University of Baghdad
College of Engineering
Aeronautical Engineering Department

تحـقيق فـرص العـمل لمـهندسـي الطيـران

اعداد وتقديم: لجنة الارشاد النفسي والتوجيه التربوي / قسم هندسة الطيران
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Contents

Today the following will be reviewed:

- Introduction to Aviation Industry (sector).
- Aeronautical Engineers and Aircraft Maintenance Engineers.
- Opportunities for Aeronautical Engineers.
- Development of Knowledge and Skills (Aviation Courses)!
- Soft Skills Required for Aeronautical Engineers

Aviation Industry

- It's a wide term that includes the design, certification, production, operation, maintenance of aircraft, training of personnel and all its supporting services.
- One of the fastest growing industries with high contribution to world economics.
- It is affecting other sectors directly and indirectly.

Beyond the industry

Aviation's global employment and GDP impact

87.7 millio

Jobs supported by aviation worldwide.

$3.5 trillio

Aviation's global econor impact (including direct induced and tourism ca

4.1%

Global GDP supported by aviation.

35%

Air transport carries aroun 35% of world trade by value less than 1% by volume.

$6.5 trillio

Value of cargo handled by ai

58%

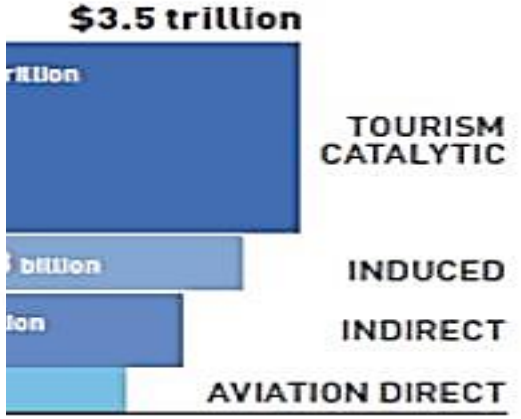
Percentage of international tourists who travel by air.

Every day in 2019

- 12.5 million passengers
- 128,000 flights
- $18 billion worth of goods carried

Every 60 seconds

- A single jet aircraft flies 15 kms
- The fan blade in a typical jet engine will rotate 4,000 times
- $12.4 million worth of world trade carried
- 8,643 passengers board aircraft around the world
- 69,000 data messages are sent over the specialist SITA network
- $6.6 million worth of economic activity supported by aviation
- 9,452 bags are accepted into the global luggage handling system
- 89 flights take off worldwide



.3 million

ivil aerospace (engineers d designers of civil aircraft, gines and components)

37,000

ir navigation service roviders (air traffic ntrollers, engineers, ecutives)

r references to the facts and analysis ntained in this summary document, ease refer to the ATAG *Aviation: nefits Beyond Borders* 2020 and *ypoint 2050* reports available on ww.aviationbenefits.org

87.7 million Jobs supported by air transport under normal circumstances.

→ **41.7 million** Jobs supported by aviation following Covid-19 impact.

→ **A reduction of 46 million** jobs supported (-52.5%).

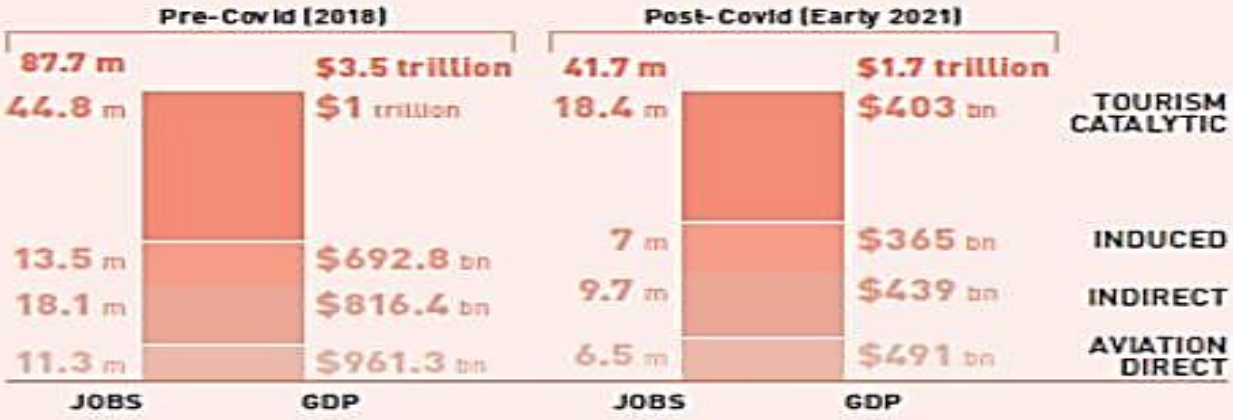
$3.5 trillion Aviation's global economic impact under normal circumstances.

