MS Comp Sci
Master of Science in Computer Science

Under Review | Spring 2024

Proposal Information

Status
Active

Workflow Status
In Progress

Faculty Senate Approval, Faculty Senate expand ▲
Waiting for Approval | Faculty Senate Approval

Rick Holmes
Nancy Middlebrook

Changes

- Admissions Requirements
- Requirements
- participants
- Proposed Effective Term and Year
- Learning Outcomes

Show All ▼

Proposal Information

Proposed
Sponsoring faculty/staff member
Darko Stefanovic

Proposed
Sponsoring faculty/staff email
darko@unm.edu

Existing
Sponsoring faculty/staff member

Existing
Sponsoring faculty/staff email

College
School of Engineering

Department
Computer Science

Campus
Main Campus

Effective Term and Year

Proposed
Proposed Effective Term and Year
Spring 2024

Existing
Proposed Effective Term and Year
Fall 2006

Justification

Proposed
Program Justification
Updating MS core requirements.

Existing
Program Justification

Proposed
Graduate program revision
No

Existing
Graduate program revision
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Program Category and Level

Program Category
Program

Program Level
Graduate

Degree, Minor, or Certificate Name
Master of Science in Computer Science

Degree Type
Master of Science

Degree/Certificate Level
Graduate

Plan Options
Plan I (Thesis)
Plan III (Coursework only)

Is this program also offered online?
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Associated Forms

Select any associated course forms that exist

Select any associated program forms that exist

Shared Credit and Dual Degree information

Interdepartmental Program

No

Catalog Information

Program Description

Contact the department for more information about this program.

Proposed
Admissions Requirements

Admission Information

In addition to the University-wide requirements for admission to graduate study, the prospective Master of Science (M.S.) or Doctor of Philosophy (Ph.D.) candidate must submit verbal, quantitative and analytical GRE scores (general test) as well as satisfy the following criteria for admission to graduate study:

- Knowledge of computer science equivalent to CS 152L, 251L, 261, 341L, 351L, 357L, 361L, 362, **460 and **481.
- Knowledge of mathematics essential to computer science equivalent to MATH 1512, 1522, **314 and STAT **345.

Students lacking adequate undergraduate training may be admitted, at the discretion of the admissions committee, with the understanding that coursework required to remove the deficiencies in undergraduate background is not applicable to the graduate degree.

Each student is assigned a graduate advisor. The student should see his or her graduate advisor before registering for the first time. The student and the advisor together work out a course of studies which meets the student's career objectives, and which constitutes a coherent program satisfying the graduation requirements. No course shall be counted toward the required credit hours which has not been agreed on by the student and the advisor as a part of this coherent program. It is the responsibility of the student to meet the requirements and to keep the department office informed of compliance with them; in particular, the student should meet with his or her graduate advisor at least once a semester to review progress toward the degree.

Application Deadlines

Fall Semester: Priority for admission and consideration for financial aid is given to applications received by January 15. International applications are accepted until March 1, and domestic applications are accepted until July 15.
Spring Semester: Priority for admission and consideration for financial aid is given to applications received by August 1. International applications are accepted until August 1, and domestic applications are accepted until November 15.

Existing

Admissions Requirements

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Graduation Requirements

Professional Credential/Licensure Program Information

Proposed
License/Certification associated with program
No

Existing
License/Certification associated with program
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Degree Information

Degree Hours
32

Minimum Major Hours

Professional Accrediting Bodies

Degree Requirements

Requirements

- Complete 1 of the following

  Plan I (Thesis)

  - Complete all of the following
    - Complete at least 2 of the following:
      - CS500 - Introduction to the Theory of Computation (3)
      - CS550 - Programming Languages and Systems (3)
      - CS530 - Geometric and Probabilistic Methods in Computer Science (3)
      - CS558 - Software Foundations (3)
      - CS561 - Algorithms-Data Structure (3)
    - **Earn a grade of "B-" or better.**
    - Complete at least 2 of the following:
      - CS512 - Introduction to Computer Graphics (3)
      - CS522 - Digital Image Processing (3)
      - CS523 - Complex Adaptive Systems (3)
      - CS527 - Principles of Artificially Intelligent Machines (3)
      - CS529 - Introduction to Machine Learning (3)
    - **Earn a grade of "B-" or better.**
    - Complete at least 2 of the following:
      - CS554 - Compiler Construction (3)
      - CS580 - The Specification of Software Systems (3)
      - CS585 - Computer Networks (3)
      - CS587 - Advanced Operating Systems (3)
      - **CS542 - Introduction to Parallel Processing (3)**
      - **CS544 - Introduction to Cybersecurity (3)**
      - **CS564 - Introduction to Database Management (3)**
    - **Earn a grade of "B-" or better.**
    - Earn at least 6 credits from the following:
      - CS599 - Master's Thesis (1 - 6)
    - Earn at least 8 credits from the following types of courses:
      Electives, approved by advisor. At least 2 credit hours of CS 592 (Colloquium), taken at UNM.

  Plan III (Coursework only)

  - Complete all of the following
    - Complete at least 2 of the following:
      - CS500 - Introduction to the Theory of Computation (3)
      - CS530 - Geometric and Probabilistic Methods in Computer Science (3)
      - CS550 - Programming Languages and Systems (3)
      - CS558 - Software Foundations (3)
      - CS561 - Algorithms-Data Structure (3)
    - **Earn a grade of "B-" or better.**
    - Complete at least 2 of the following:
      - CS512 - Introduction to Computer Graphics (3)
      - CS522 - Digital Image Processing (3)
      - CS523 - Complex Adaptive Systems (3)
      - CS527 - Principles of Artificially Intelligent Machines (3)
      - CS529 - Introduction to Machine Learning (3)
    - **Earn a grade of "B-" or better.**
    - Complete at least 2 of the following:

- CS554 - Compiler Construction (3)
- CS580 - The Specification of Software Systems (3)
- CS585 - Computer Networks (3)
- CS587 - Advanced Operating Systems (3)
- **CS542 - Introduction to Parallel Processing (3)**
- **CS544 - Introduction to Cybersecurity (3)**
- **CS564 - Introduction to Database Management (3)**

- **Earn a grade of "B-" or better.**
- Earn at least 14 credits from the following types of courses:
  Electives, approved by advisor. At least 2 credit hours of CS 592 (Colloquium), taken at UNM.

Grand Total Credits: 32

Concentrations

Program Concentrations

Code	Title
CON Entrep Tech Mgmt Cmptr Sci	Entrepreneurship and Technology Management

Concentration Required
No

Emphases

Emphasis required
No

Emphasis Hours

Emphasis Rules

No Rules

Program Learning Outcomes

Proposed

Learning Outcomes

The three outcomes for the M.S. program are:

1. CS Fundamentals: Exhibit knowledge of engineering and science fundamentals appropriate for the discipline and/or specialization.
2. Communication: Be able to communicate effectively.
3. Critical Assessment: Demonstrate the ability to critically assess information in the discipline and/or specialization.

Existing

Learning Outcomes