The Pratt School of Engineering
Professional Master’s Programs
2019-2020
Bulletin of
Duke University
The Pratt School of Engineering
2019-2020
The information in this bulletin applies to the academic year 2019-2020 and is accurate and current, to the greatest extent possible, as of July 2019. The university reserves the right to change programs of study, academic requirements, teaching staff, the calendar, and other matters described herein without prior notice, in accordance with established procedures.

Duke University does not tolerate discrimination or harassment of any kind. Duke University has designated the Vice President for Institutional Equity as the individual responsible for the coordination and administration of its nondiscrimination and harassment policies generally. The Office for Institutional Equity is located in Smith Warehouse, 114 S. Buchanan Blvd., Bay 8, Durham, NC 27708, (919) 684-8222, oie-help@duke.edu. Sexual harassment and sexual misconduct are forms of sex discrimination and prohibited by the university. Duke University has designated Jayne Grandes as its director of Title IX compliance and Age Discrimination Act coordinator. She is also with the Office for Institutional Equity and can be contacted at (919) 660-5766 or jayne.grandes@duke.edu.

Questions or comments about discrimination, harassment, domestic violence, dating violence, and stalking can be directed to the Office for Institutional Equity, (919) 684-8222. Additional information, including the complete text of the discrimination grievance procedure and the harassment policy and appropriate complaint procedures, may be found by contacting the Office for Institutional Equity or visiting its website at https://oie.duke.edu/. Questions or comments about sex-based and sexual harassment and misconduct, domestic violence, dating violence, and stalking committed by a student may also be directed to Victoria Krebs, Associate Dean of Students in the Office of Student Conduct, at (919) 684-7336 or victoria.krebs@duke.edu. Additional information, including the complete text of the policy and complaint procedure for such misconduct, may be found at https://studentaffairs.duke.edu/conduct/z-policies/student-sexual-misconduct-policy-dukes-commitment-title-ix.

Duke University recognizes and utilizes electronic mail as a medium for official communications. The university provides all students with email accounts as well as access to email services from public clusters if students do not have personal computers of their own. All students are expected to access their email accounts on a regular basis to check for and respond as necessary to such communications.

Information that the university is required to make available under the federal Clery Act is available by visiting the Records Division, Duke University Police Department, 502 Oregon Street, Durham, NC 27708, or by calling (919) 684-4602. See https://police.duke.edu/news-stats/clery for more details.

The Family Educational Rights & Privacy Act (FERPA), 20 U.S.C § 1232g; 34 CFR Part 99, is a federal law that guides the release of students’ education records, of which disciplinary records are a part. For additional information about FERPA, see https://www.ed.gov/policy/gen/guid/fpco/ferpa/index.html.

Duke University is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award baccalaureate, master’s, doctorate, and professional degrees. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, GA 30033-4097 or call (404) 679-4500 for questions about the accreditation of Duke University.

This publication is available in alternative format on request. Please call (919) 684-2813.

July 2019
The Mission of Duke University

James B. Duke’s founding indenture of Duke University directed the members of the university to “provide real leadership in the educational world” by choosing individuals of “outstanding character, ability and vision” to serve as its officers, trustees and faculty; by carefully selecting students of “character, determination and application;” and by pursuing those areas of teaching and scholarship that would “most help to develop our resources, increase our wisdom, and promote human happiness.”

To these ends, the mission of Duke University is to provide a superior liberal education to undergraduate students, attending not only to their intellectual growth but also to their development as adults committed to high ethical standards and full participation as leaders in their communities; to prepare future members of the learned professions for lives of skilled and ethical service by providing excellent graduate and professional education; to advance the frontiers of knowledge and contribute boldly to the international community of scholarship; to promote an intellectual environment built on a commitment to free and open inquiry; to help those who suffer, cure disease and promote health, through sophisticated medical research and thoughtful patient care; to provide wide-ranging educational opportunities, on and beyond our campuses, for traditional students, active professionals and life-long learners using the power of information technologies; and to promote a deep appreciation for the range of human difference and potential, a sense of the obligations and rewards of citizenship, and a commitment to learning, freedom and truth.

By pursuing these objectives with vision and integrity, Duke University seeks to engage the mind, elevate the spirit, and stimulate the best effort of all who are associated with the university; to contribute in diverse ways to the local community, the state, the nation and the world; and to attain and maintain a place of real leadership in all that we do.

— Adopted by the Board of Trustees on February 23, 2001
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  Duke Kunshan University:
  Master of Engineering Program

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# 2019-2020 Academic Calendar

## Summer 2019

<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>February</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>M</td>
<td>Registration begins for all summer sessions</td>
</tr>
<tr>
<td><strong>May</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>W</td>
<td>Term 1 classes begin. The Monday class meeting schedule is in effect on this day. (Therefore, all summer classes meet this day.) Regular class meeting schedule begins on Thursday, May 16. Drop/Add continues</td>
</tr>
<tr>
<td>16</td>
<td>Th</td>
<td>Regular class meeting schedule begins</td>
</tr>
<tr>
<td>17</td>
<td>F</td>
<td>Drop/Add for Term 1 ends</td>
</tr>
<tr>
<td>27</td>
<td>M</td>
<td>Memorial Day holiday. No classes are held</td>
</tr>
<tr>
<td><strong>June</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>M</td>
<td>Term 1 classes end</td>
</tr>
<tr>
<td>25</td>
<td>T</td>
<td>Reading period</td>
</tr>
<tr>
<td>26</td>
<td>W</td>
<td>Term 1 final examinations begin</td>
</tr>
<tr>
<td>27</td>
<td>Th</td>
<td>Term 1 final examinations end</td>
</tr>
<tr>
<td><strong>July</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>M</td>
<td>Term 2 classes begin</td>
</tr>
<tr>
<td>3</td>
<td>W</td>
<td>Drop/Add for Term 2 ends</td>
</tr>
<tr>
<td>4</td>
<td>Th</td>
<td>Independence Day holiday. No classes are held</td>
</tr>
<tr>
<td><strong>August</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Th</td>
<td>Term 2 classes end</td>
</tr>
<tr>
<td>9</td>
<td>F</td>
<td>Reading period (until 7:00 PM). 7:00 PM. Term 2 final examinations begin</td>
</tr>
<tr>
<td>11</td>
<td>Su</td>
<td>10:00 PM. Term 2 final examinations end</td>
</tr>
</tbody>
</table>

## Fall 2019

<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>August</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>W</td>
<td>MEMP and MEng I-Week orientation for international students begins</td>
</tr>
<tr>
<td>19</td>
<td>M</td>
<td>MEMP and MEng new graduate student orientation begins</td>
</tr>
<tr>
<td>21</td>
<td>W</td>
<td>4:00 PM. Convocation for new graduate and professional school students</td>
</tr>
<tr>
<td>26</td>
<td>M</td>
<td>8:30 AM. Fall semester classes begin. Drop/Add continues</td>
</tr>
<tr>
<td><strong>September</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>M</td>
<td>Labor Day. Classes in session</td>
</tr>
<tr>
<td>6</td>
<td>F</td>
<td>Drop/Add ends</td>
</tr>
<tr>
<td>26/27</td>
<td>Th/F</td>
<td>5:30 PM. Founders’ Day Convocation</td>
</tr>
<tr>
<td>29</td>
<td>Su</td>
<td>Founders’ Day</td>
</tr>
<tr>
<td><strong>October</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>F</td>
<td>7:30 PM. Fall break begins</td>
</tr>
<tr>
<td>9</td>
<td>W</td>
<td>8:30 AM. Classes resume</td>
</tr>
<tr>
<td>21</td>
<td>M</td>
<td>Bookbagging begins for Spring 2020</td>
</tr>
<tr>
<td>30</td>
<td>W</td>
<td>Registration begins for Spring 2020</td>
</tr>
<tr>
<td><strong>November</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>M</td>
<td>Registration ends for Spring 2020</td>
</tr>
<tr>
<td>12</td>
<td>T</td>
<td>Drop/Add begins for Spring 2020</td>
</tr>
<tr>
<td>26</td>
<td>T</td>
<td>10:30 PM. Thanksgiving recess begins. Graduate classes end</td>
</tr>
<tr>
<td>27-Dec. 10</td>
<td>W-T</td>
<td>Graduate reading period</td>
</tr>
<tr>
<td><strong>December</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>M</td>
<td>8:30 AM. Classes resume</td>
</tr>
<tr>
<td>11</td>
<td>W</td>
<td>9:00 AM. Final examinations begin</td>
</tr>
<tr>
<td>16</td>
<td>M</td>
<td>10:00 PM. Final examinations end</td>
</tr>
</tbody>
</table>
# 2019-2020 Academic Calendar

## Spring 2020

<table>
<thead>
<tr>
<th>January</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>W</td>
<td>8:30 AM. Spring semester begins. The Monday class meeting schedule is in effect on this day; regular class meeting schedule begins on Thursday, January 9; classes meeting in a W/F meeting pattern begin January 10. Drop/Add continues</td>
</tr>
<tr>
<td>9</td>
<td>Th</td>
<td>Regular class meeting schedule begins</td>
</tr>
<tr>
<td>20</td>
<td>M</td>
<td>Martin Luther King, Jr. Day holiday. Classes are rescheduled on Wednesday, January 8</td>
</tr>
<tr>
<td>22</td>
<td>W</td>
<td>Drop/Add ends</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>February</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>M</td>
<td>Registration begins for Summer 2020</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>March</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>F</td>
<td>7:00 PM. Spring recess begins</td>
</tr>
<tr>
<td>16</td>
<td>W</td>
<td>8:30 AM. Classes resume</td>
</tr>
<tr>
<td>23</td>
<td>M</td>
<td>Bookbagging begins for Fall 2020</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>April</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>W</td>
<td>Registration begins for Fall 2020; Summer 2020 registration continues</td>
</tr>
<tr>
<td>9</td>
<td>Th</td>
<td>Registration ends for Fall 2020; Summer 2020 registration continues</td>
</tr>
<tr>
<td>10</td>
<td>F</td>
<td>Drop/Add begins for Fall 2020</td>
</tr>
<tr>
<td>15</td>
<td>W</td>
<td>Graduate classes end</td>
</tr>
<tr>
<td>16-26</td>
<td>Th-Su</td>
<td>Graduate reading period</td>
</tr>
<tr>
<td>27</td>
<td>M</td>
<td>9:00 AM. Final examinations begin</td>
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<table>
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<tr>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Sa</td>
<td>10:00 PM. Final examinations end</td>
</tr>
<tr>
<td>8</td>
<td>F</td>
<td>d-MEMP Hooding Ceremony</td>
</tr>
<tr>
<td>9</td>
<td>Sa</td>
<td>MEng Hooding Ceremonies; MEMP Hooding Ceremony</td>
</tr>
<tr>
<td>10</td>
<td>Su</td>
<td>Graduation exercises; conferring of degrees</td>
</tr>
</tbody>
</table>

## Summer 2020

<table>
<thead>
<tr>
<th>February</th>
<th></th>
<th></th>
</tr>
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<tbody>
<tr>
<td>17</td>
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<td>Registration begins for all summer sessions</td>
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<td>Memorial Day holiday. No classes are held</td>
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<tbody>
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<td>22</td>
<td>M</td>
<td>Term 1 classes end</td>
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<tr>
<td>23</td>
<td>T</td>
<td>Reading period</td>
</tr>
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<td>24</td>
<td>W</td>
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<td>Th</td>
<td>Term 1 final examinations end</td>
</tr>
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<td>29</td>
<td>M</td>
<td>Term 2 classes begin</td>
</tr>
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<table>
<thead>
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<th>July</th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>W</td>
<td>Drop/Add for Term 2 ends</td>
</tr>
<tr>
<td>4</td>
<td>Sa</td>
<td>Independence Day holiday</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>August</th>
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<th></th>
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</thead>
<tbody>
<tr>
<td>6</td>
<td>Th</td>
<td>Term 2 classes end</td>
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<td>F</td>
<td>Reading period (until 7:00 PM). 7:00 PM. Term 2 final examinations begin</td>
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<tr>
<td>9</td>
<td>Su</td>
<td>10:00 PM. Term 2 final examinations end</td>
</tr>
</tbody>
</table>
Administration
General Administration

Vincent Price, PhD, President
Sally Kornbluth, PhD, Provost
Tallman Trask III, MBA, PhD, Executive Vice President
A. Eugene Washington, MD, Chancellor for Health Affairs and the President and Chief Executive Officer of the Duke University Health System
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Kyle Cavanaugh, MBA, Vice President for Administration
Tracy Futhey, MS, Vice President, Information Technology and Chief Information Officer
Kimberly Hewitt, JD, Vice President, Office for Institutional Equity
David L. Kennedy, Vice President, Alumni Affairs and Development
Mary Pat McMahon, MS, Vice Provost/Vice President for Campus Life
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Christopher Plowe, MD, Director of Duke Global Health Institute
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Timothy Walsh, MBA, Vice President for Finance
Kevin M. White, PhD, Vice President and Director of Athletics
Stelfanie Williams, PhD, Vice President, Durham and Regional Affairs
Karen L. Abrams, JD, Dean, School of Law
Valerie S. Ashby, PhD, Dean of Trinity College of Arts & Sciences
Ravi V. Bellamkonda, PhD, Dean, Pratt School of Engineering
William Boulding, PhD, Dean, Fuqua School of Business
Marion E. Broome, PhD, RN, FAAN, Dean, School of Nursing
L. Gregory Jones, PhD, Dean, Divinity School
Judith Kelley, MPP, PhD, Dean, Sanford School of Public Policy
Mary E. Klotman, MD, Dean, School of Medicine
Paula B. McClain, PhD, Dean, Graduate School
Todd Steelman, PhD, Dean, Nicholas School of the Environment
Edward J. Balleisen, PhD, Vice Provost for Interdisciplinary Studies
Abbas Benmamoun, PhD, Vice Provost for Faculty Advancement
Gary G. Bennett, PhD, Vice Provost for Undergraduate Education
Lawrence Carin, PhD, Vice Provost for Research
Jennifer Francis, PhD, Executive Vice Provost
Deborah Jakubs, PhD, Vice Provost for Library Affairs
Scott Lindroth, PhD, Vice Provost for the Arts
Luke A. Powery, ThD, Dean of Duke Chapel
Neal F. Triplett, MBA, President and CEO, Duke University Management Corporation

Pratt Administration

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George Truskey, PhD, Senior Associate Dean
Nan Jokerst, PhD, Associate Dean for Strategic Initiatives
Linda Franzoni, PhD, Associate Dean for Undergraduate Education
Bradley A. Fox, PhD, Associate Dean for Master’s Programs
Jennifer L. West, PhD, Associate Dean for PhD Education
Ken Gall, PhD, Associate Dean for Entrepreneurship
Ashutosh Chilkoti, PhD, Chair, Department of Biomedical Engineering
Mark Wiesner, PhD, Chair, Department of Civil and Environmental Engineering
Krishnendu Chakrabarty, PhD, Chair, Department of Electrical and Computer Engineering
Catherine Brinson, PhD, Chair, Department of Mechanical Engineering and Materials Science

Pratt School of Engineering Faculty

Bridget Fletcher, Adjunct Assistant Professor, Pratt School of Engineering
Deb Wojcik, PhD, Adjunct Assistant Professor, Pratt School of Engineering

Engineering Master’s Program Staff

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Kelsey Liddle, Student Records Coordinator

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Paige Anderson, Associate Director, Admissions and Recruiting
Susan Brown, Assistant Director, Admissions and Recruiting
JD Hastings, Admissions Officer, Admissions and Recruiting
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Jeffrey T. Glass, PhD, Professor, Electrical and Computer Engineering, and Hogg Family Director, Engineering Management & Entrepreneurship
La Tondra Murray, PhD, Director, Online and Distance Education

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Carolyn Gilbert, Assistant Director of Student Services

MEMP Faculty
Kathie Amato, MBA, Adjunct Associate Professor and Senior Lecturing Fellow, Duke Innovation & Entrepreneurship Initiative
Bobby L. Compton, Adjunct Associate Professor, Pratt School of Engineering
Steven DelGrosso, Adjunct Associate Professor, Pratt School of Engineering
Daniel Egger, Executive in Residence and Director, Center for Quantitative Modeling, Pratt School of Engineering
Tammi Kay George, Adjunct Associate Professor, Pratt School of Engineering
Guerry L. Grune, PhD, Adjunct Associate Professor, Pratt School of Engineering
Dean Hering, Adjunct Associate Professor, Pratt School of Engineering
Joseph S. Holmes, MBA, Adjunct Associate Professor, Pratt School of Engineering
Gregory S. Hopper, Adjunct Associate Professor, Pratt School of Engineering
Edward Marshall, PhD, Adjunct Professor, Fuqua School of Business
Pranab Majumder, PhD, Associate Professor of the Practice, Fuqua School of Business
Luis Morales, Executive in Residence, Pratt School of Engineering
La Tondra Murray, PhD, Director, Online and Distance Education, Pratt School of Engineering
Tony O’Driscoll, EdD, Lecturing Fellow, Fuqua School of Business
Dina Requena, PhD, Adjunct Associate Professor, Pratt School of Engineering
Theodore G. Ryan, PhD, Adjunct Professor (primary appt: Management and Organizations), Fuqua School of Business
Sanyin Siang, Adjunct Assistant Professor, Pratt School of Engineering
Charles J. Skender, MBA, Instructor (primary appt: Accounting), Fuqua School of Business
Ric Telford, Executive in Residence, Pratt School of Engineering
Greg Twiss, Adjunct Associate Professor, Pratt School of Engineering
Jake Vestal, Adjunct Assistant Professor, Pratt School of Engineering
Jeff Ward, JD, Adjunct Associate Professor, Duke Law
Seth A. Watkins, JD, Adjunct Assistant Professor, Duke Law
Kevin M. Wright, MBA, Adjunct Associate Professor, Pratt School of Engineering

MENG Faculty
Directors of Master’s Studies
Fan Yuan, PhD, Professor, Biomedical Engineering
Mark Borsuk, PhD, Associate Professor, Civil Engineering
Andrew Hilton, PhD, Professor of the Practice, Electrical and Computer Engineering
Adrienne Stiff-Roberts, PhD, Professor, Electrical and Computer Engineering
Chuan-Hua Chen, PhD, Associate Professor, Mechanical Engineering and Materials Science
Adam Wax, PhD, Professor, Photonics and Optical Sciences

Master’s Coordinators
Beverly Gedvillas, Biomedical Engineering and Photonics and Optical Sciences
Karen Heine, Civil and Environmental Engineering
Tony Strimple, Electrical and Computer Engineering
Stacey Traister, Mechanical Engineering and Materials Science
Biomedical Engineering Faculty
Barr, Roger, Professor
Bellamkonda, Ravi V., Professor and Vinik Dean of the Pratt School of Engineering
Bucholz, Elizabeth, Assistant Professor of the Practice
Bursac, Nenad, Professor
Chilkoti, Ashutosh, Professor and Chair
Collier, Joel, Associate Professor
Dunn, Jessilyn, Assistant Professor
Farsiu, Sina, Associate Professor
Gersbach, Charles, Associate Professor
Gong, Yiyank, Assistant Professor
Grill, Warren, Professor
Henriquez, Craig, Professor
Hoffman, Brent, Assistant Professor
Horstmeyer, Roarke, Assistant Professor
Izatt, Joseph, Professor
Katz, David, Professor
Lynch, Michael, Assistant Professor
Malkin, Robert, Professor of the Practice
Musah, Samira, Assistant Professor
Myers, Barry, Professor
Neu, Wanda, Professor
Nightingale, Kathryn, Professor
Palmeri, Mark, Associate Professor of the Practice
Ramanujam, Nimmi, Professor
Randles, Amanda, Assistant Professor
Richardson, Eric, Associate Professor of the Practice
Saterbak, Ann, Professor of the Practice
Segura, Tatiana, Professor
Shen, Xiling, Associate Professor
Sommer, Marc, Associate Professor
Tadoss, Michael, Assistant Professor
Trahey, Gregg, Professor
Truskey, George, Professor
Varghese, Shyni, Professor
Viventi, Jonathan, Assistant Professor
Vo-Dinh, Tuan, Professor
von Ramm, Olaf, Professor
Wax, Adam, Professor
West, Jennifer, Professor
Wolf, Patrick, Associate Professor
Yao, Junjie, Assistant Professor
You, Lingchong, Associate Professor
Yuan, Fan, Professor

Civil and Environmental Engineering Faculty
Barros, Ana, Professor
Bergin, Michael, Professor
Boadu, Fred, Associate Professor
Borsuk, Mark, Associate Professor
Bragg, Andrew, Assistant Professor
Carlson, David, Assistant Professor
Chaney, Nathaniel, Assistant Professor
Deshusses, Marc, Professor
Ferguson, Lee, Associate Professor
Gavin, Henri, Professor
Guilleminot, Johann, Assistant Professor
Gunsch, Claudia, Associate Professor
Hsu-Kim, Heileen, Professor
Hueckel, Tomasz, Professor
Kabala, Zbigniew, Associate Professor
Nadeau, Joseph, Professor of the Practice
Petroski, Henry, Professor
Schaad, David, Professor of the Practice
Scovazzi, Guglielmo, Professor
Veveakis, Manolis, Assistant Professor
Wiesner, Mark, Professor and Chair

**Electrical and Computer Engineering Faculty**
Bletsch, Tyler, Assistant Professor of the Practice
Board, John, Associate Professor
Brady, David, Professor
Brooke, Martin, Associate Professor
Brown, April, Professor
Brown, Kenneth, Associate Professor
Calderbank, Robert, Professor
Carin, Larry, Professor
Chakrabarty, Krishnendu, Professor and Chair
Chen, Yiran, Professor
Collins, Leslie M., Professor
Cummer, Steven, Professor
Cummings, Missy, Professor
Daily, Shaundra, Associate Professor of the Practice
Fair, Richard, Professor
Franklin, Aaron, Associate Professor
Glass, Jeffrey, Professor
Gehm, Michael, Associate Professor
Gong, Neil, Assistant Professor
Gorolatova, Maria, Assistant Professor
Gustafson, Michael, Associate Professor of the Practice
Hilton, Andrew, Associate Professor of the Practice
Huettel, Lisa, Professor of the Practice
Joines, William, Professor
Jokerst, Nan Marie, Professor
Kim, Jungsang, Professor
Krolik, Jeffrey, Professor
Lee, Ben, Associate Professor
Li, Hai, Associate Professor
Li, Xin, Professor
Lipp, Genevieve, Assistant Professor of the Practice
Litchinitser, Natasha, Professor
Liu, Qing, Professor
Marvian, Iman, Assistant Professor
Massoud, Hisham, Professor
Mikkelsen, Maiken, Associate Professor
Nolte, Loren, Professor
Nowacek, Douglas, Associate Professor
Padilla, Willie, Professor
Pajic, Miroslav, Assistant Professor
Pfister, Henry, Professor
Reeves, Galen, Assistant Professor
Rudin, Cynthia Diane, Associate Professor
Sapiro, Guillermo, Professor
Smith, David, Professor
Sorin, Daniel, Professor
Stiff-Roberts, Adrienne, Professor
Tarokh, Vahid, Professor
Tantum, Stacy, Associate Professor of the Practice
Trivedi, Kishor, Professor
Younes, Rabih, Assistant Professor of the Practice

**Mechanical Engineering and Materials Science Faculty**
Aquino, Wilkins, Professor
Arya, Gaurav, Associate Professor
Bejan, Adrian, Professor
Bliss, Donald, Associate Professor
Blum, Volker, Associate Professor
Bridgeman, Leila, Assistant Professor
Brinson, Catherine, Professor
Chen, Chuan-Hua, Associate Professor
Cocks, F. Hadley, Professor
History of Duke University

Duke University traces its roots to 1838 in nearby Randolph County, where local Methodist and Quaker communities joined forces to support a permanent school that they named Union Institute. After a brief period as Normal College (1851-59), the school changed its name to Trinity College in 1859 and became a liberal arts college affiliated with the Methodist Church. The college moved to the growing city of Durham in 1892 when Washington Duke provided financial assistance and another local businessman, Julian S. Carr, donated land. In December 1924, the trustees graciously accepted the provisions of James B. Duke’s indenture creating the family philanthropic foundation, The Duke Endowment, which provided for the expansion of Trinity College into Duke University.

