

Purdue Calumet Center for Innovation through
Visualization & Simulation (CIVS) immersive theater.



Scan the QR code for more information
about the interdisciplinary Master of Science Degree
in Modeling, Simulation and Visualization
or contact the degree administering unit:

Professor Mohammad Zahraee,

- PHONE: 219/989-2966
- EMAIL: msv@purduecal.edu
- WEB: purduecal.edu/techgrad



GRADUATE STUDIES
purduecal.edu/gradschool

PURDUE
CALUMET

MASTER OF *earn a* SCIENCE DEGREE

Modeling, Simulation and Visualization

*Learn skills to increase efficiency, optimize
processes and environments, and provide
cost-effective solutions using 2D and 3D
computerized environments, modeling,
simulation and visualization.*

PURDUE
UNIVERSITY
CALUMET



Interdisciplinary Master of Science Degree in **Modeling, Simulation and Visualization**

Before committing to a costly investment in an uncertain solution to increase productivity or solve a problem, business and industry may want to seek expertise from graduates of an innovative, **interdisciplinary** degree program at Purdue University Calumet.

Students with undergraduate education in **science, technology, computer science, engineering, medical/healthcare, and management** may be interested in a **Master of Science degree in Modeling, Simulation and Visualization (MSMSV)**. The MSMSV degree equips graduates with essential skills for professions which use modeling, simulation and visualization skills such as:

- designers
- engineers
- technologists
- business
- developers
- software consultants
- computer scientists
- transportation
- education
- marketing
- healthcare
- many others

Students in the program will have the opportunity to work with the **Center for Innovation through Visualization & Simulation (CIVS)** at Purdue Calumet. CIVS is a multidisciplinary center that combines advanced simulation techniques with 3-D visualization and virtual reality technologies. The Center emphasizes the application of state-of-the-art technologies to address complex real world problems and promotes innovation in areas such as economic development, energy, environment, education and training, healthcare, medicine, manufacturing, security and daily life.



Plan of Study (30 Credit hours)

18 hours required core courses (6 courses)

- Unified Modeling Languages
- Simulation Techniques
- Visualization Techniques
- High Performance Computing
- Software Project Management
- Design and Analysis of Simulation Experiments

9 credit hours of electives (3 courses)

A number of graduate level courses are available for use as electives; electives are approved by the student's graduate committee for inclusion in the plan of study.

3 credit hours of directed project

- Directed MS Project* (1 course taken in two phases)

** Students will work with CIVS on directed project*

Phase One - 1 credit hour—proposal

Phase Two - 2 credit hours—final report/project

Basic Requirements

Bachelor's degree from an accredited four-year college or university in any Science, Technology, Engineering or Mathematics (STEM) related areas. GPA of 3.0 or greater based on a 4.0 scale. If necessary, students may be required to take leveling courses after admission, to meet pre-requisites. Conditional admission may be available for students under a 3.0 GPA.

A student must meet the following pre-requisites:

1 Semester Object Oriented Programming
(Sophomore level or above)

1 Semester Statistics/Probability
(Sophomore level or above)

2 Semesters Calculus (Differential and Integral),
OR 1 Semester discrete mathematics or numerical
methods (Sophomore level or above)

TOEFL iBT*: 77

(Reading 19, Listening 14, Speaking 18, Writing 18)

*Additional requirement for non-native English speakers.
IELTS and Pearson scores are also accepted

Application Deadlines

International Students:

Fall: **May 1** Spring: **October 1** Summer: **March 1**

Domestic Students:

For deadline info, contact Jody Kidd, Graduate Coordinator
at 219-989-2966 or tech@purduecal.edu.