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Guide to Graduate Study Policies and Procedures for the Department of Fire Protection Engineering

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1. INTRODUCTION

The Department of Fire Protection Engineering (FPE) offers an environment for advanced graduate study and research in the broad area of fire safety. The department offers a Master of Science (M.S.) degree through the department, a Master of Engineering (M.Eng.) degree and a Graduate Certificate in Engineering through the Maryland Applied Graduate Engineering program, along with courses outside of a degree program for those with the status of Advanced Special Students. The M.S. degree is offered on-campus; the M.Eng. degree and Graduate Certificate in Engineering are offered both on-campus and online.

Information about the on-campus degree programs may be obtained from the FPE Director of Graduate Studies, <u>Dr. Arnaud Trouvé</u>. Information about online courses for the M.Eng. degree, Graduate Certificate in Engineering, or non-degree programs may be obtained from <u>Dr. James A. Milke</u>, FPE Professor Emeriti and Director of the FPE Distance Learning Program.

This guide has been prepared as an aid to prospective and current graduate students along with faculty. It describes the policies, rules and regulations concerning graduate studies in the FPE department, including the responsibilities of both the student and advisor. Many of these rules have evolved since the initiation of the graduate program. Others are relatively new statements of policy that are necessary for a reasonable organization of the graduate program.

Additional information about fire protection engineering graduate programs and requirements for Master of Science degrees are available in the <u>University of Maryland Graduate Catalog</u>. This Guide provides details such as policy and procedures. **All policies adopted by the Graduate School supersede those stated in this Guide.** Furthermore, because the policies included in this Guide are constantly under evaluation, the FPE department may choose to deviate from the policies stated in this Guide.

Goals of the FPE Graduate Program

The mission of the Department of Fire Protection Engineering is to reduce the burden of fire losses on life and property by providing the highest quality of scientifically based education, research and outreach in fire protection engineering, and in fire-related safety, health and environmental issues. The FPE graduate program provides the unique interdisciplinary academic foundation and

scholarly training needed to address complex engineering problems with emphasis on advancing the field of fire protection engineering.

The educational objectives of the FPE Master of Science and Master of Engineering degree programs are to produce graduates who:

- Have the technical knowledge and skills needed to practice fire protection engineering locally, nationally and internationally in a variety of modern professional settings;
- Have the ability to understand and communicate societal, environmental, economic and safety implications of engineering decisions on the local and global communities;
- Are prepared to attain professional certification and licensure;
- Appreciate the need to maintain continual professional competency and to practice ethically;
- Are prepared to participate in the development and promotion of fire protection engineering and assume technical and/or business leadership positions.

Some additional educational objectives specific to the FPE Master of Science degree program are to produce graduates who:

- Appreciate the importance of scientific research as a mechanism to strengthen the technical basis of fire protection engineering;
- Have the basic competencies needed to pursue advanced studies (e.g., Ph.D.) in fire protection engineering or related fields.

The program is designed to stimulate intellectual growth, increase the level of objective understanding of the physical world and further develop capabilities for analysis and synthesis in order to produce premier fire safety engineers and/or researchers. Students in the Combined Programs are expected to graduate after 12 months (Combined Bachelor of Science/Master of Science and Combined Bachelor of Science/Master of Engineering students) or 16 months (other students) in the program.

A list of recent Master of Science graduates and access to their thesis manuscripts can be <u>found on this website</u>.

Doctor of Philosophy (Ph.D.) Degree

The FPE department does not confer a Ph.D. degree. However, students may pursue a Ph.D. degree with a strong emphasis on fire protection engineering by enrolling in the Ph.D. programs of other University of Maryland departments, such as Mechanical, Aerospace or Civil Engineering. In each case, students will fulfill the requirements of the specific department that is hosting them. Fire Protection Engineering faculty are affiliated with these departments and can serve as Ph.D. advisors. Information on the Ph.D. degree options may be obtained from the FPE Director of Graduate Studies, <u>Dr. Arnaud Trouvé</u>.

