Professor Koh Soo Ngee

I am always reminded that the vision of our School is to excel in teaching, research and professional services so as to contribute to the technological advancement and economic development of Singapore. It is a tall order for any individual by any standard. Just consider one aspect, say teaching, of the vision. We can immediately recall buzz words like higher-order/critical thinking, creative thinking, problem-based learning, life-long learning, tailor-made programme, broad-base education, entrepreneurship, soft-skills, ethical intelligence, etc. It is equally challenging to excel in research as most engineering academics world-wide compete to create something that will have a great positive impact on the quality of human lives and invariably propel them to fame and glory. If we were to include excellence in management, the vision is even more daunting. However, it is achievable collectively at the school level. Some of us might be better in research than teaching and others teaching than research. We simply have to find our own optimum performance point. In the end, whatever we do, we have to ensure that our products are graduates who are competent world-class engineers and researchers able to compete globally in as many areas of electrical and electronic engineering as possible. They must be adept at understanding and harnessing the explosion of knowledge to create wealth for the nation. Our goal is to train our very own Claude Shannon, Jack Kilby, John Bardeen, William Shockley and Walter Brattain. Big dreams and grand visions are not difficult to put forth. They will make a difference to our society only if we follow up with positive efforts. I am inclined to suggest that the ultimate goal of a university student is to understand the enormity of the task they are facing, accept the challenge intelligently and inch forward in the right direction. There is no short cut in life though serendipity does happen if the lucky star is shining at you. This is equally applicable to all academics aspiring to achieve their ultimate goal, be it at a local or international scale. We will succeed to a greater or lesser extent if we have the passion and will, and given the right environment.

New EEE Full

Professor Soh Yeng Chai

The basic purpose of education is to acquire knowledge to improve one's intellectual, moral, and social skills. At a higher level, one should aim to assimilate and integrate the skills acquired to create new knowledge.

The intellectual, moral and social skills that one learned and/or created will have an eventual impact on the society. Thus, a valuable measure of the impact of education is to examine the evolution of the society in terms of intellectual creation, progressiveness and civility.

As a researcher, I feel great satisfaction when my research articles are widely referenced by my peers. It is an indication that the ideas/results developed have gained acceptance and are being followed by fellow researchers. In my early years of research, I was fortunate to be among the first few researchers to explore the robust stability of uncertain systems. It was very satisfying to see the growing interest in that particular research problem, and that my work has created an influence on the development of technology in that area. As a Head of Division, my challenge is to influence the research interests of my colleagues so that as a group we can create a greater impact in certain niche areas. Given the limited resources, we have no choice but to focus on areas that are of national interest. One potential area is the applications of complex system theories to life sciences and biomedical engineering.

An educated individual is one that has a higher level of knowledge and skills than the average. He or she should therefore have a greater ability and capacity to contribute towards the advancement of the society. Furthermore, the cost of education is getting more and more expensive and students are paying for only a fraction of the cost. It's a highly subsidized education! To reap the benefits from the society, one should at least be a useful person. If everyone contributes positively, it would make a big difference to the place we live in.

The promotion to Professor is a transparent process. One can always apply for promotion and the biggest hurdle is to have at least 6 international reviewers endorsing your credentials. It will come eventually if one constantly strives for excellence in teaching, research and professional services.