

**Reading for Chemistry 8541**  
**“Dynamics”**  
**Fall Semester 2018**

**Instructor:** Donald G. Truhlar

**Textbooks:**

1. “Mathematical Methods for Scientists and Engineers,” Donald A. McQuarrie
  - ISBN 1-891389-24-6 (cloth cover)
  - ISBN 1-891389-29-7 (soft cover)
2. “Classical Mechanics: Systems of Particles and Hamiltonian Dynamics,” 2nd ed., Walter Griener
  - ISBN: 978-3-642-03433-6 (paperback)
  - e-ISBN: 978-3-642-03434-3

**Other recommended textbooks for supplemental reading, if desired:**

“Foundations of Applied Mathematics,” Michael D. Greenberg (Dover Publications, Mineola, New York, 2013).

“Mathematical Methods in the Physical Sciences,” 3rd ed., Mary L. Boas; John Wiley, New York, 2006.

“Classical Mechanics,” 5<sup>th</sup> edition, T. W. B. Kibble and F. H. Berkshire; Imperial College Press, London, 2004, available in paperback.

“Classical Mechanics,” J. W. Leech; Methuen & Co. and Science Paperbacks, London, 1965.

“Classical Mechanics,” H. C. Corben and P. Stehle; Robert E. Krieger Publishing Co., Huntington, NY, 1960.

“Classical Mechanics,” John R. Taylor (University Science Books, 2005).

**Other reading, the classics:**

“Methods of Theoretical Physics,” P. M. Morse and H. Feshbach; McGraw-Hill, New York, 1953. (two volumes)

“Mathematical Methods for Physicists,” 7th edition, G. B. Arfken and H. J. Weber; Elsevier, Amsterdam and Boston, 2012.

“Classical Mechanics,” 3rd edition, H. Goldstein, C. Poole, J. Safko; Addison Wesley, San Francisco, 2002. Older editions are just as good; the 2nd edition may even be better.

“Mechanics,” L. D. Landau and E. M. Lifshitz; Pergamon, Addison-Wesley, Reading, MA, 1960.