

# SYSTEMS ENGINEERING & OPERATIONS RESEARCH

## SEOR Qualifying Exams

- **OR 541 Operations Research: Deterministic Models**

Reading List:

W.L. Winston, Operations Research, Applications and Algorithms (4th edition),  
Cengage (2004); ch. 3-9, 11

Notes:

open book (no e-book), open notes, no computer, no calculator

- **OR 542 Operations Research: Stochastic Models**

Reading List:

W.L. Winston, Operations Research, Applications and Algorithms (4th edition),  
Cengage (2004); ch. 16, 17, 20

Notes:

open book (no e-book), open notes, no computer, calculator allowed

- **SYST 505 Systems Engineering Principles**

Reading List:

\*\*SE Principles Lecture (SEOR PhD students who are preparing for the SYST 505  
qualifying exam may request a copy of these notes by emailing seor@gmu.edu)

Notes:

closed book, closed notes, no computer, calculator allowed

- **SYST 520 System Engineering Design**

Reading List:

SYST 520 Course Notes (SEOR PhD students who are preparing for the SYST 520  
qualifying exam may request a copy of these notes by emailing seor@gmu.edu)

Collateral reading:

- 1) Any textbook on the basics of the Unified Modeling Language
- 2) Dennis M. Buede, The Engineering Design of Systems, (2nd or 3rd edition),  
Wiley (2009, 2016)
- 3) Sanford Friedenthal, Alan Moore, Rick Steiner, A Practical Guide to SysML: The  
Systems Modeling Language, (3rd edition), MK/OMG Press (2014)

\*\*About 50% of the exam is based on object oriented analysis and design; 35% on  
structured analysis and design, and 15% on a mixture of structured and object  
oriented topics.

Notes:

Closed books, closed notes, no computer, no calculator