→ **$1.7 trillion** Global economic impact following Covid-19.

→ **A reduction of $1.8 trillion** in economic activity supported by aviation (-51.5%).

The impact of Covid-19

Jobs in aviation, throughout the supply chain and in the wider economy will be impacted by Covid-19[4].



4.8 million

Direct aviation jobs may be lost due to Covid-19 impact (a 43% reduction from pre-Covid levels):

- **1.3 million** at airlines (-36% compared with pre-Covid)
- **220,000** at airport operators (-34%)
- **3.2 million** other on-airport (-55%)
- **151,000** in civil aerospace (-11%)

56.7%

Drop in airport revenues predicted for 2020, reaching a year-on-year peak of 90% globally in the second quarter of 2020 (the hardest hit region is Europe losing close to $37 billion in revenue).

50%

Drop in revenue for airlines expected for 2020: around $419 billion, for total losses of $84.3 billion by the world's airlines.

Aeronautical Engineers And Aircraft Maintenance Engineers

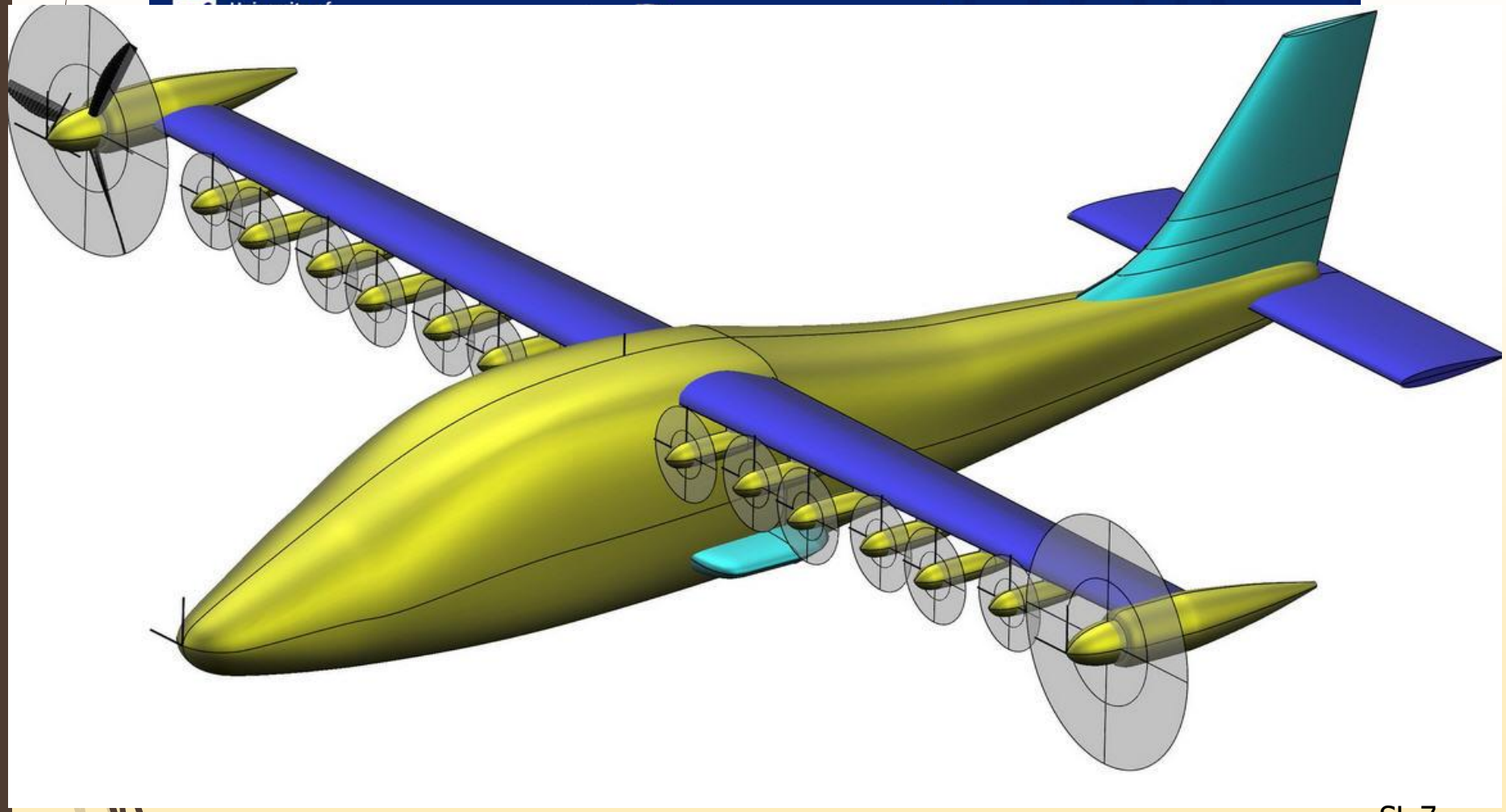
- These are two different specialties, one is academic (4-5 years) leading to research and development with wide verity of applications, while the other (1-2 years) is skill based focused on aircraft (and aircraft components) maintenance