As a result of the Duke gift, Trinity underwent both academic and physical expansion. The original Durham campus became known as East Campus when it was rebuilt in stately Georgian architecture. West Campus, Gothic in style and dominated by the soaring tower of the Duke Chapel, opened in 1930.

In 1972, the men’s and women’s colleges merged into the Trinity College of Arts & Sciences. Academic expansion of the university throughout its history has also included the establishment of graduate and professional schools. Duke now is composed of ten schools, including The Graduate School, Duke Divinity School, the School of Medicine, the School of Nursing, the School of Law, the Pratt School of Engineering, The Fuqua School of Business, the Nicholas School of the Environment, and the Sanford School of Public Policy, along with international outposts, including one in Kunshan, China.

Today, Duke embraces a diverse community of learners, including approximately 7,000 undergraduates and 8,900 graduate and professional students from a multiplicity of backgrounds.

The university has a strong commitment to applying knowledge in service to society, both near its North Carolina campus and around the world. Younger than most other prestigious US research universities, Duke University consistently ranks among the very best. Duke’s graduate and professional schools are among the leaders in their fields. More than 75 percent of Duke students pursue service-learning opportunities in Durham and around the world through the Duke Durham Neighborhood Partnership, DukeEngage, the Community Service Center and other programs that advance the university’s mission of “knowledge in service to society.”

For more historical information, visit https://library.duke.edu/rubenstein/uarchives.

History of the Pratt School of Engineering

Duke’s Pratt School of Engineering is a vibrant teaching and research institution focused on education and exploring the frontiers of engineering in a hands-on, cross-disciplinary learning environment. A Duke engineering education is built on a foundation of partnership and shared commitment between students and faculty. Pratt students become successful leaders, and compete with the very best students in the world for prestigious scholarships and fellowships.

The mission of the Pratt School of Engineering is to provide a rigorous engineering education for students, enabling them to lead productive, rewarding, and ethical lives for the betterment of society. It is Pratt’s vision that engineering students and faculty will be catalysts for generating and integrating knowledge across the disciplines required to address complex issues facing a global society.

The school offers bachelor, master of science, and doctoral degrees majoring in biomedical engineering, civil and environmental engineering, electrical and computer engineering, mechanical engineering, and materials science. The school also offers a professional master of engineering management degree and a suite of master of engineering degrees for students who want to pursue applied engineering roles in industry.

The Pratt School of Engineering and Trinity College of Arts & Sciences are the undergraduate schools of Duke University. The Pratt School of Engineering is also one of Duke’s nine graduate and professional schools and has extensive collaboration with the School of Medicine, the Sanford School of Public Policy, Nicholas School of the Environment, School of Law, The Fuqua School of Business and The Graduate School.

The Pratt School of Engineering is located near North Carolina’s famed Research Triangle Park, named for the Triangle formed by Duke University in Durham, The University of North Carolina at Chapel Hill, and North Carolina State University in Raleigh. The 7,000-acre Research Triangle Park, recognized internationally as a center for cutting-edge research and development, is home to more than 200 organizations and more than 100,000 employees.

The Mission of the Pratt School of Engineering

The mission of Duke’s Pratt School of Engineering is to provide a rigorous engineering education for both undergraduate and graduate students, enabling them to lead productive, rewarding, and ethical lives for the betterment of society.
Athletic Programs

In addition to unrestricted access to all university athletic and recreational facilities, MEMP and MEng students enjoy other benefits from Duke’s commitment to college athletics. The university is a member of the Atlantic Coast Conference of the National Collegiate Athletic Association, and offers intercollegiate competition in a variety of sports. Admission to all intercollegiate athletic events except men’s basketball is free to graduate and professional students using their university ID cards. Season tickets to men’s basketball games are subject to a campout and lottery system operated by the Graduate and Professional Student Council. The university supports a strong intramural program in which the MEM and MEng Programs participates enthusiastically.

Campus Security

The Duke University Police Department provides comprehensive law enforcement and security services to all components of Duke University. Under the federal Campus Security Act (20 USC 1092f), prospective students may obtain a copy of the university’s annual security report by visiting the Duke University Police Department at 502 Oregon Street, Durham, NC, or by calling (919) 684-2444. They can also visit the Duke Police Department website at https://police.duke.edu/news-stats/clery. This report includes campus crime statistics and the university’s safety and security policies. For emergencies, dial 911. For nonemergencies, dial (919) 684-2444. Students can also download the LiveSafe App on their iPhone or Android; visit https://emergency.duke.edu/notified/livesafe/ for more information.

Dining Services

Dining Services facilities accept points, flex, and cash for payment and are located throughout the Duke campus. More information about the specific dining units is available by visiting the Dining Services website at https://studentaffairs.duke.edu/dining or by contacting the Dining Services Administrative Office at (919) 660-3900, 416 Chapel Drive, 018 Brodhead Center, Box 90898, Duke University, Durham, NC 27708-0898.

Duke Student Email Accounts

Duke University and the MEM and MEng Programs recognize and use electronic mail as a vital medium for official communications. In the summer prior to matriculation, each entering student will receive an email from the university’s Office of Information Technology that contains the student’s NetID and password. Upon receiving this information, the student can access his/her own Duke email account at https://mail.duke.edu. The MEM and MEng Programs official communications (e.g., financial aid, field education, student life, academic programs, and bursar’s office) will be emailed only to the student’s Duke email account. Each student is accountable to this information, which is important and usually time-sensitive. Therefore, the student is responsible for regularly accessing the Duke email account while attending the MEM and MEng Programs.

Living Accommodations

Off-Campus Housing

The majority of MEMP and MEng students live in off-campus apartment complexes because of their proximity to the school and competitive rental rates. Off-campus rental properties are not inspected or approved by Duke University, nor does the university or its agents negotiate with owners for students. For assistance with off-campus housing options for graduate and professional students, contact Duke Community Housing at (877) 895-1234 or visit https://www.nearduke.com/housing.

On-Campus Housing

First-year international graduate students will be given priority to on-campus housing in the 301 Swift Avenue Apartments. To submit an application for the 301 Swift Avenue Apartments, please visit https://studentaffairs.duke.edu/hdr/graduate-professional-students/graduate-living-campus. Students with disabilities who wish to explore the possibility of reasonable accommodations in on-campus housing should contact the Office of Services for Students with Disabilities at (919) 668-1267.

Motor Vehicle Registration

Students possessing or maintaining a motor vehicle at Duke University must register it at the beginning of the academic year for purposes of parking. If a motor vehicle is acquired and maintained/parked after academic registration, it must be registered within five calendar days after operation on the campus begins. Students may register vehicles at University Parking Services (302 Science Drive, on the ground level of the Science Drive Garage) or by visiting the parking services website at https://parking.duke.edu/. This site also has information about transit services on campus. At the time of registration, the student will need the license plate number, Social Security number, local address, phone number, and year, make, and color of the motor vehicle. The fee can be paid by check, cash, or credit card. For more information call (919) 684-7275.
Resources

The following resources are available to members of the Duke community:

- Counseling and Psychological Services: (919) 660-1000. CAPS offers evaluation, consultation, counseling, and referrals for students concerned about alcohol use.
- Duke Police and Emergency Medical Service: 911 or (919) 684-2444. Professionals will respond to assess the medical needs of an individual who is incapacitated or at-risk.
- DukeReach: (919) 681-2455. If a student is concerned about a fellow student's physical or mental health or potential future actions, they should contact DukeReach by phone or email (dukereach@duke.edu).

A more extensive listing of counseling services, educational programs, and other resources can be found in The Bulletin of Duke University: The Graduate School. Information and Resources Concerning Substance Use.

International House

International House provides programming and support for international students and scholars, as well as their spouses and dependents. They can assist students in finding housing and childcare and connecting spouses and international students through such events as Global Café, and they also offer orientations in August and January for international incoming students and spouses.

For more information about International House and the services and programs they provide, please visit their website: https://studentaffairs.duke.edu/ihouse.

Student Health

The university health service provides medical care and health advice necessary to help students enjoy university life and community.

Counseling and Psychological Services

Counseling and Psychological Services (CAPS) is a component of student services that provides a coordinated, comprehensive range of counseling and developmental services to assist and promote the personal growth of Duke students. The professional staff is composed of psychologists, clinical social workers, and psychiatrists experienced in working with students of all ages. They are also available to the entire university community for consultation, educational activities in student development, and mental health issues affecting not only individual students but the campus community as a whole. CAPS maintains a policy of strict confidentiality concerning information about each student's contact with the CAPS staff. There are no charges for initial evaluation, brief counseling/psychotherapy, or self-development seminars.

Appointments may be made by calling (919) 660-1000 or coming by the offices in the Student Health Center, 305 Towerview, next to Penn Pavilion, between 8 a.m. and 5 p.m. Monday through Friday. If a student's concern needs immediate attention that should be made known to the receptionist, every effort will be made to arrange for the student to talk with a staff member at the earliest possible time.

When CAPS is closed, students who have a life-threatening emergency should go to the nearest emergency room for assistance. Students who have an urgent need between 8 a.m. and 5 p.m. should contact the Dean on call at (919) 970-4169. Students who have an urgent need after 5 p.m. should call (984) 974-6303 and let the Health-link staff member know that they were referred by Duke-CAPS.

Sexual Assault Support Services

Located in the Crowell Building underneath the Duke Coffeehouse on East Campus, the Duke Women's Center offers advocacy, support, information resources in the university, and a crisis information and referral line (919) 684-3897 for victims of sexual assault and past sexual violence. The office offers support groups for survivors and their friends or partners, as well as ongoing educational programs to alert students to problems of interpersonal violence. For more information, call the Duke Women's Center at (919) 684-3897 during regular business hours or (919) 970-2108 after hours, weekends, or on holidays. If it is an emergency, call 911 or Duke Police at (919) 684-2444.

Student Health Center

The Student Health Center provides primary and on-site urgent care. It is located inside the Student Wellness Center at 305 Towerview, next to Penn Pavilion in Campus Center. Emergency transportation, if required, can be obtained from the Duke campus police. The facilities of the university health service clinic are available during both regular and summer sessions to all currently enrolled full-time and part-time degree students. The facilities of the university infirmary are available during the regular sessions, from the opening of the university in the fall until graduation day in the spring, to all currently enrolled full-time and part-time degree students. All currently enrolled full-time and part-time degree candidates are assessed a mandatory student health fee each semester. In the 2019-2020 academic year, the estimated fee is $417 per semester. Nondegree students are not assessed the fee. For more information on the student health fee, visit https://studentaffairs.duke.edu/studenthealth.

Student Insurance

Student insurance provides coverage for most specialists, emergency room, off-site urgent care, and major medical expenses. The university makes available both a single student health insurance plan and a family plan. For the 2019-2020 insurance rates, visit https://studentaffairs.duke.edu/studenthealth/health-insurance (all fees and rates are subject to change). Each full- or part-time degree student must purchase this student insurance or complete the waiver statement indicating that he/she is covered by other generally comparable insurance. The family insurance plan also covers primary health care for the family at Duke health care facilities at 80 percent of the usual, customary, and reasonable allowance after the deductible has been satisfied.
Students graduating in December will have the option to only pay for insurance until December. Students do not have to make this change; however, students who do wish to discontinue student insurance for the spring semester must notify Student Affairs by emailing insurance@studentaffairs.duke.edu with the following information:

- First and last name
- Student ID #
- That the student is graduating and would like to change to paying for health insurance for just the fall semester.

This request must be made by 5 p.m. on the last day of open enrollment, which is typically January 31. For more information, please visit Student Health at https://studentaffairs.duke.edu/studenthealth/health-insurance.

### Student Services

#### MEM Program Development Committee

MEM Program Development Committee members work with the program's leaders to plan student activities, coordinate student recruitment events, and enhance industry relations. Typical social activities have included International Foods Night, Community Service Days, Basketball Campout, Graduate School Mixer, Movie Nights, and Sport Competitions.

#### Career Services

The Duke Engineering Master’s Career Services team and the Duke Career Center offer a wide range of outstanding career support to all engineering master’s students. The aim of Career Services is to help students realize their professional goals while transitioning from Duke into the workplace. Services offered to students include career advising, career fair preparation, company visits in the Research Triangle Park, and employer visits. For more information on provided opportunities, please visit Career Services at https://pratt.duke.edu/grad/students/masters-career-services.

#### Graduate Communications Center

The Duke Engineering Graduate Communications Center (GCC) is a comprehensive communications and intercultural resource and support center for all engineering graduate students. Serving international and domestic students, the GCC offers individual and small-group coaching by appointment. The GCC also organizes workshops and semester-long courses. To make an appointment with a consultant or learn about other services, please visit the GCC at https://pratt.duke.edu/grad/students/gcc#get-started.

#### Graduate Student Groups

There are many ways to get involved, make a difference, and connect with fellow students at the Pratt School of Engineering. Pratt has many different student groups that exist within departments, as well as the Engineering Student Council, which spans across all departments, and the Graduate and Professional Student Council, which connects and advocates for all of Duke's graduate and professional students. Students who are interested in joining one of these programs should visit https://pratt.duke.edu/grad/students/groups.
Master of Engineering Management Program
The Pratt School of Engineering at Duke University offers an interdisciplinary master of engineering management (MEM) degree in cooperation with The Fuqua School of Business and the Duke University School of Law. Designed to develop engineering leaders of consequence for technology-based organizations, the degree provides a personalized, applied engineering management curriculum to a select group of high-potential students with science and engineering backgrounds. Duke's MEM Program was launched in 1997 out of recognition that society needs engineers with business skills. This is consistent with current interest to develop "T-shaped" individuals with focused expertise in a technical area of interest (the stem of the T) and breadth of workplace skills, such as business acumen and leadership (the top of the T). To address complex societal grand challenges, it is imperative that engineers have the interdisciplinary perspective to understand not only technological challenges, but also the environmental, societal, and fiscal implications of engineering design decisions.

In addition to the campus program, Duke offers a distributed education program for working professionals, known as d-MEMP. This program combines three weeklong residencies with semester-based distance coursework that allows students to work and attend school simultaneously. The distance courses are accessible via the web and allow a student to participate synchronously or asynchronously according to their needs and schedule. In addition to the course content, these integrated courses allow students to learn effective skills for working productively with others from a distance.

In summary, Duke's interdisciplinary Master of Engineering Management Program produces leaders of consequence—graduates with "T-shaped" skill sets encompassing a solid business foundation and focused technical expertise. Perhaps more importantly, they have developed the ability to think critically and creatively, enabling them to use that expertise to make a profound impact on society.

Admissions Policies and Practices

Applications are accepted for the campus and distance programs for both the fall and spring semesters. Admission to the MEM Program requires the following:

- a bachelor’s degree in engineering or science from an accredited institution (transcripts required, including an estimated GPA)*;
- statement of purpose*;
- résumé*;
- three recommendations*;
- Graduate Record Exam (GRE) results or equivalent;
- Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS) exam results (international applicants only); and
- a nonrefundable application fee of $75 US, to be paid via credit card* or via check made out to Duke University; and
- an interview.

For more information on the application requirements, see [https://memp.pratt.duke.edu/apply/requirements](https://memp.pratt.duke.edu/apply/requirements).

*Items that can be submitted online using the online application. For more information on the online application, see [https://memp.pratt.duke.edu/apply/online](https://memp.pratt.duke.edu/apply/online).

International Applicants

Unlike many schools, Duke does not require financial support documents as part of the application; instead, students submit this information after they have been admitted and are enrolled in the program. Duke does not automatically issue I-20s to students upon admission. Instead, students work with the department to submit information and supporting documents to Duke's Visa Services Office. Upon accepting the offer of admission, a student will receive an email from the MEMP office with a user name and password in order to complete the online Request for Temporary Visa Form - Part II.

The process is as follows:

- The student completes the online form, prints it off, signs it, and returns it to the MEMP office, along with the appropriate supporting documents.
- Students must show liquid funds in the total amount listed in the PDF document available on the MEMP Tuition page, [https://memp.pratt.duke.edu/campus/tuition-financial-aid](https://memp.pratt.duke.edu/campus/tuition-financial-aid).
- Financial documents must be less than four months old.
- Only after the MEMP office receives everything from the student will they complete Part I of the Request for Temporary Visa Form. At that time, the student’s entire packet will be sent to Duke Visa Services for processing.
- Visa documents (I-20 or DS-2019) are usually issued within two calendar weeks from the date that Duke Visa Services receives the completed packet.
- Students should register for a visa appointment only after they receive their documents.
- Those on non-Duke visas complete a modified process during the enrollment period.

Application Deadlines

Applications are reviewed in rounds, and applicants should submit their application materials as early as possible but before the deadlines listed at [https://memp.pratt.duke.edu/apply/deadlines](https://memp.pratt.duke.edu/apply/deadlines).

An application is not considered complete until every component has been received, and an application must be complete by a round’s deadline in order to be considered for that round. Please note:

- In some cases, the MEM Program may postpone a decision to the next round.
- Admitted students may request to defer admission for up to one year.
Campus Tuition and Financial Aid Information

Tuition and Fees

Campus program tuition for the 2019-2020 academic year is $28,332 per semester taken at the university with a full load of four courses in a semester. In general, completion of the eight required program courses over two semesters would result in a total tuition cost of $56,664.

Students taking fewer than four courses in a semester may request payment per unit at $2,361 per unit. Please note that course credits earned through the internship requirement do not incur tuition charges.

Estimated Full-Time Student Expenses for the 2019-2020 Academic Year

<table>
<thead>
<tr>
<th>Expense</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuition</td>
<td>$56,664 ($28,332/semester)</td>
</tr>
<tr>
<td>Health Fee</td>
<td>$834*</td>
</tr>
<tr>
<td>Health Insurance</td>
<td>$3,900**</td>
</tr>
<tr>
<td>Graduate Student Activity Fee</td>
<td>$38’</td>
</tr>
<tr>
<td>Graduate and Professional Student Services Fee</td>
<td>$20</td>
</tr>
<tr>
<td>Transcript Fee</td>
<td>$40’</td>
</tr>
<tr>
<td>Recreation Fee</td>
<td>$316’</td>
</tr>
<tr>
<td>Room</td>
<td>$9,855’</td>
</tr>
<tr>
<td>Board</td>
<td>$3,420’</td>
</tr>
<tr>
<td>Books</td>
<td>$666’</td>
</tr>
<tr>
<td>Transportation and Miscellaneous</td>
<td>$5,427’</td>
</tr>
<tr>
<td>Total</td>
<td>$81,180</td>
</tr>
</tbody>
</table>

- The normal program duration is one year of study (two semesters).
- The normal load is four courses (12 units) per semester.
- No tuition is charged for the internship course, internship assessment course, or seminar series.
- There is no charge for registration for students in the Master of Engineering Management Program. Domestic students can estimate $664 in loan fees per term if securing student loans.

* Fees and estimates subject to confirmation each May.
** Required unless a student can show proof of comparable private insurance coverage.
Cost of Living
The cost of living—which includes room, board, and transportation, among other miscellaneous costs—is estimated for the 2019-2020 academic year. The actual cost of living depends on individual lifestyle. Cost may also differ for international students.

Tuition
Tuition is charged on a per semester basis. The tuition per semester for 2019-2020 is $28,332.

Transcript Fee
All entering students will be charged in the fall semester a one-time mandatory fee of $40 for transcripts. This fee entitles the student to an unlimited number of Duke transcripts.

