**NOTE TO TMS LEARNING PATHWAYS: ADVANCED MATERIALS MANUFACTURING PARTICIPANT: The instructions for customization are highlighted in red type. Do not include these in your final letter.**

**<Insert Date>**

Dear **<Insert Your Supervisor’s Name>**:

I am requesting approval to participate in the [TMS Learning Pathways: Advanced Materials Manufacturing](https://www.tms.org/portal/MEETINGS___EVENTS/TMS_Meetings___Events/Upcoming_TMS_Meetings/PathwaysAdvancedManufacturing/portal/Meetings___Events/2020/learning_advanced2020/default.aspx?hkey=78b89b14-19bc-4f06-82f7-70a9a43ef9c5) virtual professional development program, set for December 7–9, 2020, with support for the associated registration fee.

This course will provide a unique opportunity to learn from recognized experts who are on the leading edge of advanced materials manufacturing. Participants can choose sessions from among three short course tracks: machine learning, additive manufacturing, and lightweighting.

Importantly, the course notes and materials for all modules will be given to every participant for reference, providing three times the value of a single course.

The **machine learning track** supports the following learning objectives:

* Create, critically evaluate, and interpret machine learning models for materials and assess how machine learning tools can impact your work
* Organize and curate data in a way that is suitable for machine learning
* Familiarize with, and deploy data analytics tools on realistic materials datasets to understand (experimental) factors that control materials behavior
* Design an experiment that incorporates machine learning

The **additive manufacturing track** supports the following learning objectives:

* Understand the fundamentals of materials used in additive manufacturing, with an emphasis on metals and alloys
* Describe key processing and post-processing considerations for common addictive manufacturing applications
* Explain qualification and certification best practices from industry and regulatory perspectives
* Explore opportunities in industrial applications of additive manufacturing, e.g., aerospace engineering

The **lightweighting track** supports the following learning objectives:

* Develop/select lightweight materials (advanced high strength steels, light alloys, and polymer-based composites) for various automotive, aerospace, and maritime applications
* Understand key relationships between processes, microstructure, and service properties in lightweighting applications
* Explain how integrated computational materials engineering (ICME) can be leveraged for lightweight design and applications
* Understand mass/cost tradeoffs and opportunities with alternative materials, multi-material joining, and manufacturing

Introductory, intermediate, and advanced modules are offered for each simultaneous short course track. This gives me the opportunity to pick my entry point for any given topic and the ability to jump to the other topics to explore intersecting interests.

**INSERT THE FOLLOWING PARAGRAPH IF YOU ARE NOT A CURRENT TMS MEMBER:**

**<<**I will also receive [electronic TMS membership](http://www.tms.org/Society/benefits.aspx) through 2021, which provides me with free electronic access to peer-reviewed materials journals on Springer, discounts on books and proceedings, and special rates for continuing education courses and technical meetings, with my congress registration. **>>**

**BENEFITS OF PARTICIPATING**

**Please copy and paste any, or all, of the following meeting benefits into your letter, according to your needs:**

**<Visit the** [**TMS Learning Pathways: Advanced Materials Manufacturing Course Curriculum page**](https://www.tms.org/portal/MEETINGS___EVENTS/TMS_Meetings___Events/Upcoming_TMS_Meetings/PathwaysAdvancedManufacturing/curriculum/portal/Meetings___Events/2020/learning_advanced2020/curriculum.aspx?hkey=90fbba53-2c43-4e41-851d-3da4b16403d5) **to view a breakdown of covered topics that are most relevant to your job responsibilities.>**

I have reviewed the [TMS Learning Pathways: Advanced Materials Manufacturing 2020 program schedule](https://www.tms.org/portal/MEETINGS___EVENTS/TMS_Meetings___Events/Upcoming_TMS_Meetings/PathwaysAdvancedManufacturing/curriculum/portal/Meetings___Events/2020/learning_advanced2020/curriculum.aspx?hkey=90fbba53-2c43-4e41-851d-3da4b16403d5) and firmly believe that this course will enable me to achieve multiple technology, networking, and business development goals on behalf of the organization, as well as enhance my own professional skills and contributions. I am particularly interested in the following modules: <<insert modules from the [program schedule](https://www.tms.org/portal/MEETINGS___EVENTS/TMS_Meetings___Events/Upcoming_TMS_Meetings/PathwaysAdvancedManufacturing/curriculum/portal/Meetings___Events/2020/learning_advanced2020/curriculum.aspx?hkey=90fbba53-2c43-4e41-851d-3da4b16403d5) that relate to your job responsibilities here>>

**CONCLUSION AND COST**

***It is important that I*** [***register***](https://www.tms.org/portal/MEETINGS___EVENTS/TMS_Meetings___Events/Upcoming_TMS_Meetings/PathwaysAdvancedManufacturing/Registration/portal/Meetings___Events/2020/learning_advanced2020/registration.aspx?hkey=b50fc36f-e8b3-428f-b928-1844aba54865) ***by November 6, 2020,*** to receive the discounted rate of <Insert Fee: $595/Member, $715/Non-member, $295/Student>. After the discount registration deadline, the standard registration rate is <Insert Fee: $695/Member, $815/Non-member, $395/Student>.

TMS Learning Pathways: Advanced Materials Manufacturing will be an important and impactful technical program in my field. I will be able to address multiple professional goals by participating in this one event. I believe it is a prudent investment of time and resources that will benefit **<Name of Your Organization>** with the knowledge and skills that I will be able to develop. Thank you for your consideration.

Sincerely,

**<Insert Your Signature>**