Supporting Economy, Enriching Knowledge: The Science and Technology Collection at the Lee Kong Chian Reference Library

By Tan Pei Jiun, Reference Librarian, Lee Kong Chian Reference Library

As a small country with no natural resources, Singapore's successful economic development, since gaining independence in 1965, depended largely on industrialisation and on building a value-added service economy. Underlying this success is a keen focus on harnessing the benefits afforded by developments in the area of science and technology. Various segments of the society worked in tandem to ensure that Singaporeans are, and will continue to be, equipped with the right skills to survive, contribute and thrive in this society.

In this respect, the National Library plays a vital role in the provision of resources and services to serve the people's information needs.

The Science and Technology Collection at the Lee Kong Chian Reference Library supports the needs of our users by providing timely, accurate and useful information in the scientific, industrial and technical fields to cater for research, education and decision-making. The collection's main focuses are electronics, engineering, and chemicals – the three pillars of the economy. As Singapore diversifies its economy and adds a fourth pillar of biomedical sciences, the collection is also evolving to expand its resources in this broad area. More importantly, the collection strives not only to support learning, but also to enrich lives through the knowledge spaces created.

This article hopes to highlight the strengths and create an awareness of the Science and Technology Collection. In addition, it also invites feedback and suggestions from users on how this collection can be developed to greater heights in terms of relevancy and usefulness.

Engaging User Communities

The Science and Technology Collection addresses the needs of users with varying degrees of technological sophistication and diverse educational and economic backgrounds. Users can be:

- Practitioners and technicians in relevant industries and trade,
- Managers and administrators of relevant industries and trade,
- Technical students up to the undergraduate level,
- Adult learners and interested lay persons,
- Journalists intending to write feature articles on scientific/ technological topics or
- Government officers

Signing of the MOU between NLB and IES in September 2005.

Serving such diverse groups of users is a challenge faced by the Library. There is an increasing amount of effort undertaken to engage these user communities so that the collection can be better developed to suit their needs. A major step in this direction was taken in September 2005 when the National Library Board (NLB) signed a Memorandum of Understanding (MOU) with the Institution of Engineers Singapore (IES). In this MOU, both NLB and IES will collaborate, amongst other areas of cooperation, to raise the level of engineering information services provided to students, practitioners, and the general public. Many programmes are also being planned to create opportunities for the Library to touch base with user groups and to heighten awareness of the Science and Technology Collection. For example, a series of related events will be held at the National Library building in February this year.

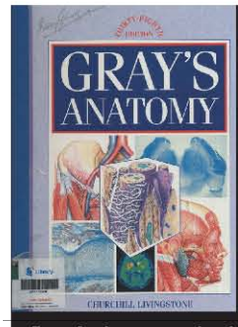
Collection In a Nutshell

The Science and Technology Collection adopts an encyclopedic approach and covers broad disciplines of knowledge in the field of science and technology. Besides engineering, it covers computer science, information technology, natural sciences, physical sciences, mathematics, astronomy and earth sciences.

Currently, the collection contains over 24,000 volumes of print materials in formats such as books, textbooks, encyclopedias, dictionaries, handbooks, scholarly journals, trade magazines and conference proceedings. A small collection of CD-ROMs and various science and technology electronic databases are available for use in the Library.

Focus on Biomedical Sciences

The area of biomedical sciences is a key focus of the Science and Technology Collection and is currently undergoing rapid expansion. This area covers topics such as life sciences, pharmacology, pharmaceuticals, physiology, anatomy, diseases, and behavioral science, amongst others. The focus is on providing a wide range of reliable information so that users can locate specific facts, processes, or get an introduction to various disciplines within biomedical sciences.



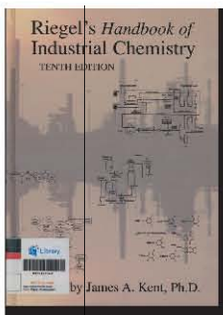
Gray's Anatomy is the classic reference work on the human body.