Student Health Fee
All students are assessed a fee each semester for the use of the Student Health Service. The fee is estimated to be $417 per semester and is distinct from the health insurance; it does not provide major medical coverage.

Health Insurance
Students will be charged for health insurance in the fall semester, unless proof of other health insurance is provided. For 2019-2020, the Student Health Insurance is estimated to be $3,900. Information on the coverage provided by this insurance is available from the Office of the Bursar.

Graduate Student Activity Fee
All graduate students will be charged an activity fee of $19 per semester.

Graduate and Professional Student Services
All graduate students will be charged a fee of $10 per semester to support graduate student services.

Recreation Fee
All graduate students will be charged a recreation fee of $158 per semester for the use of on-campus facilities.

Audit Fees
Auditors are permitted on a space-available basis with the consent of the instructor. Students who have selected the pay-per-semester billing option may audit courses without charge. Students who have selected the pay-per-credit billing option may audit courses but will incur a $535 fee for each audited course.

Vehicle Fee
Students should contact the University Parking Services Office at (919) 684-7275 regarding parking.

Payment of Accounts
The Office of the Bursar will issue invoices to registered students for tuition, fees, and other charges approximately four to six weeks prior to the beginning of classes each semester. The total amount due on the invoice is payable by the invoice late payment date which is normally one week prior to the beginning of classes. A student is required to pay all invoices as presented and will be in default if the total amount is not paid in full by the due date. A student in default will not be allowed to receive a transcript of academic records or receive a diploma at graduation. Inquire at the bursar’s office by calling (919) 684-3531 for information on the following: monthly payment option; late payment charge; and refunds for withdrawal from school during fall and spring semesters.

Financial Aid
Because the Master of Engineering Management Program is a professional degree rather than a research degree, most students pay their own tuition costs.

Loans
US citizens and eligible noncitizens are able to borrow through the Federal Stafford Loan Program. Applicants for assistance through this program must file a Free Application for Federal Student Aid (FAFSA), which may be completed online at https://www.fafsa.ed.gov/. When completing the online form students will be asked for Duke’s Title IV Code; it is E00165.
Maximum eligibility under the Stafford Unsubsidized Loan Program is $20,500 per year with an aggregate limit of $138,500. For further information on the FAFSA and the US Department of Education’s Stafford Loan Program, please call (800) 433-3243.
Students awarded Federal loans must make satisfactory academic progress toward their degree and must be enrolled in 9 graduate-level credits per semester. Guidelines may be found at https://memp.pratt.duke.edu/sites/memp.pratt.duke.edu/files/u148/PMP_SAP_Financial_Aid.pdf.

International applicants are not eligible for federal loans; however, many international students take out loans in their home countries, and some US banks may offer loans to international students for study in the United States.

Scholarship
The MEM Program has limited financial assistance available through the following scholarships:
- scholarships for underrepresented students
- Wilkinson and Garda Scholarships for Outstanding Students
See https://memp.pratt.duke.edu/campus/campus-financial-aid for more information on scholarships.
DoD SMART Scholarship Program (US Citizens Only)

The Science, Mathematics and Research for Transformation (SMART) Scholarship for Service Program has been established by the Department of Defense (DoD) to support undergraduate and graduate students pursuing degrees in Science, Technology, Engineering and Mathematics (STEM) disciplines. The program aims to increase the number of civilian scientists and engineers working at DoD laboratories. See https://smart.asee.org/ for more information.

VA Benefits

Duke University offers information for veterans who are applying for VA benefits, including the Yellow Ribbon Program. See https://registrar.duke.edu/veterans/veterans-education-benefits for more information.

On-Campus Work

While enrolled in the program, many students work in a variety of places, such as campus libraries, the MEMP department, and various departments within Duke University. Teaching assistantships are available in various departments, and some departments have research assistantships as well. These positions are paid an hourly rate, and most students work between ten and twenty hours per week. Some positions are generally posted and filled just a week or two before classes begin each semester. See https://dukelist.duke.edu/ for more information.

MEMP Tuition Policies

Students enrolled in the MEM Program as full-time residential students will automatically be set up on a pay-per-semester billing system, meaning they will be charged the equivalent of four separate courses. Students enrolling as Distributed MEM Program (d-MEMP) students will also be set up for pay-per-semester billing; however, they will be charged the equivalent of two separate courses. Students set up on the pay-per-semester billing system may take a fifth course for free; however, students in the d-MEMP must complete four courses before they may take a free course with the pay-per-semester billing option. All students may take a maximum of two free courses throughout the program. Students enrolling as part-time will automatically be set up for payments on a per unit basis. If an enrolling student intends to take less than the typical load (four courses for full-time, two courses for d-MEMP), please contact the MEMP Business Manager to make this change. The last day for making changes to a student’s billing structure is the last day of Drop/Add in that semester.

If a student would like to alter their payment structure after the start of the program, please contact the MEMP Business Manager. Please note that students must pay at least the full tuition amount for the program. For example, a student may not take five courses in term one on a semester-based plan and then take three courses in the following term on a per-unit basis. Please see below for the bursar’s office policies and procedures.

Payment of Accounts for Fall and Spring

The bursar’s office emails and/or mails statements to registered graduate students for tuition, fees, and other charges approximately four to six weeks prior to the beginning of classes each semester. The amount due on the statement is payable by the due date listed on the statement. Student account statements are also available online. Inquiries regarding statements can be directed to the bursar’s office at bursar@duke.edu or (919) 684-3531.

As part of the admission agreement to Duke University, students are required to pay all statements as presented. If full payment is not received, a late payment penalty charge on the past due amount is charged on the subsequent statement. The past due amount is defined as the amount due from the previous statement minus payments, financial aid, loans, and other credits received prior to the due date listed on the prior statement. Failure to receive an invoice does not warrant exemption from the payment of tuition and fees nor from the penalties and restrictions. Nonregistered students will be required to make payment for tuition, fees, and other charges at the time of registration.

In addition to late payment charges, students with accounts in default may be subject to the following restrictions:

- blocked from registering for future terms
- blocked from access to copies of transcript of academic records
- not able to have academic credits certified
- not be permitted to go on leave of absence
- not eligible to receive a diploma at graduation
- subject to withdrawal from the university
- subject to having the past due student account referred to a collection agency and credit bureaus

Refunds for Withdrawal from School during Fall and Spring Semesters

In the event of death, refund of full tuition and fees for the term will be granted. In all other cases of withdrawal from the university, students may have tuition refunded according to the following schedule:

<table>
<thead>
<tr>
<th>Withdrawal Period</th>
<th>Refund Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>withdrawal before classes begin</td>
<td>100% (including fees)</td>
</tr>
<tr>
<td>withdrawal during the first or second week of classes</td>
<td>80%*</td>
</tr>
<tr>
<td>withdrawal during the third, fourth, or fifth week of classes</td>
<td>60%*</td>
</tr>
<tr>
<td>withdrawal during the sixth week of classes</td>
<td>20%*</td>
</tr>
<tr>
<td>withdrawal after the sixth week</td>
<td>No refund</td>
</tr>
</tbody>
</table>

*Fees are not refunded after the start of the term.

Tuition charges paid from grants or loans will be restored to those funds on the same pro rata basis and will not be refunded or carried forward.
d-MEMP Tuition and Residency Information

Tuition and Fees

Distance MEM Program Fees

Distance MEM Program students can find details for tuition, fees, and estimated expenses at https://memp.pratt.duke.edu/distance/tuition-financial-aid.

Payment of Accounts

Please refer to the MEM campus section “Payment of Accounts” on page 23.

Tuition Policies

Please refer to the MEM campus section “MEMP Tuition Policies” on page 24.

Residency Attendance

d-MEMP offers a unique blend of learning delivery. The program combines the flexibility of remote coursework with close interactions and support of a cohort and faculty. A key component of the success to building a community for each class is the residency program. Each d-MEMP student is required to attend three on-campus residencies throughout the duration of the degree.

Residencies allow d-MEMP cohorts to meet, interact, and bond, as well as learn valuable tools for successfully navigating the d-MEMP delivery format. Being on campus enhances communication with professors and faculty, allowing the one-on-one personal interaction necessary to forge strong ties and relationships with mentors. Through residency roundtables and workshops, students build career development skills. Finally, social activities planned for these three week-long stays provide a way to enjoy the camaraderie of classmates.

The d-MEMP residencies fulfill the Seminar and Workshop Series requirements that residential MEMP students are required to complete. Generally, students are expected to complete the residencies sequentially; however, the director of Online and Distance Education may make exceptions for students with extenuating circumstances. These cases are rare and are considered on a case-by-case basis. For students that transition between MEMP and d-MEMP, the director of Online and Distance Education may approve a blended combination of residencies and EGRMGMT 501 to fulfill this degree requirement.

Registration for residencies is performed along with course registration through DukeHub. Failure to register for and/or attend a residency may delay graduation.

Residency 1: Orientation Residency (One week prior to the start of classes in Fall Year 1)

This residency initiates the d-MEM program. Program introductions and updates are delivered, expectations are outlined, and students have the opportunity to experience the Duke community. Highlights include distance technology/tooling overviews, workshops, faculty interaction, and social activities for d-MEMP cohorts.

Residency 2: Mid-Program Residency (One week in July between Years 1 and 2)

This residency provides students an opportunity to reconnect personally with faculty and cohorts. Seminars and workshops focusing on
professional development and business simulation activities will be required to supplement the remote classroom experience. Social activities will further enhance relationship building amongst distance cohorts.

**Residency 3: Capstone Residency (One week prior to May graduation in Spring Year 2)**

The culmination of the d-MEM Program, this residency provides students the forum for final class presentations and assessments. Interactions, discussions, and feedback mark the integration of learning and application. Social activities during this residency will bring cohorts together for a final shared experience. Students participate in Duke’s graduation ceremonies alongside campus students.

**Academic Policies**

**Academic Freedom**

Freedom of inquiry and the free exchange of ideas are essential for the fulfillment of the university’s mission. Academic freedom is a right and responsibility of students as well as faculty. Students who believe that their academic freedom has been abridged should submit a written complaint to the faculty director of the MEM Program. The faculty director of the MEM Program may enlist the senior associate dean for research for the Pratt School of Engineering to provide advice. Cases not resolved by the faculty director of the MEM Program may be brought to the attention of the provost. Students may also seek advice of the student ombudsperson in resolving a complaint.

**Academic Standing and Satisfactory Academic Progress**

To maintain satisfactory academic progress (SAP), students must achieve a required minimum grade point average (GPA) of 3.0, complete two-thirds (67%) of cumulative attempted courses, and are limited to a maximum of 45.0 attempted credits. Attempted and completed courses include courses for which A-F letter grades or (C)redit/(I)ncome (NC) were assigned. Attempted but not completed courses include courses with grades of (D) drop, (I) complete or (W)ithdrawn. Courses that are not counted in the attempted calculation include courses taken for audit and courses with grades of (Z) Continuing or (N)o grade given.

The short duration of the program means that these requirements must be taken very seriously by all students immediately upon entry into the program. Students who do not make satisfactory academic progress or who receive an F in any course may be subject to academic disciplinary action. These actions may include academic probation, suspension, or dismissal. Academic probation means that the student is in danger of being suspended or dismissed from the program. It also means that the student should take immediate action to be more successful academically. A variety of actions may be required when a student is placed on academic probation, including, but not limited to, tutoring, exclusion from extracurricular activities, enrollment in specific courses, and/or limiting the number of classes taken in a semester. In addition, students must have a grade point average of B (3.0) or better to graduate.

Suspension, dismissal, and graduation are authorized by the executive director of the Master of Engineering Management Program. Any suspension, dismissal, or graduation decision made by the executive director of the Master of Engineering Management Program may be appealed within seven days to the senior associate dean for research within the Pratt School of Engineering.

**Admission Revocation**

The MEM Program reserves the right to rescind any applicant’s admission to the program if new information arises pertaining to significant academic performance issues, criminal activity, Duke Community Standard violations, or other extraordinary circumstances. In general, significant issues that justify withdrawing an offer of admission would be those that could lead to a suspension or dismissal if a student were already enrolled in the MEM Program.

Decisions to revoke admissions will be made by the MEM Program Admissions Committee, and appeals will be heard by the senior associate dean for research in the Pratt School of Engineering.

**Advising**

Each MEM student is assigned an academic advisor who is available to assist with questions regarding topics such as career direction and academic preparation for the student’s desired career. These advisors are available as a resource. An advisor will not contact a student individually to set up a meeting, but a student is welcome to contact him or her with questions or to set up a meeting. Students seeking advice should contact their advisor to discuss questions or to arrange for a meeting time. Even if an advisor’s background differs from the student’s own, he or she can be a very helpful resource.

As a graduate student, academic advising is very different from advising as an undergraduate. Students should not rely on their advisor to make their own course decisions. Students should make sure to assess their individual career interests and the knowledge required to be successful in the field, and then identify potential course options consistent with their personal career goals before meeting with their advisor. The student’s advisor can then provide advice about final course decisions.

**Audits**

Audits are permitted on a space-available basis with the consent of the instructor and the MEMP director (see Audit Permission form on Sakai). Audit Permission Forms must be turned in by the last day of the Drop/Add period set forth by the registrar’s office. Students may audit only one course per fall and spring semesters; no courses may be audited during the summer terms.

The fee for auditing a course depends on a student’s tuition payment option. Degree students registered for regular MEMP courses and who have selected the pay-by-term payment option may audit a course without being charged. Degree students registered for regular MEMP courses and who have selected the pay-by-credit payment option may audit a course but will incur an audit fee for each course audited. This policy is in effect for all students, even if a student decides to change from pay-by-term to pay-by-credit in their last semester of the program.

It is important that students understand an instructor’s expectations for auditing a course, such as completing assignments and readings, participating in class, etc. Auditing students must comply with these requests to successfully complete the audit, as it is possible to fail.
Note that degree candidates may unofficially "sit-in" on courses with just the permission of the instructor; no forms are necessary in this case. Generally, nondegree seeking candidates may not audit or sit-in on courses; however, alumni of the MEM Program and students from MEM Program Consortium Schools who wish to audit a class for personal or professional development will be considered on a case-by-case basis.

Complaints

If a student has a concern with a course or with an aspect of the program, the concern should first be addressed to the faculty or staff member most associated with the area of concern. If the faculty or staff member is not able to address the concern, the matter may be brought to the attention of one of the MEMP directors to address the situation. If a significant concern has not been addressed by one of the directors, the matter may be appealed in writing to the senior associate dean for research in the Pratt School of Engineering.

Changing a Course

MEM courses generally follow the calendar for graduate students on the university registrar’s website (https://registrar.duke.edu/calendars-key-dates/academic-calendar). This calendar applies to engineering management courses and courses under The Graduate School’s oversight. Courses taken in The Fuqua School of Business follow the Fuqua School Daytime MBA calendar, which can be found on the Fuqua Daytime MBA website (https://www.fuqua.duke.edu/programs/daytime-mba/program-format). Fuqua operates on a term basis with two terms per semester; therefore, courses are compressed into an intense six-week schedule.

The Graduate School and The Fuqua School of Business set Drop/Add dates for their respective courses and those dates are followed accordingly. If a course is dropped after the Drop/Add period, the status of the student at the time of withdrawal from the course will be indicated on their permanent record as a withdraw (W). To withdraw from a course, please fill out the Course Withdrawal Form on the MEMP Sakai site. A student seeking a course withdrawal will first meet with his or her academic dean to discuss eligibility and desirability of making a change in the student’s semester schedule. In general, students found responsible for academic cheating in a course with a consequence of a reduced grade will not be eligible to withdraw from that class. If the student is authorized to withdraw by the dean, the student will seek a signature from the course instructor. This policy provides an opportunity for the student to discuss the issues leading to the student’s request and to determine whether the student is fully informed about performance, grading, and readiness for the course. The signature also provides the mechanism by which instructors learn that the student will no longer be a member of the class. The last day to withdraw from a course without a W generally is the last day of the Drop/Add period. The last day to withdraw from a course with a W is the last day of classes for each semester.

Tuition and fees issued for course withdrawals can be found on the bursar’s website (https://finance.duke.edu/bursar) for courses taken on the semester system. For Fuqua courses on the term system, the dates listed on this site should be divided in half. Directors of the MEM Program reserve the right to evaluate extenuating circumstances and hardships on a case-by-case basis.

Section Changes for Core Courses

Because the MEM Program is a one-year program, it is imperative that students take the core courses offered each semester. Often, one or two sections of a particular core course fill up and students with conflicts between elective courses and core courses are unable to register. Students are initially encouraged to voluntarily redistribute from full sections to open sections. If a voluntary redistribution is not sufficient, students without conflicts may be randomly selected and switched to an alternate section of a core course in order to ensure that all students are able to complete their degree requirements.

Courses at Nearby Universities

Under the interinstitutional registration agreement, any MEMP student enrolled as a degree-seeking student at any of the following universities may take technical electives at the following universities:

- North Carolina Central University
- North Carolina State University
- The University of North Carolina at Chapel Hill
- The University of North Carolina at Charlotte
- The University of North Carolina at Greensboro

Permission of the MEMP director or executive director is required and students will be charged Duke University tuition rates for such courses. Distance courses may not be taken under an interinstitutional transfer agreement. More information about interinstitutional registration can be found on the university registrar’s website at https://registrar.duke.edu/interinstitutional-duke-students-visiting-other-campuses. MEMP students are not permitted to take interinstitutional or non-EGRMGMT classes during the summer.

Duke University Policies

Policies that apply to all students at Duke University may be found at https://policies.duke.edu/students/index.php. In some cases, the Master of Engineering Management Program may have supplemental policies to Duke University Policies. If the Master of Engineering Management Program policies or adjudication procedures contradict Duke University Policies, Duke University Policies and procedures take precedence.

4+1 Program for Duke Students

Advanced Duke undergraduates may participate in a 4+1 Program where both a bachelor's degree and a MEM degree may be completed in 4.5 to 5 years. In the 4+1 Program, students may typically apply up to four graduate courses (at the 500 level or above) that were taken during their undergraduate career but not used to fulfill undergraduate degree requirements toward MEM degree requirements.
To be considered for the 4+1 Program, undergraduates may apply for MEMP admission during the standard admission cycle for entrance. Students should consider the following guidelines when submitting materials:

- apply in the spring of junior year for admission in the fall semester of the student’s senior year; or
- apply in the fall of senior year for admission in the spring semester of the student’s senior year.

Admission decisions will be made and communicated to the student following the published admissions decision calendar. Matriculation will typically occur in Summer Session 1 after the spring semester of the senior year. Therefore, students will pay undergraduate tuition for the first four years of study and will pay MEMP tuition for the fifth year of study.

MEMP courses (see “Courses of Instruction” on page 39) are not typically available to undergraduates. After admission, 4+1 students work with the student records coordinator to register for EGRMGMT courses while an undergraduate. Not all graduate-level courses are available to undergraduates, and registration will only be provided for EGRMGMT courses.

Generally, for graduate courses taken as an undergraduate to be transferred and counted toward the MEM degree, the courses must meet the following conditions:

- a maximum of four courses may be transferred to the MEM degree;
- transferred courses may not have been used to fulfill any undergraduate degree requirements;
- transferred courses must fulfill MEM degree requirements; and
- a grade of B or better must have been earned in the course.

To transfer course credit, matriculated students should complete the Pratt Credit Transfer Form and obtain approval from the associate dean for undergraduate studies in the Pratt School of Engineering or the students’ academic dean in the Trinity College of Arts & Sciences and the executive director of the MEMP. Please note that the undergraduate course credits transfer to the MEM degree, but the grade earned will remain part of the student’s undergraduate GPA and will not be used to calculate a MEMP GPA.

Generally, Duke will not allow a gap greater than three months between a student’s senior year, and the transfer of credits from the student’s undergraduate program into the MEM Program will also not be allowed.

Exemption from a Core Course

A student may request an exemption from a core course if they have already taken a substantially similar course. Receiving an exemption does not decrease the number of courses that must be taken. The previously-taken course will fulfill the degree requirements for the corresponding MEMP core course, which allows the student to take one additional technical elective in its place.

In order for a course exemption to be considered, students must submit the syllabus for the previous course and the current MEMP course, the student’s transcript that includes the grade received for the previous course (should be a B or better), and the student’s assessment of why the previous course and Duke’s course are substantially similar. The exemption request should be made to the executive director who will review the submitted materials and consult with the appropriate individual(s) before making a determination. All course exemptions are made on a case-by-case basis. A course with a title similar to a MEMP core course is not sufficient justification for a course exemption.

Extra Courses/Semesters at Duke

Master of Engineering Management Program

The master of engineering management degree can be earned in one to two years. Students completing four classes per semester can complete the degree in as little as two semesters and an internship. Students completing three classes per semester can complete the degree in three semesters and an internship. Limitations on the number of additional courses/semesters are at the discretion of the Associate Dean and executive director of Professional Master’s Programs in consultation with their program committee. Full-time students who begin the program in the fall, should complete the MEM degree in no more than 22 months; full-time students who begin the program in the spring or summer, should complete the degree in no more than 24 months.

In a semester, students may elect to take a fifth course for free, as long as the student has selected the pay-per-term tuition payment option for each semester in which they enroll in a fifth course. This option will allow students to take more electives than are required to complete the program. As long as all MEMP core courses and approved technical electives are taken, students are free to choose additional electives at their discretion. Students may take a maximum of two free courses, which can be used to satisfy up to two technical electives; however, free courses do not satisfy tuition requirements. Students must pay at
least the full tuition amount for the program prior to graduating. For example, a student completing the d-MEM Program in four semesters may not take two courses in their first two semesters, three courses in their third semester on a term-based plan, and then one course in their fourth semester on a per-unit basis. In this case, the student must either select the pay-per-term option for their fourth semester or the pay-per-unit option for the remaining two credit-bearing courses. Please see the Tuition and Options Chart on Sakai for additional information.

