At the 9 July 1962 meeting of Council, a position was created entitled the "Professor of Electronic Computation and Director of the Digital Computing Laboratory" within the School of Electrical Engineering to "accept responsibility for the development of courses and the expansion of our digital computing facilities" (Council resolution 62/105). On 14 September 1964 Professor M. W. Allen was appointed to this position (Council resolution 64/152). He entered on duty on 26 May 1965 and it appears that the Department of Electronic Computation effectively came into existence at this time.

At the 2 August 1972 meeting of the Vice-Chancellor's Advisory Committee the name of the department was changed to the Department of Computer Science (file 00020416).

On 8 September 1980 Council altered the name of the school to the School of Electrical Engineering & Computer Science effective from 1981 (resolution 80/139).

The department became the School of Computer Science and Engineering on 1/1/1991 with Professor John Hiller becoming the first head of school. Council at its meeting on 10 December 1990 resolved by CL90/108 (v) Proposed division of the School of Electrical Engineering and Computer Science into two schools:
1. That a School of Computer Science and Engineering be established in the Faculty of Engineering from 1 January 1991; and 2. That the School of Computer Science and Engineering be based upon the present Department of Computer Science in the School of Electrical Engineering and Computer Science; 3. That the balance of the existing School of Electrical Engineering and Computer Science be renamed the School of Electrical Engineering.

Computer Science was established as its own school to give the Department greater academic, financial and management autonomy in order to pursue its range of academic interests and enterprises. Computer Science was by far the largest department within the School of Electrical Engineering and was teaching over half of the student load. Its student body was comprised not only of students of the Faculty of Engineering but also of the Board of Studies in Science of Mathematics. Staff of the Department of Computer Science felt the need for greater autonomy and thought that other departments of the School of Electrical Engineering and Computer Science could feel stifled and constrained by the needs of the Department. Growth in computer engineering and the graduate teaching and research areas of the Department was certain and the Department would be larger than many schools in the university. The range of its activities and interests and the discipline of computer science had grown rapidly and the Department also was active in areas not especially closely related to electrical engineering, eg psychology, philosophy, computer literacy, and other areas of cognitive science.

One of the largest schools of its kind, in 2004 research was grouped in the following areas: algorithms, artificial intelligence, bioinformatics, computer architecture, computer systems, database systems, networks, and software engineering. That year the school attracted over $4.5 million in research funding including Australian Research Council grants and grants from industry, both local and international. The school at that time was also partner in a number of external research centres including the Smart Internet Technology Cooperative Research Centre, and the national ICT Australia (NICTA), a research Centre of Excellence in Information and Communications Technologies.
In 2008 the School of Computer Science and Engineering and the School of Electrical Engineering and Telecommunications had joint responsibility for the curriculum of the Computer Engineering program. Staff of the school was grouped into research groups of Artificial Intelligence, Computer Systems and Software Engineering. Courses in these areas were offered to students taking major studies in computer science or computer engineering, while introductory-level computing courses were available more generally to students studying Science, Arts or Engineering. Computer science had links with discrete mathematics, which furnished the theory behind the algorithms that computer software implemented, and electrical engineering, which supplied the then present technology underlying physical computing devices. Graduate employability was enhanced by CSE's strong and growing industry links. The Computer Science degree had a Co-op Scholarship program that gave students extensive industry experience from their second year; all Engineering degrees required industrial training experience. The School ran an Industry Liaison Office whose primary aim was to link students and employers both for in-course experience and for graduate employment.

The head of school in January 2008 was Professor Paul Compton.