Student: Carlos José Arias Bandry
ID: 840806-4510

Seminar #5: The Environment and Sustainable Development

Given the current increasing trend of resources consumption (water, food, energy, goods) worldwide, it is important to consider the sustainable model at the moment of planning the expansion of existing cities and the development of new sustainable ones.

As an engineer, sustainability issues will play a significant role in our everyday jobs. The implementation of sustainable and eco-friendly technologies in our designs, such as renewable energies, resources and assets optimization, should be the primary goal on all our future projects. Environment impact studies shall represent an important part of every single construction project, resulting in a sustainable way of expanding our society taking into consideration the preservation of the environment surrounding us and the proper usage of our natural resources.

Research on new more efficient technologies has been taking place in the last years within topics ranging from research on new renewable technologies to improvement of the efficiency of current technologies and procedures for power generation.

The incorporation of these new environmental friendly technologies represents a new approach to reach a sustainable society. Projects based on these new technologies will pose a vital impact on the sustainability of our society, providing innovative and improved methods to develop sustainable cities.

This initiative taken by KTH through The Environment and Sustainable Development course provides the engineering students with a set of tools and inspirational ideas for them to be able to develop their careers within the sustainable model.

Making the students aware of the problems currently faced by our planet such as environmental hazards (animals, vegetation, water, global warming) and our society (resource scarceness, depleting food and water supplies) ignites the consciousness in them, resulting in better sustainable-thinking engineers for tomorrow. Moreover, seeding possible solutions or improved scenarios for the future in their minds stimulates them in order to start integrating sustainability into their everyday life.

This course highly relates with the other mandatory courses within our program such as The Sustainable Electric Power Engineer and Power Systems and Environment. However, the majority of our courses is purely technical and focuses primarily on isolated calculations rather than contextual system designs. Courses like The

Environment and Sustainable Development provide a different approach for students, focusing in a more broad and comprehensive aspect of engineering, which corresponds to the sustainability development.

In my opinion, some of the technical courses offered at KTH could have incorporated a couple of lectures explaining how that technical part of engineering is related to the sustainable model, and how to improve the sustainability of our society using that specific technical area on our career. Taking into consideration the environmental perspective on every part of our education will make us better sustainable engineers, providing the necessary background for constructing the pillars of a sustainable society in the future.

After graduating with the proper knowledge and awareness regarding the environment and sustainable development, the new generation of engineers will be able to take this knowledge into their future employer companies. In this manner the seed of sustainability will spread into the industrial and commercial level and into society as a whole, ensuring our chances to become a true 100% sustainable human society in the future.