else (neither in Dynkin's treatise, nor in my own Lecture Notes volume). Thus every mathematician interested in time continuous Markov processes should know this book.

P. A. MEYER

Algebraic topology by Edwin H. Spanier. McGraw Series in Higher Mathematics, McGraw-Hill, New York, 1966. xiv+528 pp. $15.00.

This book is designed to be a text for a year or longer graduate course in algebraic topology. It also is a reference work for the subject. Like most books that serve both of these purposes, this one has its good and bad properties. Before stating some of the good properties, let me remark that overall I feel the book is an excellent one and the best book on the subject to date. One of the best features of this book over others is the excellent choice of topics covered. All of them are important topics which should be known by those students who wish to work in algebraic topology or to use algebraic topology in other fields. The organization is excellent and well thought-out; it is not a collection of individual topics as some books are. Furthermore, the notation is good and conforms to current usage. The fine set of exercises also helps the organization of the book as some of them lead the reader into material to be covered later.

Some of the disadvantages of using this book as a text stem from its reference work attributes. For example, in some places the topics are covered too thoroughly and this means the reader can become bogged down in some theorems of only technical interest. It also means that the chapter on homology, the most basic concept of algebraic topology, does not begin until p. 154. To counteract the abundance of material and to make sure which are the most important theorems, the reader is advised to read carefully the first paragraph of each section which is a guide to the important results. Another problem is that the book is quite difficult for many students to read, especially on their own. Its use should be accompanied by lectures which have lots of examples and which point out which results proven in the book can be skipped. Another somewhat negative observation is that the book basically only contains ideas that were developed before the mid 1950's. However, a reader who has mastered this book is in a good position to tackle later developments such as K-theory and applications of algebraic topology to differential topology. If the reader is interested in a book which avoids the abundance of material and which is easier to read on one's own, he should try to obtain the lecture notes for 2 courses the author gave at the University of Chicago in 1955 from which this book developed.