



# IGMCS

## INTERDISCIPLINARY GRADUATE MINOR IN COMPUTATIONAL SCIENCE

In today's rapidly evolving world, computational modeling and simulation, increasingly powered by cutting-edge Artificial Intelligence (AI) and Machine Learning (ML), are indispensable across all fields of science and engineering. Professionals skilled in these areas are in exceptionally high demand for innovative, interdisciplinary, and high-impact work.

The University of Tennessee's Interdisciplinary Graduate Minor in Computational Science (IGMCS) offers graduate students an opportunity to acquire a balanced and comprehensive package of knowledge and skills in computationally intensive methods, including the rapidly expanding applications of AI and ML.

This unique program allows students to strategically augment their primary graduate work with tailored courses from other disciplines, ensuring a holistic and forward-looking education that prepares them for diverse and competitive employment opportunities in academia, national laboratories, government, and industry.





**COMPUTER  
SCIENCE /  
INFORMATION  
SCIENCE**

**MATH /  
STATISTICS**



**SCIENCE /  
ENGINEERING  
DOMAIN**

# IGMCS

The **Interdisciplinary Graduate Minor in Computational Science (IGMCS)** enables a student to obtain a minor in Computational Science simultaneously with a graduate degree, at either the Master's or PhD level. Computational Science demands a basic level of understanding and skill in three discipline clusters — Mathematics/Statistics, Computer/Information Science, and a Science/Engineering "Domain" such as Physics, Geography, Biology, Chemical Engineering, etc. The IGMCS program allows students seeking an advanced degree in one of these areas to put together a small set of courses and internships tailored to their needs and which fills out their understanding of Computational Science in a way that suits their particular background and advances their particular goals. By formally recognizing this work through a Minor in Computational Science, the IGMCS program is designed to increase the value of the graduate degree that students receive in their chosen field.

## IGMCS COURSE REQUIREMENTS

The minor requires a combination of course work from three disciplines - Computer Science/Information Science, Mathematics/Statistics, and a participating Science/Engineering domain (e.g., Chemical Engineering, Chemistry, Physics).

For students pursuing a Master's degree, 9 total hours of approved IGMCS courses are required consisting of 3 hours within the home discipline and 3 hours from each of the other two disciplines. For example, a student whose home department is Computer Science must complete 3 hours of approved Computer Science courses and 3 hours of approved courses in each of the other two discipline groups (Mathematics and domain science/engineering).

For students pursuing a PhD degree, 15 total hours of approved IGMCS courses are required, consisting of 6 hours within the home discipline and 9 hours from the other two disciplines (with a minimum of 3 hours from each). For example, a student whose home department is Physics must complete 6 hours of approved Physics courses and 9 hours of approved courses from Computer Science and Mathematics (with a minimum of 3 hours from each).

Degree	Hours required in home discipline	Hours required from two other disciplines	Total Hours
IGMCS at Master's Level	3	3 in each	9
IGMCS at PhD Level	6	9 (at least 3 in each)	15