Adult learners, students and those without a background in biomedical sciences can turn to many classic works and introductory texts available in the collection.

The Library also collects works that reflects current trends and developments, especially in the applications of genetic technologies, pharmaceuticals, and traditional Chinese medicine (TCM). Useful handbooks for both learners and practitioners on subjects such as toxicology, occupational safety, mental health and athletic training are also available.

Supporting the Information Needs of the Chemicals Industry

The section on chemicals and related technologies has been developed with the practical information needs of industry practitioners in mind. The range of titles attests to the Library's commitment to support such needs. Subject areas in this section include chemical engineering, bio-engineering, food sciences and material sciences.

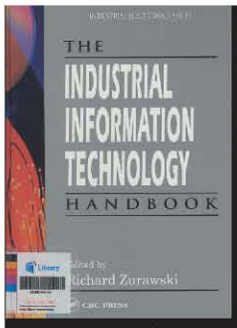


Rigel's Handbook of Industrial Chemistry is a prominent chemical engineeing title.

The depth of the section is also demonstrated by the many titles that focus on specific topics within their field. Examples of these topics are petroleum refining processes, design of petrochemical plants, common natural ingredients, cosmetic ingredients, plastics, and industrial surfactants.

Engineering, Manufacturing and Building

The engineering section was one of the earliest technological subject that received attention in the Library. Starting out as a section that consists mainly of introductory texts



This is one of the many titles founding the engineering section.

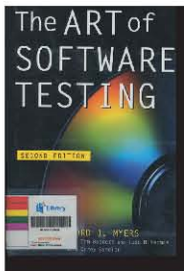
across various engineering disciplines that catered to students' needs, the section has since grown to become the one of the largest in the Science and Technology Collection.

Today, the engineering section includes many works on the principles and practices of new technologies such as digital video, mobile devices, RFID (Radio Frequency Identification) and GPS (Global Positioning System). It also has titles on the design of transportation networks, waste water systems, and pollution control.

Supplementing the main engineering section is a large body of works on manufacturing. These titles focus on specific products, processes and industries. Works providing practical information for practitioners in the building construction and renovation industries are also abundant in the section. These provide information on topics such as water-proofing, plumbing, fire protection, adhesives, sealants, masonry and HVAC (heating, ventilation and air-conditioning).

Plans are underway to collect relevant standards from international sources to further strengthen the engineering section.

Information Technology



The Art of Software Testing is a standard setting work.

The computer science and information technology (IT) section is designed to meet the basic information needs of undergraduate students, practitioners, IT managers and the general public. The focus is on collecting titles that provide a general overview to major concepts, technologies, practices and trends. Apart from key texts that are helpful to both students and adult learners, the Library is currently building up its collection that are also suitable for managers of IT. These include works that feature broad surveys of the IT industry – its trends, developments, best practices and applications, both current and potential.

Electronic Databases

Since the field of science and technology changes rapidly, the main print collection needs to be supplemented with electronic databases that store both retrospective and new information resources. Search capabilities on electronic databases also help to improve productivity of users. These databases are especially useful to adult learners and employees of smaller companies who do not have easy access to such resources.

The databases in our collection provide three main types of information – scholarly research papers, articles found in trade and popular magazines and data sheets. Some of these databases are *PsycINFO* (EBSCO), *CINAHL* (EBSCO), *Engineering Village 2*, *Nature.com*, and Dialog's *Material Safety Data Sheets*.

Conclusion

As Singapore evolves into a knowledge-based economy with a key focus on science and technology, the collection at the Lee Kong Chian Reference Library will continue to be developed to meet the anticipated needs of relevant users. The Library will also actively engage the user communities to better understand their needs. In sum, as science and technology permeates the fabric of society, the collection aims not only to support the needs of the economy, but also to supply knowledge resources that will enrich people's lives.