

## QUALIFYING YOURSELF FOR ENGINEERING EMPLOYMENT

In an earlier article, <http://gracefullyaged.com/2015/12/14/high-rate-of-unemployment-in-the-midst-of-unfilled-vacancies/>, you'll find out that there is a high volume of unfilled vacancies in the midst of gross unemployment. In this s article, you'll discover how you can make yourself employable. You'll have to bear with me because the article will be a bit lengthy.

Your technical institution has put in place acceptable curricula, experienced teaching and technical staff, adequate and well-equipped laboratories and workshop, supervised Students' Industrial Work Experience Scheme and a fool proof admission policy that ensures that you have the prerequisite qualifications before being offered admission.

I'll start the discussion from the admission point; believing that you have the prerequisites. Any student who obtained the prerequisites on merit will definitely graduate. There may be one or, at most, two years of setback resulting from the fact that most engineering aspirants are not fully aware of the need for such courses as economics, management, environmental planning and management and other essential social studies relating to your chosen branch of engineering.

### Lectures

Punctuality and consistency at lectures are good ingredients of success. You don't need to like your lecturer but love your lectures. Ability to grasp in the classroom is essential but your readiness to immediately address difficult topics will determine your success. Immediate attention to assignments is paramount. You cannot be aware of the 5% of the lectures that will form the foundation for the career you have carved or will carve out for yourself. Much of the remaining 95% will come up for use occasionally. It's thus necessary to take every lecture seriously.

### Laboratories and Workshops

Laboratory and workshop practices are designed in relation to courses that require them to assist the students to have a clear understanding of the topics that are crucial to the understanding of engineering practice.

It is good practice to prepare the introduction and material requirements, based on the method of investigation proposed, ahead of the exercise. This helps to reduce the time you are likely to spend while keeping an eye on the trend of the data obtained.

Your seriousness to engineering practice reflects in your dressing. I had a student who was always attending Hydraulic Practical Sessions in flowing Babanriga. On three occasions I warned him; drawing the attention of the Chief Technologist to the issue. He erroneously thought that I could not discipline him because I was a graduate student and not a regular lecturer. At the end of the Session, I returned a nil score for him. He had to repeat the course.

Laboratory overalls are essential to laboratory practice while strong tight-fitting clothing is the best for workshops; the tightness should give enough room for easy movement.

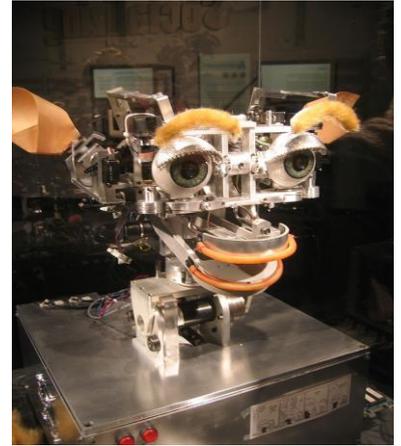
Safety boots and canvas are also good if you can afford them but avoid party shoes.

### Field Exercises

All engineering programs have field work at some point. Agricultural, Mining, Civil, Geotechnical, Petroleum, Electrical, etc. need surveying. Field exercise requires a more serious preparation of the introduction and material requirements than for laboratories and workshops. This is because it is very expensive to go back to the field.

If you cannot afford a light jungle boot, obtain a solid canvas. Jeans made with Khaki is best for field work. Ladies should develop the habit of wearing same for field work; avoid skirts for field work. Jeans are relatively cheap since they are produced en masse. In field exercises, you are likely to come across redundant information. Take for instance a topographic survey exercise covering a large area and having a road that traverses it. You need to reflect his road in your drawings with its respective elevations as appropriate, but you cannot use its elevations in your computations.

Treat your report the same way you handle those for laboratories and workshops.



[https://en.wikipedia.org/wiki/Engineering#/media/File:Kismet\\_robot\\_20051016.jpg](https://en.wikipedia.org/wiki/Engineering#/media/File:Kismet_robot_20051016.jpg) Uploaded: 17 October 2005

## Industrial Training IT

Industrial Training (IT) should not be seen as complementary to institutions' organized field works, laboratories and workshops. IT exposes the student to the real life situation of the studies carried out in the formal classes. You may visit <http://gracefullyaged.com/2015/12/26/industrialvocational-exposures/> for a more detailed exposure.

Report of IT, aside from following the same format as those for Workshop, carries an appendix which compiles weekly logs endorsed by the industry-based supervisor.

## Industry Work

Many employers use industry work experience as a prerequisite for new graduates. Employers also use this period as a chance to assess new employees for future employment. Exhibited potential to take responsibility, make sound decisions and apply technical skills will make you stand out as someone that might be great for the organization. On the other hand, you will also have the opportunity to evaluate the company for yourself to see if it's somewhere you might wish to work and also make better decisions about whether or not you'll enjoy that field of engineering.

## Reporting

Laboratory or workshop report is a systematic, coherent document which defines and analyses a subject or problem. Reports must always be: (i) accurate; (ii) concise; (iii) clear; and (iv) well structured. Reporting is part of the training that will assist you in carrying out your assignments in your career.

Your report is very essential. Develop the habit of using durable report booklets: one of my reports is still intact 38 years after I have left the university. The reports that are no longer with me are the ones that were borrowed but not returned.

Your institution has a format for report writing. Follow the format, which is most likely to contain: (i) title; (ii) abstract; (iii) introduction; (iv) materials and methods; (v) results; (vi) discussion; (vii) conclusion and recommendation; and (viii) literature cited. It is essential to illustrate, where necessary, with good diagrams.

It is good practice to use your school practical reports to learn how to write good reports. Use the format that is akin to the prescription endorsed by the relevant journal of your institution. This will prepare you for your post-graduate program, if interested.

### General Comments on Style

1. All scientific names (genus and species) must be italicized. (Underlining indicates italics in a typed paper.)
2. Use the metric system of measurements. Abbreviations of units are used without a following period.
3. Be aware that the word *data* is plural while *datum* is singular. This affects the choice of a correct verb. The word *species* is used both as a singular and as a plural.
4. Numbers should be written as numerals when they are greater than ten or when they are associated with measurements; for example, 6 mm or 2 g but *two* explanations of *six* factors. When one list includes numbers over and under ten, all numbers in the list may be expressed as numerals; for example, 17 sunfish, 13 bass, and 2 trout. Never start a sentence with numerals. Spell all numbers beginning sentences.
5. Be sure to divide paragraphs correctly and to use starting and ending sentences that indicate the purpose of the paragraph. A report or a section of a report should not be one long paragraph.
6. Every sentence must have a subject and a verb.
7. Avoid using the first person, I or we, in writing. Keep your writing impersonal, in the third person. Instead of saying, "We weighed the frogs and put them in a glass jar," write, "The frogs were weighed and put in a glass jar."
8. Avoid the use of slang and the overuse of contractions.
9. Be consistent in the use of tense throughout a paragraph--do not switch between past and present. It is best to use past tense.
10. Be sure that pronouns refer to antecedents. For example, in the statement, "Sometimes cecropia caterpillars are in cherry trees but they are hard to find," does "they" refer to caterpillars or trees?

After writing a report, read it over, watching especially for the lack of precision and for ambiguity. Each sentence should present a clear message.