ED 411 Assignment

1. To encourage the students to take the engineering career, which aspect should be concerned?

The outreach programme (students the opportunity to get involved in community service on a regular basis, which projects to choose from almost daily. Project-led and are offered at a variety of nonprofit variety.) that brings the hands on activities (gained by actually doing something about it from books, lecture, etc.) directly to the classroom. They have shown that outreach programmes are essential tools for increasing awareness about the engineering profession at the pre-university level. The outreach activities that have been effective in educating students about the challenges and rewards of engineering careers, and discusses the impact Engineering programmes have had in motivating students to consider engineering educational and career paths.

This objective is achieved through involvement in hands-on activities, exposure to undergraduate engineering students, instruction by science and engineering faculty and staff, and panel discussions with professional engineers. The main outcome is to increase awareness about the many facets of engineering and hopefully to convince some of the students to pursue engineering as a career.

Engineering Career for young men in high school. Eg. In Myanmar education, the career conference should be held in upper Basic Middle School and High School before they aren’t university students .So they choose right career and right University or Institude. This initiative was designed for high school students, their parents, teachers and guidance counsellors to explore careers in engineering.

Career options in engineering are not well known to most adults, let alone teenagers, and are not well represented in high school curricula or through career guidance counselling. Prior to the workshop presentation, students completed a pre-programme questionnaire, which included asking them to describe what an engineer does. Students were allowed to indicate not sure.

Other examples of incorrect descriptions include:

• I think an engineer is a person who works with engines.

• I think they fix things like cars.

The most common correct description given was that engineers design and build things. Other examples of correct descriptions include:

• An engineer designs things and puts them together to make them work.

• An engineer comes up with innovative ideas and solves problems.

Outreach programmes are essential tools for increasing awareness about the engineering profession at the pre-university level. Studies have shown that the existing level of knowledge about engineering is minimal, even in the senior grades, and that participation in outreach programmes, such as Engineering, significantly increases interest in pursuing engineering as a career.

We should introduce to the students the knowledge of engineering, what field they are interested in, what kind of career they choose, and they need to decide what kind of work to do as a professional. So we give them knowledge of career. We introduce them to industrial and plant by excursion .When the students are well known the engineering education, they choose the right field.

The participants take a close look at careers in engineering and meet with successful men from the profession.

2. Outline the fact to design the interactive tutorial assistance programme’

In ASTutE (Automated Student Tutorial Environment) a computer-based tutorial resource designed to work alongside tutors to help meet the challenge of teaching increasing numbers of students with increasingly diverse backgrounds.

Which tutors can quickly write new, or modify existing, problems by editing a simple template. Students use ASTutE interactively to check answers or as a detailed help system, accessing only as many help stages as they require. As a result, the student takes one of many possible routes through a tutorial problem, consistent with their understanding of the topic.

One option is to incorporate new learning technologies such as Computer-Aided Learning (CAL) into the curriculum to support and enhance existing teaching methods. Tutorials are particularly affected by the pressures described, yet experiential learning through tutorial work is an essential component in the consolidation of students’ understanding of lecture material. Therefore, is to utilize CAL material as an additional tutorial resource in a way that concentrates on making tutorials more effective for all involved.

Several key criteria were identified:

· The tutorial resource must be an integrated part of the curriculum, available at all times for use both in and outside time-tabled sessions.

· It should solve the majority of difficulties for the majority of students, freeing tutors to deal with more complex misunderstandings.

· The student interface must mirror the pencil-paper approach as far as possible: defining the problem.

· Tutors should be able to write or modify problems, which must be a quick and easy process, with no requirement to install special software and a minimal learning curve.

ASTutE provides tutors with an additional teaching resource that supports and enhances traditional teaching methods by making tutorial assistance more effective. The ASTutE Tutorial Assistant is an efficient, accessible and interactive tool of benefit to both tutors and students.

We think tutorial system benefit for both teacher and students, computer is the aid of the tutorial system. We used the computer assisted technology CAT and need to prepared package with key data.

3. Express the personal and professional skill and attributes required for 2 years engineering programs.

Personal and professional skills and attributes for 2 year engineering program is the most significant contribution to the field of engineering education.

• Possessing a multidisciplinary system perspective;

• Exhibiting good communication skills;

•Having high ethical standards,

Develops expected student learning outcomes that are consistent with the programme mission and are validated by programme stakeholders. Programme outcomes include technical knowledge and reasoning, personal and professional skills and attributes, interpersonal skills such as teamwork and communication, and conceiving, designing, implementing and operating systems in the enterprise and societal context. It is necessary to understand the mission of the 2 years course.

Develop students morally, mentally and physically and to imbue them with the highest ideals of duty, honor and loyalty in order to provide graduates who are dedicated to a career of naval service and have potential for future development in mind and character to assume the highest responsibilities of command, citizenship and government.

Engineering graduates who are capable of growing to fill engineering, management and leader- ship roles in government and industry, maturing their fascination with field.

