A guide for prospective undergraduates
Mathematics is one of the oldest academic disciplines. It does not consist merely of a fixed body of knowledge handed down from one generation to the next; on the contrary, it is constantly developing and expanding, sometimes controversially. This is a particularly exciting time in mathematics: interactions with other disciplines have generated many new ideas and new interconnections within mathematics are resulting in dramatic advances.

The Mathematics Department at Manchester University is one of the largest in the country, with some 50 academic staff, about 450 undergraduates and 50 postgraduate students. It occupies most of the Mathematics Building, a 19-storey tower just opposite the Manchester Museum on Oxford road, about one mile south of the city centre.

The Mathematics Building contains a student common room and areas for private study, as well as lecture and tutorial rooms and staff offices. There is a cluster of microcomputers for student use. A large room on the sixth floor (the Conference Room) is used as a general meeting place for staff and students and for social functions.

The teaching and research of the Department are organised in five main groups: pure mathematics, applied mathematics, numerical analysis, mathematical statistics and logic. There are postgraduate students in all these areas working for the Ph.D. degree or on one of the five M.Sc. courses. Many of the third year options reflect the research interests of members of the Department.

Most undergraduate teaching takes the form of lectures with a variety of support classes to provide more individual attention. One type of support class is the tutorial, in which a member of staff and up to ten students discuss ideas and problems which arise from lectures. Another format is the examples class, where a student tackles problems and receives help from a member of staff and postgraduate students as required.

Of the four B.Sc. Honours schools which involve Mathematics by far the largest is the Honours Mathematics School which admits over 100 students each year. Despite its size, the Department is a friendly one. Every undergraduate has a member of staff as a personal counsellor. A number of social and mathematical events are organised by the Department and by the undergraduate Mathematical Colloquium.
All first year students are guaranteed a place in a University Hall of Residence. There are many different types, ranging from self-catering flats to the more traditional Halls, offering a wide range of amenities. Some of the University accommodation is close to the Mathematics Building and most of the remainder is in a pleasant area to the south, readily accessible by bus or bicycle. It is also possible to live in lodgings or in a rented house or flat.

The Students’ Union is a good place to meet and make friends from other departments. It is run by students for students, and every undergraduate is automatically a member. It provides many recreational facilities, and a large number of societies and clubs are organised under its auspices. Extensive sports facilities are available on the main campus and close to the main student residences to the south of the University.

The University of Manchester is one of the largest universities in the country. On the main campus are to be found the Manchester Museum (famous for its Egyptian collections), the Whitworth Art Gallery and the University Theatre. The John Rylands University Library is one of the largest and finest academic libraries in Britain. The main campus and the area immediately to the south (where most students live) has little industrial development and has plenty of trees and parks. Manchester has a long tradition in the arts, and many of its museums, theatres, art galleries and cinemas offer concessionary rates to students. Besides performances by the city's famous symphony orchestras, there are regular series of chamber music and other concerts arranged by the University and the nearby Royal Northern College of Music. Live pop, jazz and folk music can be found at dozens of venues and most of the big name bands and artists of pop and rock music have performed in the city.

Manchester people are known for their friendliness and the student community plays an active role in the life of the city. Living in Manchester is pleasant and relatively cheap. The image of a grimy industrial city is now some decades out-of-date and there have been and are many projects to beautify the city.

The town centre is lively and contains a wide variety of shops and restaurants catering for most needs, tastes, interests and budgets. Road and rail communications with the rest of the country are good, as are the services provided from Manchester International Airport.

For those who enjoy the countryside as well as city life, Manchester is ideally situated. To the south-east there is the Derbyshire Peak District, which further north merges into the bleaker Pennines. The Lake District and the mountains of North Wales are also within easy reach.

MATHEMATICS AT MANCHESTER UNIVERSITY
The front cover shows two interlinked three-dimensional models of the Klein bottle. The Klein bottle is a one-sided surface which requires four dimensions to be faithfully modelled. A three-dimensional model, such as is shown here, necessarily crosses itself. The Klein bottle is an example of a fibre bundle, one of the key topological concepts which play an essential part in present-day physical theories of the very small (quantum mechanics) and the very large (cosmology).

Above is a part of the graph of the Riemann zeta-function. One of the deepest unsolved problems of mathematics concerns the distribution of the non-trivial zeroes of this function.