what do YOU want to achieve
and
how HIGH are your dreams

a condensed course (1 year only) and pass the same test.

- The question "**Which specialty is better?**" does not have one specific answer because it is relative and depends on:

Opportunities for Aeronautical Engineers



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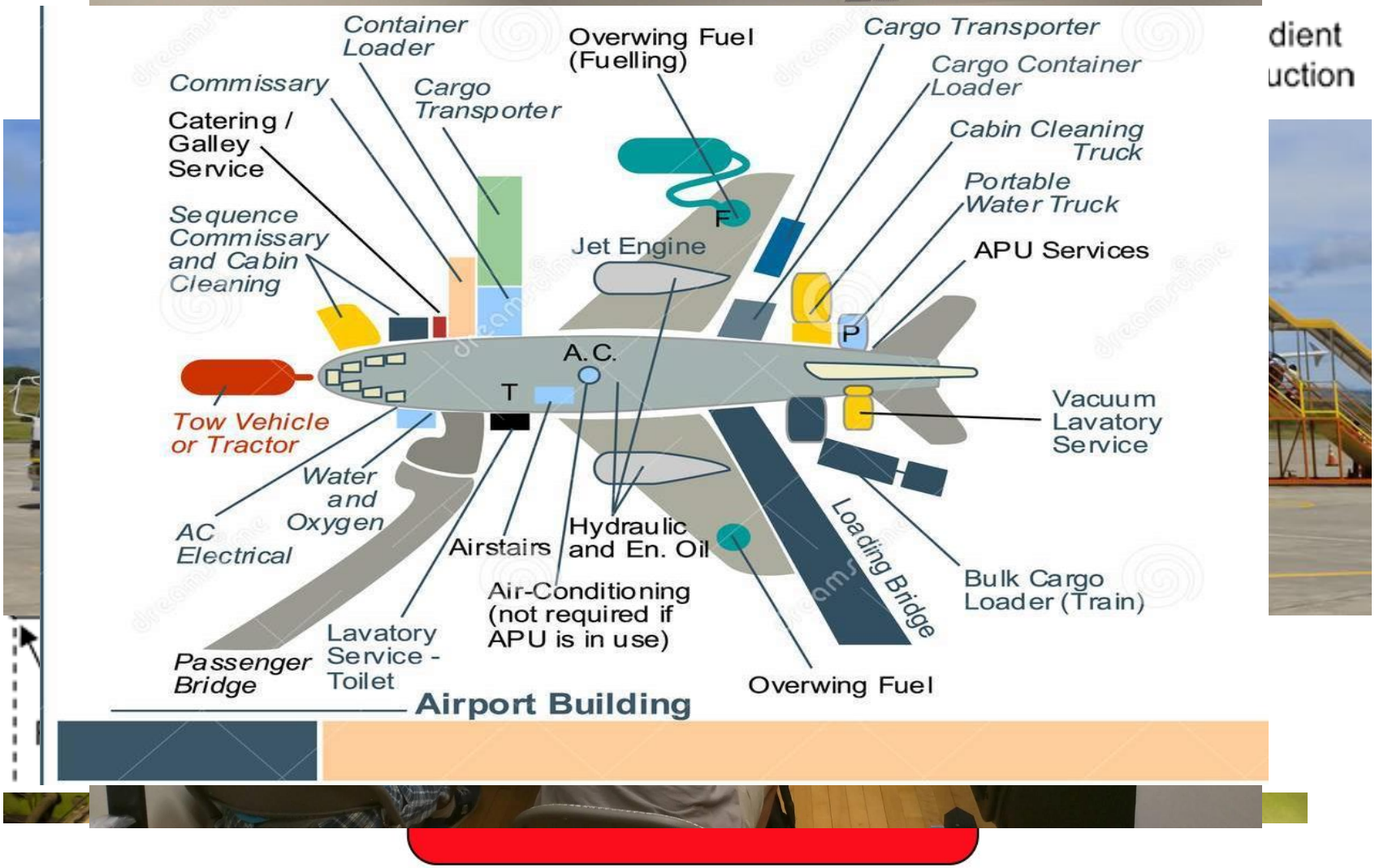


Other Fields

Development of Knowledge and Skills

- You have to develop your knowledge and skills continuously, keep learning.
- You must consider quality of the learning sources.
- You must consider the direct and indirect costs of these learning sources.
- You must consider the benefits of these sources.

