



**Newsletters**  
**Faculty of Science**  
**Yarmouk University**  
**Issue 1**  
**November 2024**



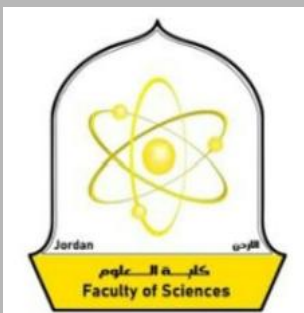
**Editor-in-Chief : Prof. Amjad D. Al-Nasser**

**Co-Editor: Dr. Liali Al-Quran**

**Contact us:**

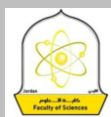
**[Science@yu.edu.jo](mailto:Science@yu.edu.jo)**

**027211111 Ex 2420**



# TABLE OF CONTENTS

<b>1. Faculty of Science .....</b>	<b>3</b>
<b>2. University President's Message .....</b>	<b>4</b>
<b>3. Message From the Dean .....</b>	<b>5</b>
<b>4. Attractive News .....</b>	<b>6</b>
4.1. Distinguished Alumni - News	
4.2. Data Analysis Services-News	
<b>5. Orientations &amp; Workshops News .....</b>	<b>9</b>
5.1. New Students Orientation	
5.2. Workshop: R programming	
5.3. Workshop: R Markdown	
5.4. Quality Assurance Workshops	
<b>6. Research Projects News .....</b>	<b>14</b>
6.1. Project 1: Oil Shales	
6.2. Project 2: Geophysical Study	
6.3. Project 3: Heavy Metals	
6.4. Project 4: Rumex Cyprius	
6.5. Project 5: Elements of Seaweed	
6.6. Project 6: Genesis of Micronutrients	
<b>7. Faculty Members News .....</b>	<b>21</b>
7.1. Top 2% Researchers	
7.2. New Faculty Members	
7.3. Faculty Promotions	
7.4. Administrative Appointments	
7.5. Distinguished Faculty Retirees	
7.6. Department Former Heads- 2023/2024	
<b>8. Faculty Management 2024/2025 .....</b>	<b>28</b>



# FACULTY OF SCIENCE

## Our Vision

To be a pioneer and distinguished Faculty at the national and regional levels in both academic and research sectors according to the highest international standards.

## Our Mission

To contribute to achieving the mission of Yarmouk University through excellence in teaching and scientific research and servicing the local community. The Faculty aims at providing society with distinguished graduates equipped with scientific and technological tools capable of facing future developments and compete at the regional and international levels.

## Our Core Values

**Quality and Excellence:** The pursuit of global excellence in teaching, learning, and innovation.

**Creativity:** creating the appropriate climate for creative thinking and innovative behavior.

**Justice and Integrity:** The Faculty is committed to the principles of social justice, equal opportunities, and cultural diversity.

**Authenticity:** Faculty members are committed to honesty, respect, and professional ethics.

**Transparency:** The Faculty and its members are committed to transparency in scientific and educational activities.

**Effective Communication:** The Faculty instills a culture of teamwork in thinking, behavior, and communication between faculty members, employees, students, and the local community.

## Our Strategic Goals

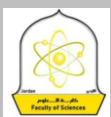
**Achieving** quality standards in research and education, and the relentless pursuit of international academic excellence.

**Providing** society with graduates who are pioneers and leaders and providing them with various scientific skills and experiences.

**Continuous** updating of curricula to keep pace with progress in various scientific disciplines.

**Providing** an interactive learning environment that encourages effective communication between students and faculty members

**Developing** pioneering scientific research that contributes to Faculty excellence, enriches knowledge, and provides innovative solutions to problems facing the local community.



# University President's Message



Dear Faculty, Students and Friends at the Faculty of Science,

It gives me great pride to announce the launch of the first newsletter for the Faculty of Science, a vital communication platform that celebrates the outstanding achievements and innovative aspirations of one of our university's most distinguished pillars. The Faculty of Science has always been a beacon of knowledge, contributing not only to our students' academic and professional growth but also to the advancement of knowledge that serves our community and strengthens our nation's position on the global stage.

