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# Suggestions for classroom use

The material presented in the *Handbook* is straightforwardly suited for classroom use. For each three kinds of wave motion considered, the underlying physical concepts and the road leading to their governing equations are presented in detail. Furthermore, analytical results are derived for relatively simple configurations in the radiation and scattering of waves. Finally, each section concludes with a set of carefully selected Exercises (with all answers provided). Whenever the coherence in the presentation made this desirable, some arguments, reasonings and calculations have been repeated in Parts 1, 2 and/or 3.

A suggestion is made below for the material to be included in introductory courses that cover the fundamentals, but leave out a number of more advanced topics, in case time constrictions necessitate this.

## Introductory course on Radiation and Scattering of Acoustic Waves in Fluids

### General Introduction

**Appendix A:** Sections A.1–A.4, A.7 (only the Kronecker tensor), A.10–A.12 (the definitions only)

**Appendix B:** Sections B.1–B.3

and from Part 1:

### Chapter 1

**Chapter 2:** Sections 2.1–2.9, 2.12

**Chapter 4:** Sections 4.1–4.4

**Chapter 5:** Sections 5.1–5.4, 5.7–5.10

**Chapter 6:** Sections 6.1–6.4

**Chapter 7:** Sections 7.1, 7.4

## Introductory course on Radiation and Scattering of Elastic Waves in Solids

### General Introduction

**Appendix A:** Sections A.1–A.4, A.7 (only the Kronecker tensor and the symmetrical unit tensor of rank four), A.10–A.12 (the definitions only)

**Appendix B:** Sections B.1–B.3

and from Part 2:

### Chapter 9

**Chapter 10:** Sections 10.1–10.9, 10.12

**Chapter 12:** Sections 12.1–12.4

**Chapter 13:** Sections 13.1–13.8

**Chapter 14:** Sections 14.1–14.4

**Chapter 15:** Sections 15.1, 15.4

## Introductory course on Radiation and Scattering of Electromagnetic Waves

### General Introduction

**Appendix A:** Sections A.1–A.4, A.7 (only the Kronecker and Levi–Civita tensors)

**Appendix B:** Sections B.1–B.3

and from Part 3:

### Chapter 17

**Chapter 18:** Sections 18.1–18.5

**Chapter 19:** Sections 19.1–19.8

**Chapter 20:** Sections 20.1–20.3

**Chapter 21:** Sections 21.1–21.4

**Chapter 24:** Sections 24.1–24.4

**Chapter 26:** Sections 26.1–26.4, 26.9–26.12

**Chapter 27:** Sections 27.1–27.4

**Chapter 28:** Sections 28.1, 28.4

**Chapter 30:** Section 30.1