Students are responsible for maintaining good academic standing (generally considered to be a B average), thus, should consider this when determining the number of courses to take each semester. While many students are able to manage large course loads and still make time for work and extracurricular activities, others may find it difficult to do so successfully. It is very much an individual consideration as to whether or not taking three courses in one semester is manageable. Note that the Drop/Add date is relatively early in the semester and should be kept in mind if a student decides to register for or drop out of an extra course.

**Full-Time versus Part-Time**

To be considered a full-time student, students must be registered for at least three graduate-level courses (9.0 course credits). Enrolling in less than three courses (9.0 credits) is considered part-time. International students must be enrolled full-time to maintain a valid visa with the exception of their final semester if their degree will be completed at the end of that semester. All students in their final semester must register for at least three tuition- and credit-bearing courses (this does not include EGRMGM 550 or EGRMGM 551).

**Fuqua Electives**

A few select Fuqua electives (not Fuqua Core MBA courses) are open to full-time Duke graduate students with two caveats: (1) admission is strictly on a space-available basis; and (2) permission from the instructor is required. Note that students must have the proper background or prerequisites. MEMP students cannot directly enroll online and must comply by the Fuqua registration process and deadlines. Please review the registration information provided in the MEM Academic Information folder under the MEMP Student Resources Sakai site. Distance students cannot access Fuqua classes online.

**Graduation**

It is each student’s responsibility to ensure that they have successfully completed all degree requirements for graduation, including the timely submission of the graduation application on DukeHub during the Apply for Graduation window. A list of requirements is outlined below. Graduation will be delayed if a student does not complete all requirements within the required time frame.

MEMP graduation requirements are as follows:

- Four core management courses:
  - Engineering Management 510 (Marketing)
  - Engineering Management 520 (Intellectual Property, Business Law, and Entrepreneurship)
  - Engineering Management 530 (Finance and Accounting for Technology-Based Companies)
  - Engineering Management 540 (Management in High-Tech Industries)
- Four graduate-level technical elective courses, typically 500 level and above, chosen from:
  - departments within the Pratt School of Engineering, including engineering management electives
  - courses outside of the Pratt School of Engineering with the director’s approval; and
  - courses at partnering universities through the Interinstitutional Registration Agreement, with the director’s approval.
- Internship, written project summary, and oral presentation (Engineering Management 550 and Engineering Management 551)
- Two semesters of the MEMP Seminar and Workshop Series (Engineering Management 501)
- Complete the graduation application on DukeHub during the Apply for Graduation window. Failure to apply may delay graduation and/or the receipt of the student’s diploma. (If, for any reason, a student needs to change their graduation date, they must contact the student records coordinator for approval.)

*D-MEMP students complete three residencies to fulfill the Seminar and Workshop Series requirement.

International students should ensure that their intended graduation date is consistent with their visa status (see the Duke Visa Services Office website, [https://visaservices.duke.edu/](https://visaservices.duke.edu/)).

**Immunization Requirements**

Students are required to be immunized against measles, rubella, tetanus, diphtheria and, in some cases, polio. Entering students must present proof of immunizations to Student Health Services prior to the student’s first day of class. Students not providing this information will not be permitted to attend class until proof of immunization is provided.

**Independent Studies**

Independent study courses may be pursued by identifying a specific topic and an interested faculty member who is willing to instruct an independent study course. The topic and faculty approval should be sent to the academic coordinator so they can enroll the student in the appropriate independent study course. Students may take up to two independent study courses as technical electives for their degree.

**Leave of Absence**

The MEM and d-MEM programs are designed to accommodate both part-time and full-time students. It is generally expected that continuous enrollment will be the norm for all students regardless of their status as part-time or full-time. That is, for full-time MEMP students, continuous enrollment of three or more courses per semester and for part-time students, continuous enrollment of one or more courses per semester is generally expected. For d-MEMP students, continuous enrollment of at least one course per semester is generally expected.
It is understood that circumstances and personal situations may sometimes require that students interrupt their education for some period of time. The deadline for a leave of absence is the last day of classes in a semester and is not typically granted once classes have ended and final exams have begun. All leave of absence forms (personal, medical, and academic) can be found in the MEMP Student Resources page of Sakai under Academic Services, Academic Policies and Forms.

A personal leave of absence is appropriate if a student has a personal situation to address away from school.

A medical leave of absence should be considered if, due to personal or health problems, continuing in courses is impossible for a student. A letter from the student's medical provider may be required to grant a medical leave of absence.

Except in unusual circumstances, a leave of absence of one or two years will be granted. A leave of absence greater than two years is generally not allowed. A student will need to begin the MEM Program again if a leave of absence of greater than two years has occurred. The directors of the MEM Program may make exceptions to this general rule.

After a leave of absence, students must reapply and admission is not guaranteed. Students must complete the application and include an explanation of the circumstances surrounding the withdrawal, along with a statement describing the withdrawal and their reflections during their time away from Duke.

Foreign national students who wish to work in the United States after graduating need to understand the laws and policies regarding a leave of absence and the requirements upon readmission. Returning from a leave of absence greater than five months will require the student to reapply for their F-1 visa prior to entering the United States and returning to the program at Duke University. Additionally, work authorization laws set forth by the United States Department of Homeland Security require foreign national students to have maintained active status in their program of study for at least one academic year, two consecutive semesters not including the summer term, to be eligible for either Curricular Practical Training or Optional Practical Training. Therefore, foreign national students returning from a leave of absence must complete two consecutive semesters of course work, regardless of how many credits they have completed toward the master of engineering management degree.

Nondegree Option

Students who do not intend to obtain a MEM degree but are interested in some of the MEMP courses may take MEMP courses (i.e., courses designated as engineering management (EGRMGMT)) as a nondegree student. The application for admission as a nondegree student is distinct from application as a MEM degree student. Thus, if a student decides to become a part-time or full-time MEM degree student, a separate application and processing fee are required. A maximum of four courses taken as a nondegree student may be applied to the MEM degree program if the student is admitted. Note that tuition for these courses is paid separately from any other programs in which a student is currently enrolled. A nondegree student may be withdrawn from the active status if he/she has not taken a course for a period of three consecutive academic years. If withdrawn, the student will need to reapply to the program in order to take classes.

Non-MEMP Student Registration

Graduate and professional students who are not enrolled in the MEM Program may register for some MEMP courses (i.e., courses designated with engineering management course numbers) on a space-available basis and with permission of the instructor. Instructors will require students to have sufficient background for the course as needed and may also limit outside enrollment for any pedagogical reason. For example, some courses require very close teamwork and thus may be hindered by allowing students outside of the MEM Program to enroll in the course. Generally no more than five non-MEMP students will be allowed to enroll in a course at any given time. Students who enroll in MEMP courses as non-MEMP students may not utilize these courses for an MEM degree. Generally the MEMP core courses are not available to non-MEMP students. The core courses for the MEM Program are as follows:

- Engineering Management 510 (Marketing)
- Engineering Management 520 (Intellectual Property, Business Law, and Entrepreneurship)
- Engineering Management 530 (Finance in High-Tech Industries)
- Engineering Management 540 (Management of High-Tech Industries)

For non-MEMP students enrolling in MEMP courses, no additional fees beyond their degree program fees will be charged by the MEM Program. To enroll into a MEMP course, the student must fill out a Course Registration Permission Form found on the Academic Forms page of the MEMP Student Resources Sakai site or at https://memp.pratt.duke.edu/campus/degrees/other-duke-students.

Regrading an Assignment, Exam, or a Course

Grading is up to the individual faculty member in each course; however, there are some general comments that apply to most courses. Most of the questions received after grading an exam or the entire course are very reasonable and well thought out. However, some indicate that it is necessary to reiterate the philosophy on grades:

- The only reason for a grade to change is if the faculty member made a mistake. This means that students must persuade the faculty member that a mistake has been made.
- This type of persuasion does not generally start with "I want..." or "I need..." or even "the company I work for requires..."
- As students in a management program, the student must take into account the manager’s (i.e., faculty member’s) perspective of fairness for the entire class. Please do not ask a faculty member to do something that is not fair for the entire class if the student were in the faculty position.

If a student believes a mistake was made on his/her exams or final course grade, he/she is encouraged to speak to the professor. The addition of points, transcription of points from the assignments to the grade book, etc. are all possible sources of error. Answering questions from a particular reading or resource that the instructor did not have in mind when the question was written may also be a source of grading error. A clear and logical argument for such mistakes should be easy to make. If a student is simply struggling to improve his/her grade, then it is likely he/she should not be requesting the regrading. If a student has evidence that a mistake was made in their grading and the instructor of the course does not consider this evidence the student should discuss the situation with one of the MEMP directors.

Additionally, if a student is interviewing with companies that have a threshold of some minimum GPA and he or she is struggling to meet that minimum threshold, then perhaps the student is interviewing with the wrong companies. Generally, these same companies will
ignore GPA in three years if the student can convey a record of accomplishments. If a student is on the borderline of GPA acceptability, then the directors urge students to consider changing their strategy of either which companies they would like to work for or how and when they plan to work for them.

In those exceptional cases where a problem remains unresolved through discussions with the professor or one of the MEMP directors, an appeal may be made to the senior associate dean for research for the Pratt School of Engineering. Any appeal must be made in writing and must include a description of the error that was made in assigning a grade.

Seminars and Workshops

Students will attend professional development seminars and workshops through EGRMGMT 501. Course policies are outlined in the course syllabus, which is provided to students on the course’s Sakai platform. Failing to follow course guidelines may result in unfulfilled requirements for the MEM Program and thus can prevent a student from receiving their degree. All students must complete two semesters of the seminar workshop course before graduating with their MEM degree.

Part-time students must enroll in two semesters of the seminar course and attend the equivalent of two semesters of seminars and workshops during their enrollment in the program. Part-time students must consult with the EGRMGMT 501 instructor before the semester’s Drop/Add period ends to discuss their involvement in the course.

This policy applies to MEMP-sponsored weekly seminars and required workshops listed on the seminar course’s Sakai site. From time to time, the program may notify students of other seminars offered by other departments or optional seminars and workshops sponsored by the MEM Program. Attendance is encouraged at these seminars but is not required.

Summer School

The MEM Program only offers EGRMGMT 550 and 551 during the summer because that is when campus students complete their internship requirement. Typically, students take EGRMGMT 550 in the summer and EGRMGMT 551 in the fall immediately following the internship. Students planning to graduate in September should enroll in both EGRMGMT 550 and 551 in the summer. MEM students cannot take summer classes outside of the MEM Program to count towards their degree but may take courses for their own personal development. Foreign national students who are working on their internship in the United States during the summer will need to apply for Curricular Practical Training (CPT) and must enroll in EGRMGMT 550 over the summer. For more information about CPT, please visit the Duke Visa Services website, [https://visaservices.duke.edu/](https://visaservices.duke.edu/).
Transferring Policies

Transferring Credits from Other Pratt School Departments into the MEM Program

Students may utilize up to three graduate courses taken as an MS or PhD student in the Pratt School of Engineering as technical electives in the MEM Program. Generally these courses should be taken concurrently with the MEM degree or within the previous four years. Thus, an MS or PhD student can receive the MEM degree by completing five additional courses, four of which are the core courses, the internship requirement, and the seminar series. Approval from the MEMP executive director is required. Admission to the MEM Program is separate from admission to other graduate programs at the Pratt School of Engineering and the MEMP courses are paid for separately from the student’s MS or PhD graduate courses.

Generally, the credits to be used for both degrees will only be seen on the MS/PhD transcript and will count only toward the student’s MS/PhD grade point average.

Students in dual degree programs will receive both degrees simultaneously. Students will not be permitted to receive one degree in a different term than the other, even if coursework for one of the degrees has been completed.

Transferring Credits from The Fuqua School of Business into an Ad Hoc Joint Degree with the MEM Program

If a student has completed the Fuqua MBA course requirements then he or she will be allowed to waive three of the courses in the MEM Program: Engineering Management 510 (Marketing), Engineering Management 530 (Finance in High-Tech Industries), and Engineering Management 540 (Management in High-Tech Industries). Thus, a student can receive the MEM degree by completing five additional courses, the internship requirement, the seminar series and other miscellaneous required activities in the MEM Program. The five courses the student must complete include the required Engineering Management 520 (Intellectual Property, Business Law, and Entrepreneurship) core course and four technical electives. Admission to the MEM Program is separate from admission to The Fuqua School of Business.

Transferring Credits from Other Universities

Transfer of credits for courses from other universities is not allowed. A total of 30.0 credits must be taken at Duke. If a student has taken graduate courses at another university that were not used for their degree, they may give the student a bit more leeway in the types of courses that can be taken at Duke but they do not decrease the total number.

Transferring Credits from the Naval Nuclear Power Training Command

Students in the United States Navy, who have completed their Nuclear Power Training, may transfer a maximum of six credit hours toward the Master of Engineering Management degree. These credits will be listed as Duke Equivalent courses with the grade ‘TR.’ In order to transfer Nuclear Power Training course credit, students must submit their academic and Joint Services Transcripts to the academic coordinator after admission to the MEM program. The academic coordinator will request that the registrar transfer 6.0 credits to the student’s academic record.

Transferring from Other Pratt School Departments into the MEM Program

Students leaving a MEng, MS, or PhD program in the Pratt School of Engineering may utilize up to four graduate courses in that program taken toward their MEM degree. For MENG students, all grades will count toward the MEM GPA. For MS and PhD students, only the courses that are transferred will count toward the MEM GPA.

Generally, for graduate courses to be transferred and counted toward the MEM degree, the courses must meet the following conditions:
- transferred courses must fulfill MEM degree requirements; and
- a grade of B or better must have been earned in the course.
To transfer course credit, matriculated students should complete the Pratt Credit Transfer Form.

Transferring from Non-Pratt Duke Departments into the MEM Program

Students leaving a graduate degree program outside of the Pratt School of Engineering may utilize up to two graduate courses in that program taken toward their MEM degree. The courses that are transferred will count toward the MEM GPA.

Generally, for graduate courses to be transferred and counted toward the MEM degree, the courses must meet the following conditions:
- transferred courses must fulfill MEM degree requirements; and
- a grade of B or better must have been earned in the course.
To transfer course credit, matriculated students should complete the Pratt Credit Transfer Form.

Transferring between MEM and d-MEMP

Students must be approved to transfer between the campus MEM Program and the distance program (d-MEMP). The d-MEM degree is designed as a separate program distinctly targeted to working professionals with industry experience. Only on an exceptional basis for compelling reasons will a student be allowed this option. The student must meet with and be approved by the director of Online and Distance Education. Similarly, d-MEMP students wanting transfer to the campus MEM Program must meet with and be approved by the director of Online and Distance Education.

Undergraduate-Level Courses

Courses below the graduate level, typically below the 500 level, may not be applied toward the required credits needed for the MEM degree. With the approval of the instructor of the undergraduate course, a program director, and the associate dean for Professional Master’s Programs, students may enroll in lower-level courses, but these courses will not count toward graduation credit requirements and will not be included in a student’s GPA calculation.

Withdrawal, Involuntary Administrative

Students who exhibit harmful, potentially harmful, or disruptive behavior toward themselves or others may be subject to involuntary administrative withdrawal from the university if their behavior renders them unable to effectively function in the university community. Such
behavior includes, but is not limited to, that which
- poses a significant threat of danger and/or harm to self; and/or
- other members of the university community; and/or
- interferes with the lawful activities or basic rights of other students, university employees, or visitors.

Any member of the university community who has reason to believe that a student may meet the standard for an involuntary administrative withdrawal may contact the vice president for student affairs or his/her designee. The vice president or designee will conduct a preliminary review in consultation with professionals from Student Health and/or Counseling and Psychological Services, the executive director of Professional Master’s Programs, and/or other relevant individuals. The vice president or designee will meet, when possible, with the student in question to discuss the information that has been presented and give the student an opportunity to respond. The vice president or designee may mandate that the student be evaluated by a specified health professional within a given time frame if an evaluation has not already been conducted. In the instances described above the vice president for student affairs or designee will make the final decision about involuntary administrative withdrawal. A written statement citing the reasons will be forwarded to the executive director of Professional Master’s Programs, who will withdraw the student from the university. At any point in the process the student may request a voluntary withdrawal via the executive director of Professional Master’s Programs.

Academic Integrity

The Duke Community Standard

Duke University is a community dedicated to scholarship, leadership, and service and to the principles of honesty, fairness, respect, and accountability. Citizens of this community commit to reflect upon and uphold these principles in all academic and nonacademic endeavors, and to protect and promote a culture of integrity.

To uphold the Duke Community Standard:
- I will not lie, cheat, or steal in my academic endeavors;
- I will conduct myself honorably in all my endeavors; and
- I will act if the Standard is compromised.

It is implicit that every assignment submitted was done in accordance with the Duke Community Standard.

The Reaffirmation

Upon completion of each academic assignment, students may be expected to reaffirm the above commitment by signing this statement:

“I have adhered to the Duke Community Standard in completing this assignment.”

[Student Signature]

Definitions

Lying, Cheating (including plagiarism), Stealing. Definitions for these terms used in the Duke Community Standard appear at https://studentaffairs.duke.edu/conduct/z-policies#dishonesty.

Application of the Community Standard to the Master of Engineering Management Program

The Duke Community Standard encompasses both academic and nonacademic endeavors. The first part of the pledge focuses on academic endeavors and includes assignments (any work, required or volunteered, submitted for review and/or academic credit) and actions that are taken to complete assignments. It also includes activities associated with a student’s job search since the definition of lying includes “communicating untruths in order to gain an unfair academic or employment advantage.” Some of the aspects of academic endeavors as they apply to master of engineering management students are:

Group and Individual Work. Please note that in many classes there will be both group work and individual work. Students should be sure they are clear about what level of consultation or collaboration with others is allowed.

Studying from old exams, assignments and case studies. Many courses have case studies, exercises, or problems that have been used previously. Students should not use prior semesters’ work to prepare for an exam or assignment unless allowed by the instructor.

MEMP suite, computer laboratory, library, meeting rooms, and other shared resources. There are numerous shared resources that are available to support a student’s studies. Use these so that they will remain in good shape and equally accessible for others.

Career Service Resources. Use these so that they will remain equally accessible for others and so that the MEMP Program will remain in good standing with Career Services. Abide by Career Center policies found at https://studentaffairs.duke.edu/career/about-us/policies.

Implicit Reaffirmation. Some instructors may not require students to include the reaffirmation on every assignment. If the instructor does not require students to write the reaffirmation (“I have adhered to the Duke Community Standard in completing this assignment”) or it is omitted from the assignment, it is implicit that every assignment submitted was done in accordance with the Duke Community Standard.

The second part of the Duke Community Standard extends its reach to nonacademic activities undertaken while enrolled as a MEMP student. Students are expected to observe

- all local, state, and federal laws and
- to abide by Duke policies including university policies on discrimination, harassment (including sexual violence and other forms of sexual misconduct), domestic violence, dating violence, and stalking. Details for these may be found at
  - https://oie.duke.edu/sites/default/files/U32/discrimination_grievance_procedure.3.28.18.pdf;
  - https://duke.edu/policies/students/universitywide/index.php;
Jurisdiction

- The MEM Program may respond to any complaint of behavior that occurred within a student’s involvement in the MEM Program, from application to graduation. However, complaints of discrimination, harassment (including sexual harassment which, in turn, includes sexual violence and other forms of sexual misconduct), domestic violence, and stalking will be addressed under the Student Sexual Misconduct Policy (for misconduct by students) or the Harassment Policy and Procedures (for misconduct by employees or others).
- Any MEMP student is subject to disciplinary action. This includes students who have matriculated to, are currently enrolled in, are on leave from, or have been readmitted (following a dismissal) to programs of the university.
- With the agreement of the vice president for student affairs and the dean of the Pratt School of Engineering, jurisdiction may be extended to a student who has graduated and is alleged to have committed a violation during his/her MEMP career.
- The accused may also be a cohesive unit of the university, such as a recognized organization.
- The university reserves the right to take necessary and appropriate action to protect the safety and well-being of the campus community. Such action may include pursuing any violation of local, state or federal law, or university policy—on or off campus—that constitutes a direct or indirect threat to the university community. Further, students who are cited, arrested, or reported for repeated behavioral concerns off campus may be subject to disciplinary action. Additionally, students or groups who are on university-affiliated programs outings may be subject to disciplinary action.
- In cases of alleged policy violations by a student enrolled in a joint degree program or interdisciplinary coursework within Duke, each school or unit (the home unit and the host unit) may have a stake in the adjudication. Thus, an ad hoc process shall be developed and an ad hoc panel formed with representatives from both institutions units to handle the case. The sanctions may be different for each school or unit.
- For students completing interinstitutional coursework at other institutions, whether domestic or international, or for visiting students enrolled in classes at Duke, the home and the host institutions should confer and decide the process to be followed, which may include combined or separate elements. The sanction may be different for each institution.

Academic Standard Resolution Process

A flow chart for the resolution process for possible violations of the academic standard is given in Figure 1 (see above). The details for the process will be described in this section.

Students’ Obligation to Act on Potential Cases of Academic Dishonesty

The Duke Community Standard stresses the commitment that students share with faculty and administrators to enhance the climate for academic integrity at Duke University. The pledge beginning “I will not lie, cheat, or steal in my academic endeavors” is followed by “I will act if the standard is compromised.” Both statements, like the Duke Community Standard as a whole, are statements of principles. From principles flow policies. Stemming from this nontoleration statement (“I will act if the standard is compromised”) is a policy that reflects an emphasis on taking constructive action of some sort if one witnesses or knows about dishonorable behavior connected to classroom assignments or activities.

