

# Modeling and Simulation

Educating the DoD Communities and Services

**The Navy M&S Office in conjunction with the Defense Modeling and Simulation Steering Committee presented the Naval Postgraduate School with an enormous challenge in 2006: design and deliver an educational program for delivery by 2009, for 20,000 or more acquisition professionals, focusing on the effective use of modeling and simulation in acquisition. To answer this challenge, the Modeling and Simulation Education for the Acquisition/T&E Workforce project was initiated, and is currently in its second year of execution.**

## Learning from the Best

The Naval Postgraduate School has partnered with six other academic institutions, each a recognized expert in the field of Modeling and Simulation, to create this education program.



NPS recognizes the contributions of its academic partners in this project. In accordance with federal ethics regulations, however, NPS and the federal government do not endorse any of these universities or their products or services.

## M&S Project Benefits

- Comprehensive educational program focused on consumers of M&S. Significant step towards satisfying DoD M&S educational needs.
- Partnership of government and academia—opportunity to influence the culture of M&S education.
- Improved workforce capabilities across all Services, activities, and programs that utilize M&S.
- Increased use of M&S in acquisition to realize potential savings from simulation based acquisition in the DoD not being realized today.
- All learning materials created from this project will be public domain—the nation will not have to pay for this work again.
- 80% of course materials will support all 6 communities, and the program is constructed in a way to facilitate reuse.

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Acquisition; Test and Evaluation

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Photos Courtesy of U.S. Navy, and the Naval Postgraduate School.

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## Is your workforce using M&S effectively?



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## Educating the DoD Workforce is Our Mission

During the first year of the project, the team studied what was available nationally, identified the requirements for the educational program and developed a learning architecture consisting of courses and delivery methods to cover the educational gaps identified. The team worked with stakeholders from the acquisition community and services as well as partners from key academic universities to design modules and courses to meet these requirements.

In 2008, the team will continue by developing and testing the courses identified in the first year. A prototype curriculum will be offered, and feedback incorporated into the final materials. The educational program which will consist of a mixture of short and long, online and resident courses will be provided in December.

## IMPLEMENTATION

Each of the offering universities will implement the course materials into their educational programs differently. For example, the Naval Postgraduate School will offer four groupings of the courses into certificate programs. These will also be available as tracks in existing degree programs, such as the Masters degree in Systems Engineering.

[www.nps.edu/msacq](http://www.nps.edu/msacq)

## Coming to a University Near You January 2009

**FULL ACADEMIC COURSES**  
**SHORT ACADEMIC COURSES**  
**WEB-BASED MODULES**

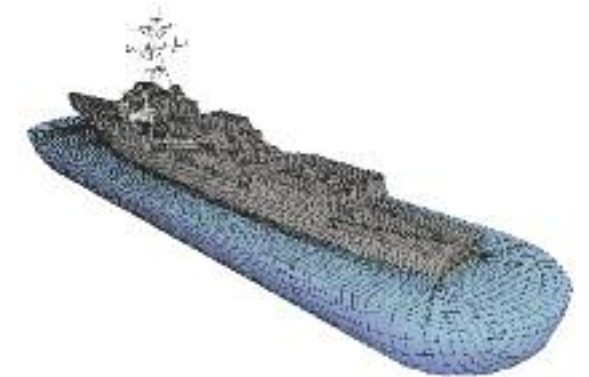
### 16 NEW COURSES

**M&S in the Acquisition Life Cycle, Parts 1 and 2**  
**M&S Strategy and Support Plans**  
**M&S Requirements and Evaluating M&S Proposals**  
**Contracting for M&S**  
**Best Practices in M&S**  
**M&S in Decision Risk Analysis and Mitigation**  
**M&S Environments**  
**M&S Data Strategies**  
**M&S for Test and Evaluation, Introduction and Advanced**  
**Introduction to Engineering M&S Applications**  
**Physics-based M&S**  
**Basic Engineering Concepts in M&S, Parts 1 and 2**  
**Topics in the Application of Engineering M&S**



## Motivational Course Material: Engineering Case Studies

A series of engineering case studies were assembled as supplemental material for the program. These case studies are primarily aimed at acquisition professionals who do not possess an engineering degree or perhaps do not have a strong background in physics based M&S, and emphasis is placed on describing the underlying engineering concepts. A handful of these are currently available on the project website.



## FOUR CERTIFICATE PROGRAMS

### M&S MANAGEMENT

**Intro to DoD M&S**  
**M&S in the Acquisition Life Cycle, Parts 1 and 2**  
**Best Practices in M&S**

### M&S ACQUISITION

**M&S Strategy and Support Plans**  
**M&S Requirements & Evaluating Proposals**  
**Contracting for M&S**  
**M&S in Decision Risk Analysis**

### M&S TEST AND EVALUATION

**M&S for Test and Evaluation, Introduction and Advanced**  
**M&S Environments**  
**M&S Data Strategies**

### M&S ENGINEERING INTEGRATION

**Physics-based M&S**  
**Basic Engineering Concepts in M&S, Parts 1 and 2**  
**Selected Topics in the Application Engineering M&S**

