

The University of Tripoli

Report on Interdisciplinary Research at the University of Tripoli, Libya

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Table of Contents

Repor	t on Interdisciplinary Research at the University of Tripoli, Libya
1.	Introduction3
2.	Definition and Importance of Interdisciplinary Research
3.	Current Status of Interdisciplinary Research at UoT3
4.	Interdisciplinary programs6
5.	Funding6
6.	Interdisciplinary research administration6
7.	Research facilities
8.	Local agreements7
9.	International Agreements7
10.	Challenges
11	Conclusion

1. Introduction

The University of Tripoli (UoT), established in 1957, is Libya's oldest and largest public university. With over 20 faculties spanning the sciences, engineering, health, agriculture, humanities, and social sciences, UoT plays a central role in national education and research. In recent years, there has been a growing recognition of the importance of interdisciplinary research (IDR) as a strategy to address complex societal challenges in Libya and the broader region.

2. Definition and Importance of Interdisciplinary Research

Interdisciplinary research involves the integration of knowledge, methods, and perspectives from two or more academic disciplines to advance understanding or solve problems that cannot be adequately addressed by one field alone. At UoT, this approach is increasingly vital for tackling issues such as public health, environmental sustainability, renewable energy, food security, and post-conflict development.

3. Current Status of Interdisciplinary Research at UoT

UoT recognizes the importance of interdisciplinary research and encourages it among research the staff community. Interdisciplinary research has increased over the past five years. Table 1 shows the number of papers authored by staff from different disciplines over the years from 2020 until the end of 2024. Assuming that faculties usually have different disciplines, the number of papers authored by staff from different faculties have been counted from the university publication repository.

Table 1: The number of papers co-authored cross faculties at UoT

Year	2020	2021	2022	2023	2024
Papers	24	36	45	41	39

The trend of change is depicted in Figure 1.

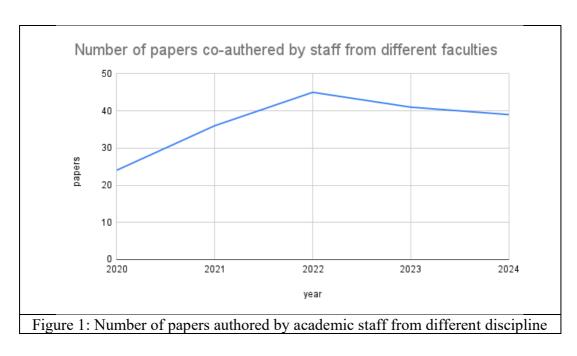


Table 2 shows the number of interdisciplinary papers distributed by faculties for the year 2023:

Table 2: Number of interdisciplinary papers at UoT in 2023

Faculty Name	Number of papers
Faculty of Science	10
Faculty of Veterinary Medicine	7
faculty of Education Tripoli	4
Faculty of Information Technology	4
faculty of Medicine	4
faculty of Agriculture	4
Faculty of Engineering	2
Faculty of Arts and Design	2
Faculty of Economics and Administration Tajura	1
Faculty of Education Bin Ghesheer	1
faculty of Pharmacy	1
faculty of Education Janzour	1

Table 3 shows the details of cooperation between faculties.

Table 3: Details of interdisciplinary research at UoT in 2023

Faculty	Faculties cooperated with	No. of papers
	Faculty of Agriculture	1
	Faculty of Education Bin Ghesheer	1
	Faculty of Education Tripoli	1
Faculty of Science	Faculty of Information Technology	2
	Faculty of Medicine	3
	Faculty of Pharmacy	1
	Faculty of Veterinary Medicine	4
Faculty of Veterinary Medicine	Faculty of Medicine	4
raculty of vetermary wiedienic	Faculty of Science	3
	Faculty of Arts and Design	2
Faculty of Education Tripoli	Faculty of Education Janzour	1
raculty of Education Tripon	Faculty of Science	1
	Faculty of Veterinary Medicine	1
Faculty of Information Technology	Faculty of Engineering	2
raculty of information reclinology	Faculty of Science	2
Faculty of Medicine	Faculty of Science	3
1 active of wedienic	Faculty of Veterinary Medicine	3
	Faculty of Economics Tajura	1
Faculty of Agriculture	Faculty of Science	1
	Faculty of Veterinary Medicine	2
Faculty of Engineering	Faculty of Information Technology	2
Faculty of Arts and Design	Faculty of Education Tripoli	2
Faculty of Economics Tajura	Faculty of Agriculture	1
Faculty of Education Bin Ghesheer	Faculty of Science	1
Faculty of Pharmacy	Faculty of Science	1
Faculty of Education Janzour	Faculty of Education Tripoli	1

Another indicator is found in the number of co-authored publications with researchers from outside the university over the period from 2020 to 2024 (Table 4). This number does not reflect the interdisciplinary research as many papers are written in the same discipline, however, it indicates the volume of cooperation between researchers from UoT with the other world.