In today's rapidly evolving world, science and technology are advancing at an unprecedented pace. To stay aligned with the needs of the modern era, we are deeply committed to the continuous improvement of our academic curricula, aiming to provide an education of the highest quality. This dedication to excellence in curriculum development ensures that our programs stay dynamic, relevant, and forward-thinking, equipping our students with cutting-edge knowledge and essential skills that prepare them to excel in a competitive job market. Through this approach, we empower our graduates to lead and innovate in various fields, making meaningful contributions to both society and industry.

The Faculty of Science plays an indispensable role in our university's ecosystem, not only by serving

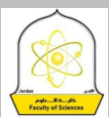
as a core academic foundation but also by acting as a bridge for interdisciplinary studies and research. It is a source of inspiration and intellectual growth for all disciplines, enriching our collective understanding and helping us tackle pressing challenges from multiple perspectives. Through collaborative research, international partnerships, and groundbreaking projects, the Faculty of Science exemplifies our university's dedication to advancing scientific knowledge and fostering innovation.

As we look to the future, we are especially excited about the potential of integrating cutting-edge educational technologies within our classrooms and laboratories, particularly those associated with artificial intelligence. These advancements promise to transform both the learning experience and our research capabilities, allowing students and faculty alike to push the boundaries of what is possible. AI and related technologies will play a crucial role in enhancing our educational offerings, helping us not only to teach knowledge but also to nurture analytical and creative thinking.

Let me take this opportunity to extend my sincere gratitude to everyone who has worked tirelessly to bring this newsletter to life. I am confident it will become a platform that showcases the achievements, research, and aspirations of the Faculty of Science, reflecting our unwavering commitment to educational excellence and continuous improvement. May it inspire our faculty, students, and the broader community as we continue to advance knowledge, innovate, and shape the future together.

Thank you all for your dedication, and may peace be upon you.

**Prof. Islam Massad**  
**President**



# Message From The Dean

Dear Faculty, Students, and Friends of the Faculty of Science,



As we reflect on another successful year, I am filled with pride in the strides we have made as a community of scholars, researchers, and learners.

Our faculty continues to push the

boundaries of scientific discovery, foster innovation, and uphold the values of academic excellence.

This year, we celebrated significant achievements that affirm our commitment to both local and global impact. Notably, the Department of Statistics successfully achieved ABET accreditation last year, and this year, three more departments—Mathematics, Chemistry, and Physics—are preparing for the international accreditation (ABET). In addition, we have started the process for local accreditation (Taskeen), further emphasizing the quality and rigor of our academic programs. Several of our faculty members have also been recognized among the top 2% of the most-cited researchers worldwide,

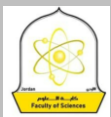
showcasing the far-reaching influence of our work. At the same time, we are still grounded in our mission to provide an inclusive, stimulating environment where both established scholars and new members of our faculty can thrive. This issue of the newsletter highlights some of the groundbreaking research projects across diverse disciplines that are shaping the future of science.

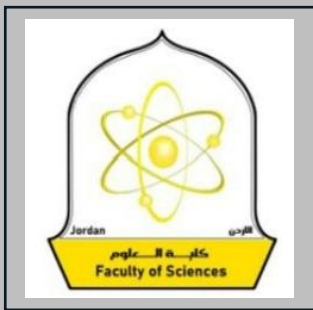
I also want to express my gratitude to our senior faculty, who continue to mentor and inspire, and to those who have recently joined us. Your contributions are vital to the dynamic nature of our Faculty.

As we look to the year ahead, I am excited about the opportunities that lie before us. Together, we will continue to uphold the vision and values that make our Faculty of Science a leader in scientific advancement and education.

