

Medical and Scientific Illustration in the United States (US)

Professor Michael Peres

Correspondence: Michael Peres, United States,
Medical and Scientific Illustration in the United States (US)
E-mail: mrpph@rit.edu

The field of Medical and Scientific Illustration in the United States is large and constantly changing. In 1974, when the author began his studies, everything about the field was different. At the time, a student in the U.S. could go to a number of Universities (4 year) or Colleges (2 year) to study this subject. More than forty years later, only a few programs still offer similar programs of study. The Rochester Institute of Technology (RIT), where the author is a professor and Randolph Community College in North Carolina are all that remain from the more than ten that had operated. These two programs are very different from one another and there is not adequate space in this article to expand on these differences. Program details can be found online at: <http://cias.rit.edu/schools/photographic-arts-sciences/undergraduate-biomedical-photographic-communications>

Keywords: *diagnostic imaging, education, graphic design, medical art and illustration, multimedia, photography, printed media, social networking, telemedicine, video*

In the mid 1980's, the U.S. healthcare industry went through a tremendous transformation as a consequence of new mandates for insurance reimbursements. These changes represented the beginning of a period of the downsizing of this field that has only recently stabilized. In the early 1980's, medical photography departments were centralized and had large numbers of employees but over thirty years later, there has been significant decentralization of services or outright elimination of medical photographers within hospitals. There still remain medical and scientific photographers who provide clinical and patient photography, but often these photographers also produce a lot of public relations photography.

While this profession has shrunk in size and scope, ophthalmic photography has grown exponentially. In 1986, a biomedical photography graduating class from RIT would be approximately 12 students. At that time, 11 students might enter medical photography jobs and one might pursue an ophthalmic opportunity. While the economics of the health care industry were transforming, digital technologies were also becoming mainstream and viable tools for professional use. As a result of the digital revolution of the early 2000's, subjects that became integrated into photographic curriculums also changed significantly. This had profound changes in what opportunities students from RIT in particular could pursue. The RIT curriculum was significantly broadened to include a more significant visual communications component.

In 2013, RIT converted the entire University curriculum from a three/ten week model to one of two/fifteen weeks. This University mandated conversion required the School of Photographic Arts and Sciences' two Bachelor of Science programs to be consolidated. This consolidation led to the repackaging and redesign of the first two years of the required curriculum. Currently students take sixty credits in this time, of which thirty are general education. They take humanities courses, writing courses, mathematics courses as well as laboratory science courses. Each student enrolls in a course program that seems relevant to their career goals and allows for customization. The required imaging curriculum consists of courses in fundamentals of photography, photographic technology, scientific photography, human vision and color, as well as careers and professional practices.

By mid-year 2015, the RIT program will graduate approximately twenty-five students and their employment opportunities will

be vastly different than graduates of thirty years ago. The University's curriculum has provided a more diverse experience for its students. Those students that are interested can study advanced photographic technology and programming, along with traditional subjects such as clinic medicine, close-up and photomicrography. Students can also specialize in ophthalmic photography, color management, imaging systems, magnified imaging and photographic instrumentation. The curriculum is primarily focused on technology, problem solving and the optimization of imaging used across various environments.

Given this, 2015's graduating class will find very different opportunities than one might expect from this type of education. In May 2014, two students were employed by Apple

as image quality engineers. Zeiss Microscopy also recruits students as a direct result of the diverse and wide range of applied microscopy experiences the students have pursued while in school including light, Scanning Electron Microscopy (SEM) and confocal scanning. Possibly 12 graduates will find employment as ophthalmic photographers/imagers and one or two others will pursue graduate studies including medical and optometry schools. As the world continues to change, so have the students, curriculum and subsequent opportunities. Database management, graphic arts publishing and corporate careers are now realistic possibilities in addition to working at major medical centers, such as the Mayo clinic a not-for-profit worldwide leader in medical care, research and education.

