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Autore	Reed Rob (Robert H.)
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Nota di contenuto	Cover -- Title Page -- Copyright Page -- Contents -- List of boxes -- Preface -- List of abbreviations -- Acknowledgements -- For the student -- Study and examination skills -- 1. The importance of transferable skills -- 2. Managing your time -- 3. Working with others -- 4. Taking notes from lectures and texts -- 5. Learning effectively -- 6. Revision strategies -- 7. Assignments and exams -- 8. Preparing your curriculum vitae -- Information technology and learning resources -- 9. Finding and citing published information -- 10. Evaluating information -- 11. Using online resources -- 12. Bioinformatics - Internet resources -- 13. Using spreadsheets -- 14. Using word processors, databases and other packages -- Communicating information -- 15. Organising a poster display -- 16. Giving a spoken presentation -- 17. General aspects of scientific writing -- 18. Writing essays -- 19. Reporting practical and project work -- 20. Writing literature surveys and reviews -- Fundamental laboratory techniques -- 21. Essentials of practical work -- 22. Bioethics -- 23. Health and safety -- 24. Working with liquids -- 25. Basic laboratory procedures -- 26. Principles of solution chemistry -- 27. pH and buffer solutions -- 28. Introduction to microscopy -- 29. Setting up and using a light microscope -- The investigative approach -- 30. Making

measurements -- 31. SI units and their use -- 32. Scientific method and design of experiments -- 33. Making notes of practical work -- 34. Project work -- Working with cells and tissues -- 35. Sterile technique -- 36. Culture systems and growth measurement -- 37. Collecting and isolating microbes -- 38. Identifying microbes -- 39. Naming microbes and other organisms -- 40. Working with animal and plant tissues and cells -- 41. Homogenisation and fractionation of cells and tissues -- Analytical techniques. 42. Calibration and its application to quantitative analysis -- 43. Immunological methods -- 44. Using stable isotopes -- 45. Using radioisotopes -- 46. Measuring light -- 47. Basic spectroscopy -- 48. Advanced spectroscopy and spectrometry -- 49. Centrifugation -- 50. Chromatography - separation methods -- 51. Chromatography - detection and analysis -- 52. Principles and practice of electrophoresis -- 53. Advanced electrophoretic techniques -- 54. Electroanalytical techniques -- Assaying biomolecules and studying metabolism -- 55. Analysis of biomolecules: fundamental principles -- 56. Assaying amino acids, peptides and proteins -- 57. Assaying lipids -- 58. Assaying carbohydrates -- 59. Assaying nucleic acids and nucleotides -- 60. Protein purification -- 61. Enzyme studies -- 62. Membrane transport processes -- 63. Photosynthesis and respiration -- Genetics -- 64. Mendelian genetics -- 65. Bacterial and phage genetics -- 66. Molecular genetics I - fundamental principles -- 67. Molecular genetics II - PCR and related applications -- 68. Molecular genetics III - genetic manipulation techniques -- Analysis and presentation of data -- 69. Manipulating and transforming raw data -- 70. Using graphs -- 71. Presenting data in tables -- 72. Hints for solving numerical problems -- 73. Descriptive statistics -- 74. Choosing and using statistical tests -- Index.

Sommario/riassunto

If you are studying the biomolecular sciences - including biochemistry, biomedical sciences, biotechnology, genetics, microbiology and molecular biology - then this book will be an indispensable companion throughout the whole of your degree programme. It provides effective explanation and support for the development of a wide range of laboratory and data analysis skills that you will use time and again during the practical aspects of your studies. This book also gives you a solid grounding in the broader transferable skills, which are increasingly necessary to achieve a high level of academic success.
