edu](mailto:helpdesk@rice.edu)
- Technology Support: [it.rice.edu](http://it.rice.edu)
- Title IX Information: [safe.rice.edu](http://safe.rice.edu)
- University Fellowships and External Funding: [graduate.rice.edu/](http://graduate.rice.edu/)

## About the Rice Center for Engineering Leadership

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The Rice Center for Engineering Leadership (RCEL) was established in 2009 with a gift from John '73, '74, and Ann '75 Doerr. The official Engineering Leadership Certificate was approved in 2014. RCEL's mission is to inspire, educate, and develop ethical leaders in technology who will excel in research, industry, non-engineering career paths, or entrepreneurship.

RCEL's programing enhances a traditional engineering education by providing skills not typically covered in the Rice engineering curriculum. Through a series of curricular and co-curricular learning experiences, RCEL students learn to create and communicate a vision, build a high-performing team, form and execute collaborative plans, and create innovations that endure.

### **The Need for Engineering Leaders**

Many of the most important changes in the world today are driven by the creations of engineers. Breakthroughs in computing and biotechnology, for example, are changing the way people communicate, learn, and heal. Engineering leaders are at the forefront of these advancements, and RCEL's Certificate program is intended to build the skills, motivations, and opportunities needed to become an engineering leader.

### **RCEL Undergraduate Certificate in Engineering Leadership**

At the center of RCEL is the Engineering Leadership Certificate, an accredited academic credential aimed at preparing students for their first leadership role after graduation. The multi-year certificate program comprises a series of courses, labs, and RCEL-specific learning experiences that supplement the core curriculum of the School of Engineering. The RCEL Certificate Program allows students to learn fundamentals of engineering leadership, practice their leadership skills while participating in engineering-based hands-on activities, give and receive coaching, and critically reflect on their leadership experiences through a series of structured self-assessments.

### **Masters in Engineering Management and Leadership**

In today's world, all major companies have become technology companies. Therefore, engineers are being increasingly involved in the creation of new ideas, products, and services, across all sectors of society. For companies to take full advantage of this new paradigm, they must hire people who have been extensively educated on the best ways of leading, managing, and inspiring teams of engineers and technical professionals who are digital natives.

Housed in the Rice Center for Engineering Leadership, the Master of Engineering Management and Leadership program at Rice is a professional, non-thesis master's degree meant for technical professionals with engineering or related technical backgrounds; recent college graduates from engineering and the computational science fields should also apply.

The MEML program is offered online or on-campus, with full-time and part-time options. Students who have a BA or a BS degree in any field of engineering or related study may apply. Students must apply to either the online or on-campus program and will be explicitly admitted to one program or the other.

Visit [engineering.rice.edu/meml](http://engineering.rice.edu/meml) to learn more.

## Contact

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### Rice Center for Engineering Leadership (RCEL)

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**Degree Requirements - Technical Depth (Area of Specialization) Expanded**

Courses offered by the George R. Brown School of Engineering include the following: BIOE, CAAM, CEVE, CHBE, COMP, DSCI, ELEC, ENGI, GLHT, INDE, MECH, MSNE, RCEL, SSPB, or STAT. See below for typically approved areas of specialization.

**NOTE:** Select 3 courses from courses offered by the George R. Brown School of Engineering, or from an engineering-centered focus area, as an Area of Specialization. Departmental approval is required for areas of specialization. *Below are examples of courses from each specialization (i.e., department) that a MEML student might select.*

**Area of Specialization: Computer Science (COMP)**

Code	Course Title	Credit Hours
COMP 614	Computer Programming for Data Science (recommended)	3
COMP 643	Big Data	3
COMP 665	Data Visualization	3
Total Credit Hours		9

**Area of Specialization: Data Science**

Code	Course Title	Credit Hours
COMP 614	Computer Programming for Data Science (recommended)	3
COMP 680	Statistics for Computing and Data Science (recommended)	3
Select one course from the following options:		
COMP 643	Big Data	3
COMP 665	Data Visualization	
COMP 642	Machine Learning	
Total Credit Hours		9

### Degree Requirements - Technical Depth (Area of Specialization) *Expanded*

**NOTE TO HOUSTON AREA STUDENTS:** Students in the MEML degree program and in either of the two cohorts (online or on-campus) will be allowed to take up to 3 courses (9 credit hours) in the other modality (on-campus or online) with permission from the Engineering Management and Leadership Program Advisor. Certain restrictions apply for international students.

