

topic. Given the usual compartmentalization of the advanced undergraduate curriculum in most US colleges and universities, this work is unlikely to find a role as a textbook—the four chapters on mechanics and four on electromagnetism are insufficient to span the topics covered in the usual undergraduate course, and the mathematical rigor is occasionally on the high end of the undergraduate range.

It is tempting to assess the book by comparing the authors' idiosyncrasies with my own and then producing a list of omitted topics that I consider absolutely essential to the undergraduate curriculum. To avoid personal prejudices, I compared the book's selection of topics instead with the contents of the texts we use in our undergraduate physics curriculum at Oregon State University. By that yardstick, many topics seem to be missing or at least hard to find: mechanical oscillations, dipole radiation, multipole expansions, kinetic theory. The eight chapters on solids constitute an exceedingly fine coverage of the topic, in my opinion, but, measured against our curriculum, the book overemphasizes solids. Further, it underemphasizes molecules, nuclei (no discussion of the nuclear force or fusion) and particles (no mention at all, despite the lovely cover illustration of quarks in a nucleon). The index, which is of critical importance in a book of this type, is inadequate. For example, although there is an entire section of the book on the Maxwell-Boltzmann distribution, it is not mentioned in the index. Nor is the canonical ensemble, even though it is the subject of an entire chapter.

All in all, *Advanced University Physics* is a book that students and instructors may find to be a valuable resource, but it is not apparent where it will fit into the standard US undergraduate curriculum. Nonetheless, I intend to keep my office copy within arm's reach.

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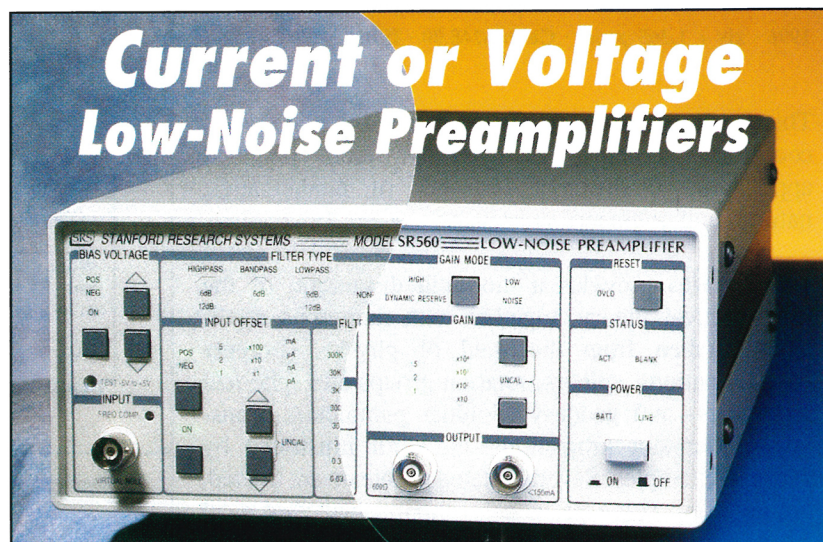
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