



**Department of Materials Science
and Engineering**

Department of Materials Science and Engineering
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Dear Truman Scholarship Committee,

It is my pleasure to provide an enthusiastic letter of recommendation for Mr. Jason Hess in his application for the Truman Scholarship.

In addition to my role as a Research Assistant Professor in the Department of Materials Science and Engineering at Case Western Reserve University and as an Investigator in the Advanced Platform Technology Center at the Louis Stokes Cleveland VA Medical Center, I am an adjunct member of the faculty in the Mechanical Engineering program at Youngstown State University. I have known Mr. Hess since August 2021 where he was a stand-out member of my Engineering Materials 2606 course. An exceptional academic and University Honors College Scholar, he displayed strong intellect, engaged in valuable course discussions, and was thorough and timely with all of his assignments. He demonstrated excellent knowledge of the value of technical standards and earned top marks for the assignments associated with the application and value of technical standards in the global marketplace. This is unique for an undergraduate student early in the program to be able to make the connection between basic engineering theory and laboratory measurements and then the implications of a lack of standards to local companies through the global supply chain. In the class, he was a top academic student with well-honed communication skills including excellent marks on numerous papers and class presentations. The assignments were always well thought out and articulated professionally. **It was clear from his work in this class that he had the academic talent, inquisitiveness, and drive to pursue graduate education.**

Based on my interactions with Mr. Hess during the semester and his interest in standardization and aerospace, I recommended that he consider applying for an internship sponsored by ASTM International for the prestigious Washington Internships for Students of Engineering (WISE) program. Each year up to 15 students are chosen nationwide to work on public policy related to technology working with congressional committees and agencies within the executive branch of government. Students that are awarded the opportunity spend nine weeks in Washington D.C. researching public policy and standardization then complete their internship writing and presenting a research paper that is published in the WISE Journal of Engineering and Public Policy. Mr. Hess applied and was the 2022 recipient of the ASTM International WISE internship. I had the opportunity to review his paper and attend his presentation virtually and I can say that his work on “Orbital Space Debris – Policy Recommendations in the Pursuit of Near and Long Term Space Sustainability” exhibits a clear understanding of the challenges set forth by decades of old domestic and foreign satellites and rockets currently littering outer space. His research was thorough and identified gaps in regulations including mitigation, tracking and removal of the space debris in addition to the ambiguity of domestic versus foreign responsibility for liability and ultimately, sustainability. Mr. Hess’ presentation was clear and honestly a bit concerning as

you begin to think about the upward trajectory of launched space materials, be it satellites or spent rockets and the lack of standardization in place to manage these spent materials. A thorough researcher with the ability to assimilate and analyze information, he not only identified the problem, but Mr. Hess was able to provide valuable recommendations for domestic stabilization of the space debris and suggest a path toward sustainability encompassing the commercial and governmental sectors. Mr. Hess' work on this program elevated his research and professional skills. He was able to successfully identify a critical problem, work with members of congress and agency resources to arrive at potential solutions, and ultimately deliver a professional summary for publication. **The WISE program further emphasized his abilities and potential for successful graduate work.**

I am enthusiastically supporting his application because Mr. Hess embodies exceptional leadership, is passionate about public service, and displays the intellect and prospect for academic success that is defined by the Truman Scholarship program. **Mr. Hess, indeed, meets and exceeds in all three pillars.**

As his instructor and mentor since 2021, I have watched his academic career flourish. His consistently excels in his coursework and he finds time to give back academically by serving as a teaching assistant for the First Year Program. Mr. Hess' ability to take difficult concepts and break them into manageable pieces for others to learn more effectively is another stellar quality that will lead to his success in graduate school. He will be tasked with larger questions himself as he moves through his program and to have the skill set to break down seemingly impossible tasks and troubleshoot research failures is absolutely essential. I believe his desire to combine engineering theory/practice with public policy shows his ability to see the broader picture and a recognition that to solve these larger technological problems requires knowledge in more than one discipline – and he is passionate about pursuing both. Mr. Hess continues to excel this year, was inducted into the Ohio Lambda chapter of Tau Beta Pi and already serving as their President-Elect, and serves as secretary in the ASME student chapter. **Highly successful graduate students balance their academics, research, and service to the university or professional societies – Mr. Hess has this experience as an undergraduate and will transition seamlessly into a graduate program.**

I would welcome the opportunity to work with Mr. Hess in my research lab, if only he were interested in the fatigue and fracture of materials in medical devices. I would not hesitate for moment to welcome him as a graduate student at CWRU and I believe he would excel in any investigator's lab. Mr. Hess more than meets the pillars of the Truman Scholarship, this I have witnessed first-hand. Please accept my highest recommendation for Mr. Hess and feel free to contact me if you should have any additional questions regarding the recommendation.

Sincerely,



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