The advanced multi-disciplinary degree program in Computational Science and Engineering addresses the current need for sophisticated skills in data and computation in both engineering and the sciences. Such skills require an understanding of tools, techniques, and algorithmic capabilities in a range of subjects including simulation, modeling, analytics, parallelization, visualization, networking, and programming. An awareness of a variety of new algorithms and analytic techniques is essential to maximizing the power of the new data and computational tools.

The Master of Computational Science and Engineering (MCSE) professional master's degree is for individuals interested in practicing within the field of data and computation, while the PhD program concentrates more specifically on research.

Computational Science and Engineering does not currently offer an academic program at the undergraduate level.

**Master’s Programs**

- Master of Computational Science and Engineering (MCSE) Degree [Link](https://ga.rice.edu/programs-study/departments-programs/engineering/computational-science-engineering/computational-science-engineering-mcse/)
- Master of Arts (MA) Degree in the field of Computational Science and Engineering*

**Doctoral Program**

- Doctor of Philosophy (PhD) Degree in the field of Computational Science and Engineering [Link](https://ga.rice.edu/programs-study/departments-programs/engineering/computational-science-engineering/computational-science-engineering-phd/)

* Although students are not normally admitted to a Master of Arts (MA) degree program, graduate students may earn the MA as they work towards the PhD.

**Director**

Matthias Heinkenschloss, *Computational and Applied Mathematics*

**Advisory Committee**

John Dobelman, Statistics
Matthias Heinkenschloss, *Computational and Applied Mathematics*
Mack Joyner, Computer Science
Michael T. Orchard, *Electrical and Computer Engineering*

**For Rice University degree-granting programs:**

To view the list of official course offerings, please see Rice’s Course Catalog [Link](https://courses.rice.edu/admweb/ISWKSCAT.cat?p_action=cata)

To view the most recent semester’s course schedule, please see Rice’s Course Schedule [Link](https://courses.rice.edu/admweb/ISWKSCAT.cat)

**Description and Code Legend**

*Note: Internally, the university uses the following descriptions, codes, and abbreviations for this academic program. The following is a quick reference:*

**Course Catalog/Schedule**

- Course offerings/subject codes: Courses from various subjects can be applied towards this program

**Department (or Program) Description and Code**

- MCSE students are admitted to one of the following four home departments:
  - Computational and Applied Mathematics: CAAM
  - Computer Science: COMP
  - Electrical and Computer Engineering: ELEC
  - Statistics: STAT

**Graduate Degree Descriptions and Codes**

- Master of Computational Science and Engineering degree: MCSE
- Master of Arts degree: MA
- Doctor of Philosophy degree: PhD

**Graduate Degree Program Description and Code**

- Degree Program in Computational Science and Engineering: CSCE

**CIP Code and Description**

- CSCE Major/Program: CIP Code/Title: 11.0101 - Computer and Information Sciences, General

1 Classification of Instructional Programs (CIP) 2020 Codes and Descriptions from the National Center for Education Statistics: [Link](https://nces.ed.gov/ipeds/cipcode/)