Students who observe or hear about cheating are obligated to do something about it rather than to remain passive bystanders. They are obligated to take action. Several possible courses of action are available, and students should feel free to discuss them with trusted advisors before choosing among them:

- Alerting the faculty member that cheating may be occurring in the course. This alert can be in any form, including anonymously. The information will allow the instructor to consider corrective measures and to address the topic with the class.
- Calling attention to the suspected violation as it is occurring, in either a public or a private manner.
• Identifying the suspected cheater to the faculty member of the course.
• Unless required otherwise by a court of law, the report will be treated in total confidence: if the reporting student requests anonymity, the faculty member will not divulge the reporting student’s name to anyone, and the reporting student is under no obligation to take the information any place else. The faculty member will then act on this information, as the Faculty Handbook requires; at the very least, the instructor will let the suspected student know that his or her behavior has raised suspicion;
• Speaking directly with the student suspected of violating the Duke Community Standard, either to gain clarity about what happened or to put the person on alert that his or her behavior could have serious consequences; and
• Discuss concerns about a suspected violation with the executive director of the Master of Engineering Management Program (executive director, MEM Program)

Whatever the option chosen for reporting breaches of academic integrity, a student is responsible for doing something. This responsibility is an integral part of the Duke Community Standard and will help to build a community of honor whose values the Duke Community Standard articulates.

Investigating

Once a suspected violation has been brought to the attention of the executive director, MEMP, he/she may consult with the associate dean for student conduct to decide whether any further investigation is warranted and possible. They will also assess the severity of the allegations and the executive director of MEM Program will review the disciplinary record of the person suspected to see if there are any previous violations that would preclude a “one-time faculty/student resolution.” If there is to be a further investigation, the executive director of the MEM Program will notify the individual/group that an academic investigation is being held and specify the university policy that is suspected of being violated. The executive director of the MEM Program will gather information regarding the alleged incident in order to determine the appropriate means of resolution. Investigations may include a review of related documents, interviews, or requests for written statements from any person involved in the alleged incident. Please be aware that students and organizations that lie during the investigation phase or any other aspect of the judicial process are violating the Duke Community Standard. Additionally, sanctions for multiple infractions are typically more severe than sanctions for single infractions.

Cases may be dropped for insufficient information, or referred for possible disciplinary action. In order for a case to be referred for possible disciplinary action, there must be sufficient information to believe that a policy violation may have occurred and that the alleged individual/group may be responsible.

Resolving Violations

Suspected violations are resolved dependent on their severity and the student’s disciplinary history.

One-Time Student-Faculty Resolution. When the suspected violation is “minimal,” such that it would not put the student at risk of suspension or expulsion (e.g., inadvertent omission of a citation or improper citation, minor misunderstanding about collaboration or use of materials on an assignment), and when the student has not committed any previous violations, it may be possible to resolve the situation at the level of the faculty member in charge of the course and the student. The first, and essential, stage in this process is for the faculty member to discuss the situation with the executive director of the MEM Program to determine if the suspected violation is in fact “minimal,” and if the student has previously been found responsible for any academic integrity violations. The executive director of the MEM Program in consultation with the associate dean for Student Conduct serves as a “clearinghouse” for Duke Community Standard violations, so that
• there is consistency in defining what violations are “minimal”;
• the consequences for various types of violations are consistent; and
• repeated violations by the same student in different courses do not go unnoted.

When these conditions for a “one-time student-faculty resolution” are met, the instructor may impose consequences for the violation and inform the executive director of the MEM Program of the consequences. These could include receiving failing grades on the assignment or the course, repeating one or more assignments, and/or completing a separate assignment intended to inform the student about academic integrity (e.g., a paper analyzing the consequences of failure to cite sources properly).

If the instructor does not want to use this option, he/she may request an administrative hearing. If the student does not agree with the resolution proposed by the instructor, he/she may request an administrative hearing.

Administrative Hearing. If the suspected violation is not “minimal,” if there have been previous violations, if the instructor chooses not to resolve the case, or if the student disagrees with the instructor’s proposed resolution, the case goes to an administrative hearing. If the violation is severe enough to put the student at risk of suspension or dismissal, and if the accused student denies the accusation, he/she may ask to bypass the administrative hearing level and go directly to an ad hoc judicial panel, as explained below.

If the student admits violating the policy and accepts responsibility for his/her actions, the executive director of the MEM Program, in consultation with the associate dean for student conduct, will recommend the appropriate disciplinary action. Consequences may include probation, suspension, or expulsion, and/or assignments intended to educate the student about academic standards. Consequences may include recommendations to the course instructor involving grades for one or more assignments or for the whole course, but final authority for these rests with the instructor. If the student believes the administrative hearing failed to consider relevant information, violated fair procedures in some other way, or imposed consequences inappropriate to the offense, he/she may appeal the decision to an ad hoc student conduct panel. If the student does not admit violating the policy, the case will be presented to an ad hoc student conduct panel.

Ad Hoc Student Conduct Panel. Appeals from the administrative hearing stage will be heard by an ad hoc student conduct panel composed of four members, two master of engineering management students and two faculty or staff members from the Pratt School of Engineering. The executive director of the MEM Program will be present to help maintain continuity and consistency of procedures, but will not be a voting member of that panel. The student members will be selected by the MEMP Graduate and Professional Student Council representative(s). If no representatives have yet been elected, the students will be selected by the director of the MEMP. The faculty/staff members will be selected by the executive director of the MEM Program. The student suspected of the violation may object in writing if he/she believes any member of the proposed panel has a conflict of interest that could jeopardize a fair judgment. All members of the panel and the accused student should be notified at least forty-eight hours in advance when and where the hearing will be and what evidence will be presented. Any of the student conduct panel members or the student may ask for evidence to be presented. The accused student may consult others for advice at his/her discretion and may bring a member of the Duke community (student, faculty, or staff member) to the hearing as an advisor (but the advisor does not speak to the student conduct panel or any witnesses). The panel will attempt to decide,
using a clear and convincing standard, whether a violation took place and what the consequences should be by consensus; where consensus is not possible, a vote will determine the outcome (thus, a 3-1 or 4-0 vote is necessary to reach a conclusion). Consequences may include probation, suspension, or expulsion, and/or assignments intended to educate the student about academic standards. Consequences may include recommendations to the course instructor involving grades for one or more assignments or for the whole course, but final authority for these rests with the instructor.

Ad hoc student conduct panels are not trials and are not constrained by rules of procedure and evidence typically used in a court of law. The university disciplinary system operates under a standard of fairness, which includes an opportunity for the student/group to be notified of the alleged incident and policy violations under consideration and an opportunity to be heard.

If the student believes the ad hoc student conduct panel failed to consider relevant information, violated fair procedures in some other way, or imposed consequences inappropriate to the offense, he/she may appeal the decision to the senior associate dean for research for the Pratt School of Engineering. This appeal must be made within seven days of the ad hoc student conduct panel’s decision.

Nonacademic Standard Resolution Process

A flow chart for the resolution process for possible violations of the nonacademic standard is given in Figure 2 (see above). The details for the process will be described in this section.

Investigating. Once a suspected violation has been brought to the attention of the executive director of the MEM Program, he/she will consult with the associate dean for student conduct to decide whether any further investigation is warranted and possible. (Again, allegations of harassment will be handled under either the Student Sexual Misconduct Policy or the Harassment Policy and Procedures.) If there is to be a further investigation, the executive director of the MEM Program will notify the individual/group that an investigation is being held and specify the university policy that is suspected of being violated. He/she will gather information regarding the alleged incident in order to determine the appropriate means of resolution. Investigations may include a review of related documents, interviews, or requests for written statements from any person involved in the alleged incident. Please be aware that students and organizations that lie during the investigation phase or any other aspect of the process are violating the Duke Community Standard. Additionally, sanctions for multiple infractions are typically more severe than sanctions for single infractions.

In cases where local, state, and/or federal laws may have been violated, the investigation may be postponed until the outcome of the legal investigation has been completed. Additionally, prior to investigation and resolution, interim restrictions may be placed on a student/group to protect the health and safety of students or the community. These restrictions may include a “no contact order,” removal of privileges, removal from or relocation within the residential community, suspension of activity, or suspension from the university. An interim suspension from the university may be imposed by the dean of the Pratt School of Engineering or the vice president for student affairs, or designee, and shall become effective immediately without prior notice whenever there is evidence that the continued presence of the student may pose a substantial and immediate threat to him/herself, to others, or to the university community.

Cases may be dropped for insufficient information, or referred for possible disciplinary action. In order for a case to be referred for possible disciplinary action, there must be sufficient information to believe that a policy violation may have occurred and that the alleged individual/group may be responsible.

Resolving Violations. Alleged nonacademic violations are handled by administrative hearing. If the student admits violating the policy and accepts responsibility for his/her actions, the executive director of the MEM Program will recommend the appropriate disciplinary action. Consequences may include probation, suspension, or expulsion, and/or assignments intended to educate the student about appropriate community behavior.

If the student believes the administrative hearing failed to consider relevant information, violated fair procedures in some other way, or imposed consequences inappropriate to the offense, he/she may appeal the decision to the senior associate dean for research for the Pratt School of Engineering. This appeal must be made within seven days of the administrative hearing’s decision.

Confidentiality

Information gathered in the process of resolving alleged Duke Community Standard violations is confidential. Information may be shared with the following entities or under the following circumstances:

- with the accused student to inform her/him that he/she has been accused
- with school officials with legitimate interest, such as, instructor of the class, administrators of the Master of Engineering Management Program, Office of Student Affairs, Office of Student Conduct, Office of Institutional Equity
- to comply with a judicial order or lawfully issued subpoena
- to appropriate officials in cases of health and safety emergencies
- for any students involved in a joint-degree program or interdisciplinary coursework, with the other degree program
- for student involved in interinstitutional coursework, with the other institution
Information about Duke Community Standard violations, their disposition and consequences may be shared, with any identifying information removed, for the purposes of:

- educating students and faculty about Duke Community Standard violations;
- ensuring consistency in responding to Duke Community Standard violations; and
- reporting on Duke Community Standard violations to the university or to facilitate research on academic integrity.

Curriculum Overview

The core of the Master of Engineering Management Program consists of four engineering management courses developed in conjunction with the Duke University School of Law and The Fuqua School of Business. A required internship accompanied by a written project summary and oral presentation insures students have work experience, while four graduate-level technical courses of the student’s choosing serve to extend the student's science and engineering background.

To complete a master’s degree in engineering management, the student must complete 30.0 course credits:

- Four core management courses (12.0 credits)
  - Engineering Management 510 (Marketing)
  - Engineering Management 520 (Intellectual Property, Business Law, and Entrepreneurship)
  - Engineering Management 530 (Finance in High-Tech Industries)
  - Engineering Management 540 (Management of High-Tech Industries)
- Four technical elective courses (12.0 course credits)
- Seminar & Workshop Series (0 course credits)*
  - Engineering Management 501 (Engineering Management Seminar/Workshop) (require two semesters)
- Internship, written project summary, oral presentation (6.0 course credits)
  - Engineering Management 550 (Engineering Management Internship)
  - Engineering Management 551 (Engineering Management Internship Assessment)

* d-MEMP equivalent is three residencies.

Internship

The internship component of Duke’s MEM Program ensures that students gain valuable experience in industry. Students complete an internship with a company anywhere in the world and work on a well-defined project (Engineering Management 550). A minimum of eight weeks of full-time work, or 320 hours, must be completed to satisfy the internship experience requirements. A final internship report and presentation must be submitted and both must be approved by the course instructor before credit can be given (Engineering Management 551). Internship contributes 6 course credits toward graduation.

Students are responsible for finding and establishing an internship, though there are several resources that can help in the search. Students who are still enrolled in undergraduate study are encouraged to use their institution's career center, and previously employed students should use their experience. Students with previous work experience may apply that work experience to the internship requirements, as long as the work they performed was in the field of engineering and can satisfy the internship assessment course requirements. D-MEMP students will utilize their current employment to meet the internship requirements.

Seminar and Workshop Series

Weekly seminars offer campus students the opportunity to interact with top industry leaders, experienced business managers, entrepreneurs, venture capitalists, and small-business owners. Designed to introduce students to different aspects of business and industry, the series also includes information on career opportunity and development. A weekly post-seminar reception allows students to talk one-on-one with speakers and network with their peers.

Duke’s unique workshop series allows students to further develop marketable business skills in an intensive, interactive environment. Topics are selected through input from industry, program administrators, and students and led by the professional development coordinator. D-MEMP students must attend three on-campus residencies in lieu of the seminar and workshop series.

Technical Electives

Technical electives enable students to customize coursework to satisfy their individual preferences. Elective offerings are designed to provide variety, flexibility, and top-of-class quality as students enhance their depth and breadth of knowledge. Courses below the graduate level, typically below the 500 level, may not be applied toward the required technical electives for the master of engineering management degree. Students may enroll in courses below the graduate level, but these courses will not count toward any graduation requirement and will not be included in a student’s GPA calculation.

Students may utilize the following options:

- select from a variety of topics in the area of management of technology and entrepreneurship offered by the MEM Program;
- take courses at the highly-ranked departments within the Pratt School of Engineering, including the top-ranked biomedical engineering department;
- customize an interdisciplinary set of courses in subjects such as photonics or nanotechnology;
- take courses outside of the Pratt School of Engineering with the director’s approval from The Fuqua School of Business;
- take courses in areas such as physics, chemistry, computer science, or statistics/decision science;
- pursue courses at North Carolina State University and the University of North Carolina at Chapel Hill through an interinstitutional transfer and with approval of the director;

* Enrollment in Fuqua courses is not guaranteed; rather, Fuqua courses are offered on a space available basis and require instructor consent. Additionally, not all Fuqua courses are available to MEM students and not all of those that are offered can be used as a technical elective. MEM students are limited to two Fuqua courses per semester. Fuqua courses require a separate registration process than that of engineering courses.
• develop an independent study course by identifying a topic and an interested faculty member. Students may take up to two independent study courses; or
• take other technical electives as approved.

Example Curriculum
The campus program can be completed in as little as one year. The internship is typically completed during the summer either before or after beginning the program.

Summer
Internship

Semester 1
Engineering Management 501 (Engineering Management Seminar)
Engineering Management 510 (Marketing)
Engineering Management 530 (Finance in High-Tech Industries)
Technical Elective 1
Technical Elective 2
Engineering Management 550 (Engineering Management Internship)
Engineering Management 551 (Engineering Management Internship Assessment)

Semester 2
Engineering Management 501 (Engineering Management Seminar)
Engineering Management 520 (Intellectual Property, Business Law & Entrepreneurship)
Engineering Management 540 (Management in High-Tech Industries)
Technical Elective 3
Technical Elective 4

Grading Policies
Standard Courses: A=Exceptional; B=Good; C=Satisfactory; (A, B, and C grades may include + or -); F=Failure; I=Incomplete; N=No Grade Given; Z=Satisfactory Completion of the first term of a two-course sequence
Audits: AD=Audit; WA=Withdrawal Audit; N=No Grade Report
Credit/No Credit Courses (including Internship Courses): CR=Passing; NC=Failure

Incomplete Grades
I grades are to be assigned if, because of illness or other extenuating circumstances, a student’s work in the course is incomplete. Please note that students who are given an Incomplete must complete the work within one year or the grade will convert to an F.

Retention of Examinations
Instructors are requested to retain all final examination papers for at least one year after the date the examination is given. Examination papers should be available for reference where a final grade is questioned.

Business Foundations for Engineers Graduate Certificate
The Master of Engineering Management Program sponsors a Business Foundations for Engineers graduate certificate. This standalone, credit-bearing program provides experienced STEM professionals with a foundational business education in a technical context. The certificate program enables working technical professionals to cultivate a competitive advantage by building skills in the domains of marketing, finance, management, and law. The Business Foundations for Engineers graduate certificate is designed for working professionals and requires completion of the four core EGRMgmt online courses (12 credits).

Admissions Policies and Practices
The certificate program is open to all qualified applicants worldwide. Students who have passed Calculus I, Calculus II, Calculus III, Statistics, or other math course beyond Calculus II among other technical electives during their undergraduate coursework will be best prepared for the academic rigor of the certificate program.
Applications are accepted for the certificate program for both the fall and spring semesters. Admission to the Business Foundations for Engineers Graduate Certificate Program requires:
• a bachelor’s degree in engineering or science from an accredited institution (transcripts required, including an estimated GPA and a grade scale);
• statement of purpose;
• résumé
• two recommendations;
• English Language Testing (TOEFL or IELTS): official results required (international applicants only);
• a nonrefundable application fee of $75 US, to be paid via credit card or via check made out to Duke University; and
• an interview.
Application Deadlines

Students apply in accordance with existing application deadlines for the campus and distance MEM programs. Students who enroll and successfully complete the certificate requirements will have the option to subsequently apply for the Distributed Master of Engineering Management Program (d-MEMP) within four years and use their certificate courses (12.0 course credits) towards the degree (30.0 course credits) as long as they earn a grade of B or better in each class. Certificate holders who apply to d-MEMP will additionally be required to provide GRE scores and complete all course requirements for the degree (e.g. four electives, two internship courses, and three on-campus residencies in Durham, NC).

*An extended deadline will be allowed for Fall 2019 applications. For more details on Fall 2019 admissions, please visit https://memp.pratt.duke.edu/apply/deadlines.

Tuition

Certificate courses will be charged at the rate of $2,361 per credit.

Admission Revocation

Please refer to the policy in the MEM section "Academic Policies" on page 26.

Academic Integrity

Please refer to the policy in the MEM section "Academic Integrity" on page 33.

Curriculum Overview

Students may take one certificate course during the 2019-2020 academic year and up to two certificate courses starting in Fall 2020 and beyond. Certificate courses are not offered in the summer terms. Students completing the four courses will receive a transcript and a Business Foundations for Engineers certificate. Students are required to participate in a virtual on-boarding program before their first certificate course.

The four certificate courses are:

- EGRMGMT 510: Marketing (available Fall 2019)
- EGRMGMT 520: Intellectual Property Law (available Spring 2021)
- EGRMGMT 530: Finance (available Fall 2020)
- EGRMGMT 540: Management (available Spring 2020)

Courses of Instruction

Engineering Management (EGRMGMT)


504. Residency 1 - Introduction. One week course to introduce the Distributed Master of Engineering Management Program (d-MEMP). Residency 1 includes an orientation to Duke and the program, business simulations, case studies, professional development workshops and alumni engagement opportunities. Prerequisite: Enrollment in the Distributed Master of Engineering Management Program. 0 units.

505. Residency 2 - Mid-Program. One week course to assess interim progress for the Distributed Master of Engineering Management Program (d-MEMP). Residency 2 includes team-building exercises, case studies, leadership training, workshops, seminars and engagement opportunities. Prerequisite: EGRMGMT 504. 0 units.

506. Residency 3 - Conclusion and Graduation. One week course to conclude the Distributed Master of Engineering Management Program (d-MEMP). Residency 3 includes internship presentations, team-building exercises, case studies, leadership training, professional development workshops, exit interviews, and graduation activities. Prerequisite: EGRMGMT 505. 0 units.

510. Marketing. Review basic concepts in marketing; marketing of high tech products and services. Product development with short life cycles, selling into complex supply chains, building advantage through innovation, the role of the customer in high tech and technology-intensive service industries, and marketing in volatile environments. Prerequisite: enrollment in the Master of Engineering Management Program. 3 units.


530. Finance in High Tech Industries. Review basic concepts of financial accounting and finance, with an emphasis on accounting needed for effective financial analysis. Focus on issues of finance in high tech industries. Emphases will include project financing, notions of options as applied to internal financial analysis, allocation of costs and revenues for new high tech projects, valuing projects and valuing firms when intellectual assets are a significant portion of total level value; corporate control in high tech firms. Finance issues in mergers, acquisitions, and alliances. Prerequisite: enrollment in the Master of Engineering Management Program. 3 units.

532. Advanced Corporate Finance for Technology-Based Companies. The focus of this course will be on major financial decisions of established technology corporations as well as entrepreneurial ventures. Analytical models and theories will be covered via problems and cases. Specific areas will include asset management, short-term and long-term borrowing, advanced capital budgeting strategies, determination of capital structure, dividend policy, international issues, and mergers and other forms of restructuring. Prerequisite:
Consent of instructor required. 3 units.

**591. Special Readings in Engineering Management.** Individual readings in advanced study and research areas of engineering management. Programs within engineering management tailored to fit the requirements of a small group. Permission of instructor required. 3 units.

Opportunity for study of advanced subjects related to programs within engineering management tailored to fit the requirements of a small group. Permission of instructor required. 3 units.

Opportunity for study of advanced subjects with laboratory related to programs within engineering management tailored to fit the requirements of a small group. Permission of instructor required. 3 units.

Consent of instructor required. 3 units.

**590. Advanced Topics in Engineering Management.** Opportunity for study of advanced subjects related to programs within engineering management tailored to fit the requirements of a small group. Permission of instructor required. 3 units.

**590L. Advanced Topics in Engineering Management (with Lab).** Opportunity for study of advanced subjects with laboratory related to programs within engineering management tailored to fit the requirements of a small group. Permission of instructor required. 3 units.

Consent of instructor required. 3 units.

**540. Management of High Tech Industries.** Decision making in complex environments; emphasis on project analysis, complex investment analyses, strategic decision making where outcomes depend on high technology, and the role of decisions in product development. Management in high tech firms; emphasis on management of professionals, management of project-based and team-based organizational structures, and the role of the manager in expertise driven organizations. Prerequisite: enrollment in the Master of Engineering Management Program or Master of Engineering Program. 3 units. C-L: Master of Engineering 540

**550. Engineering Management Internship.** A three-credit internship which requires participation with a cooperating organization, whether local or distant, involving a well-defined set of tasks. Full-time employment in an appropriate capacity may be utilized for this internship. This course is a required co or prerequisite for Engineering Management 551. Prerequisite: Enrollment in the Master of Engineering Management Program. 3 units.

**551. Engineering Management Internship Assessment.** This course involves the assessment of a student's internship experience via a report and oral presentation. The questions and general format of the report and presentation will be provided by the instructor. The report and presentation will be evaluated by the instructor and both must be approved to obtain credit for this course. Students must have completed or be simultaneously enrolled in Engineering Management 550 which is a course designated for the internship experience. Prerequisite: Enrollment in the Master of Engineering Management Program. 3 units.