A list of recent Ph.D. graduates and access to their Ph.D. manuscripts can be found on this website.

2. ADMISSION REQUIREMENTS AND PROCEDURES

The decision to admit students into the FPE Master of Engineering and Graduate Certificate in Engineering degree programs is made by the Maryland Graduate Applied Engineering (MAGE) program. Visit the <u>MAGE program website</u> for more information on admission requirements for both the on-campus and the online options.

The information in this section is for students applying to the FPE Master of Science degree program. The decision to admit students into the FPE Master of Science degree program is made by the Graduate School after reviewing the recommendations of the department based on the applicant's ability to carry out scholarly work at the graduate level.

Admissions Procedures

a. The application and supporting documentation are submitted to the Graduate School (Application deadlines are available on this website). The application will require submission of: a resume; an essay or statement of goals and experiences; three letters of recommendation; and official copies of transcripts. For applicants who obtained a Bachelor of Science degree from the University of Maryland FPE department, the application material submissions may be reduced to: a resume; an essay or statement of goals and experiences; and one letter of recommendation. Scores from the Graduate Record Examination (GRE) are required for applicants to the FPE Master of Science program, with the exception of students who hold a Bachelor of Science degree from the University of Maryland College Park. (Note that GRE score submission is recommended but not required for applicants to the FPE Master of Engineering program. For more information, visit this website.)

In addition, in the case of international applicants from non-English speaking countries, the application process requires scores from the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS) or the Pearson Test of English (PTE). Language proficiency requirements <u>can be reviewed on this website</u>. Information on the application system and processes may be obtained from the FPE Associate Director for Programs, <u>Nicole Hollywood</u> (*Tel.*: (1) 301-405-3994).

- b. The Graduate School forwards a summary of the application to the FPE department. For international applicants, the file is also sent to the International Student & Scholar Services (ISSS) for evaluation of the applicant's academic record, English language skills, and financial support.
- c. The application is reviewed by the FPE department's Director of Graduate Studies.
- d. The recommendation of the FPE Director of Graduate Studies is sent to the Graduate School.
- e. The Graduate School (and ISSS for international applicants) reviews the applicant's file again, makes the final decision, notifies the applicant of the final decision, and gives detailed instructions to successful applicants for completion of their registration.

Minimum Requirements

a. Applicants should have a Bachelor of Science degree in engineering, or a related field from an accredited institution.

- b. Applicants should have taken the following 4 prerequisite courses: differential equations, fluid mechanics, heat transfer, structural mechanics (or strength of materials). Applicants who have not completed all prerequisites may still be admitted on a provisional basis if they demonstrate satisfactory academic performance in a related field and/or relevant work experience; these applicants would then be asked to complete the prerequisite courses during their first semester at University of Maryland; note that provisional admission remains an exception and that corresponding applications are evaluated on a case-by-case basis.
- c. Applicants should have an undergraduate GPA of at least 3.0/4.0.
- d. Applicants from non-English speaking countries should satisfy the requirement of the International Student & Scholar Services (ISSS), which generally involves submitting scores from the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS) or the Pearson Test of English (PTE). For more information, visit the English language proficiency portion of the Graduate School website and the international student admissions portion of the Graduate School website.

3. SELECTION OF COURSEWORK ADVISOR

Each graduate student in the department has a coursework advisor.

- Master of Engineering graduate students enrolled in the online program are advised by <u>Dr. James A. Milke</u>, FPE Professor and Director of the FPE Distance Learning Program.
- Master of Engineering graduate students enrolled in the on-campus program are advised by <u>Dr. Arnaud Trouvé</u>, FPE Professor and Chair, and Director of Graduate Studies.
- Master of Science graduate students are advised by the member of the FPE faculty who they have elected as their thesis advisor: each new Master of Science graduate student entering the department must initiate contact with the faculty to obtain an advisor based on his/her indicated research area of interest. The FPE Director of Graduate Studies, Dr. Arnaud Trouvé, is available to facilitate these contacts; the Master of Science advisor should be identified by the end of the student's first semester of study. A Master of Science student may elect to change advisors, subject to the approval of the new advisor and the FPE Director of Graduate Studies, at any later date.