Development of Knowledge and Skills

- Online or Virtual Class courses is just one of the many options available.
- Some examples of reliable online training providers are:

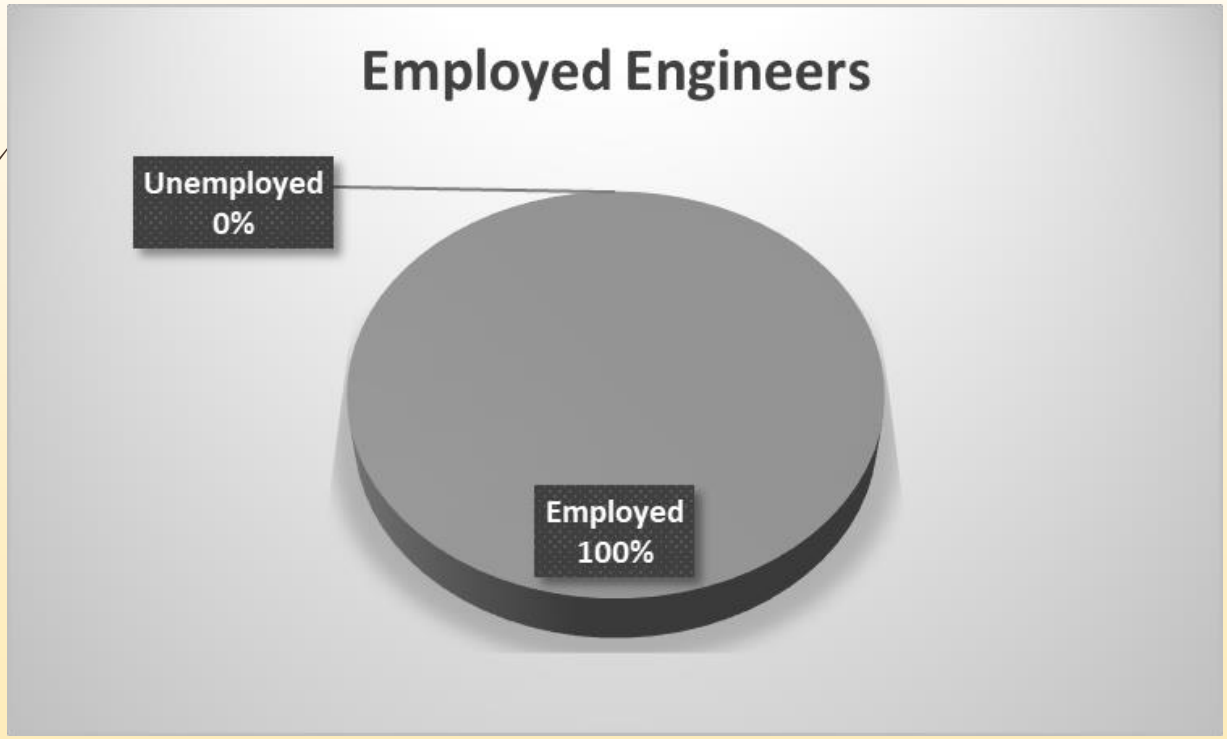
1. ICAO (https://www.icao.int/Pages/default.aspx)
2. IATA (https://www.iata.org/)
3. Airlines such as Turkish Airlines (https://akademi.thy.com/courses.aspx)
4. Embry-Riddle Aeronautical University (https://erau.edu/)
5. Linkedin (https://www.linkedin.com)

