



Computer Engineering Impact and Role in Student Academic Achievement

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Received: 03 October 2022 **Accepted:** 20 December 2022 **Published:** 22 January 2023

Abstract: *Computer engineering is an ever-evolving field, and it is becoming increasingly popular for students to pursue a degree in this area. Not only can computer engineering offer students the chance to work with cutting-edge technology, but it also has a major impact on student academic achievement. In this blog post, we will explore why computer engineering is so important in helping students succeed academically, as well as its role in the future of education. We will also discuss the tools and techniques that educators can use to help foster student success. Read on to learn more about the power of computer engineering and how it's transforming student achievement!*

Keywords: *Computers in Education, Students' Academic Achievement, Engineering - Impact Factors, Computer Engineering.*

1. INTRODUCTION

Computer engineering has had a profound impact on student academic achievement. The field of computer engineering encompasses the design and construction of computer hardware and software systems. This interdisciplinary field draws upon the principles of electrical engineering, mathematics, and computer science to develop computers and systems that are more efficient, reliable, and secure.

Recent advances in computer engineering have led to the development of new technologies that are transforming education. One such technology is online learning, which allows students to access course materials and receive instruction from anywhere in the world. Online learning is particularly beneficial for students who are unable to attend traditional brick-and-mortar schools.

Another exciting development in computer engineering is virtual reality (VR). VR can be used for educational purposes, such as providing students with immersive experiences that



allow them to learn about other cultures or historical events. VR can also be used for entertainment or gaming purposes. Either way, VR is sure to have a major impact on the way students learn in the future.

As you can see, computer engineering plays a vital role in supporting student academic achievement. The field of computer engineering is constantly evolving, and new technologies are being developed that have the potential to revolutionize education. It will be exciting to see how computer engineering continues to impact student learning in the years to come.

Computer Engineering (ECE) education.” Unlike the aforementioned pioneers, the benefit of the 120-year history of engineering education Education and computer engineering get to gather and computer engineering play a vital role in history of education. They oversee and create software and hardware for computers. As already said, they frequently collaborate closely with software engineers to do this. They create new equipment, update hardware, and create software systems.

A subfield of electrical engineering and computer science called computer engineering (CoE or CpE) merges the various branches of computer science and electronic engineering needed to create computer hardware and software. Software engineering education is necessary for computer engineers in addition to instruction in electronic engineering, software design, and hardware- software interaction. In addition to covering topics like artificial intelligence (AI), robotics, computer networks, computer architecture, and operating systems, it makes use of the techniques and ideas of electrical engineering and computer science. The design of individual microcontrollers, microprocessors, personal computers, and supercomputers, as well as circuit design, are all tasks that computer engineers are involved in.

Writing software and firmware for embedded microcontrollers, building VLSI chips, developing analogue sensors, designing mixed signal circuit boards, and designing operating systems are typical topics covered by computer engineers. Robotics research makes use of digital systems to control and monitor electrical systems including motors, communications, and sensors, making computer engineers well-suited for this field of study.

The whole breadth of information required in the design and implementation of computers is beyond the scope of an undergraduate degree, hence computer engineering students are often permitted to choose topics of in-depth study in their junior and senior year. Before identifying computer engineering as their primary focus, other universities may require engineering students to complete one or two years of general engineering.

2. REFERENCE

1. Berry, F. C., DiPiazza, P. S., & Sauer, S. L. (2003). The future of electrical and computer engineering education. *IEEE Transactions on Education*, 46(4), 467-476.
2. Abbas, M. K., & Hussaini, M. H. A. (2022). Universal Educations of College Policy–Trainings for Pakistanian on Modernization and Danger. *Journal of Multidisciplinary*



- Cases (JMC) ISSN 2799-0990, 2(04), 7-14.
3. Hussaini, M. H. A. (2022). Effect of Information Technology on Education. International Journal of Information Technology & Computer Engineering (IJITC) ISSN: 2455-5290, 2(04), 1-5.
 4. Al Hussaini, M. H., Kausar, N., & Indriani, F. (2022). Disasters and Their Effects on Child Development. International Journal of Learning Reformation in Elementary Education, 1(02), 70-79.
 5. Al Hussaini, M. H., Abbas, M. K., Fatima, R., & Noureen, A. (2023). Anxiety Impact on the Children Brain: Consequences for Children Emotional Capacities. Journal of Mental Health Issues and Behavior (JMhib) ISSN: 2799-1261, 3(01), 8-15.
 6. Al Hussaini, M. H., & Sulisworo, D. (2022). Effect of Tension on Learner School Performance at Primary School Level at Bhakkar, Pakistan. Journal of Pedagogy and Education Science, 1(02), 100-107.
 7. IEEE Computer Society; ACM (December 12, 2004). Computer Engineering 2004: Curriculum Guidelines for Undergraduate Degree Programs in Computer Engineering (PDF). p. iii. Retrieved December 17, 2012. Computer System engineering has traditionally been viewed as a combination of both electronic engineering (EE) and computer science (CS).
 9. "Changing Majors @ Clemson". Clemson University. Retrieved September 20, 2011.
 10. "Declaring a College of Engineering Major". University of Arkansas. Archived from the original on October 12, 2014. Retrieved September 20, 2011.
 11. "Programas de Materias" (in Spanish). Universidad Católica Argentina.