UNISEC-EGYPT: Strengths, Weaknesses, Opportunities, and Threats

Ayman H. Kassem

Department of Aerospace Engineering
Cairo University
Outline

• UNISEC-EGYPT.

• Strengths. S

• Weaknesses. W

• Opportunities. O

• Threats. T

• Restructure of SSTlab.

• Future Plan.
UNISEC-EGYPT

• It is the first official year of UNISEC-Egypt.

• We thought of reshaping the structure of our Space Science and Technology lab (SSTLab) to make it a model for other UNISEC-Egypt members.
Strengths

• Many years of teaching and research space experience (Egyptsat1).

• Experience gained by faculty and students in building models (Cansat, Cubesats, Rovers, Quadcopters, etc.).

• Top students from all over the country.
Weaknesses

• Shortage in managerial or secretarial staff.

• Shortage in technical staff.

• Lack of equipments and good quality sensors.

• No dedicated budget for research.
Opportunities

• There is an increase in the number of students to study Aerospace Engineering.

• We started to get requests from different universities and research institutes to join UNISEC-EGYPT such as:
  • Alexandria Library,
  • Zwail University,
  • National authority of remote sensing and space sciences.
Threats

• The main threat is the bureaucracy.
• It became harder and harder to acquire new aerospace related equipment and sensors due to security checks and paper work.
• There is also difficulty in funding as most of the money is spent on security.
• There are five universities applied to establish space programs.
Restructure of SSTLab

- The new structure consists of eight groups and headed by UNISEC POC.

Diagram:
- POC
- RA
  - CTPx Head
  - Ground station head
  - Cubesat head
  - Quad/Octocopters head
  - Space rover head
  - Launchers head
  - Public relation head
  - Fund raising head
CANSAT
GROUND STATION GROUP

• The group is established.

• Working on building our own satellite propagators and trackers software.

• Working on the feasibility study for equipments.

• Facing problems with security permissions.

• Facing problems with funding.
QUAD/OCTOCOPTER GROUP
Public Relations and Fund Raising GROUP

• A major step must taken to secure funding.

• We made two groups for that.

• The two groups work together.

• Anniversary

75/25

AEROSPACE ENGINEERING CAIRO UNIVERSITY

75 years since inception - 25 years since 1st full program graduation
Future Plan

• Continuing CanSat Education (CTP6, CTP7, ....)

• Competing nationally and internationally (EED, ARLISS, MIC, etc.).

• CubeSat (moving to engineering Model).

• Blending with Egypt’s space research plan and cooperating with different Egyptian research institutions such as NARSS and Ministry of scientific research.
Thank you

Ready for Questions