Warm regards,

**Prof. Amjad D. Al-Nasser**  
Dean, Faculty of Science  
November 2024.

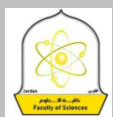
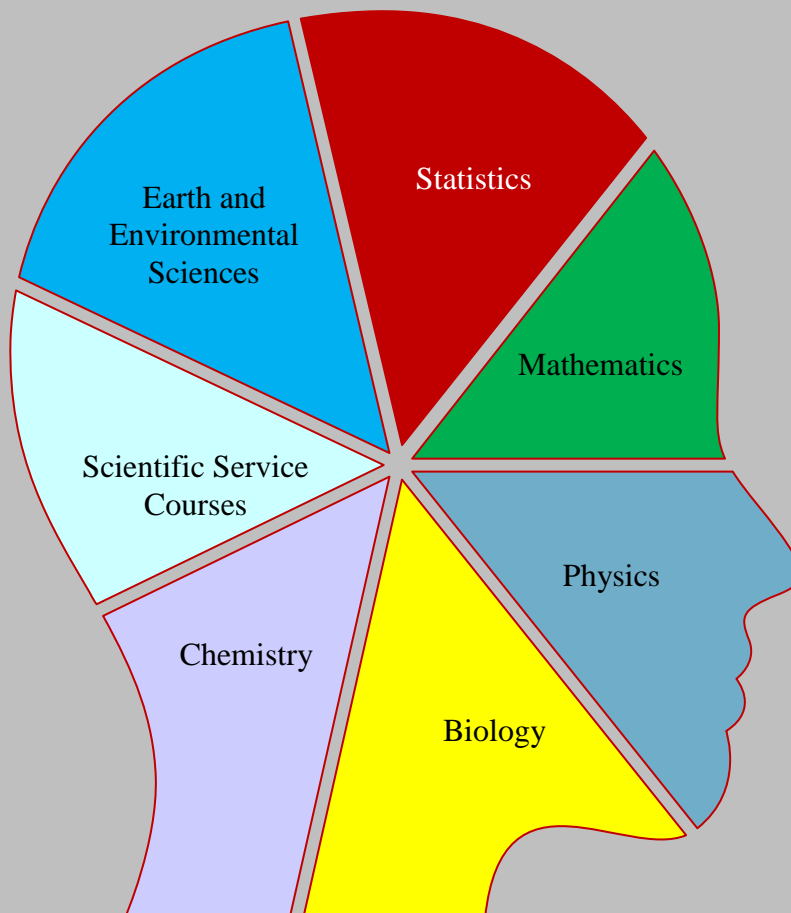




Yarmouk University  
Faculty of Science



# Attractive News



# Distinguished Alumni

**Dr. Ayman Sulaiman** graduated from Yarmouk University in 1993, majoring in Physics with a minor in Mathematics.



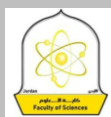
He went on to pursue a Ph.D. in Atmospheric and Environmental Sciences, ultimately building a distinguished career dedicated to environmental management and international collaboration. Currently, he serves as the Commissioner for Environment and Natural Protected Areas at the Aqaba Special Economic Zone Authority (ASEZA) in Jordan, where his work emphasizes sustainable development and conservation in one of Jordan's most ecologically sensitive areas.

Dr. Sulaiman's career milestones reflect his deep commitment to environmental science and community well-being. In 2003, he was appointed to coordinate the European-funded initiative to establish the Ben-Hayyan Aqaba International Laboratories. This state-of-the-art facility focuses on air, water, and food quality and has since become a benchmark for environmental and public health standards in the region. Dr. Sulaiman led Ben-Hayyan Laboratories as its Director until 2014, after which he transitioned to the role of Director of Environment, where he

continued to influence environmental policy and infrastructure. He later assumed an advisory position for environmental affairs and ultimately became Chief Commissioner's Advisor, further shaping ASEZA's strategic direction in environmental stewardship.

In addition to his work within ASEZA, Dr. Sulaiman has played a pivotal role in various national and international initiatives. As the former Director of the Delivery Unit at ASEZA, he was responsible for executing high-priority initiatives and activating plans for critical sectors, ensuring that ASEZA's environmental goals aligned with Jordan's broader developmental objectives. Dr. Sulaiman's expertise has also extended to high-level collaborations, notably as Head of the Jordan Delegation for the Interreg NEXT MED Program 2021-2027, a program aimed at enhancing cross-border cooperation in the Mediterranean region. His previous role as Director of the Aqaba Regional Office for the European Neighborhood Initiative's Cross-Border Cooperation Program for the Mediterranean (ENI CBC MED Program 2014-2020) further highlights his commitment to fostering international partnerships for sustainable development.

Dr. Sulaiman's dedication to environmental management and climate resilience is evident in his service on Jordan's National Committee for Climate Change, where he contributes to national policy and action plans addressing climate challenges. His professional interests remain focused on environmental conservation, sustainable management practices, and fostering collaborative frameworks to tackle regional and global environmental issues. Through his extensive work, Dr. Sulaiman continues to make impactful contributions to Jordan's environmental policies and its position in the global arena for sustainable development.



