Electrons Play a Vital Role in Modern Life

YOU are standing today at the threshold of the greatest and most highly specialized period of all times—the electrical age.

Just over one hundred years ago Faraday discovered the principles of electromagnetic induction which formed the basis of the science of electrical engineering. That this science which is now universal in its application, is of such origin, bears eloquent testimony to its truly remarkable development. In point of fact, it is a little exaggeration to say that on Faraday's experiment of century ago modern civilization largely depends.

Little reflection is needed to substantiate electricity's claim to a leading place in the world of modern science. The electric motor is everywhere in use for power; modern business relies enormously upon the telegraph; radio and X-ray play an important part in modern life. The recent advances in television, radar, and sound pictures are due to their electrical foundations. No factor in contemporary civilization is so universal in application as is electrical science. Harnessed to countless uses, it already affects every moment of our lives, and it promises to perform hundreds of additional tasks in the future.

The field of electrical engineering is almost universal. It enters virtually every phase of industry and public service where power is necessary and control is exercised over physical and mechanical operations. Electrical engineering is as fundamental as the great form of power it makes available and is constantly developing new applications and new opportunities for men who have basic training in it. (The work of the electrical engineer may vary from that of a highly technical and specialized research and design to manufacturing, maintenance, sales, or administration.) Engineers are needed where new applications or new uses for present equipments are established.

Specifically, electrical engineering includes these broad fields: generation and utilization of electrical power; illumination, transportation, design and construction of networks for distribution of power; use and design of electrical machinery and controls; radio electronics which include television, FM, radar, microwave techniques, and research.

ELECTRICAL ENGINEERING
As a Career

Condensed from various technical sources
by ENGR. JOSE A. RODRIGUEZ
Dean, College of Engineering and Architecture

THE ELECTRICAL INDUSTRY

From the great hydroelectric plants of today, a force — electric power—which, together with electricity developed by steam turbines and diesel-driven generators, makes possible a new kind of world and great and far-reaching electrical industry. Here is an industry whose creations and products are so universal in demand that the need for men trained in its science is continually expanding.

The field offers an exceptionally broad range of occupational opportunity. Electrical engineers and technicians are needed by power companies to operate and maintain the many great power plants, substations, transmission and distribution lines, etc., twenty four hours a day. Modern illumination and wiring in homes, offices, factories and stores provide a profitable field for electrical contractors. Today, modern ships have electric drives through huge diesel-electric generating units and motors of thousands of horsepower each. Marine and railroad electrification are now one of the major branches of electrical engineering and these fields provide good paying jobs with opportunities to travel and see the world.

The Author

Outstanding among the many electrical developments are the great fields of radio communications and electronics. At the very heart of these new industries are the technical men whose technical training is in electricity as a specialty. Yet as broad and interesting as are these industries and developments of today, these fields face a future of greater expansion.

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Formal Essay

Look Here, Junior!!

By NESTOR M. MORELOS

● Here is a sneak preview of authentic (straight from the corridors of this university) Carolinians of different varieties. Hear ye!! Hear ye!! Here is the greatest show of the season!

Here she comes...here she comes... the color-happy coed. She applies make-up like nobody's business, making of herself an ingenious replica of an African witch doctor...wears red shoes...yellow dress printed with blue flowers...black belt... pink ribbon...painted dark-red nails. From distance she looks like an animated totem pole in technicolor!!

The girl who comes to school geared up like a paratrooper. You know hanging bags weighing a ton...out-of-the-wall belt and buckle similar to those worn by Flash Gordon and Buck Rogers... shoes with heels to compete with the Empire State Building... five birthstone rings...an oversized watch...knitted shawl over her shoulders...bar pins as big as neon lights... wonder how they lug themselves around with such stuff!!

The nationalistic and traditional-minded coed...hair dangling behind her shoulders a mile long...aaaaaaaahhhhhh...puts on sandals or bakya...wears a dress styled way back in 1896 during the Cry of Balintawak!!! Keep up with the time girlie, keep up with the time!

And now comes...Oh no! Yipes!...Good gawrsh!...The teen-ager...plaid-mad girl with her hair barbered down her skull...Bob...shingle...poodle... army cut...ala Ingrid Bergman. When she's behind you, a fine example of a plucked turkeys behind and when she's in front of you, her head's a cabbage! Ouch!...hey, cut it out Alice...I didn't mean it...hee...hee...haw...haw.

