



धातुकर्म एवं पदार्थ अभियांत्रिकी विभाग

**DEPARTMENT OF METALLURGICAL AND MATERIALS ENGINEERING**

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### **Introducing MTech in Computational Materials Engineering**

The Department of Metallurgical and Materials Engineering is thrilled to announce the launch of its new M. Tech. program in Computational Materials Engineering (CME), a pioneering educational pathway designed to equip the next generation of engineers and scientists with the skills necessary to navigate and shape the rapidly evolving landscape of materials science and engineering. This innovative program uniquely integrates foundational principles with cutting-edge computational methods, covering a comprehensive curriculum that includes Atomistic and Continuum Materials Methods, Structure of Materials, Numerical Methods, Advanced Thermodynamics, and Machine Learning. The CME program aims to foster an in-depth understanding of materials behavior and properties from both a theoretical and practical perspective, preparing students to address complex engineering challenges through sophisticated computational approaches.

The introduction of the MTech in CME is a strategic expansion of the department's academic portfolio, aligning seamlessly with current industry trends and demands. The field of materials engineering is at the forefront of technological advancements, driving innovations in sectors ranging from aerospace to biomedical engineering. By focusing on computational techniques, the CME program ensures graduates are well-prepared to contribute to and lead material design, development, and optimization efforts, making significant contributions to sustainable and advanced technological solutions. Students completing this program will find themselves highly sought after in a job market eager for professionals skilled in applying machine learning and computational methods to solve real-world materials engineering problems, opening doors to careers in research and development, consulting, academia, and beyond. Our faculties have substantial national and international academic and industrial collaborations in the broad area of CME.

Date: 03.04.2024

(B.S.S. Daniel)

Place: Roorkee