4. DEGREE REQUIREMENTS FOR THE MASTER DEGREES

4.1 Master of Science degree

- a. Complete 8 approved courses (24 credits) in agreement with the requirements listed in Section 5.1. Complete at least 6 credits of thesis research (ENFP799).
- b. Maintain a GPA of 3.0 or better.
- c. Submit a satisfactory Master of Science thesis and successfully defend the thesis in an oral examination.
- d. Have at least 1 credit of registration in the graduation semester or summer term.
- e. Complete the degree within 5 years.

Each student is responsible for maintaining a good academic standing during their program. In case of subpar performance, the Master of Science student is required to communicate with his/her coursework advisor (see Section 3) and to develop a plan to improve his/her academic record during the following term.

4.2 Master of Engineering degree

- a. Complete 10 approved courses (30 credits) in agreement with the requirements listed in Section 5.2.
- b. Maintain a GPA of 3.0 or better.
- c. Have at least 1 credit of registration in the graduation semester or summer term.
- d. Complete the degree within 5 years.

Each student is responsible for maintaining a good academic standing during their program. In case of subpar performance, the Master of Engineering student is required to communicate with his/her coursework advisor (see Section 3) and to develop a plan to improve his/her academic record during the following term.

5. COURSEWORK REQUIREMENTS

Each graduate student should propose a list of courses to be taken that will fulfill the coursework requirement. This list should be discussed with the student's coursework advisor (see Section 3 above). Acceptability of the proposed list, as determined by the coursework advisor and approved by the FPE Director of Graduate Studies for on-campus students or the Director of the FPE Distance Learning Program for online students, should be based on the student's stated objectives and background.

5.1 Master of Science Degree

5.1.1 Combined Bachelor of Science/Master of Science Degree Programs

Students enrolled in the Department of Fire Protection Engineering and/or Mechanical Engineering Bachelor of Science programs at the University of Maryland may participate in the Combined Bachelor of Science/Master of Science degree program in Fire Protection Engineering.

The Combined Bachelor of Science/Master of Science degree programs require a 3.50 or higher cumulative GPA and 90 or more degree credits. The Combined Program allows students to complete both the bachelor and master degrees in approximately five to five and a half years.

Joining the Combined Programs in Fire Protection Engineering is a two-step process. In the first step, students should meet with the Fire Protection Engineering advisor during the first term of their junior year to discuss program application and procedural forms. All forms should be submitted no later than one week before the first meeting of the student's first 600 level class.

Once the student reaches his/her final academic year in the bachelor of science program, the second step is application to the <u>University of Maryland Graduate School</u>. Deadlines for applying to the graduate programs in Fire Protection Engineering may be found on the <u>University of Maryland Graduate School website</u>.

Interested and qualified undergraduates may take up to 3 graduate (600+) courses (9 credits). The credits will be double-counted as part of their coursework requirement for both the bachelor and

master degrees. Combined program curricular requirements and a sample plan are available for the Master of Science programs at the links provided in this list:

- Bachelor Degree in Mechanical Engineering and Master of Science Degree in Fire Protection Engineering
- Bachelor Degree in Fire Protection Engineering and Master of Science Degree in Fire Protection Engineering

Course Selections for a Combined Program student joining the Master of Science in Fire Protection Engineering is made from:

• Three double-counted courses from the following paired 400/600 level courses:

ENFP405/621	Structural Fire Protection/Analytical Procedures of Structural Fire		
	Protection		
ENFP410/610	Special Hazard Suppression Systems/Advanced Fire Suppression		
ENFP413/613	Advanced Life Safety Analysis/Human Response to Fire		
ENFP415/651	Fire Dynamics/Advanced Fire Dynamics		
ENFP440/627	NFP440/627 Smoke Management and Fire Alarm Systems/Smoke Detection and		
	Management		
ENFP464/664	Industrial Fire Safety		
ENFP465/665	ENFP465/665 Fire and Explosion: Investigation and Reconstruction		
ENFP467/667	Wildland Fires: Science and Applications		

Note that each paired 400/600 level course is treated as a single course and students (whether students enrolled in a Bachelor of Science, Master of Science, Master of Engineering, combined Bachelor of Science/Master of Science or combined Bachelor of Science/Master of Engineering degree program) can only take the course once.

In the case of students enrolled in the Combined Bachelor of Science in Mechanical Engineering /Master of Science in Fire Protection Engineering degree program, the following course is also accepted as a double-counted course:

ENFP601 Fundamentals of Fire Safety

• Two courses selected from among:

ENFP620	Fire Dynamics Laboratory
ENFP626	Computational Fire Modeling
ENFP630	Diffusion Flames and Burning Rate Theory
ENFP671	Material Flammability

• One engineering mathematics course, approved by the student's advisor, based on the student's intended course of study and research. Examples of approved mathematics courses include: MATH, STAT or AMSC 400+; or any of the following:

ENCE621	Uncertainty Modeling and Analysis
ENME605	Advanced Systems Control: Linear Systems
ENME610	Engineering Optimization
ENME625	Multidisciplinary Optimization
ENME673	Energy and Variational Methods in Applied Mechanics
ENRE620	Mathematical Techniques of Reliability Engineering

Bayesian Analysis ENRE643

ENRE655 Advanced Methods in Reliability Modeling

Two courses of the student's choice at the 400+ level subjected to approval of the FPE Director of Graduate Studies.

5.1.2 Master of Science Degree Program for Students Holding a University of Maryland FPE **Bachelor of Science Degree**

Students enrolled in the University of Maryland Bachelor of Science in Fire Protection Engineering degree program (and who are not part of a combined degree program, see Section 5.1.1) may apply to the Master of Science in Fire Protection Engineering degree program. Requirements for the completion of the combined degree programs include:

Two courses selected from among:

ENFP620 Fire Dynamics Laboratory Computational Fire Modeling ENFP626

ENFP630 Diffusion Flames and Burning Rate Theory

Material Flammability ENFP671

Two courses at the 600+ level selected from the following list of paired 400/600 level:

ENFP464/664 Industrial Fire Safety

ENFP465/665 Fire and Explosion: Investigation and Reconstruction

ENFP467/667 Wildland Fires: Science and Applications

Note that each paired 400/600 level course is treated as a single course and students (whether students enrolled in a Bachelor of Science, Master of Science, Master of Engineering, combined Bachelor of Science/Master of Science or combined Bachelor of Science/Master of Engineering degree program) can only take the course once.

One engineering mathematics course, approved by the student's advisor, based on the student's intended course of study and research. Examples of approved mathematics courses include: MATH, STAT or AMSC 400+; or any of the following:

ENCE621	Uncertainty Modeling and Analysis
ENME605	Advanced Systems Control: Linear Systems
ENME610	Engineering Optimization
ENME625	Multidisciplinary Optimization
ENME673	Energy and Variational Methods in Applied Mechanics
ENRE620	Mathematical Techniques of Reliability Engineering
ENRE643	Bayesian Analysis
ENRE655	Advanced Methods in Reliability Modeling

Three courses of the student's choice at the 400+ level, at least one of which need to be from within the FPE department portfolio and subjected to approval of the FPE Director of Graduate Studies.

