IAC-11.E1.2.8: Educational assessment of four years of CubeSat activities at the University of Liège, Belgium.

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Liège ?
1. The OUFTI-1 project

2. Development of soft skills in 5 fields

3. Survey
   1. Content and panel
   2. General trends
   3. Use in professionnal life
   4. Soft skills used
   5. Open questions

4. Conclusion
1. The OUFTI-1 project

CubeSat standard

Three payloads

Subsystems developed by students

1 kg litre watt

2 universities + 3 engineering schools
2. Development of soft skills in 5 fields

• To establish **synergies** between theory and practice
• To adopt an **applied scientific approach**
• To master written and oral scientific **communication**
• To manage a **collaborative work**
• To manage a **substantial** work that should lead into a **concrete result**
3.1. Survey – content and panel

Closed questions:
- 22 soft skills in 5 fields
- Evaluation of: - use in OUFTI-1
  - development in OUFTI-1
  - use in professional life

Open questions:
- Most developed and most used-in-professional-life skills
- Professional life & OUFTI-1

→ Panel and participation:

<table>
<thead>
<tr>
<th>Academic year</th>
<th>Number of students</th>
<th>Number of answers</th>
<th>Participation rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007-2008</td>
<td>2</td>
<td>2</td>
<td>100%</td>
</tr>
<tr>
<td>2008-2009</td>
<td>13</td>
<td>8</td>
<td>61.5%</td>
</tr>
<tr>
<td>2009-2010</td>
<td>15</td>
<td>8</td>
<td>53.3%</td>
</tr>
<tr>
<td>2010-2011</td>
<td>10</td>
<td>6</td>
<td>60%</td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
<td>24</td>
<td>60%</td>
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</table>
3.2. Survey – general trends

A: to establish synergies between theory and practice

B: to adopt an applied scientific approach

C: to master written and oral scientific communication

D: to manage a collaborative work

E: to manage a substantial work that should lead into a concrete result
3.2. Survey – general trends

→ Detailed scores for the use of collaborative skills

- **a:** Communicate within a group constituted of different profiles
- **b:** Collaborate to solve consequent and multidisciplinary problems
- **c:** Share tasks
- **d:** Manage the possible tensions rising within the group
- **e:** Take into account the mutual consequences of choices and developments
3.2. Survey – general trends

A: to establish synergies between theory and practice

B: to adopt an applied scientific approach

C: to master written and oral scientific communication

D: to manage a collaborative work

E: to manage a substantial work that should lead into a concrete result
3.3. Survey – use in professional life

→ evolves according to seniority

A: to establish synergies between theory and practice

B: to adopt an applied scientific approach

C: to master written and oral scientific communication

D: to manage a collaborative work

E: to manage a substantial work that should lead into a concrete result
3.4. Survey – soft skills used

→ differ according to the team

<table>
<thead>
<tr>
<th>Year of graduation</th>
<th>Score</th>
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<tbody>
<tr>
<td>2008</td>
<td>2.00</td>
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<tr>
<td>2009</td>
<td>2.20</td>
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<tr>
<td>2010</td>
<td>2.40</td>
</tr>
<tr>
<td>2011</td>
<td>2.60</td>
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</table>

**A:** to establish synergies between theory and practice

**B:** to adopt an applied scientific approach

**C:** to master written and oral scientific communication

**D:** to manage a collaborative work

**E:** to manage a substantial work that should lead into a concrete result
3.5. Survey – open questions

• Most developed?
  → Collaborative skills
  → Communication

• Most important in professional life?
  → Communication
  → Collaborative skills

• Mentioned in job interview (71%)

• Prepare to professional life (79%)
3.5. Survey – open questions

62.5% (out of the 24 answers) work in aerospace sector:
4. Conclusion

- Educational project
- Soft skills are developed…
  …and used in professional life
- Positive influence on professional life
- Beginning of numerous space careers

New projects will follow!
Thank you for your attention!