# Data Analysis Services -News

On March 25, 2024, the President of Yarmouk University “Prof. Islam Massad” inaugurated the Statistical Analysis Unit within the Faculty of Science, marking a significant advancement in the university's commitment to supporting research and data analysis. This unit operates under the administrative umbrella of the Department of Statistics and serves as the faculty's newest service initiative, designed to provide valuable data analysis support for students and community members. It offers a broad range of data analysis services and programming solutions for scientific experiment models using statistical simulation languages. Additionally, the unit aims to organize specialized courses in statistical analysis and data science in collaboration with various university centers to expand its



impact.

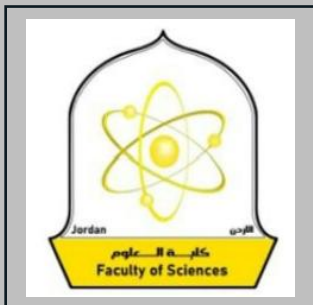
Statistical analysis is essential across all fields of scientific and academic research, and the unit benefits from the expertise of faculty members from the Department of Statistics, who bring specialized knowledge in diverse areas of statistics and data science. This collective expertise enriches the unit's data analysis capabilities, enabling it to support advanced projects across numerous scientific disciplines.

The unit's services include descriptive and inferential analysis, as well as the development of various regression models, such as linear and nonlinear models, generalized linear models, penalized regression, decision trees, random forests, cluster analysis, graphical models, structural equation modeling, Gaussian processes, and Dirichlet processes.

To deliver these services, the unit utilizes a variety of statistical software and programming languages, including SPSS, R, SmartPLS, Amos, Eviews, Python, Matlab, Mathematica, and Stata.



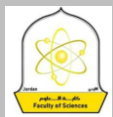
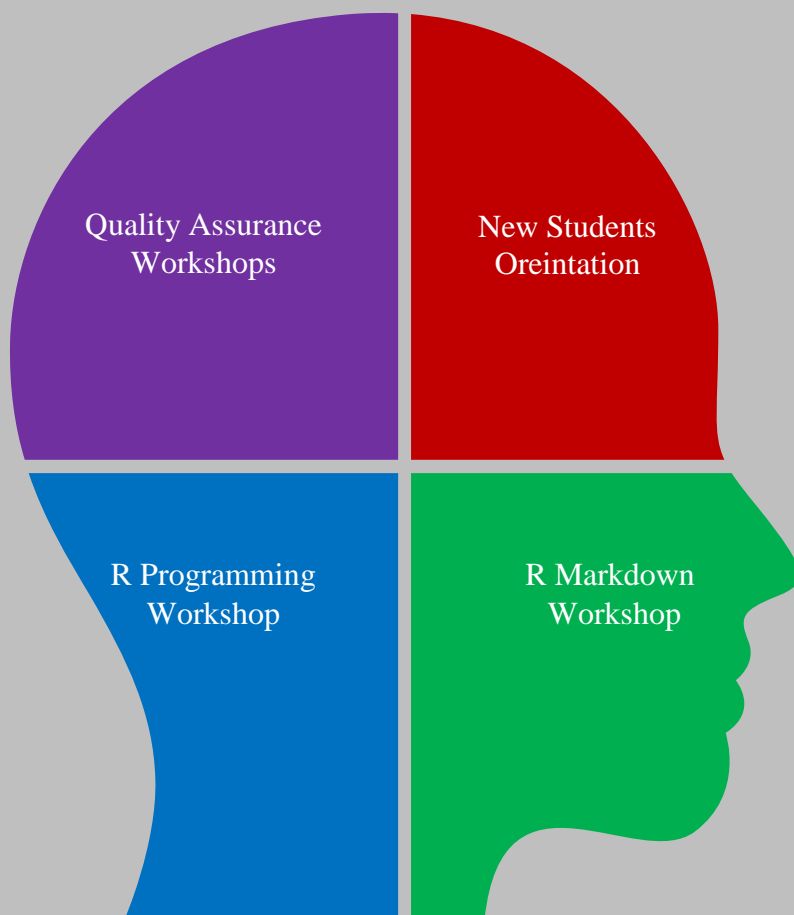




Yarmouk University  
Faculty of Science



## Orientations & Workshops News



# Orientation Meeting With New Students



Faculty of Science recently held an orientation meeting to warmly welcome our new students. Dean Prof. Amjad Al-Nasser extended a warm greeting, encouraging students and providing a comprehensive introduction to their academic journey and campus life. The session aimed to acquaint students with essential resources, support services, and the core values that shape our educational community.