**556. Engineering Management Practicum.** The Engineering Management Practicum provides a real life view of various challenges faced by organizations. Projects at the intersection of engineering and business will be chosen for this practicum. Students will work in teams and will conduct a mentored, semester-long project for an organization. The learning objectives of this course include: (i) learn how engineering and technology impact organizations and how they are integrated into an organization to achieve desired results; (ii) understand, through an experiential environment, how organizations function and the difference between theory and implementation in an organizational setting; and (iii) develop team based skills in an applied environment and learn how to communicate technical issues to a variety of personnel in an organization. Consent of instructor required. 3 units.

**560. Project Management.** Projects are one of the key mechanisms for achieving organizational goals and implementing change, whether it is the design and launch of a new product, the construction of a new building, or the development of a new information system. This course will focus on defining project scope, developing project plans, managing project execution, validating project performance and ensuring project control. Additional topics covered include decision making, project finance, project portfolio selection and risk management. 3 units.

**562. Operations Management.** Operations management involves planning and controlling the processes used to produce the goods and services provided by an organization. In essence, it is the management of all activities related to doing the actual work of the organization. Managing these processes can be quite challenging – they are often very complex, and can involve large numbers of people and facilities, huge volumes of materials and great distance. Objectives of the course are to: (i) Introduce students to the functional area of operations and to increase their awareness of how a firm's operations interface with the other functional areas of the organization, (ii) Familiarize students with the various issues and problems that traditionally arise in the management of operations within both manufacturing and service organizations, (iii) Acquaint students with some of the terminology, modeling, and methodologies that often arise in the handling and resolution of operations issues and problem. 3 units.

**563. Supply Chain Management.** The objectives of this course are to develop conceptual and modeling skills for the student and provide practical problem-solving tools, applicable to the design and analysis of supply chains. Students will also identify how the existence of multiple (distinct) decision makers in the supply chain can create misaligned incentives that harm supply chain performance and then learn how to mitigate this problem. Examples will include technology supply chains, and supply chains for innovative products. The course will balance modeling/quantitative problem solving with conceptual frameworks. Prerequisite: Enrollment in the Master of Engineering Management Program or permission of instructor. 3 units.

**574. Commercializing Technology Innovations: Turning Visions into Value.** This course is designed to demystify and unify the journey from idea creation to value extraction through the use of concrete tools and real-world exercise. Innovations have many sources (e.g., individuals, companies, universities, governments) and many vehicles for commercialization (e.g., licensing, new products, enhanced products, and new ventures). Through this course, students will learn to think more broadly about innovation and commercialization options and strategies. Prerequisite: enrollment in the Master of Engineering Management Program. 3 units.

**580. Decision Models.** Problems involving uncertainty and/or complex interactions can be too difficult to grasp intuitively. This course introduces spreadsheet modeling, simulation, decision analysis and optimization to represent and analyze such complex problems. First, the use of decision trees for structuring decision problems under uncertainty is discussed. Next, Monte Carlo simulation is used as a modeling environment, using add-in programs as necessary. Prerequisite: Familiarity with Excel, enrollment in the Master of Engineering Management program, or permission of instructor. 3 units.

**584. Advanced Engineering Systems Optimization and Simulation.** Introduction and advanced discussions of mathematical optimization and simulation to design and evaluate engineering systems. Application of linear and nonlinear programming, dynamic programming, expert systems, simulation and heuristic approaches to a range of engineering systems problems. Examples addressed to be suggested and developed by the students including but not limited to: production plant scheduling, water resources planning, vehicle routing, resource allocation, repair, and rehabilitation scheduling, and comparison of engineering design alternatives. Instructor consent required. 3 units.

**590. Advanced Topics in Engineering Management.** Opportunity for study of advanced subjects related to programs within engineering management tailored to fit the requirements of a small group. Permission of instructor required. 3 units.

**590L. Advanced Topics in Engineering Management (with Lab).** Opportunity for study of advanced subjects with laboratory related to programs within engineering management tailored to fit the requirements of a small group. Permission of instructor required. 3 units.

**591. Special Readings in Engineering Management.** Individual readings in advanced study and research areas of engineering management. Consent of instructor required. 3 units.
The Master of Engineering (MEng) Program began in 2010 and provides students with the skills to effectively contribute to the technical needs of the twenty-first century global organization immediately upon graduation. The MEng degree is an applied, nonthesis degree that has a single departmental affiliation or a defined interdisciplinary affiliation across more than one department.

As an applied, nonthesis degree, the MEng degree provides differentiated value by coupling graduate-level technical knowledge in key areas of strength with core business fundamentals, thus better preparing students to work in industry. The MEng degree is housed in, and managed by, the Pratt School of Engineering with faculty oversight provided by engineering school faculty through the Engineering Faculty Council and the existing departments.

The MEng degree positioned the Pratt School of Engineering to take a leadership role in developing a professional master’s curriculum that delivers state-of-the-art technical depth coupled with necessary business knowledge breadth to produce graduates who can truly impact their organizations. The disciplines within the master of engineering degree are:

- Biomedical Engineering
- Civil Engineering
- Computational Mechanics and Scientific Computing
- Electrical and Computer Engineering
- Mechanical Engineering
- Environmental Engineering
- Materials Science and Engineering
- Photonics and Optical Sciences
- Risk Engineering

Admissions Policies and Practices

Admission to the MEng Program

Applications are accepted for the MEng Program for both the fall or spring semester for the Biomedical, Civil, Environmental, Materials Science, Mechanical, and Photonics and Optical Sciences disciplines; applications are accepted for the fall semester only for the Electrical and Computer and Environmental disciplines.

Admission to the MEng Program requires the following:

- a bachelor’s degree in engineering or science from an accredited institution (transcripts required, including an estimated GPA*);
- statement of purpose*;
- résumé*;
- three recommendations*;
- Graduate Record Exam (GRE) results or equivalent;
- Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS) exam results (international applicants only);
- a nonrefundable application fee of $75 USD, to be paid via check made out to Duke University or via credit card if using the online application*; and
- an interview.

For more information on the application requirements, see https://meng.pratt.duke.edu/application-requirements.

*Items that can be submitted using the online application. For more information on the online application, see https://meng.pratt.duke.edu/how-to-apply.

International Applicants

Unlike many schools, Duke does not require financial support documents as part of the application; instead, students submit this information after they have been admitted and are enrolled in the program.

Duke does not automatically issue I-20s to students upon admission. Instead, students work with the department to submit information and supporting documents to Duke’s Visa Services Office.

The process is as follows:

- Upon accepting the offer of admission, a student will receive an email from the MEng office with a user name and password in order to complete the online Request for Temporary Visa Form - Part II.
- The student completes the online form, prints it off, signs it, and returns it to the MEng office, along with the appropriate supporting documents.
- Financial documents must be less than four months old.
- Only after the MEng Program receives everything from the student will the office complete Part I of the Request for Temporary Visa Form. At that time, the student’s entire packet will be sent to Duke Visa Services for processing.
- Visa documents (I-20 or DS-2019) are usually issued within two calendar weeks from the date that Duke Visa Services receives the completed packet.
- Student should register for a visa appointment only after they receive their visa documents.
- Those on non-Duke visas complete a modified process during the enrollment period.

Application Deadlines

The MEng Program accepts applications for the fall or spring semester in rounds, and applicants should submit their application materials as early as possible but before the deadlines listed at https://meng.pratt.duke.edu/application-deadlines.
deadlines. In order to be considered in an application round, the application and all supporting documents must be received by the date indicated. Please note:

- In some cases, the MEng Program may postpone a decision to the next round.
- Admitted students may request to defer admission for up to one year.

Campus Tuition and Financial Aid Information

Tuition and Fees
Program tuition for the 2019-2020 academic year is $27,970 per semester taken at the university. In general, completion of the thirty required course credits over three semesters would result in a total tuition cost of $83,910. Please note that the internship courses do not incur tuition charges.

Estimated Full-Time Student Expenses for the 2019-2020 Academic Year

<table>
<thead>
<tr>
<th></th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuition</td>
<td>$55,940 ($27,970/semester)</td>
</tr>
<tr>
<td>Health Fee</td>
<td>$834*</td>
</tr>
<tr>
<td>Health Insurance</td>
<td>$3,900**</td>
</tr>
<tr>
<td>Graduate Student Activity Fee</td>
<td>$38'</td>
</tr>
<tr>
<td>Graduate Student and Professional Services Fee</td>
<td>$20</td>
</tr>
<tr>
<td>Transcript Fee</td>
<td>$40'</td>
</tr>
<tr>
<td>Recreation Fee</td>
<td>$316'</td>
</tr>
<tr>
<td>Room</td>
<td>$9,855'</td>
</tr>
<tr>
<td>Board</td>
<td>$3,420'</td>
</tr>
<tr>
<td>Books</td>
<td>$666*</td>
</tr>
<tr>
<td>Transportation and Misc.</td>
<td>$5,427'</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$80,456</td>
</tr>
</tbody>
</table>

- The normal program duration is one and one-half years of study (three semesters).
- The normal load is four courses per semester in the first year.
- There is no charge for registration for students in the Master of Engineering Program. Domestic students can estimate $664.00 in loan fees per term if securing student loans.

Cost of Living
The cost of living—which includes room, board, and transportation, among other miscellaneous costs—is estimated for the 2019-2020 academic year. The actual cost of living depends on individual lifestyle. Cost may also differ for international students.

Tuition
Tuition is charged on a per semester basis. The tuition per semester for 2019-2020 is $27,970. Students who decide to complete the MEng Program in four semesters may pay by unit in their fourth semester and do not have to be enrolled full-time but must be enrolled in at least three units. Students enrolling as part-time for the duration of the program may request tuition payment on a per unit basis. Students enrolling as full-time may not request payment on a per unit basis until the fourth semester, as stated above.

Transcript Fee
All entering students will be charged in the fall semester a one-time mandatory fee of $40 for transcripts. This fee entitles the student to an unlimited number of Duke transcripts.

Student Health Fee
All students are assessed a fee each semester for the use of Student Health Services. The fee is estimated to be $417’ per semester and is distinct from the health insurance; it does not provide major medical coverage.

Health Insurance
Students will be charged for health insurance in the fall semester, unless proof of other health insurance is provided. For 2019-2020, the Student Health Insurance is estimated to be $3,900. Information on the coverage provided by this insurance is available from the Office of the Bursar.

Graduate Student Activity Fee
All graduate students will be charged an activity fee of $19’ per semester.

Graduate and Professional Student Services
All graduate students will be charged a fee of $10 per semester to support graduate student services.

Recreation Fee
All graduate students will be charged a recreation fee of $158’ per semester for the use of on-campus facilities.

* Fees and estimates subject to confirmation each May.
** Required unless the student can show proof of comparable private insurance coverage.
Audit Fees

Auditors are permitted on a space-available basis with the consent of the instructor. Students who have selected the pay-per-semester billing option may audit courses without charge. Students who have selected the pay-per-credit billing option may audit courses but will incur a $535 fee for each audited course.

Vehicle Fee

Students should contact the University Parking Services Office at (919) 684-7275 regarding parking.

Payment of Accounts

The Office of the Bursar will issue invoices to registered students for tuition, fees, and other charges approximately four to six weeks prior to the beginning of classes each semester. The total amount due on the invoice is payable by the invoice late payment date which is normally one week prior to the beginning of classes. A student is required to pay all invoices as presented and will be in default if the total amount is not paid in full by the due date. A student in default will not be allowed to receive a transcript of academic records or receive a diploma at graduation. Inquire at the bursar’s office by calling (919) 684-3531 for information on the following: monthly payment option; late payment charge; refunds for withdrawal from school during fall and spring semesters.

Financial Aid

Limited financial aid is available to highly qualified candidates through academic scholarships with an emphasis on increasing diversity within the program.

Loans

Because the MEng Program is a professional degree program rather than a research degree program, most students pay their own tuition costs. Many students take out loans and feel there will be an excellent "return on investment" when they get out into the work force. United States citizens and eligible noncitizens are able to borrow through the Federal Stafford Loan Program. Applicants for assistance through this program must file a Free Application for Federal Student Aid (FAFSA), which may be completed online at https://fafsa.ed.gov/. When completing the online form students will be asked for Duke's Title IV Code; it is E00165.

Maximum eligibility under the Stafford Unsubsidized Loan Program is $20,500 per year with an aggregate limit of $138,500. For further information on the FAFSA and the US Department of Education's Stafford Loan Program, please call (800) 433-3243.

Students awarded federal loans must make satisfactory academic progress toward their degree and must be enrolled in 9 graduate-level credits each semester. Guidelines may be found at https://memp.pratt.duke.edu/sites/memp.pratt.duke.edu/files/u148/PMP_SAP_Financial_Aid.pdf.

International applicants are not eligible for federal loans; however, many international students take out loans in their home countries, and some US banks may offer loans to international students for study in the United States.

DoD SMART Scholarship Program (US Citizens only)

The Science, Mathematics and Research for Transformation (SMART) Scholarship for Service Program has been established by the Department of Defense (DoD) to support undergraduate and graduate students pursuing degrees in Science, Technology, Engineering, and Mathematics (STEM) disciplines. The program aims to increase the number of civilian scientists and engineers working at DoD laboratories. See https://smartscholarshipprod.service-now.com/smart for more information.

VA Benefits

Duke University offers information for veterans who are applying for VA benefits, including the Yellow Ribbon Program. See https://registrar.duke.edu/veterans/veterans-education-benefits for more information.

MEng Tuition Policies

Please see below for the bursar’s office policies and procedures.

Payment of Accounts for Fall and Spring

The bursar’s office emails and/or mails statements to registered graduate students for tuition, fees, and other charges approximately four to six weeks prior to the beginning of classes each semester. The amount due on the statement is payable by the due date listed on the statement. Student account statements are also available for review on DukeHub. Inquiries regarding statements can be directed to the bursar’s office at bursar@duke.edu or (919) 684-3531.

As part of the admission agreement to Duke University, students are required to pay all statements as presented. If full payment is not received, a late payment penalty charge on the past due amount is charged on the subsequent statement. The past due amount is defined as the amount due from the previous statement minus payments, financial aid, loans, and other credits received prior to the due date listed on the prior statement. Failure to receive an invoice does not warrant exemption from the payment of tuition and fees nor from the penalties and restrictions. Nonregistered students will be required to make payment for tuition, fees, and other charges at the time of registration.

In addition to late payment charges, students with accounts in default may be subject to the following restrictions:

- blocked from registering for future terms
- blocked from access to copies of transcript of academic records
- not able to have academic credits certified
- not be permitted to go on leave of absence
- not eligible to receive a diploma at graduation
- subject to withdrawal from the university
- subject to having the past due student account referred to a collection agency and credit bureaus
Refunds for Withdrawal from School during Fall and Spring Semesters

In the event of death, refund of full tuition and fees for the term will be granted. In all other cases of withdrawal from the university, students may have tuition refunded according to the following schedule:

<table>
<thead>
<tr>
<th>Withdrawal Period</th>
<th>Refund Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>withdrawal before classes begin</td>
<td>100% (including fees)</td>
</tr>
<tr>
<td>withdrawal during the first or second week of classes</td>
<td>80%*</td>
</tr>
<tr>
<td>withdrawal during the third, fourth, or fifth week of classes</td>
<td>60%*</td>
</tr>
<tr>
<td>withdrawal during the sixth week of classes</td>
<td>20%*</td>
</tr>
<tr>
<td>withdrawal after the sixth week</td>
<td>No refund</td>
</tr>
</tbody>
</table>

*Fees are not refunded after the start of the term

Tuition charges paid from grants or loans will be restored to those funds on the same pro rata basis and will not be refunded or carried forward.

Academic Policies

Academic Freedom

Freedom of inquiry and the free exchange of ideas are essential for the fulfillment of the university’s mission. Academic freedom is a right and responsibility of students as well as faculty. Students who believe that their academic freedom has been abridged should submit a written complaint to the executive director of Professional Master’s Programs (EDMS). The EDMS may enlist the senior associate dean of education for the Pratt School of Engineering to provide advice. Cases not resolved by the EDMS may be brought to the attention of the provost. Students may also seek advice of the student ombudsperson in resolving a complaint.

Academic Standing and Satisfactory Academic Progress

To maintain satisfactory academic progress (SAP), students must achieve a required minimum grade point average (GPA) of 3.0, complete two-thirds (67%) of cumulative attempted courses, and are limited to a maximum of 45.0 attempted credits. Attempted and completed courses include courses for which A-F letter grades or (C)redit/(NC) No Credit were assigned. Attempted but not completed courses include courses with grades of (I)ncomplete or (W)ithdrawn. Courses that are not counted in the attempted calculation include courses taken for audit and courses with grades of (Z) Continuing or (N)o grade given.

The short duration of the program means that these requirements must be taken very seriously by all students immediately upon entry into the program. Students who do not make satisfactory academic progress or who receive an F in any course may be subject to academic disciplinary action. These actions may include academic probation, suspension, or dismissal. Academic probation means that the student is in danger of being suspended or dismissed from the program. It also means that the student should take immediate action to be more successful academically. A variety of actions may be required when a student is placed on academic probation, including, but not limited to, tutoring, exclusion from extracurricular activities, enrollment in specific courses, and/or limiting the number of classes taken in a semester. In addition, students must have a grade point average of B (3.0) or better to graduate.

Suspension, dismissal, and graduation are authorized by the executive director of the Master of Engineering Management Program. Any suspension, dismissal, or graduation decision made by the executive director of the Master of Engineering Management Program may be appealed within seven days to the senior associate dean for research within the Pratt School of Engineering.

Admission Revocation

The MEng Program reserves the right to rescind any applicant’s admission to the program if new information arises pertaining to significant academic performance issues, criminal activity, Duke Community Standard violations, or other extraordinary circumstances. In general, significant issues that justify withdrawing an offer of admission would be those that could lead to a suspension or dismissal if a student were already enrolled in the MEng Program.

Decisions to revoke admissions will be made by the MEng Admissions Committee for the major of interest, and appeals will be heard by the senior associate dean for education or their designee in the Pratt School of Engineering.

Advising

Academic plans for the MEng students must be approved by an academic advisor. The implementation of this requirement will be determined by each major but could include an overall plan of study approval, a semester by semester approval of course choices and/or advising sessions for incoming students. A menu of course options can be an aid in this advising process. The student is responsible for determining that their plan of work will satisfy all graduation requirements for their major.

Audits

Audits are permitted on a space-available basis with the consent of the instructor and the director of master of engineering studies (DMS) for the student’s major (see Audit Permission Form). Students may only audit one course per fall and spring semesters.

The fee for auditing a course depends on a student’s tuition payment option. Degree students registered for regular MEng courses and who have selected the pay-by-term payment option may audit an additional course without being charged. Degree students registered for regular MEng courses and who have selected the pay-by-credit payment option may audit a course but will incur an audit fee of $535 for
each course audited. This policy is in effect for all students, even if a student decides to change from pay-by-term to pay-by-credit in their last semester of the program.

It is important that students understand an instructor’s expectations for auditing students, such as assignments, readings, class participation, etc. Auditing students must comply with these requests to successfully complete the audit, as it is possible to fail.

Note that degree students may unofficially “sit-in” on courses with just the permission of the instructor; no forms are necessary in this case. Generally, nondegree seeking students may not audit or sit-in on courses; however, alumni of the MEng Program who wish to audit classes for personal or professional development will be considered on a case-by-case basis.

Complaints

If a student has a concern with a course or with an aspect of the program, the concern should first be addressed to the faculty or staff member most associated with the area of concern. If the faculty or staff member is not able to address the concern, the matter may be brought to the attention of the appropriate DMS to address the situation. If a significant concern has not been addressed by the DMS, the matter may be escalated to the EDMS. Complaint responses from the EDMS may be appealed in writing to the senior associate dean for education in the Pratt School of Engineering.

Concurrent MEng and PhD Degrees

Students getting their PhD degree from the Pratt School of Engineering may also want to pursue a MEng degree to obtain the breadth found in the MEng core courses. To facilitate this, PhD students may utilize their PhD courses to fulfill the technical course requirements of the MEng degree (i.e., the eight noncore course requirements) if those courses meet the curricular requirements of the MEng major of interest. Thus, PhD students may obtain the MEng degree by adding the two MEng core courses to their coursework and fulfilling the internship requirements. Note that generally the student’s PhD research will not be acceptable as the internship experience for the concurrent MEng degree. Students must apply for the MEng Program independently from the PhD and must be enrolled in the MEng Program (i.e., dual enrolled in the MEng and PhD) before taking the MEng core courses. Students should register for these MEng core courses separately from their PhD courses under their MEng “bookbag” and will be billed for these courses separately from their PhD. Other MEng courses to be utilized to fulfill the MEng requirements may be taken at anytime while a PhD student, before or after enrolling in the MEng Program. Note that being accepted as a PhD student does not guarantee acceptance as a MEng student. Note that students will generally receive their MEng degree at the same time or after receiving their PhD. If a student does not obtain a PhD, only four of the technical courses taken as a PhD student may be applied to the MEng degree. The other four technical MEng course requirements and the MEng core courses must be taken after enrollment in the MEng Program. All PhD students should discuss their plans with their faculty advisor for their research program and with the DMS for their major of interest. When applying for the MEng degree, he/she should indicate they are already a PhD student and plan to do the MEng concurrently with his/her PhD.

Changing a Course

MEng courses generally follow the calendar for graduate students on the university registrar’s website (https://registrar.duke.edu/calendars-key-dates/academic-calendar), including Drop/Add dates. This applies to master of engineering courses and courses under The Graduate School oversight.