5.1.3 Master of Science Degree Program for Students Not Holding a University of Maryland **FPE Bachelor of Science Degree**

For students who join the Fire Protection Engineering program from other disciplines and/or other universities, the following set of coursework is required:

ENFP651 Advanced Fire Dynamics

Additional course selection for the Master of Science in Fire Protection Engineering is made from:

• Two courses selected from among:

ENFP620	Fire Dynamics Laboratory
ENFP626	Computational Fire Modeling
ENFP630	Diffusion Flames and Burning Rate Theory
ENFP671	Material Flammability

• Four courses at the 600+ level selected from the following list:

ENFP601	Fundamentals of Fire Safety ¹		
ENFP405/621	Structural Fire Protection/Analytical Procedures of Structural Fire		
	Protection		
ENFP410/610	Special Hazard Suppression Systems/Advanced Fire Suppression		
ENFP413/613	Advanced Life Safety Analysis/Human Response to Fire		
ENFP440/627	Smoke Management and Fire Alarm Systems/Smoke Detection and		
	Management		
ENFP464/664	Industrial Fire Safety		
ENFP465/665	ENFP465/665 Fire and Explosion: Investigation and Reconstruction		
ENFP467/667	Wildland Fires: Science and Application		

Note that each paired 400/600 level course is treated as a single course and students (whether students enrolled in a Bachelor of Science, Master of Science, Master of Engineering, combined Bachelor of Science/Master of Science or combined Bachelor of Science/Master of Engineering degree program) can only take the course once.

• One engineering mathematics course, approved by the student's advisor, based on the student's intended course of study and research. Examples of approved mathematics courses include: MATH, STAT or AMSC 400+; or any of the following:

ENCE621	Uncertainty Modeling and Analysis
ENME605	Advanced Systems Control: Linear Systems
ENME610	Engineering Optimization
ENME625	Multidisciplinary Optimization
ENME673	Energy and Variational Methods in Applied Mechanics
ENRE620	Mathematical Techniques of Reliability Engineering
ENRE643	Bayesian Analysis
ENRE655	Advanced Methods in Reliability Modeling

5.2 Master of Engineering Degree

5.2.1 Combined Bachelor of Science/Master of Engineering Degree Program

¹ Highly recommended for students without a Fire Protection Engineering bachelor degree.

Students enrolled in the Department of Fire Protection Engineering Bachelor of Science program at the University of Maryland may participate in the Combined Bachelor of Science/Master of Engineering degree program in Fire Protection Engineering.

The Combined Bachelor of Science/Master of Engineering degree program requires a 3.50 or higher cumulative GPA and 90 or more degree credits. The Combined Program allows students to complete both the bachelor and master degrees in approximately five to five and a half years.

Joining the Combined Programs in Fire Protection Engineering is a two-step process. In the first step, students should meet with the Fire Protection Engineering advisor during the first term of their junior year to discuss program application and procedural forms. All forms should be submitted no later than one week before the first meeting of the student's first 600 level class.

Once the student reaches his/her final academic year in the bachelor of science program, the second step is application to the <u>University of Maryland Graduate School</u>. Deadlines for applying to the FPE professional (online and on campus) graduate programs may be found on the <u>Maryland Applied Graduate Engineering Application Process website</u>.

Interested and qualified undergraduates may take up to 3 graduate (600+) courses (9 credits). The credits will be double-counted as part of their coursework requirement for both the bachelor and master degrees. Combined program curricular requirements and a sample plan can be <u>found on this website</u>.

Course Selections for a Combined Program student joining the Master of Engineering in Fire Protection Engineering is made from:

• Three double-counted courses from the following paired 400/600 level courses:

ENFP405/621	Structural Fire Protection/Analytical Procedures of Structural Fire		
	Protection		
ENFP410/610	Special Hazard Suppression Systems/Advanced Fire Suppression		
ENFP413/613	Advanced Life Safety Analysis/Human Response to Fire		
ENFP415/651	/651 Fire Dynamics/Advanced Fire Dynamics		
ENFP440/627 Smoke Management and Fire Alarm Systems/Smoke Detection ar			
Management			
ENFP464/664	Industrial Fire Safety		
ENFP465/665	Fire and Explosion: Investigation and Reconstruction		
ENFP467/667 Wildland Fires: Science and Applications			

Note that each paired 400/600 level course is treated as a single course and students (whether students enrolled in a Bachelor of Science, Master of Science, Master of Engineering, combined Bachelor of Science/Master of Science or combined Bachelor of Science/Master of Engineering degree program) can only take the course once.