A student learning assessment model provides an approach to student learning assessment that is based on the standards and the local programme context. It describes four elements of student learning assessment, specifically:

• Learning objectives;

• Curriculum and instruction;

• Assessment of student learning;

• Use of assessment results.

The model highlights the importance of aligning teaching, learning and assessment with the local programme’s intended learning outcomes, as well as the use of assessment results to improve the processes of teaching, learning and assessment. The rating scale used to generate the data is the same rating scale that was used in the stakeholder survey. The scoring (1-5) is as follows:

1. To have experienced or been exposed to;

2. To be able to participate in and contribute to;

3. To be able to understand and explain;

4. To be skilled in the practice or implementation of;

5. To be able to lead or innovate in.

There were assessed are as follows:

1. Problem Identification and Formulation;

2. Modeling;

3. Estimation and Qualitative Analysis;

4. Solution and Recommendation;

5. Perseverance and Flexibility;

6. Critical Thinking;

7. Professional Ethics, Integrity, Responsibility Accountability.

8. Critical Thinking

was introduced for those students in their 2nd year. This workshop provides students and faculty members with a standard language for evaluating student work. Again, faculty members are encouraged to use this language in subsequent courses.

If we prepared 2 year course we decided outcome, how to approach the outcome and how to assess that course, and collect feedback. We would established the mission and vision for that 2 years course.

4. To designed the work-base engineering program, what are to be consider for quality assurance?

The term work based learning is generally understood to refer to a process whereby activity carried out in the workplace can result in learning. The identification and accreditation of that learning makes it possible to consider the award of credit points leading to recognized qualifications. The concept is extended to reflect the quality assurance (QA) necessary to ratify that workplace delivery of an already validated Bachelor of Engineering programme can be effectively established.

Typically for a degree programme, various levels of award are defined. To achieve the learning outcomes should:

• Be relevant to the qualification sought whereby the content reflects a coherent programme.

• Be at a level that satisfies the criteria for the award.

• Be measurable through appropriate assessment

The definition and structure of the learning outcomes should have regard to:

• The student and the level of study.

• Requirements of other accrediting bodies.

• Is the programme for an individual or a group?

The learning process can be divided into two categories: undergraduate and postgraduate.

In the undergraduate process the programme will normally be a currently accredited degree for delivery in the university and will require additional QA processes for delivery in the workplace.

In postgraduate programmes that are accredited for delivery in the university can also be considered using similar criteria. Typically programmes considered for this delivery will be established for groups of students.

Alternatively, programmes of study may be designed for individual students at the postgraduate level. The delivery of work based learning in this mode will normally be defined by the use of a Learning Contract (LC) or Module Action Plan (MAP). Outcomes will be delivered. Whatever form is used to define the learning process, it will be required to describe the following learning support mechanisms:

• Timescales.

• The assessment process.

• Library resources.

• Computing resources.

The objectives of a QA system as shown will broadly remain the same whether the programme is institutional or work based in an organization.

5. Write sociological rationale of the design curriculum.

Hegemony stands for domination, leadership and ascendancy. In industrial design education, it has become more important because of its dramatic impact on the industrial design discipline. Educators have been the dominant class in the system of industrial design education. The students are playing an improving role, curricula design and teaching strategies are still dominated by the concept of hegemony.

In view of this, several conclusions can be drawn. Hegemony can be viewed as a tool, and how it is used can result in significantly different results.

A term can be created, design hegemony, to mean design domination, leadership or ascendancy. A good understanding towards these concepts is important to improve the quality of design education. Without hegemony, a state cannot be administered; without design hegemony, a design education cannot be executed effectively. If used properly, hegemony in industrial design will enable design education be executed effectively.

Hegemony have two meanings. First, it refers to a process within civil society whereby a fundamental class exercises control through its moral and intellectual leadership over allied classes. In this perspective, an alliance is formed among ruling groups as a result of the power and ability of one class to articulate the interest of other social groups to its own.

The second use of the term takes on a much more dynamic character. Hegemony, as it is used, points to the relationship between the dominant and dominated class. In this case, hegemony refers to the successful attempt of a dominant class to utilize its control over the resources of state and society, particularly through the use of the mass media and the educational system .

Hegemony is related to the issues of ideology entirely. In other words, hegemony itself is ideology.

6. Express the example of advance and new developments in engineering and technological education.

Over the world we presented the result of research in International Conferences. The diversity of subjects, concepts, ideas and international backgrounds in this presentation of proceedings demonstrate the global nature of International Conferences, as well as its relevance within the worldwide affairs regarding engineering and technology education.

Importantly, all of the papers have undergone assessment by independent international peer referees and have been professionally edited in order to ensure the high quality and value of the Proceedings into the future. Consequently, it is anticipated that this research will become a useful source of information on other research and development activities in the dynamic and evolving field of engineering and technology education.

These research are also used for advance and new developments in engineering and technological education as a references.

7. To improve the communication skill of engineers, what are to be emphasized in training programs?

The Engineering Communication study programme as it relates to students and discuss the essential features of communication skills. Particularly as it relates to new technologies.