And now comes some blah-blah on the masculine side...slick guy with his hair plastered and glued on his head...used up five combs and three bottles of pomade in a single setting... nearly strained his arm combing his hair... long sleeved shirts and expensive pants.... puts on sunglasses which unfortunately has become a permanent thing to cover his go-go and tantalizing eyes... day and night... rain or shine... in the classroom... in church... in the toilet... in the bathroom... he just couldn't take off those goggles.

The Bogart or Widmark he-man type...bright-colored fancy shirt and the... rolled-up denim pants fit for the barn dance, hunting, mountain climbing and a rodeo.

The soldier-boy... knows better than to come to school in those drill-worn uniforms. During drill days, those suits become sweat-stained and skunk-smelling after three hours of military sunbath. The odor... Ugh! Phew!... Give me some air will you? Those fatigue uniforms... its aroma combined with the *dugho* in your seat can drown your appetite for learning... just try sitting besides these people and the classroom automatically becomes a third-class theatre with all the trimmings!

There are you...I...I mean there you are, folks...ladies and people... the blow by blow account of colored indians (or is it carolinians)?... who are... hmmmmm... wait a minute... see that group of ladies over there? Looks like a bunch of turkeys gobbling their heads off! Who do they think they are, owners of this university? This is not your house, girls, remember that... oh-oh... that guy... walks up and down the corridors... peeps into classrooms... thump-a-thumping on the floor as if he were the inspector or Director of Private Schools!!

There he goes...there she goes...here I go...here I go...going..going.. gone. You one of these people? Will you revolutionize and overhaul yourselves without having the satisfaction of pulverizing and *murderizing* me? Now... now hold your temper... we are supposed to be human beings... hey, Alice!... put that ax down will you, huh?... Be a nnnnicceee girl... hey... heh... heh-heh... Alice!,... Whack! whiz! EEEeeyowwww! Good gosh!! This gal's a regular Geronimo!!... Zap!... Shazam!... Stars... Mars!... doggone it!...she's after my no-good scalf...so I better vamos or vanish, as the case maybe, and preserve my hollow coconut for the final exams... Bye.

ELECTRICAL ENGINEERING...

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ELECTRONICS IN MODERN LIFE

Electronics, the "Science of Tomorrow" is already here offering industrial and communication applications which are truly phenomenal. From research laboratories have come such amazing developments as high frequency heating, power system control, heating and air-conditioning control, printing, welding control, invisible rays, and countless uses. Innumerable new industries, made possible by electronics, beckon men of imagination and skill.

We are living in an electrical age—an age filled with 20th century wonders; and to the uninitiated, an age of magic. Not the black magic of olden times but "electronic magic." It is a magic born of infinitely small particles of negative electricity called electrons. These electrons are the most willing servants man has. They do a thousand tedious repetitive chores. They are also capable of spectacular achievements, as war has shown. For years we have been using electrons in broadcasting and television, X-ray tubes, in photoelectric cells, and in many other ways. The star performer of electronics in battles of the past war was undoubtedly radar. Ships and planes are now equipped with radar for safety and navigation. Electronic welding is now taking the place of riveting. As a scientific instrument the electron microscope is the most remarkable of all electronic devices. Theoretically, it can magnify up to 100,000 times. Electronics has already invaded the field of medicine. In the hands of a physician, the electronic tube is a valuable diagnostic and therapeutic tool. The electrical engineer has, in devising all these instruments, become the partner of the physician. Both physicians and electrical engineers are determined that the great growth expected in the field of medical electronics shall not be hampered. From the cradle to the grave, electrons will, in close alliance with all the other practices of medicine, give us new protection against disease.

All these matters are covered by the branch of science and engineering known as electronics. Its basic principles have come from physics and its applications from electrical engineering, and it deals with methods of freeing electrons with their subsequent behaviour and effects.

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Campuscrats

by

DELIA SAGUIN

I'm back again folks, and here we go again chatting about Carolinians we could not help but call campuscrats.