Additional requirements for the completion of the combined degree program include a selection of seven courses in math and engineering, at least three of which need to be in the FPE department portfolio.

5.2.2 Master of Engineering Degree Program for Students Holding or Not Holding a University of Maryland FPE Bachelor of Science Degree

Students in the University of Maryland FPE Bachelor of Science program or students from other disciplines or universities may apply to the Master of Engineering degree program. Degree requirements for the Master of Engineering in Fire Protection Engineering can be found on the Maryland Applied Graduate Engineering Degree Planning website. Degree requirements include ten courses in math and engineering, at least six of which need to be in the FPE department portfolio.

6. REQUIREMENTS FOR THESIS RESEARCH

A Master of Science candidate must perform a body of research commensurate with the level of the Master of Science Degree. The Master of Science thesis should make a contribution to the advancement in the state-of-the-art in fire safety science and/or fire safety engineering. With this objective in mind, Master of Science students are strongly encouraged to adopt the quality standards of the fire research community and to submit their research contribution for publication in an archival journal and/or for presentation in a professional meeting. During his/her Thesis work, the Master of Science student is assisted and supervised by his/her advisor (see section 3).

The procedure for review of a Master of Science thesis is as follows:

- a. The student, in consultation with his/her faculty advisor, proposes a committee of at least three members of the Graduate Faculty to review the thesis (with the advisor as the chair of the committee). Committee members should have backgrounds and interests related to the subject matter of the thesis. The committee must be approved by the Graduate School by submitting the form "Nomination of Thesis or Dissertation Committee."
- b. The student is responsible for providing each committee member with a typed, advisor-approved copy of the thesis manuscript at least one week before the oral examination (the "defense").
- c. The committee should judge the quality of the research as well as the clarity and literary correctness of the thesis. The student is responsible for meeting any requirement of style or format stipulated by the Graduate School (the student is expected to review the *Electronic Thesis and Dissertation Style Guide*).
- d. An oral examination ("defense") on the thesis and coursework is required and is administered by the committee. The advisor is responsible for planning, providing notices and holding this defense. The defense is typically 2 hours long.
- e. For committees with three members, the thesis and defense must have unanimous approval. For committees with more than three members, up to one negative vote is acceptable.
- f. Should a student not pass the defense, the defense may be repeated once.
- g. The student is responsible for meeting all deadlines of the Graduate School. These include the submission of all forms identified in Section 7 of this Guide.

Visit this <u>Graduate School policies website</u> and this <u>Graduate School academic progress website</u> for more information.

Information regarding the procedure to submit candidacy for graduation:

a. The student must submit an Application for Graduation, the Approved Program Form and all Thesis related forms by the posted deadlines of the Graduate School. For more information on forms, please see the Forms section of this Guide.

b. If a student does apply for candidacy but does not submit these forms by the posted deadlines, he/she will NOT be considered for graduation in the term for which they originally applied. Instead, his/her candidacy will be moved to the following term. Continuous registration may be required. Questions or concerns may be addressed to the FPE Associate Director for Programs, Nicole Hollywood (Tel.: (1) 301-405-3994).

7. FORMS

Forms must be submitted to the Graduate School at key points during a student's graduate program. These forms include:

- a. "Application for Graduation": the application must be submitted at the beginning of any semester during which the student believes he/she may complete all requirements for the degree (the application must be re-submitted in any subsequent semester if the student does not finish during the semester for which he/she first applied).
- b. "Approved Program for the Master of": in general, the form must be submitted during the first month of the final semester.
- c. "Nomination of Thesis or Dissertation Committee": the form must be submitted at least 6 weeks before the scheduled defense.
- d. "Thesis and Dissertation Electronic Publication Form": the deadline to submit this form depends on the semester of graduation (for more information, visit this website).