- Online MEML students that are international students living outside of the U.S. may not take on-campus and in-person courses.
- On-campus MEML students that are international students must be sure to meet the full-time semester 9 credit hour minimum for on-campus instruction to meet visa requirements.

**If you are an online MEML student local to Houston and able to attend courses on campus at Rice University, the following Areas of Specialization are also available:**

- Bioengineering
- Chemical and Biomolecular Engineering
- Civil and Environmental Engineering
- Computational and Applied Mathematics
- Computer Science
- Data Science
- Electrical and Computer Engineering
- Materials Science and Engineering
- Mechanical Engineering
- Statistics

Courses offered by the George R. Brown School of Engineering include the following: BIOE, CAAM, CEVE, CHBE, COMP, DSCI, ELEC, ENGI, GLHT, INDE, MECH, MSNE, RCEL, SSPB, or STAT. See next pages for typically approved areas of specialization.

**NOTE:** Select 3 courses from courses offered by the George R. Brown School of Engineering, or from an engineering-centered focus area, as an Area of Specialization. Departmental approval is required for areas of specialization.

***On the next page are examples of courses from each specialization (i.e., department) that a MEML student might select.***



Examples of courses from each specialization (i.e., department).

<b>Area of Specialization: Bioengineering (BIOE)</b>		
<b>Code</b>	<b>Course Title</b>	<b>Credit Hours</b>
BIOE 508/ SSPB 503	Synthetic Biology	3
BIOE 536	Frontiers in Immunoengineering	3
BIOE 539	Applied Statistics for Bioengineering and Biotechnology	3
Total Credit Hours		9

<b>Area of Specialization: Chemical and Biomolecular Engineering (CHBE)</b>		
<b>Code</b>	<b>Course Title</b>	<b>Credit Hours</b>
CHBE 501	Fluid Mechanics and Transport Processes	3
CHBE 560/ MSNE 560	Colloidal and Interfacial Phenomena	3
CHBE 590	Kinetics, Catalysis, and Reaction Engineering	3
Total Credit Hours		9

<b>Area of Specialization: Civil and Environmental Engineering (CEVE)</b>		
<b>Code</b>	<b>Course Title</b>	<b>Credit Hours</b>
CEVE 500/ MECH 500	Advanced Mechanics of Materials	3
CEVE 503/ MECH 520	Nonlinear Finite Element Analysis	3
CEVE 527/ MECH 527	Physics Guided Machine Learning and Data Driven Modeling Fem	3
Total Credit Hours		9

<b>Area of Specialization: Computational and Applied Mathematics (CAAM)</b>		
<b>Code</b>	<b>Course Title</b>	<b>Credit Hours</b>
CAAM 519	Computational Science I	3
CAAM 550	Numerical Analysis I	3
CAAM 554	Iterative Methods for Systems of Equations and Unconstrained Optimization	3
Total Credit Hours		9

Examples of courses from each specialization (i.e., department) continued on page 21.

Examples of courses from each specialization (i.e., department) continued from page 20.