Let's take PENGGOY, the announcer — broadly grinning at a certain lassie, who incidentally, had a bunch of luscious lanzones. I s'pose the gal knew what was behind Penggoy's grin, because in no time at all, the captain of Baker Battery (Penggoy that is) was allowed to accommodate himself with a handful. Guess what his comments was after slapping in a few? "Hey, these are awfully sour!" But then he hastily added, "I mean, er, can you give me some more?" Well, isn't it just like him. Of special interest are those shirts he dons, with socks to match.

LOURDES SEVERINO — the busy "little bee." Daytime finds her at the Library, lording over tomes, and of nights she is busy poring over her accounting books. The most amazing thing about her is that she never shows signs of getting fagged out... the cute little dynamo.

RUDY RATCLIFFE, whose name fits him to a "T"... at first sight of this dashing young man, he seems to be aloof, or perhaps shy; but once you get to knowing him, well, you too will know just how chummy he is. Rudy has a younger sister at this university — ANNIE is her name. She's such a sweet, conscientious thing in her early teens (this explains her unassuming ways). Brother and sister finished their high school at St. Peter's Academy... valedictorian and salutatorian no less. That's something to be proud of.

The initiations of the Kappa Lambda Sigma sorority caused a RIOT in the campus. The first of its kind in this university. Pretty co-eds became witches, murderesses, dopes, idiots, and morons, with huge signs pinned on them to identify them as such — among other things.

ROSITA TY, that sweet Pharmacite and the sorority's MOST EXALTED SISTER, invited screams and hilarious laughter from the onlookers, as, blindfolded, she was made to grope for an object on the floor. She got hold of a rubber lizzard which, she thought was real. Did she scream, and while still at it, spaghetti worms were showered upon her. Although jittery through her experience, she passed her initiation unscathed.

Then there was that solemn wedding ceremony(?) of mamselle LUZ EVANGELISTA (Kappa Lambda's Exalted Sister and the ROTC Corps Sponsor, so a little bird told me) to monsieur FRANKIE NAVALES. It was solemnized by the "Reverend" CORAZON VELOSO, who sprinkled pure milk on the newlyweds. With her face plastered with "red paint," part of her hair covering her face, and an old rag for a veil, she was really something to see. Complementing the wedding ensemble was an overgrown flower girl suckling from a milk bottle... And this was no other than LOLLY O'KEEFE, who, on ordinary days is a faultlessly groomed, decorous young lady.

CLEMENS NEPUMOCENO — the murderess! Brother, did she look like one too... too bad Clems, I think you're stuck with that name for good.

The second initiation was even worse... what with the big sisters as bosses! Victim number one was TERESITA RIVERA, who had to take on the horrible form of some kind of witch or other. But you really didn't look like one Tit... you looked more like a baker, with his indispensable cap and

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ELECTRICAL ENGINEERING . . .

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RESEARCH

Research challenges men of imagination and skill, especially those who have finished a number of years of graduate study and practice. Within the past few years, investigation have been carried on in the following fields: theory of spark discharge; recombination of gaseous ions, meaning free flow of electrons and protons; direction of emission of photoelectrons from vapors; influence of intense electric fields on the photoelectric effect; and microwaves. A large research and development program is now being undertaken by the leading research centers of the world in the fields of radar and microwave techniques; gaseous conductions and atomic structures, servomechanisms, advanced network theory, automatic controls, and the effects of electric surges upon electrical apparatus. Fundamental research and development work on dielectrics, generation of high energy particles, generators in the several megavolt range, high-precision measurements of properties and effects of high energy particles, applications of mechanical methods of mathematical analysis therapeutic applications and missile guidance, are being emphasized. Certain aspects of nuclear energy, electronic computations and radio astronomy constitute another focus of research activity. The field of endeavor calls for a thorough knowledge of mathematics, physics, and electrical engineering. An advanced study of the subject is therefore necessary to carry a life's work of research.

AWFUL EASY

The philosophy student had cornered a very pretty co-ed at a party and was, naturally enough, trying to impress her with his views on love, life, death, history, civilization and what-not.

"For instance," he was saying, "one trouble with modern society is that we are too specialized. Now, I happen to have a good background in the liberal arts, but I must confess that I haven't the faintest idea of how the radio works."

"My goodness!" exclaimed the wide-eyed co-ed. "It's awful easy. You just turn the knobs and it plays."