For more information on forms and deadlines, visit the <u>Graduate School Deadlines website</u> and the Graduate School forms website.

8. FINANCIAL SUPPORT

Information on University of Maryland tuition and fees can be found at <u>the Bursar's website</u>. The FPE department offers several types of financial support through various research assistantships (RA) or partial teaching assistantships (TA) (see the Table below).

Graduate Research Assistantships (RA) are available for Master of Science students in FPE through:

- The John L. Bryan Chair endowment
 - o One (1) John L. Bryan Chair Assistantship
- Several fellowships
 - o Two (2) UL Fire Safety Research Institute (FSRI) Fellowships
 - One (1) Fire & Risk Alliance (FRA) Fellowship
 - o One (1) FM Fellowship

See the FPE Department Financial Support website for details.

The full Research Assistantship positions feature 100% of the standard academic stipend (see the Types of Graduate Assistantships Table below) and require a commitment of 20 hours per week during the academic year and 40 hours per week during Summer. These assistantships are awarded on a competitive basis through one or several "Calls for Application."

The "Call for Application" for the John L. Bryan Chair Assistantship is posted on the FPE website once a year, with a deadline usually in mid-February. The "Calls for Application" for the FSRI, FRA, and FM Fellowships are posted on the FPE website twice a year, with a deadline usually in mid-February and end-of-August.

Additional research assistantships (RA) are awarded by individual faculty members from their research budgets. These Research Assistant positions are limited by available resources and are dependent on the number of research grants awarded to the faculty. Therefore, these assistantships are awarded on a competitive basis. Note that there is no guarantee that once financial assistance is granted to a student, it will continue for the duration of the student's program. Such continuation is dependent upon available resources and performance of the student as a research assistant. It is the student's responsibility to contact the faculty members to seek and secure research funding. The FPE department's Director of Graduate Studies is available to facilitate these contacts.

The department also offers partial teaching assistantships (TA). The partial teaching assistant positions feature 50% of the standard academic stipend (see the Types of Graduate Assistantships Table below) and require a commitment of 10 hours per week to teaching assignments (e.g. grading, proctoring, etc). The partial TA positions associated with the on-campus Bachelor of Science program are effective during the academic year (9 months) and do not provide summer support; the partial TA positions associated with the online Master of Engineering program are effective during the entire calendar year (12 months) and provide summer support. TA appointments are made on a term basis for Fall, Spring and Summer terms.

The academic stipends for graduate assistantships have been standardized in the School of Engineering (for more information, <u>visit this link</u>). Benefits are offered with any appointment (other than hourly), and include health insurance and tuition remission.

For questions or inquiries related to TA or RA opportunities in Fire Protection Engineering, contact Dr. Arnaud Trouvé.

Students are also encouraged to seek other external funding opportunities, for instance via University of Maryland <u>student or part time positions and graduate assistantships, fire protection engineering Co-op experiences or internships</u> local to the Baltimore-Washington D.C. area.

Type	Hours obligated	Appointment	Benefits
Full RA	20 hours/week during the academic year; 40 hours/week during Summer	100% RA	100% stipend; Full health and full tuition*
Partial TA	10 hours/week during Fall/Spring/Summer terms	50% TA	50% stipend; Full health and pro-rated

Types of Graduate Assistantships Table

^{*}Full tuition means 10 credits during Fall or Spring semesters and 5 credits during Summer

9. EXIT INTERVIEW FOR Master of Science GRADUATES

An exit interview is administered by the FPE Director of Graduate Studies asking Master of Science students who have completed all of their degree requirements for evaluation and comments on the Master of Science degree program objectives and curriculum. The exit interview will typically take place shortly after the thesis defense.