Table 4: The number of papers co-authored with non-UoT researchers

Year	2020	2021	2022	2023	2024
Papers	133	177	202	171	164

This trend is shown in Figure 2.

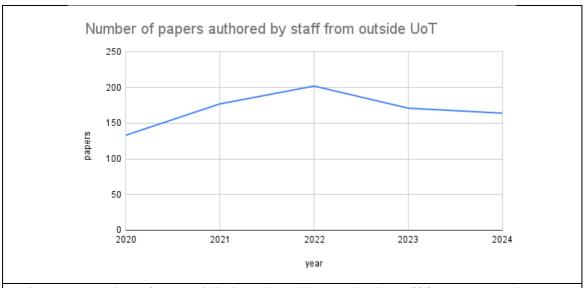


Figure 2: Number of papers jointly authored by academic staff from UoT, and one or more from outside UoT, including international authors.

4. Interdisciplinary programs

UoT faculties introduced several interdisciplinary programs. Examples of these programs:

- Master in Agricultural Engineering which is run by the faculty of Engineering and Agriculture. (<u>link</u>)
- The Bachelor of biomedical engineering (BME): The program is designed to provide a solid, interdisciplinary foundation in life and physical sciences, mathematics and engineering. (<u>link</u>)

5. Funding

Research in general at Libyan public universities and specifically at UoT is not supported directly through institutions. Academic staff receive research allowance as part of their salaries. They get paid based on their academic degree. The research hours range from 4 hours for a lecturer assistant to 10 hours for a full prof per week. Recently the research allowance has been raised to a maximum of 100 LYD per hour (link). There is no specific budget allocated to Interdisciplinary research, however, it is implicitly included in the research fund in general. In addition, the university of Tripoli board recently agreed to support publications on highly ranked journals by paying publication fees.

6. Interdisciplinary research administration

The university supports research through the Research and Consultation Center (RCC). The center encourages the interdisciplinary research through independent research groups. There exist several research groups that joins researchers from different disciplines cross the university disciplines. (link)

7. Research facilities

Faculties cross the university have their own labs and tools. The ministry of higher Education and scientific research periodically supports public universities including UoT with research labs and materials.

Despite the fact that there are several specialized research facilities distributed over different faculties, they used to be restricted for the faculty staff members and students, limiting the interdisciplinary research. In 2020, the university board took a decision to make those facilities available to all research staff at the university. These facilities are now listed at the RCC website and can be used by any research staff or group at the university.

The RCC building has three computer labs connected to the Internet which are available to any researchers on the university. It also contain few halls used usually for the training. In addition to a big meeting room that can be used through the RCC administration.

8. Local agreements

The university has made several agreements with other research organizations allowing research staff to use their research facilities and conduct joint research projects with them. Some of these agreements are listed below:

- The joint cooperation agreement between the University of Tripoli and the Libyan Center for Biotechnology Research. link
- The scientific cooperation agreement between the Faculty of Science at the University of Tripoli and the Libyan Plasma Research Center at the Libyan Authority. link
- The joint agreement between UoT and the Libyan Oil Institute. link

9. International Agreements

The university maintains several agreements with international universities that allows research staff to collaborate and work with other researchers from those universities. The International Cooperation Office (ICO) holds a list of all <u>European</u> and <u>Regional</u> agreements.

An example to the cooperation with those university can be viewed <u>here</u>.

10. Challenges

Despite its potential, interdisciplinary research at UoT faces several challenges:

- **Institutional Barriers**: Traditional administrative structures and faculty boundaries can inhibit cross-departmental collaboration. The introduction of joint research groups and interdisciplinary programs within the university would contribute to overcome this challenge.
- Funding Limitations: Limited national research funding and lack of international partnerships constrain long-term interdisciplinary initiatives.

• Capacity and Training: Although the RCC carries many training courses and workshops within the university, there is a need for targeted training in interdisciplinary methods, project management, and collaborative skills among staff and students.

11. Conclusion

Interdisciplinary research is essential to addressing Libya's complex development challenges and advancing academic excellence at the University of Tripoli. While there are existing initiatives and a strong foundation, sustained support and strategic reforms are needed to enable UoT to become a regional leader in interdisciplinary innovation.