Engineers may be technically competent; they often lack good communications skills that are necessary in order to transfer information and reasons. This situation makes excellent technical skills superfluous. It is obvious that communication skills are critical tools for success.

The sequence of importance is listed as follows:

• Technical writing:

• Public speaking:

• Working with individuals:

• Working with groups:

• Talking with people:

The objectives of the Engineering Communication course taught at the Institute are as follows:

• To introduce the basic procedures that comprise engineering communication;

• To expose students to the wide spectrum of activities involved in the field of communication;

• To demonstrate the relevance of different subjects in technical communication;

• To emphasize the importance of verbal and non- verbal communication;

• To develop a fuller awareness of the social and environmental responsibilities of the engineer;

• To encourage and emphasize the importance of responsibility, discipline, attitude, teamwork and honest effort;

• To provide a situation in which students have the maximum freedom to carry out their own decisions.

In engineering education, we all have higher degree but it is not enough to lead the students. We also need communication skill to train students and treat their parents and environments. Then we need to learn how to used modern equipment as computer technology and also need to learn international language, especially English.

8. To be designed the computer server for engineering program, what are to be aware of?

With the rapid development of the Internet over recent years, in conjunction with the transmission protocol TCP/IP and the latest version of facilities, new opportunities have come into existence for the use of the network for the remote control of experiments and other practical systems in engineering education.

There are two prime benefits: students learn how network systems work and also how remote control technologies operate and the universities save money when students from several institutions utilize the same expensive equipment. Using graphical software environments in client-server systems can be easily designed.

Client-server systems have some general advantages when compared with simple Remote-Access Systems (RAS) or proprietary (single-solution) systems. In recent years, gateway systems for remote control have become available for most measurement and instrumentation bus systems and this effectively permits direct access.The remote control of installations and systems has been a technical reality in research laboratories and automated industries for many years, particularly in process control industries.

The students has been to increase the attractiveness and effectiveness of laboratory work in research by remote-controlled experiments. An attractive consequence of this development is that resources are saved because the partners need not cater for the whole spectrum of possible (and mostly expensive) research and teaching equipment.

In our country, it is difficult to use the computer server for engineering program because our country is poor knowledge and finical problem. We all can’t start remote control technologies and remote control laboratory.

9. How many system be utilized in student’s project management?

Project management is a methodical approach to planning and guiding project processes from start to finish. According to the Project Management Institute, the processes are guided through five stages: initiation, planning, executing, controlling, and closing.

There are many system

1. The class System Project Management (SPM)
2. The critical path method (CPM),
3. Project evaluation and review technique (PERT),
4. Design structure matrices (DSM) and critical chain (CC).
5. Project management soft ware system
6. Projective management information system.

Project management can be applied to almost any type of project and is widely used to control the complex processes of software development projects.

Management tools have been utilized to manage in engineering society. The tools allow a host of tasks to be handled efficiently. Management tools related business, including the issuing of call-for-papers and providing information about the university, methods of contacting the university organisers, registrations of interest, online submissions of abstracts The project has satisfied a number of criteria in terms of suitability for engendering graduate qualities in senior engineering students. These factors make the task suitable as a challenging topic for a final year engineering project. This has been one of the underlying motives for designating the topic as a final year group project.

The advent of Internet-based online systems has revolutionised the management of almost every conceivable form of human activity, ranging from making purchases to handling finances.

The design specification is to identify the constraints on resources for the project and establish criteria to gauge the success of the outcome.

10. By using technical and Scientific Computing Enviroment, how can the different disciplines be co-operated?

The mathematics and computer science curricula in engineering degree programmes need to reform. The creation of defined links between mathematics and application-oriented engineering subjects in the introduction of technical and scientific computing environments in the teaching of mathematics, coupled with lectures in computer science, to enable engineering students/graduates to use this experience to solve problems. Experiences and results of the first year of project realization are detailed.

Mathematics is a living part of this society, and we cannot afford to experience it as a collection of formulas and rules for calculations. Among other things it is the language in which knowledge is expressed for use in computing, which is why our students must master the translation of commonplace knowledge into a precise mathematical description. It is therefore vital that students are introduced to modern tools of information technology as early as possible and constantly exposed to them. Technical and Scientific Computing Environments (SCE) are such tools. They have been available for several years and can be used in the teaching of mathematics at schools and especially at universities.

In modern society, mathematics is increasingly used in almost all areas of human activity (methods for optimal resource allocation in production, transportation, management algorithms for maximizing return on investment in banking and/or for trading in the stock-exchange, techniques for minimizing waste when cutting expensive raw- materials like leather, textile or wood, simulation algorithms for computer-aided design in all areas of industry from bottle production to plane buildings, etc).

They have to solve the problem(s), or rather little projects, in teams of two or three students. The problems concern mathematical and engineering subjects of past lessons, as well as exploring some concepts of following lectures. The teacher works as a supervisor. Our approach to using computers and SCE in mathematics lectures and seminars was as follows.