A student seeking a course withdrawal after the end of the Drop/Add period will first meet with his/her DMS to discuss eligibility and desirability of making a change in the student’s semester schedule. In general, students found responsible for academic cheating in a course with a consequence of a reduced grade will not be eligible to withdraw from that class. If the student is authorized to withdraw by the DMS, the student will seek a signature from the course instructor. The requirement for the instructor’s signature provides an opportunity for the student to discuss the issues leading to the student’s request and to determine whether the student is fully informed about performance, grading, and readiness for the course. The signature also provides the mechanism by which instructors learn that the student will no longer be a member of the class. Withdrawal from a class after the end of the Drop/Add period will result in a W on the student’s transcript.

Tuition and fees issued for course withdrawals can be found on the bursar’s website (https://finance.duke.edu/bursar) for courses taken on the semester system.

Section Changes for Core Courses

Because the MEng Program has a short duration, some students may require a specific core Industry Prep course in a specific semester in order to graduate. Often, one or two sections of a particular core course fill up and students with elective course conflicts with the core course are unable to register. The MEng Program will initially request that students voluntarily redistribute from full sections to open sections. If a voluntary redistribution is not sufficient, students without conflicts may be randomly selected and switched to an alternate section of a core course in order to ensure that all students are able to complete their degree requirements.

Courses at Nearby Universities

Under the interinstitutional registration agreement, any MEng student enrolled as a degree-seeking student at any of the following universities may take technical electives at the following universities:

- North Carolina Central University
- North Carolina State University
- The University of North Carolina at Chapel Hill
- The University of North Carolina at Charlotte
- The University of North Carolina at Greensboro

Permission of the DMS is required and students will be charged Duke University tuition rates for such courses. Distance courses may not be taken under an interinstitutional transfer agreement. More information about interinstitutional registration can be found on the university registrar’s website at https://registrar.duke.edu/interinstitutional-duke-students-visiting-other-campuses.

MEng students are not permitted to take interinstitutional or non-Pratt classes during the summer.
Duke University Policies

Policies that apply to all students at Duke University may be found at https://policies.duke.edu/students/. In some cases, the MEng Program may have supplemental policies to Duke University Policies. If MEng policies or adjudication procedures contradict Duke University policies, Duke University policies and procedures take precedence.

4+1 Program for Duke Students

Advanced Duke undergraduates may participate in a 4+1 Program where both a bachelor’s degree and a MEng degree may be completed in five years. In the 4+1 Program, students may typically apply up to four graduate courses (at the 500 level or above) that were taken during their undergraduate career but not used to fulfill undergraduate degree requirements toward MEng degree requirements. Students on a case-by-case basis (such as AB Duke Scholarships that are available only to undergraduates) may be allowed to apply up to six courses.

To be considered for the 4+1 program, undergraduates may apply for a MEng admission decision during the standard admission cycle for entrance. Students should consider the following guidelines when submitting materials:

• apply in the spring of the student's junior year for admission in the fall semester of the student's senior year; or
• apply in the fall of the student's senior year for admission in the spring semester of the student's senior year.

Admission decisions will be made and communicated to the student following the published admissions decision calendar. Although an admission decision may be made before or during the student's senior year, matriculation into the MEng Program will generally not occur until the undergraduate degree has been earned. Matriculation will occur in Summer Session 1 after the spring semester of the senior year. Therefore, students will pay undergraduate tuition for the first four years of study and will pay MEng tuition for the fifth year of study.

MEng courses (see "Courses of Instruction" on page 56) are not typically available to undergraduates. After admission, 4+1 students work with the student records coordinator to register for MENG courses while an undergraduate. Not all graduate-level courses are available to undergraduates, and registration will only be provided for MENG courses. If a 4+1 student desires to take graduate-level elective classes that are not available to undergraduates, a 4+1 student should take these courses in the fifth year of study.

Generally, for graduate courses taken as an undergraduate to be transferred and counted toward the MEng degree:

• a maximum of four graduate-level courses may be transferred to the MEng degree
• transferred courses may not have been used to fulfill any undergraduate degree requirements
• transferred courses must fulfill MEng degree requirements in the major of interest
• a grade of B or better must have been earned in the course.

To transfer course credit, a matriculated student should complete the Pratt Credit Transfer Form and obtain approval from the associate dean for undergraduate studies in the Pratt School of Engineering or the student's academic dean in the Trinity College of Arts & Sciences and the DMS for the student's MEng degree. Please note that the undergraduate course credits transfer to the MEng degree, but the grade earned will remain part of the student's undergraduate GPA and will not be used to calculate a MEng GPA.

For students in the Trinity College of Arts & Sciences, preparation for success in a graduate engineering program may require that additional undergraduate courses must be taken as prerequisites. These prerequisite courses would be in addition to the 30 course credits required for the MEng degree. It is suggested that 4+1 students discuss their program of study with the DMS to understand the expectations in earning the degree. Depending on the extent of the prerequisite courses required, it may not be possible to complete the MEng degree in only one additional year.

Generally, Duke will not allow a gap greater than three months between the student’s senior year, and the transfer of credits from the student's undergraduate program into the MEng Program will also not be allowed.

Extra Courses/Semesters at Duke

The MEng degree can be earned in one to two years. Full-time students will typically take 9.0 to 12.0 course credits per semester. Students who desire to take 15.0 or more course credits in a semester should seek the approval of the DMS. For full-time students, the degree should be completed in no more than two years. Students are charged on a per-term basis; however, students in their final semester may elect to be charged on a per-credit basis if they wish to take fewer than 9.0 credits.

Full-time versus Part-time

To be considered a full-time student, students must be registered for at least 9.0 course credits. Enrolling in less than 9.0 course credits is considered part-time. International students must be enrolled full-time to maintain a valid visa with the exception of their final semester if their degree will be completed at the end of that semester. All students in their final semester must register for at least three tuition- and credit-bearing courses.

Graduation

It is each student’s responsibility to ensure that they have completed requirements for graduation, including the timely submission of the graduation application on DukeHub. A list of requirements is outlined below. Graduation will be delayed if a student does not complete all requirements within the required time frame.

MEng students in all disciplines must complete at least 30.0 course credits composed of key program elements, as follows:

• Core industry preparatory courses (6.0 course credits)
  • Master of Engineering 570 (Business Fundamentals for Engineers)
  • Master of Engineering 540 (Management of High Tech Industries)
• Departmental or interdisciplinary core courses (15.0 to 18.0 graduate course credits, varies by program)
• Technical electives in a concentrated area (6.0 to 9.0 graduate course credits, varies by program)
• Internship, Project, or Equivalent and Project Assessment
  • Master of Engineering 550 (Master of Engineering Internship/Project)
  • Master of Engineering 551 (Master of Engineering Internship/Project Assessment)

International students should ensure that their intended graduation date is consistent with their visa status (see the Duke Visa Services website).

Immunization Requirements

Students are required to be immunized against measles, rubella, tetanus, diphtheria and, in some cases, polio. Entering students must present proof of immunizations to Student Health Services prior to the student’s first day of class. Students not providing this information will not be permitted to attend class until proof of immunization is provided.

Independent Studies

Independent studies can be an effective tool for custom plans of study. However, they should not be overused or used to avoid more structured plans of study. Thus, an instructor and a DMS from the student’s major must approve all independent studies.

Internships

Internships are meant to provide an applied experience for the MEng student. Responsibility for finding an internship lies with each student. The Career Center offers resources to facilitate successful searches including resume reviews and interview practice. Different majors may have somewhat different requirements or suggestions regarding the internship; thus, students should check with their individual majors to ensure they are fulfilling specific major requirements.

Learning Objectives

• Apply engineering principles to solving one or more problems outside of the classroom environment.
• Define a problem and determine potential solutions.
• Appreciate the importance of organizational dynamics and work relationships.
• Practice professional communication in two forms: written and oral.
• Complement the material presented in the courses of the MEng degree program.
• Practice self-assessment.

Implementation Guidelines

General Guidelines

• The internship is a zero-credit course, but a course number (Master of Engineering 550) is provided to enable a simple way to track fulfillment of the requirement.
• The minimum hourly requirement for the internship is 320 hours (eight weeks, forty hours per week).

Internship Types

• The internship can be a paid or unpaid experience, including a company or government summer job.
• Internships in research labs are acceptable if the major allows such experiences and they meet the learning objectives.
• International internships are encouraged as long as they meet the learning objectives.
• Part-time internships are acceptable as long as they meet the minimum hourly requirement and the learning objectives.
• Internships before the student receives a bachelor’s degree will generally not be allowable as a MEng internship unless the student is enrolled in a concurrent bachelor’s/MEng Program.
• Guidelines on what constitutes an acceptable internship will be provided to all students, including the learning objectives and templates of the completion requirements.
• Some programs will accept a project or an applied research experience in lieu of an internship experience. Students who wish to complete a project or applied research experience should contact the DMS for additional information.

Completion Requirements

• Successful completion of the internship will be verified by the DMS/department for each major and will include a written and/or oral project report (implementation will be determined by each major, examples include: poster session, oral presentation, project report, sponsor verification, etc.).
• Upon completion of the internship all MEng students will fill out a common form for their file, which includes information such as the participating organization, the activities undertaken, the dates of the internship, the title of the position, the contact information of the student’s supervisor.
• Students must also enroll in MENG 551 in which they will write a report about his/her internship experience and complete a final presentation summarizing the experience.

Leave of Absence

The MEng Program is designed to accommodate both part-time and full-time students. It is generally expected that continuous enrollment will be the norm for MEng students regardless of their status as part-time or full-time. That is, for full-time students, continuous enrollment of three or more courses per semester and for part-time students, continuous enrollment of one or more courses per semester is generally expected.

It is understood that circumstances and personal situations may sometimes require that students interrupt their education for some period of time. The deadline for a leave of absence is the last day of classes in a semester and is not typically granted once classes have ended and final exams have begun. All leave of absence forms (personal, medical, and academic) can be found on the MEng Student Resources page of Sakai under Academic Forms.

A personal leave of absence is appropriate if a student has a personal situation to address away from school.
A medical leave of absence should be considered if, due to personal or health problems, continuing in courses is impossible for a student. A letter from the student's medical provider may be required to grant a medical leave of absence.

Except in unusual circumstances, a leave of absence of one or two years will be granted. A leave of absence greater than two years is generally not allowed. A student will need to begin the MEng Program again if a leave of absence of greater than two years has occurred. The directors of the MEng Program may make exceptions to this general rule.

After a leave of absence, students must reapply and admission is not guaranteed. Students must complete the application and include an explanation of the circumstances surrounding the withdrawal, along with a statement describing the withdrawal and their reflections during their time away from Duke.

Foreign national students who wish to work in the United States after graduating need to understand the laws and policies regarding a leave of absence and the requirements upon readmission. Returning from a leave of absence greater than five months will require the student to reapply for their F-1 visa prior to entering the United States and returning to the program at Duke University. Additionally, work authorization laws set forth by the United States Department of Homeland Security require foreign national students to have been pursuing their degrees as full-time students for at least one academic year, two consecutive semesters not including the summer term, to be eligible for either Curricular Practical Training or Optional Practical Training. Therefore, foreign national students returning from a leave of absence must complete two consecutive semesters of full-time course work, regardless of how many credits they have completed toward the master of engineering degree.

Nondegree Option

Students who do not intend to obtain a MEng degree but are interested in some of the MEng courses may take them as a nondegree student. The application for admission as a nondegree student is distinct from application as a MEng degree student. Thus, if a student decides to become a part-time or full-time MEng degree student, a separate application and processing fee are required. A maximum of two courses taken as a nondegree student may be applied to the Master of Engineering Program if the student is admitted. Note that tuition for these courses is paid separately from any other programs in which a student is currently enrolled. A nondegree student may be withdrawn from the active status if he/she has not taken a course for a period of three consecutive academic years. If withdrawn, the student will need to reapply to the program in order to take classes.

Non-MEng Student Registration

Graduate and professional students who are not enrolled in the Master of Engineering Program may register for some master of engineering courses (i.e., courses designated with MENG course numbers) on a space-available basis and with permission of the instructor. Instructors will require students to have sufficient background for the course as needed and may also limit outside enrollment for any pedagogical reason. Students who enroll in MEng courses as non-MEng students may not utilize these courses for a MEng degree if they have been used to satisfy coursework requirements for another degree at Duke.

For non-MEng students enrolling in MEng courses, no additional fees beyond their degree program fees will be charged by the MEng Program.

Regrading an Assignment, Exam, or a Course

Grading is up to the individual faculty member in each course; however, there are some general comments that apply to most courses. Most of the questions received after grading an exam or the entire course are very reasonable and well thought out. However, some indicate that it is necessary to reiterate the philosophy on grades:

- The only reason for a grade to change is if the faculty member made a mistake. This means that students must persuade the faculty member that a mistake has been made.
- This type of persuasion does not generally start with "I want...," "I need...," or even "the company I work for requires..."
- As students in an academic program that includes management and business training, students must take into account the manager’s (i.e., faculty member’s) perspective of fairness for the entire class. Please do not ask a faculty member to do something that is not fair for the entire class if they were in the faculty position.

If a student believes a mistake was made on their exams or final course grade, they are encouraged to speak to the professor. The addition of points, transcription of points from the assignments to the grade book, etc. are all possible sources of error. Answering questions from a particular reading or resource that the instructor did not have in mind when the question was written may also be a source of grading error. A clear and logical argument for such mistakes should be easy to make. If a student is struggling simply to improve their grade then it is likely they should not be requesting the regrading. If a student has evidence that a mistake was made in their grading and the instructor of the course does not consider this evidence the student should discuss the situation with the DMS.

Additionally, if a student is interviewing with companies that have a threshold of some minimum GPA and he or she is struggling to meet that minimum threshold, then perhaps the student is interviewing with the wrong companies. Generally, these same companies will ignore GPA in three years if the student can convey a record of accomplishments. If a student is on the borderline of GPA acceptability, then they are urged to consider changing their strategy of either which companies they would like to work for or how and when they plan to work for them. In those exceptional cases where a problem remains unresolved through discussions with the professor, the DMS, or the executive director of Professional Master’s Programs, an appeal may be made to the senior associate dean for education for the Pratt School of Engineering. Any appeal must be made in writing and must include a description of the error that was made in assigning a grade.

Transferring Policies

Transferring Credits from Non-Pratt PhD Programs at Duke University

If a student has completed the preliminary exams for their PhD outside of a Pratt School of Engineering Department at Duke University, they will be allowed to waive up to two courses in the MEng Program if at least two courses taken for their PhD fulfill requirements for the
MEng major of interest. Thus, a student can receive the MEng degree by completing eight additional courses and the internship/project/ equivalent requirement. Admission to the MEng Program is separate from admission to the student's PhD program.

Transferring Credits from The Fuqua School of Business into the MEng Program

If a student has completed the Fuqua MBA course requirements then they will be allowed to waive the two core industry prep courses in the MEng Program. Thus, a student can receive the MEng degree by completing eight additional courses, the internship/project/equivalent requirement. Admission to the MEng Program is separate from admission to The Fuqua School of Business.

Transferring Credits from Other Universities

The MEng degree program requires the successful completion of ten courses (30.0 credits) at Duke. Curricula meeting MEng degree requirements are specified by the student’s MEng degree program and in consultation with the DMS of that program. If a student has taken graduate courses at another university that were not used for that degree, these courses may be used to fulfill course requirements (but not credit requirements) for the Duke MEng degree. Otherwise, the transfer of credits for courses from other universities is not allowed, unless under the terms of an external agreement, as described below.

Duke University or the Pratt School of Engineering may enter into external agreements, similar to the interinstitutional agreement, with local North Carolina Universities that allow courses taken at other universities to count toward the degree. For more information, visit https://registrar.duke.edu/interinstitutional-duke-students-visiting-other-campuses.

In general, under such agreements, courses that transfer should be taken after matriculation to Duke University. A maximum of 4 courses (12.0 credits) may transfer. Additionally, students transferring credits from other universities must complete at least 6 courses (18.0 credits) through Duke University.

Prior to registering for any non-Duke course to be applied to the MEng degree, students must obtain course-transfer approval from the DMS and a faculty member whose teaching relates to the technical area of the course.

Students may be required to pay a study abroad fee for the semester away from Duke.

Transferring into Pratt’s Professional Master’s Programs from The Graduate School (MS/PhD to MEMP or MEng)

Students may transfer into professional master’s programs offered by the Pratt School of Engineering from The Graduate School with the approval of The Graduate School, the original department, and the new department. Students desiring a transfer must submit the following materials to the Professional Master’s Programs office:

- a signed Pratt School of Engineering’s Professional Master’s Transfer Form; and
- an Apply Yourself application (application fee is waived).

Students may be able to transfer some Graduate School application documents to the Pratt School of Engineering. To request the release of these documents, please submit the Authorization and Consent to Release of Educational Record Form to The Graduate School. If original letters of recommendation are not available, the student may request Letters of Recommendation from his/her current department.

Generally, if a student is leaving the MS or PhD degree and will not earn the full degree, the credits will transfer with grades that will count toward the professional master’s program grade point average.

Transferring within Pratt’s Professional Master’s Programs (MEMP to MEng or MEng to MEMP)

Students may transfer between professional master’s programs offered by the Pratt School of Engineering with the approval of the original department and the new department. If the transfer is approved, students must submit a signed Pratt School of Engineering Professional Master’s Transfer Form to the student records coordinator for processing.

Transferring from Pratt’s Professional Master’s Programs to The Graduate School (MEMP or MEng to MS/PhD)

Students transferring from professional master’s programs offered by the Pratt School of Engineering to The Graduate School should follow The Graduate School’s application process (https://gradschool.duke.edu/admissions). If transcripts, letters of recommendation, or other application information need to be forwarded to The Graduate School, please fill out the Authorization and Consent to Release of Educational Record Form and submit it to the Professional Master’s Programs office.

Undergraduate-Level Courses

Courses below the graduate level, typically below the 500 level, may not be applied toward the required credits needed for the MEng degree. With the approval of the instructor of the undergraduate course, the director of master’s studies, and the associate dean for Professional Master’s Programs, students may enroll in lower-level courses, but these courses will not count toward any graduation requirement and will not be included in a student’s GPA calculation.

Undergraduate courses taken prior to Fall 2018 will be grandfathered according to the prior policy below.

Prior to Fall 2018, master of engineering students may take courses at the undergraduate level. Undergraduate courses at the 200 level and lower may be taken but cannot be used to fulfill MEng degree requirements. For undergraduate courses at the 300 or 400 level, the MEng major of interest determines if these courses are allowed. If allowed, no more than two may be applied to MEng degree requirements. Additionally, students must receive a grade of B or better in the undergraduate course for it to be used to fulfill degree requirements.

Withdrawal, Involuntary Administrative

Students who exhibit harmful, potentially harmful, or disruptive behavior toward themselves or others may be subject to involuntary administrative withdrawal from the university if their behavior renders them unable to effectively function in the university community. Such behavior includes, but is not limited to, that which:

- poses a significant threat of danger and/or harm to self; and/or
- other members of the university community; and/or
- interferes with the lawful activities or basic rights of other students, university employees, or visitors.

Any member of the university community who has reason to believe that a student may meet the standard for an involuntary administrative withdrawal may contact the vice president for student affairs or his/her designee. The vice president or designee will conduct
a preliminary review in consultation with professionals from Student Health and/or Counseling and Psychological Services, the executive
director of Professional Master’s Programs, and/or other relevant individuals. The vice president or designee will meet, when possible, with
the student in question to discuss the information that has been presented and give the student an opportunity to respond. The vice president
or designee may mandate that the student be evaluated by a specified health professional within a given time frame if an evaluation has not
already been conducted. In the instances described above the vice president for student affairs or designee will make the final decision about
involuntary administrative withdrawal. A written statement citing the reasons will be forwarded to the executive director of Professional
Master’s Programs, who will withdraw the student from the university. At any point in the process the student may request a voluntary
withdrawal via the executive director of Professional Master’s Programs.

Academic Integrity

The Duke Community Standard

Duke University is a community dedicated to scholarship, leadership, and service and to the principles of honesty, fairness, respect, and
accountability. Citizens of this community commit to reflect upon and uphold these principles in all academic and nonacademic endeavors,
and to protect and promote a culture of integrity.

To uphold the Duke Community Standard:
- I will not lie, cheat, or steal in my academic endeavors;
- I will conduct myself honorably in all my endeavors; and
- I will act if the Standard is compromised.

It is implicit that every assignment submitted was done in accordance with the Duke Community Standard.

The Reaffirmation

Upon completion of each academic assignment, students may be expected to reaffirm the above commitment by signing this statement:

“I have adhered to the Duke Community Standard in completing this assignment.”

[Student Signature]

Definitions

Lying, Cheating (including plagiarism), Stealing. Definitions for these terms used in the Duke Community Standard appear at
https://studentaffairs.duke.edu/conduct/z-policies#dishonesty.

Application of the Community Standard to the Master of Engineering Program

The Duke Community Standard encompasses both academic and nonacademic endeavors. The first part of the pledge focuses on
academic endeavors and includes assignments (any work, required or volunteered, submitted for review and/or academic credit) and actions
that are taken to complete assignments. It also includes activities associated with a student’s job search since the definition of lying includes
"communicating untruths in order to gain an unfair academic or employment advantage." Some of the aspects of academic endeavors as they
apply to master of engineering students are:

- Group and Individual Work. Please note that in many classes there will be both group work and individual work. Students should be
sure they are clear about what level of consultation or collaboration with others is allowed.
- Studying from old exams, assignments, and case studies. Many courses have case studies, exercises, or problems that have been
used previously. Students should not use prior semesters’ work to prepare for an exam or assignment unless allowed by the instructor.
- Computer laboratories, library, meeting rooms, and other shared resources. There are numerous shared resources that are
available to support a student’s studies. Use these so that they will remain in good shape and equally accessible for others.
- Career Service Resources. Use these so that they will remain equally accessible for others and so that the MEng Program will remain
in good standing with the Career Center. Abide by Career Center policies found at https://studentaffairs.duke.edu/career/about-us/policies.
- Implicit Reaffirmation. Some instructors may not require students to include the reaffirmation on every assignment. If the instructor
does not require the students to write the reaffirmation ("I have adhered to the Duke Community Standard in completing this assignment") or
it is omitted from the assignment, it is implicit that every assignment submitted was done in accordance with the Duke Community Standard.