Soft Skills Required for Aeronautical Engineer

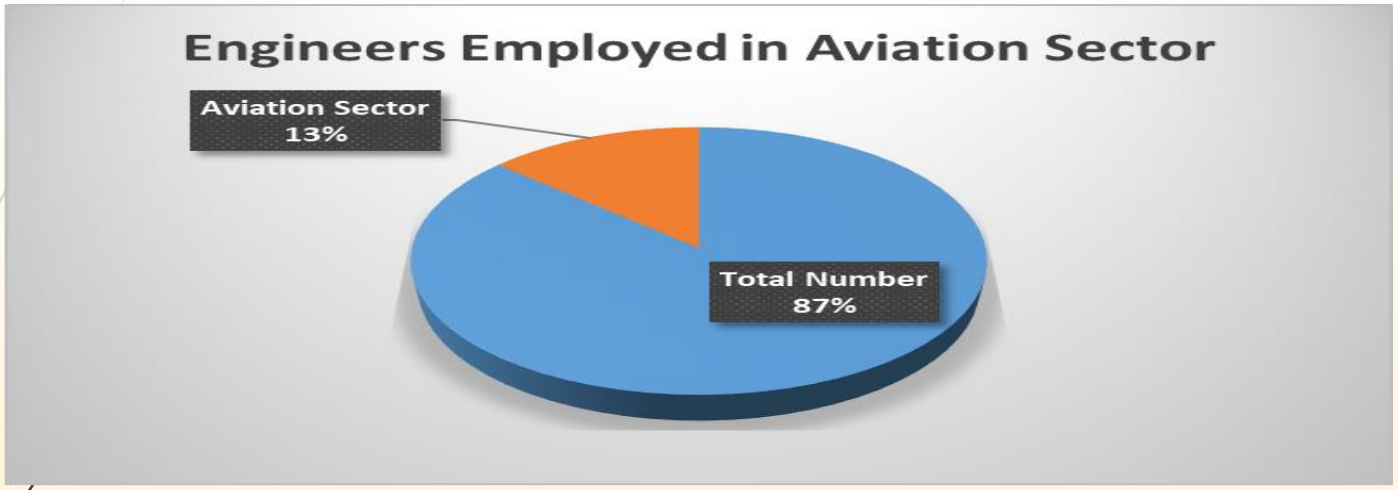
- In addition to the academic, and technical knowledge required in any job in the aviation sector, soft skills are must to ensure the minimum required level of performance of responsibilities and duties.
- Some of the common necessary soft skills in aviation are:
  1. Time management.
  2. Precision.
  3. Communication (oral and written).
  4. English language.
  5. Basic computer and software skills (word processing, spreadsheet, emails).

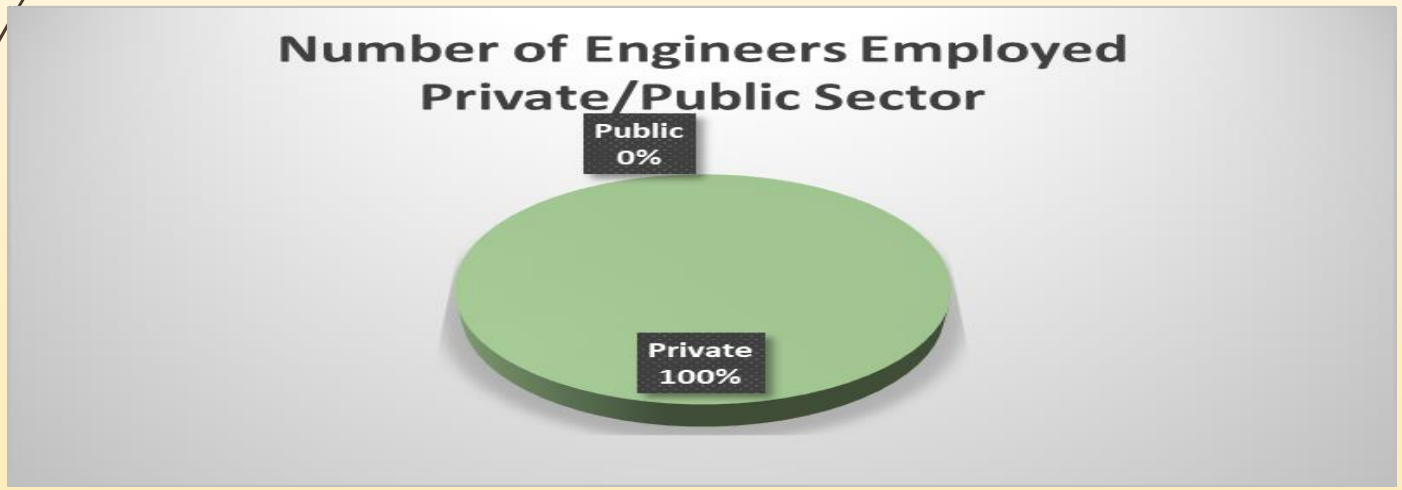
Current Graduates' Employment Status

- In 2022, the first batch of aeronautical engineers from our department graduated.



Current Graduates' Employment Status





Thank You