

by H. Flanders, in a course at the first year graduate level that would be of great interest to mathematically inclined physicists and engineers.

ROBERT HERMANN

Homology theory. An introduction to algebraic topology. By S. Wylie and P. J. Hilton. Cambridge University Press, New York, 1960. xv+484 pp. \$14.50.

The authors state their purpose and the intended scope of this book in the introduction as follows:

"This book has been written with the intention of providing an introduction to algebraic topology as it is practised today. The reader is not supposed at the outset to possess any knowledge of algebraic topology; indeed, even the reader with no knowledge of analytic topology or abstract algebra is provided, in the Background to Part I, with a synopsis of the facts that are taken for granted in the text. The treatment throughout has been subject to the consideration that, if the book is to serve its purpose, it must provide an account of the basic notions of algebraic topology intelligible to the mathematician inexperienced in the techniques and problems described. However, though the treatment is elementary, we have been more ambitious in our choice of material than is customary in elementary textbooks. It appears to us that the literature is rich in advanced textbooks and adequate in elementary introductory textbooks, but that the two types of book are not very effectively linked. Again, the advanced textbooks themselves fall into two classes which may broadly be described as classical and modern and the rapid shifts of emphasis which the subject has experienced make it difficult always to recognize classical arguments in their modern dress. We have tried to provide the links which we believe the student might find difficulty in providing for himself from a study of the available literature.

"Thus, while our beginning is quite elementary, we have been able, by omitting certain topics, particularly those treated canonically in classical works, to reach in later chapters the parts of the subjects which lie in the immediate foreground of present-day research."

In the opinion of the reviewer, they have been fairly successful in achieving this purpose. There is no other text treating algebraic topology that starts at the beginning and leads up to the topics of greatest interest in current research. On the one hand, there do exist the more advanced texts and specialized treatises dealing with special topics such as homotopy groups, fibre spaces, sheaves, manifolds, homological algebra etc., and on the other hand, there are the more