The second part of the Duke Community Standard extends its reach to nonacademic activities undertaken while enrolled as a MEng
student. Students are expected to:
- observe all local, state, and federal laws;
- abide by Duke policies (https://policies.duke.edu/students/); and
- always act professionally on-campus, off-campus, and online.

Jurisdiction

- The MEng Program may respond to any complaint of behavior that occurred within a student’s involvement in the MEng Program,
from application to graduation. However, complaints of discrimination, harassment (including sexual harassment which, in turn,
includes sexual violence and other forms of sexual misconduct), domestic violence, dating violence, and stalking will be addressed
under either the Student Sexual Misconduct Policy or the Harassment Policy and Procedures.
- Any MEng student is subject to disciplinary action. This includes students who have matriculated to, are currently enrolled in, are
on leave from, or have been readmitted (following a dismissal) to programs of the university.
- With the agreement of the vice president for student affairs and the dean of the Pratt School of Engineering, jurisdiction may
be extended to a student who has graduated and is alleged to have committed a violation during his/her master of engineering
career.
- The accused may also be a cohesive unit of the university, such as a recognized organization.
• The university reserves the right to take necessary and appropriate action to protect the safety and well-being of the campus community. Such action may include pursuing any violation of local, state or federal law, or university policy—on or off campus—that constitutes a direct or indirect threat to the university community. Further, students who are cited, arrested, or reported for repeated behavioral concerns off campus may be subject to disciplinary action. Additionally, students or groups who are on university-affiliated programs/outings may be subject to disciplinary action.

• In cases of alleged policy violations by a student enrolled in a joint degree program or interdisciplinary coursework within Duke, each school or unit (the home unit and the host unit) may have a stake in the adjudication. Thus, an ad hoc process shall be developed and an ad hoc panel formed with representatives from both institutions/units to handle the case. The sanctions may be different for each school or unit.

• For students completing interinstitutional coursework at other institutions, whether domestic or international, or for visiting students enrolled in classes at Duke, the home and the host institutions should confer and decide the process to be followed, which may include combined or separate elements. The sanction may be different for each institution.

Academic Standard Resolution Process

A flow chart for the resolution process for possible violations of the academic standard is given in Figure 1 (see above). The details for the process will be described in this section.

Students’ Obligation to Act on Potential Cases of Academic Dishonesty. The Duke Community Standard stresses the commitment that students share with faculty and administrators to enhance the climate for academic integrity at Duke University. The pledge beginning "I will not lie, cheat, or steal in my academic endeavors" is followed by "I will act if the standard is compromised." Both statements, like the Duke Community Standard as a whole, are statements of principles.

From principles flow policies. Stemming from this nontoleration statement ("I will act if the standard is compromised") is a policy that reflects an emphasis on taking constructive action of some sort if one witnesses or knows about dishonorable behavior connected to classroom assignments or activities.

Students who observe or hear about cheating are obligated to do something about it rather than to remain passive bystanders. They are obligated to take action. Several possible courses of action are available, and students should feel free to discuss them with trusted advisors before choosing among them:

• Alerting the faculty member that cheating may be occurring in the course. This alert can be in any form, including anonymously. The information will allow the instructor to consider corrective measures and to address the topic with the class.

• Calling attention to the suspected violation as it is occurring, in either a public or a private manner.

• Identifying the suspected cheater to the faculty member of the course.

• Unless required otherwise by a court of law, the report will be treated in total confidence: if the reporting student requests anonymity, the faculty member will not divulge the reporting student’s name to anyone, and the reporting student is under no obligation to take the information any place else. The faculty member will then act on this information, as the Faculty Handbook requires; at the very least, the instructor will let the suspected student know that his or her behavior has raised suspicion.

• Speaking directly with the student suspected of violating the Duke Community Standard, either to gain clarity about what happened or to put the person on alert that his or her behavior could have serious consequences.

• Discuss concerns about a suspected violation with the EDMS

Whatever the option chosen for reporting breaches of academic integrity, a student is responsible for doing something. This responsibility is an integral part of the Duke Community Standard and will help to build a community of honor whose values the Duke Community Standard articulates.
Investigating. Once a suspected violation has been brought to the attention of the EDMS, he/she may consult with the associate dean for student conduct to decide whether any further investigation is warranted and possible. They will also assess the severity of the allegations and the EDMS will review the disciplinary record of the person suspected to see if there are any previous violations that would preclude a “one-time faculty/student resolution.” If there is to be a further investigation, the EDMS will notify the individual/group that an academic investigation is being held and specify the university policy that is suspected of being violated. The EDMS will gather information regarding the alleged incident in order to determine the appropriate means of resolution. Investigations may include a review of related documents, interviews, or requests for written statements from any person involved in the alleged incident. Please be aware that students and organizations that lie during the investigation phase or any other aspect of the judicial process are violating the Duke Community Standard. Additionally, sanctions for multiple infractions are typically more severe than sanctions for single infractions.

Cases may be dropped for insufficient information, or referred for possible disciplinary action. In order for a case to be referred for possible disciplinary action, there must be sufficient information to believe that a policy violation may have occurred and that the alleged individual/group may be responsible.

Resolving Violations
Suspected violations are resolved dependent on their severity and the student’s disciplinary history.

One-Time Student-Faculty Resolution. When the suspected violation is “minimal,” such that it would not put the student at risk of suspension or expulsion (e.g., inadvertent omission of a citation or improper citation, minor misunderstanding about collaboration or use of materials on an assignment), and when the student has not committed any previous violations, it may be possible to resolve the situation at the level of the faculty member in charge of the course and the student. The first, and essential, stage in this process is for the faculty member to discuss the situation with the EDMS to determine if the suspected violation is in fact “minimal,” and if the student has previously been found responsible for any academic integrity violations. The EDMS serves as a “clearinghouse” for Duke Community Standard violations, so that

• there is consistency in defining what violations are “minimal”;
• the consequences for various types of violations are consistent; and
• repeated violations by the same student in different courses do not go unnoticed.

When these conditions for a “one-time student-faculty resolution” are met, the instructor may impose consequences for the violation and inform the EDMS of the consequences. These could include receiving failing grades on the assignment or the course, repeating one or more assignments, and/or completing a separate assignment intended to inform the student about academic integrity (e.g., a paper analyzing the consequences of failure to cite sources properly).

If the instructor does not want to use this option, he/she may request an administrative hearing. If the student does not agree with the resolution proposed by the instructor, he/she may request an administrative hearing.

Administrative Hearing. If the suspected violation is not “minimal,” if there have been previous violations, if the instructor chooses not to resolve the case, or if the student disagrees with the instructor’s proposed resolution, the case goes to an administrative hearing. If the violation is severe enough to put the student at risk of suspension or dismissal, and if the accused student denies the accusation, he/she may ask to bypass the administrative hearing level and go directly to an ad hoc judicial panel, as explained below.

If the student admits to violating the policy and accepts responsibility for his/her actions, the EDMS will recommend the appropriate disciplinary action. Consequences may include probation, suspension, or expulsion, and/or assignments intended to educate the student about academic standards. Consequences may include recommendations to the course instructor involving grades for one or more assignments or for the whole course, but final authority for these rests with the instructor.

Ad hoc Student Conduct Panel. Appeals from the administrative hearing stage will be heard by an ad hoc student conduct panel composed of four members, two MEng students and two faculty or staff members from the Pratt School of Engineering. The EDMS will be present to help maintain continuity and consistency of procedures, but will not be a voting member of that panel. The student members will be selected by the MEMP/MEng Graduate and Professional Student Council representative(s). If no representatives have yet been elected, the students will be selected by the EDMS. The faculty/staff members will be selected by the EDMS. The student suspected of the violation may object in writing if he/she believes any member of the proposed panel has a conflict of interest that could jeopardize a fair judgment. All members of the panel and the accused student should be notified at least forty-eight hours in advance of when and where the hearing will be and what evidence will be presented. Any of the student conduct panel members or the student may ask for evidence to be presented. The accused student may consult others for advice at his/her discretion and may bring a member of the Duke community (student, faculty or staff member) to the hearing as an advisor (but the advisor does not speak to the student conduct panel or any witnesses). The panel will attempt to decide, using a clear and convincing standard, whether a violation took place and what the consequences should be by consensus; where consensus is not possible, a vote will determine the outcome (thus, a 3-1 or 4-0 vote is necessary to reach a conclusion). Consequences may include probation, suspension, or expulsion, and/or assignments intended to educate the student about academic standards. Consequences may include recommendations to the course instructor involving grades for one or more assignments or for the whole course, but final authority for these rests with the instructor.

Ad hoc student conduct panels are not trials and are not constrained by rules of procedure and evidence typically used in a court of law. The university disciplinary system operates under a standard of fairness, which includes an opportunity for the student/group to be notified of the alleged incident and policy violations under consideration and an opportunity to be heard.

If the student believes the ad hoc student conduct panel failed to consider relevant information, violated fair procedures in some other way, or imposed consequences inappropriate to the offense, he/she may appeal the decision to the senior associate dean for research for the Pratt School of Engineering. This appeal must be made within seven days of the ad hoc student conduct panel’s decision. 
Nonacademic Standard Resolution Process

A flow chart for the resolution process for possible violations of the nonacademic standard is given in Figure 2 (see above). The details for the process will be described in this section.

**Investigating.** Once a suspected violation has been brought to the attention of the EDMS, he/she will consult with the associate dean for student conduct to decide whether any further investigation is warranted and possible. [Again, allegations of harassment will be handled under either the Student Sexual Misconduct Policy or the Harassment Policy and Procedures.] If there is to be a further investigation, the EDMS will notify the individual/group that an investigation is being held and specify the university policy that is suspected of being violated. He/she will gather information regarding the alleged incident in order to determine the appropriate means of resolution. Investigations may include a review of related documents, interviews, or requests for written statements from any person involved in the alleged incident. Please be aware that students and organizations that lie during the investigation phase or any other aspect of the process are violating the Duke Community Standard. Additionally, sanctions for multiple infractions are typically more severe than sanctions for single infractions.

In cases where local, state, and/or federal laws may have been violated, the investigation may be postponed until the outcome of the legal investigation has been completed. Additionally, prior to investigation and resolution, interim restrictions may be placed on a student/group to protect the health and safety of students or the community. These restrictions may include a "no contact order," removal of privileges, removal from or relocation within the residential community, suspension of activity, or suspension from the university. An interim suspension from the university may be imposed by the dean of the Pratt School of Engineering or the vice president for student affairs, or designee, and shall become effective immediately without prior notice whenever there is evidence that the continued presence of the student may pose a substantial and immediate threat to him/herself, to others, or to the university community.

Cases may be dropped for insufficient information, or referred for possible disciplinary action. In order for a case to be referred for possible disciplinary action, there must be sufficient information to believe that a policy violation may have occurred and that the alleged individual/group may be responsible.

**Resolving Violations.** Alleged nonacademic violations are handled by administrative hearing. If the student admits violating the policy and accepts responsibility for his/her actions, the EDMS, in consultation with the associate dean for student conduct, will recommend the appropriate disciplinary action. Consequences may include probation, suspension, or expulsion, and/or assignments intended to educate the student about appropriate community behavior.

If the student believes the administrative hearing failed to consider relevant information, violated fair procedures in some other way, or imposed consequences inappropriate to the offense, he/she may appeal the decision to the senior associate dean for research for the Pratt School of Engineering. This appeal must be made within seven days of the administrative hearing’s decision.

**Confidentiality**

Information gathered in the process of resolving alleged Duke Community Standard violations is confidential. Information may be shared with the following entities or under the following circumstances:

- with the accused student to inform her/him that he/she has been accused
- with school officials with legitimate interest, such as, instructor of the class, administrators of the Master of Engineering Program, Office of Student Affairs, Office of Student Conduct, Office of Institutional Equity
- to comply with a judicial order or lawfully issued subpoena
- to appropriate officials in cases of health and safety emergencies
- for any students involved in a joint degree program or interdisciplinary coursework, with the other degree program
- for student involved in interinstitutional coursework, with the other institution

Information about Duke Community Standard violations, their disposition and consequences may be shared, with any identifying information removed, for the purposes of:

- educating students and faculty about Duke Community Standard violations;
- ensuring consistency in responding to Duke Community Standard violations; and
- reporting on Duke Community Standard violations to the university or to facilitate research on academic integrity.
Curriculum Overview

MEng students in all disciplines must complete 30.0 course credits composed of key program elements as follows:

• Core industry preparatory courses (6.0 course credits)
  • Master of Engineering 540 (Management of High Tech Industries)
  • Master of Engineering 570 (Business Fundamentals for Engineers)
• Departmental or interdisciplinary core courses (15.0 to 18.0 course credits, varies by department)
• Technical electives in a concentrated area (6.0 to 9.0 course credits, varies by department)
• Internship, Project, or Equivalent and Assessment
  • Master of Engineering 550 (Master of Engineering Internship/Project)
  • Master of Engineering 551 (Master of Engineering Internship/Project Assessment)

Core Industry Preparatory Courses

The core industry preparatory courses provide students with the business skills they need to succeed in industry. Business savvy and technical expertise gained in the MEng Program will help students understand and work effectively in a corporate climate.

Departmental Courses

Each engineering discipline has defined a set of requirements for the MEng Program designed to give students in-depth technical knowledge of a particular field. The programs give students flexibility in course selection within the student’s chosen discipline, and the departmental course requirements vary. To learn more, choose a field of interest from this website: https://meng.pratt.duke.edu/courses-curriculum.

Technical Electives

Technical elective options give students more opportunity to specialize in an area of interest, and really take advantage of Duke’s leading status in several fields. Specializations like these will distinguish students with potential employers. Students will work with a faculty advisor to customize a curriculum that suits them. In some cases, an independent study sponsored by a faculty member may satisfy an elective requirement.

Technical Elective options vary. To learn more, choose a field of interest from this website: https://meng.pratt.duke.edu/courses-curriculum.

Internship/Project

MEng students are required to engage in an internship or project to complete the program. The many options available to fulfill this requirement give students a chance to practice what they are learning, ask questions and hone skills in a supportive environment. Internships may be paid or unpaid, corporate or governmental. Projects may take the form of applied research positions, provided the learning objectives are met.

A minimum of eight weeks of full-time work, or 320 hours, must be completed to satisfy the internship experience requirements. A final internship report and presentation must be submitted and both must be approved by the course instructor before credit can be given (MENG 551).

Students are responsible for finding and establishing an internship, though there are several resources that can help in the search. Students who are still enrolled in undergraduate study are encouraged to use their institution’s career center.

Grading Policies

Standard Courses: A=Exceptional; B=Good; C=Satisfactory; (A, B, and C grades may include + or -); F=Failure; I=Incomplete; N=No Grade Given; Z=Satisfactory Completion of the first term of a two-course sequence

Audits: AD=Audit; WA=Withdrawal Audit; N=No Grade Report

Credit/No Credit (including Internship Courses): CR=Passing; NC=Failure

Incomplete Grades

Incomplete grades are to be assigned if, because of illness or other extenuating circumstances, a student’s work in the course is incomplete. Please note that students who are given an incomplete must complete the work within one year or the grade will automatically convert to an F.

Retention of Examinations

Instructors are requested to retain all final examination papers for at least one year after the date the examination is given. Examination papers should be available for reference where a final grade is questioned.

Courses of Instruction

Master of Engineering (MENG)

540. Management of High Tech Industries. Decision making in complex environments; emphasis on project analysis, complex investment analyses, strategic decision making where outcomes depend on high technology, and the role of decisions in product development.
Management in high tech firms; emphasis on management of professionals, management of project-based and team-based organizational structures, and the role of the manager in expertise driven organizations. Prerequisite: enrollment in the Master of Engineering Management Program or Master of Engineering Program. 3 units. C-L: Engineering Management 540

550. Master of Engineering Internship/Project. Students gain practical engineering experience by participating in an internship or project involving a well-defined set of tasks or objectives. Prerequisite: enrollment in the Master of Engineering Program or faculty permission. 0 units.

551. Master of Engineering Internship/Project Assessment. Students will prepare a substantive assessment of their internship or project experience via a written report and/or oral presentation. Pre- or co-requisite: Completion of an internship or project. Prerequisite: enrollment in the Master of Engineering Program or faculty permission. 0 units.

570. Business Fundamentals for Engineers. This comprehensive course examines core and evolving concepts in the business fundamentals of successful technology-based companies including Business Plan Development & Strategies, Marketing, Product & Process Development processes, Intellectual Property, Accounting, Finance, and Operations. Students will learn the fundamentals essential to understanding all aspects of a business and will be able to converse in some depth in each of the areas studied upon completion. Other topics will include Supply Chain Management, Stage-Gate Development Cycles, Balances Scorecards, Blue Ocean Strategy, and Disruptive Technologies. 3 units.
Duke Kunshan University: Master of Engineering Program

Duke Kunshan University (DKU) is a partnership of Duke University and Wuhan University to create a world-class university offering a range of academic programs and conferences for students from China and throughout the world. Duke Kunshan University is located in Kunshan, Jiangsu province, China. Located in close proximity to both Shanghai and Suzhou, and connected to both by high-speed rail, the city of Kunshan is a center for business and high-tech research and manufacturing, and has one of the fastest growing economies in China.

Duke Kunshan University Master of Engineering (MEng) in Electrical and Computer Engineering

This two-year master’s degree program is built upon Duke’s Master of Engineering Program in electrical and computer engineering. This program was designed with Chinese industrial needs in mind—exposing students to US-style education as well as modern Chinese business practices and industry standards. Seeking to develop tech leaders with a global perspective, the program affords students the opportunity to learn business and industrial management fundamentals, as well as core engineering skills. The curriculum as a whole is designed to develop engineers who have the knowledge, leadership skills, and creative problem-solving abilities necessary to thrive in the global tech sector.

Students enrolled in the two-year program will spend their first year at Duke Kunshan University and their second year at Duke in the Pratt School of Engineering. Upon graduation, students will receive a Duke master of engineering degree and become alumni of both Duke University and Duke Kunshan University.

Curriculum Overview

Duke Kunshan University MEng students must complete 30.0 course credits composed of key program elements as follows:

- Two core industry preparatory courses (6.0 course credits)
  - Management of High Tech Industries
  - Business Fundamentals for Engineers
- Three core Electrical and Computer Engineering (ECE) concentration electives (9.0 course credits)
  - Concentration areas: Software development or big data analysis
- Two graduate technical electives (6.0 course credits)
- Three approved electives (9.0 course credits)
- Language and professional training courses (0 course credits)
- Summer Internship (0 course credits)

Core Industry Preparatory Courses

The core industry preparatory courses provide students with the business skills they need to succeed in industry. Business savvy and technical expertise gained in the Duke Kunshan University MEng Program will help students understand and work effectively in a corporate climate.

Courses of Instruction

Electrical and Computer Engineering (ECE)

550DK. Fundamentals of Computer Systems and Engineering. Fundamentals of computer systems and engineering for Master’s students whose undergraduate background did not cover this material. Topics covered include: Digital logic, assembly programming, computer architecture, memory hierarchies and technologies, IO, hardware implementation in VHDL, operating systems, and networking. Taught at Duke Kunshan University in Kunshan, China. Corequisite: ECE 551DK. Instructor: Hilton. 3 units.

551DK. Programming, Data Structures, and Algorithms in C++. Students learn to program in C and C++ with coverage of data structures (linked lists, binary trees, hash tables, graphs), Abstract Data Types (Stacks, Queues, Maps, Sets), and algorithms (sorting, graph search, minimal spanning tree). Efficiency of these structures and algorithms is compared via Big-O analysis. Brief coverage of concurrent (multi-threaded) programming. Emphasis is placed on defensive coding, and use of standard UNIX development tools in preparation for students’ entry into real world software development jobs. Taught at Duke Kunshan University in Kunshan, China. Instructor: Hilton. 3 units.


586K. Vector Space Methods with Applications. Covers key concepts from advanced linear algebra that are used regularly in ECE/CS journal papers on signal processing, communications, circuit design, and machine learning (e.g., logic, topology, vector spaces, optimization). For each topic, key mathematical ideas/proofs will be presented and applied. The goal is to use application topics such as Markov chains, alternating projections, and pattern classification to illustrate important mathematical topics. Background in linear algebra, a high-level programming language, and probability is assumed. Taught at Duke Kunshan University in Kunshan, China. Instructor: Staff. 3 units.
650K. Systems Programming and Engineering. Focuses on a range of topics that are central to both the design of operating systems and the programming system-level software. Students will apply knowledge of basic concepts in operating systems, networking, and programming towards these two areas. Topics covered will include concurrency, process management, hypervisors, networking, security, databases, and file systems. Students will be expected to demonstrate their understanding in these areas through a series of programming assignments covering these topics. Taught at Duke Kunshan University in Kunshan, China. Prerequisite: ECE 550DK and ECE 551DK. Instructor: Staff. 3 units.

651K. Software Engineering. Teaches students about all steps of the software development lifecycle: requirements definition, design, development, testing, and maintenance. The course assumes students are skilled object-oriented programmers from prior courses, but will include a rapid introduction to Java. Students complete team-based semester-long software project which will progress through all phases of the software lifecycle. Taught at Duke Kunshan University in Kunshan, China. Prerequisite: ECE 551DK. Instructor: Staff. 3 units

Master of Engineering (MENG)

550K. Master of Engineering Internship/Project. Students gain practical engineering experience by participating in an internship of project involving a well defined set of tasks or objectives. Prerequisite: enrollment in the Master of Engineering Program or faculty permission. Taught at Duke Kunshan University in Kunshan, China. 0 units.
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