

# Civil Engineering

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Graduate programs are offered in coastal and water resources engineering, computing and systems, construction engineering and management, environmental engineering, geotechnical and geoenvironmental engineering, mechanics and materials, structural engineering and mechanics, transportation engineering and materials.

**Degrees earned will be distributed as: "Master of Civil Engineering", "Master of Science," and "Doctor of Civil Engineering" without specialization specifications.**

## Admission Requirements

Normal minimum GPA requirements include 3.0 overall and in the major. Students who do not meet these academic requirements may take graduate courses through the Non Degree Studies program to demonstrate academic ability, but consultation with the Director of Graduate Programs is strongly advised. Applicants without academic experience in civil engineering, construction engineering, or environmental engineering may be required to take undergraduate courses to remove deficiencies, but graduate credit is not given for these courses. The Graduate Record Examination is required for all international applicants and all applicants to the PhD, MSCE, or MSENE degree programs.

## Master's Degree Requirements

Four Master's degrees, requiring a minimum of 30 or 31 credit hours, are available. At least two-thirds of a Master's program should be in a well-defined major area of concentration. The MCE is a non-thesis (Option B) degree with other requirements, such as independent projects or core courses, specified in some areas of specialization. A formal minor is not permitted. The MCE is available both on-campus and through distance education. The MSCE degree requires a thesis and a formal minor is optional. Requirements for the MENE and MSENE are the similar to those for the CE degrees.

## Doctoral Degree Requirements

The Ph.D. typically requires one year of full-time course work beyond the master's degree and research culminating in a dissertation. The program must develop a well-defined major area of concentration and may include supporting courses outside the major or a formal minor in a related field. All specialty areas, including Environmental Engineering, are included in the one Ph.D. program.

## Student Financial Support

Departmental teaching and research assistantships are available including coverage of tuition and health insurance. Fellowships -- full or supplemental to an assistantship -- are available for exceptional applicants. All financial aid recipients are selected on merit-based competition with other applicants. Applications requesting financial aid (both U.S. and international) should be submitted early: December 15 for Fall admission and by July 15 for Spring admission.

## Degrees

- Civil Engineering (MR) (<http://catalog.ncsu.edu/graduate/engineering/civil-engineering/civil-engineering-mr/>)
- Civil Engineering (MS) (<http://catalog.ncsu.edu/graduate/engineering/civil-engineering/civil-engineering-ms/>)

- Civil Engineering (PhD) (<http://catalog.ncsu.edu/graduate/engineering/civil-engineering/civil-engineering-phd/>)
- Civil Engineering (Minor) (<http://catalog.ncsu.edu/graduate/engineering/civil-engineering/civil-engineering-minor/>)
- Performance Based Earthquake Engineering (Certificate) (<http://catalog.ncsu.edu/graduate/engineering/civil-engineering/performance-based-earthquake-engineering-cert/>)

## Faculty

### Full Professors

Sankarasubramanian Arumugam

Morton A. Barlaz

Joseph F. DeCarolis

**Area of Research:** Environmental and Energy Policy

John W. Baugh Jr.

Emily Zechman Berglund

Francis Lajara De Los Reyes III

Joel Ducoste

Henry C. Frey

Mohammed Awad Gabr

Jessica Ann Kaminsky

Murthy N.Guddati

Abhinav Gupta

Tasnim Hassan

Edward J. Jaselskis

Youngsoo R. Kim

Detlef R. Knappe

Mervyn J. Kowalsky

George F. List

Min Liu

Gnanamanikam Mahinthakumar

James M. Nau

Margery F. Overton

Ranji Ranjithan

William John Rasdorf

Rudolf Seracino

Akhtarhusein A. Tayebali

Billy Merle Williams Jr.

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## Associate Professors

Ange Therese Akono

Alex Albert

**Area of Research:** Construction Engineering and Management

Douglas F. Call

**Area of Research:** Environmental & Water Resources

Cassandra Alison Castorena

Danjue Chen

Joel Casey Dietrich

Andrew P. Grieshop

Jeremiah Johnson

Brina Mortensen Montoya

Daniel R. Obenour

**Area of Research:** Water Resources & Coastal Engineering

Mohammad Pour-Ghaz

Benjamin Shane Underwood

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## Assistant Professors

Katherine Anarde

**Area of Research:** Environmental, Water Resources, & Coastal Engineering

Tarek Aziz

Eleni Bardaka

Jorge Emilio San Juan Blanco

Ashly Margot Cabas Mijares

Fernando Garcia Menendez

Ali Hajbabaie

Kook Han

Angela Rose Harris

Jordan Kern

Jason Fredrick Patrick

Giorgio Talotti Proestos

Jacelyn Jaunice Rice-Boayue

Andrew Joseph Ziccarelli

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## Practice/Research/Teaching Professors

Saran Srikanth Bodda

Florentino Banaag De La Cruz

Billy L. Edge

Meagan Kittle Autry

James William Levis

Gregory W. Lucier

Mohamad Shoaib Samandar

Elizabeth J. Sciaudone

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## Adjunct Faculty

Amin Kamal Akhnoukh

Michael Scott Breen, *Adjunct Professor*

**Area of Research:** Environmental Engineering & Air Quality

Daniel J. Findley, *Adjunct Assistant Professor*

**Area of Research:** Transportation Research (ITRE)

Alejandra C. Geiger-Ortiz, *Adjunct Assistant Professor*

**Area of Research:** Coastal Engineering

Leta Huntsinger

Anderson Rodrigo de Queiroz, *Adjunct Research Assistant Professor*

Aditya Sinha

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## Assistant Research Professor

Tongchuan Wei

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## Emeritus Faculty

William L. Bingham

Robert C. Borden

Roy H. Borden

Earl Downey Brill Jr

Allen C. Chao

John S. Fisher

Ajaya K. Gupta

Kerry S. Havner

Clinton L. Heimbach

Yasuyuki Horie

David West Johnston

Narendra P. Khosla

Michael Lloyd Leming

Vernon C. Matzen

Stephens W. Nunnally

M. Shamimur Rahman

Sami Rizkalla

Nagui M. Roupail, *Distinguished Professor Emeritus*

**Area of Research:** Transportation Engineering & Systems

J. C. Smith

John R. Stone

Harvey E. Wahls

Paul Z. Zia