ENGINEERING AND CODE OF ETHICS IN ETHIOPIA

Taye Zewdu

Pre-engineering and Common Courses

History of Engineering in Ethiopia

Current status

Codes of Ethics

Duties of Engineering graduates
Engineering:

“The creative application of scientific principles to design or develop structures, machines, apparatus, or manufacturing processes, or works utilizing them singly or in combination; or to construct or operate the same with full cognizance of their design; or to forecast their behavior under specific operating conditions; all as respects an intended function, economics of operation or safety to life and property.”

The American Engineers’ Council for Professional Development
Introduction

Engineering History in Ethiopia

Deliberate freely on all matters And hold onto the best!

1950- University College of Addis Ababa
1952- Imperial College of Engineering two-year certificate program
1954- First graduation- 26 August in the presence of HIS
3 of 26 graduates went abroad for studying Engineering
1954-ICE a four-year program
1959- Five-year program in 1959 to qualify for a BSc degree in Civil, Mechanical and Electrical Engineering
1960- Until this time only 20 got the BSc in Engineering
1961- Haile Sellassie I University (HSIU) was created through consolidation of existing colleges
1974- Addis Ababa University

Amare Asgedome, The Ethiopian Journal of Higher Education Vol. 2 No. 2 December 2005

CURRENT STATUS

Engineering Institutions in Ethiopia

Faculty of Technology was formed by combining the Imperial College of Engineering and the Ethio-Swedish College of Building Technology

2004- Addis Ababa Institute of Technology
More than 21 Universities are teaching ‘Engineering’

70/30 Program

40/30/30 proportion at AAiT

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<thead>
<tr>
<th>Description of Targets</th>
<th>2009/10</th>
<th>2014/15</th>
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<tbody>
<tr>
<td>1. University teachers (no)</td>
<td>23,000</td>
<td></td>
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<tr>
<td>a. Teachers with second degrees (%)</td>
<td>75</td>
<td></td>
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<tr>
<td>b. Teachers with PhD degrees (%)</td>
<td>25</td>
<td></td>
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<tr>
<td>c. Student – teacher ratio</td>
<td>1:20</td>
<td></td>
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<tr>
<td>2. Annual intake for postgraduate programs (second degree and PhD (no)</td>
<td>16,100</td>
<td></td>
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<tr>
<td>3. The average graduation rate of undergraduate program (%)</td>
<td>93</td>
<td></td>
</tr>
<tr>
<td>a. The graduation rate undergraduate programs for females (%)</td>
<td>90</td>
<td></td>
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<tr>
<td>b. The graduation rate undergraduate programs for males (%)</td>
<td>95</td>
<td></td>
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<tr>
<td>4. Gross admission for undergraduate program (70:30 program mix) (no)</td>
<td>185,788</td>
<td>467,000</td>
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<tr>
<td>5. Participation rate of females in undergraduate programs (%)</td>
<td>29</td>
<td>40</td>
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<tr>
<td>6. Participation rate of females in postgraduate programs (%)</td>
<td>10</td>
<td>25</td>
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FDRE, Growth and Transformation Plan, 2011-2015
For Engineers

Fundamental Principles

1. Using knowledge and skill for the enhancement of human welfare;

2. Being honest and impartial, and servicing with fidelity the public, their employers and clients;

3. Striving to increase the competence and prestige of the engineering profession; and

4. Supporting the professional and technical societies of their disciplines.
As engineering practitioners, we use our knowledge and skills for the benefit of the community to create engineering solutions for a sustainable future. In doing so, we strive to serve the community ahead of other personal or sectional interests.

Guidelines on Professional Conduct

➢ Demonstrate integrity

➢ Practice competently

➢ Exercise leadership

➢ Promote sustainability
1. Act on the basis of a well-informed conscience

2. Be honest and trustworthy

3. Respect the dignity of all persons

1. Maintain and develop knowledge and skills

2. Represent areas of competence objectively

3. Act on the basis of adequate knowledge
Exercise leadership

1. Uphold the reputation and trustworthiness of the practice of engineering

2. Support and encourage diversity

3. Communicate honestly and effectively, taking into account the reliance of others on engineering expertise

Promote Sustainability

1. Engage responsibly with the community and other stakeholders

2. Practice engineering to foster the health, safety and wellbeing of the community and the environment

3. Balance the needs of the present with the needs of future generations
Voluntary Professional Associations

Ethiopian Society of Chemical Engineers (ESChE)-Since 1995  
http://www.esche.org.et/
Ethiopian Association of Civil Engineers (EACE)-Since 1997  
http://ethace.org/
Ethiopian Society of Mechanical Engineers (ESME)- Since 1995  
www.esme.org.et
Ethiopian Society of Electrical Engineers (ESEE)- Since 1998  
www.esee.org.et/

Duties of Engineering Graduates

Chemical Engineers  
Civil Engineers  
Computer Engineers  
Electrical Engineers  
Food Engineers  
Mechanical Engineers  

Design  
Installation  
Construction  
Operation  
Maintenance  
Supervision  
Entrepreneurs
Open for Discussion

https://www.facebook.com/pages/Trust-Me-Im-an-Engineer/182881958486554?ref=br_tf
http://www.aait.edu.et
Aaitpreng.wordpress.com
http://www.mediaethiopia.com/Engineering/
http://www.abet.org/