<b>Area of Specialization: Computer Science (COMP)</b>		
<b>Code</b>	<b>Course Title</b>	<b>Credit Hours</b>
COMP 502 /ELEC 502/ STAT 502	Neural Machine Learning I	3
COMP 540	Statistical Machine Learning	4
COMP 542	Large-Scale Machine Learning	3
Total Credit Hours		10

<b>Area of Specialization: Data Science</b>		
<b>Code</b>	<b>Course Title</b>	<b>Credit Hours</b>
COMP 614	Computer Programming for Data Science	3
COMP 665	Data Visualization	3
STAT 613	Statistical Machine Learning	3
Total Credit Hours		9

<b>Area of Specialization: Electrical and Computer Engineering (ELEC)</b>		
<b>Code</b>	<b>Course Title</b>	<b>Credit Hours</b>
ELEC 519	Data Science and Dynamical Systems	3
ELEC 520/ COMP 520	Distributed Systems	4
ELEC 524/ COMP 524	Mobile and Wireless Networking	4
Total Credit Hours		11

<b>Area of Specialization: Materials Science and Nanonengineering (MSNE)</b>		
<b>Code</b>	<b>Course Title</b>	<b>Credit Hours</b>
MSNE 510	Scaling Concepts in 2d Materials and Polymer Physics	3
MSNE 511	Materials Characterization from Nano to Macro	3
MSNE 513	3D Printing and Additive Manufacturing: Theory and Applications	3
Total Credit Hours		9

Examples of courses from each specialization (i.e., department) continued on page 22.





## Student Professional Development Opportunities

The following opportunities are available to MEML@Rice students to learn, build skills, and develop professionally outside the classroom.

### Attend MEML Events (Attendance required by courses RCEL698 and RCEL699)

- [ ] **Attend MEML@Rice Seminars**
- [ ] **Attend Rice Engineering Leader Speaker Series**
- [ ] **Attend RCEL Panel Series**
  - Ethical Decisions: The Engineer's Responsibility
  - The Gender Factor: Leadership Double Standards in Tech
- [ ] **Attend MEML Professional Development Workshops**  
Workshop examples:
 

<ul style="list-style-type: none"> <li>• How To Network</li> <li>• Resume Workshop</li> <li>• Mock Interview Workshop</li> <li>• Personal Brand/Marketing</li> <li>• GitHub Portfolio Workshop</li> </ul>	<ul style="list-style-type: none"> <li>• Oral Presentation Workshop</li> <li>• Data Storytelling for Leaders</li> <li>• GAI for Business Applications</li> <li>• 3D Printing Workshop</li> <li>• Professional Life Skills Workshop</li> </ul>
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### Build Skills AND Your Resume

- [ ] **Complete Communication for Engineering Leaders**
  - Under development but coming soon!
- [ ] **Leverage Rice resources and training to fill skill gaps**
  - Center for Career Development (CCD) - Create ProfessionalOwl Plan
  - Doerr Institute
    - Sign up for executive coaching
    - Sign up for leadership skill-specific workshops
  - Fondren Library Short Courses
  - Coursera
- [ ] **Market Yourself**
  - Get a professional photo
  - Create/Update LinkedIn
  - Create a Sallyportal.org profile
  - Create a GitHub profile
- [ ] **Mentorship - Sign up for a MEML Mentor!**

### Develop and Deploy Your Job Search

**RULE OF THUMB:** *Plan for a job search with 1 month duration for each \$10k in annual salary. Example, allow 9 months for a \$90k/year job*

- [ ] **Start a targeted job search at least one year before graduation.**
  - Identify industry and specific roles
  - Prepare resume, LinkedIn, elevator pitch, practice interviewing
- [ ] **Prepare for and attend career fairs (in-person and virtual)**
  - Rice, Lillie (start-ups), Greater Houston area (Google Houston career fair)
  - Through industry groups (ASME, SWE, etc.)
  - Identify target companies; speak to a representative
- [ ] **Network, network, network.**
  - Aim to meet 100+ people who are in your target industry.
    - Find people with jobs like you want and ask about their work.
    - Reach out to people on LinkedIn and other social networks
  - Attend events and network with other audience members
  - Attend GSA events, Rice events on campus and at the ION
  - Attend industry events (ASME, IEEE, PMI, SPE, etc.) and conferences.