HYPERSONICS (Z165)

Graduate Certificate Program
College: Engineering

ABSTRACT
This certificate will provide participants with a deep understanding of the key principles relevant to the flight of high-speed vehicles and projectiles in the atmosphere. Students will be introduced to crucial concepts in areas such as hypersonic aerodynamics, high-speed airbreathing propulsion, high-temperature structures and materials, and high-speed guidance, navigation & control. More specialized courses will also be offered in important areas such as high-temperature gas dynamics, transition, turbulence, experimental and computational methods, and vehicle design. The certificate will prepare students for a career in hypersonics-related fields in both the commercial and defense sectors.

FINANCIAL ASSISTANCE
Students in this program pay a special tuition rate, which does not differ between residents and non-residents of Maryland. This rate is not fully covered by graduate assistantships, fellowships or the tuition remission. Additional graduate student fees are charged. **Tuition and fees are subject to change.** This program does not provide departmental assistantships or fellowships. Loans, work-study and need-based grants for citizens and permanent residents with demonstrated financial need may submit a Free Application for Federal Student Aid (FAFSA) by appropriate FAFSA deadlines. For more information on this process, visit: https://fafsa.ed.gov/deadlines.htm.

CONTACT
Visit the MAGE Website for Additional Information: www.mage.umd.edu (https://mage.umd.edu/)

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College Park, MD 20742
**Telephone:** 301.405.0362
**Email:** mage@umd.edu

**Website:** https://mage.umd.edu/

**Courses:** ENCH (https://umd-curr.courseleaf.com/graduate/courses/ench/)
**Courses:** ENPM (https://umd-curr.courseleaf.com/graduate/courses/enpm/)

ADMISSIONS

GENERAL REQUIREMENTS

• Statement of Purpose (https://advancedengineering.umd.edu/application-process/)
• Transcript(s)
• TOEFL/IELTS/PTE (international graduate students (https://gradschool.umd.edu/admissions/english-language-proficiency-requirements/))

PROGRAM-SPECIFIC REQUIREMENTS

• See department for details

APPLICATION DEADLINES

<table>
<thead>
<tr>
<th>Type of Applicant</th>
<th>Fall Deadline</th>
<th>Spring Deadline</th>
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<tbody>
<tr>
<td>Domestic Applicants</td>
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<td>US Citizens and Permanent</td>
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<td>Residents</td>
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<td>International Applicants</td>
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<td>F (student) or J (exchange</td>
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<td>visitor) visas; A,E,G,H,I and L visas and immigrants</td>
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RESOURCES AND LINKS:

**Program Website:** mage.umd.edu (https://mage.umd.edu/)
**Application Process:** gradschool.umd.edu/admissions (https://gradschool.umd.edu/admissions/)

REQUIREMENTS

• Hypersonics, Post-Baccalaureate Certificate (P.B.C.) (https://academiccatalog.umd.edu/graduate/programs/hypersonics-z165/hypersonics-pbc/)