Ph.D. Qualifying Exam

Reading List

General Exam
(2nd Monday after final week, 9 a.m. to 5 p.m.; Time changes slightly every year)

"Callister an Integrated Approach, 4th Edition," Chapters 1 to 20.

Note that these are approximate times to be used as a general guideline

Chapters 2, 3	**9:00 to**
Chapter 4	
Chapters 5, 6	
Chapters 7,8,9	
Chapter 10	**12:00**
Break	**12:00 to 2:00**
Chapters 11	**2:00 to**
Chapter 12	
Chapter 13	
Chapters 14, 15	
Chapter 16	
Chapters 17, 18	
Chapter 19	
Chapter 20	**5:00**

No Specialty exams for written exam.
(Specialty exams combine with the Phase II oral exam)

Note: The core curriculum is embedded in these specialty exams. Please contact the faculty member in bold for more details on the specific specialty exams.

Ceramics: **R. Reidy**/ N. Dahotre / J. Du/ T. Scharf / S. Aouadi
Reading List:

1. Course 5300 (Ceramics; Modern Ceramic Engineering by David W. Richerson, 3rd edition, Ch. 4, 5, 7, 8, 10, 11, 12, 13.1 only, 14.1 only, and 20. Handout on glass and glass processing).
2. Course 6200 (Defects; Physical Ceramics - Principles for Ceramic Science and Engineering by Y-M Chiang, D. Birnie and W.D Kingery, Ch. 1, 2, and 4)

Electronic Materials: **W. Choi**/ N. Shepherd / M. El-Bouanani /Anupama Kaul/A. Voevodin/
Reading List:

1. Course 5500 (Electronic Properties of Materials, Chapters 1-8h, R.E. Hummel 3rd Edition)
2. Reference book: Principles of Electronic Materials and Devices, by S.O.Kasap, 4th ed., McGraw-Hill; ISBN-13: 978-0078028182 (Chapters 4-5)

Metals: **S. Mukherjee** / S. Srivilliputhur / R. Banerjee/ R. Mishra / M. Young
Reading List:

1. Course 6300 ("Phase Transformations in Metals and Alloys", Porter and Easterling,)
2. Course 5200 ("Physical Metallurgy", Reed-Hill Abbaschian Ch. 1, Ch.3 to 13, Ch. 15, 16**)**

Polymers: **X. Li**/ D. Berman
Reading List:

1. Course 5400 (Paul C. Hiemenz; Timothy P. Lodge, Polymer Chemistry, Taylor & Francis Group, 2nd Edition, 2006, ISBN-10:1-57444-779-3. Ch 1-7, Ch 10-13)
2. Reference book: U.W. Gedde, Polymer Physics, Kluver Academic Publishers (Ch1, 2, 3, 4, 5, 7, 8)