The advanced degree program in Computational Science and Engineering addresses the current need for sophisticated computation in both engineering and the sciences. Such computation requires an understanding of parallel and vector capabilities and a range of subjects including visualization, networking, and programming environments. An awareness of a variety of new algorithms and analytic techniques also is essential to maximizing the power of the new computational tools.

The Master of Computational Science and Engineering (MCSE) professional master’s degree is for persons interested in practicing within this field, 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 (qa.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 (qa.rice.edu/programs-study/departments-programs/engineering/computational-science-engineering/computational-science-engineering-phd)

Coordinated Program

- Master of Computational Science and Engineering (MCSE) Degree / Master of Business Administration (MBA) Degree (qa.rice.edu/programs-study/departments-programs/engineering/computational-science-engineering/business-administration-mba-computational-science-engineering-mcse)

* 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.

Advisory Committee

John A. Dobelman, Statistics
Matthias Heinkenschloss, Computational and Applied Mathematics
Mackale Joyner, Computer Science
Micheal 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 (https://courses.rice.edu/admweb/!SWKSCAT.cat?p_action=cata)
To view the most recent semester’s course schedule, please see Rice’s Course Schedule (https://courses.rice.edu/admweb/!SWKSCAT.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 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 ¹

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

¹ Classification of Instructional Programs (CIP) 2010 Codes and Descriptions from the National Center for Education Statistics: https://nces.ed.gov/ipeds/cipcode/