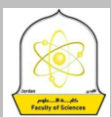


The Vice Dean “Dr. Mohammad Al-Kadiri” followed with a talk on the faculty’s commitment to high educational standards and offered guidance on how students could strategically plan their schedules. He advised students on selecting courses to manage their workload effectively, supporting both academic success and personal growth.

The Assistant Dean “Dr. Alaa Al-Khateeb” then gave a comprehensive presentation on university policies, including exam rules, absence policies, procedures for incomplete exams, and social media guidelines. This presentation provided new students with a clear understanding of the rules and expectations that contribute to a respectful and organized academic environment.

As the meeting concluded, two alumni were invited to share heartfelt reflections on their experiences as students. They spoke about how participating in faculty activities not only enriched their studies but also helped them build critical skills that later made them more attractive to employers. Both alumni attributed their successful job placements to the skills and confidence they developed through active involvement, highlighting how their engagement in the faculty community gave them a competitive edge in the job market.

The meeting ended on a positive and inspiring note, with faculty and alumni underscoring their dedication to supporting new students on their journey, equipping them with the resources, guidance, and encouragement they need to thrive at the Faculty of Science.



# R Programming Workshop



The Department of Statistics at the Faculty of Science recently organized a comprehensive four-day training workshop for master's students titled "Introduction to R Programming," which began on Monday, October 17, 2024. Presented by Dr. Ayat Almomani and Dr. Ayman Alrawashdeh, this workshop focuses on R, an advanced programming language that is widely recognized for its

powerful capabilities in data analysis and statistical graphics creation. Proficiency in R is vital for statistics students, as it serves as an essential tool for their coursework, assignments, and thesis preparation, enabling them to perform sophisticated analyses and visualize data effectively.

The primary objective of the workshop is to provide students with a solid foundation in the fundamentals of R programming. Participants will learn how to utilize R as a calculator, understand different data types, and create various objects such as vectors, matrices, and lists. The workshop will also cover various methods for data presentation, equipping students with the skills needed to effectively communicate their findings.



In addition to the basics, the workshop will delve into more advanced topics, including control structures and function creation within R. Students will gain insights into professional data visualization techniques, exploring key packages such as ggplot2 and tidyverse. These tools will enable them to create high-quality visual representations of their data, which are crucial for interpreting and conveying results in a meaningful way.



By the end of the workshop, students will have acquired valuable skills that will not only assist them in their academic pursuits but also prepare them for future careers in statistics, data science, and related fields. The Department of Statistics is committed to providing students with the resources and training necessary to excel in a data-driven world, and this workshop is a significant step in that direction. The collaboration of experienced faculty members

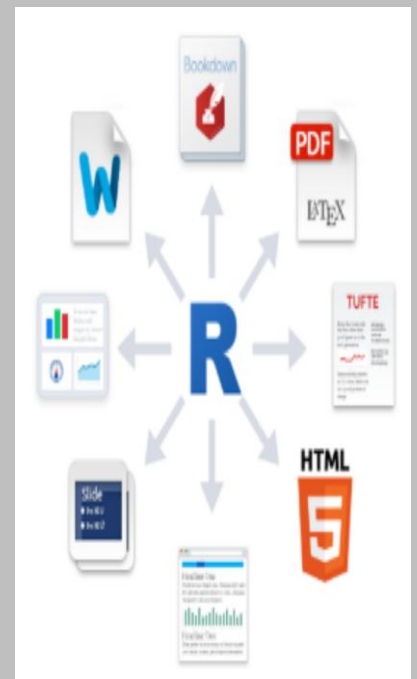
and the emphasis on practical application will undoubtedly enrich the educational experience for all participants.

# R Markdown Workshop

Under the guidance of the Dean of the Faculty of Science, the Statistical Analysis Unit, in collaboration with the Department of Statistics, organized a training workshop on Wednesday, October 23, 2024. The workshop was aimed at faculty members and graduate students in the department and focused on using RMarkdown. Dr. Ayat Al-Momani led the workshop, aiming to introduce participants to RMarkdown and how to use it as a tool for presenting data analysis results professionally.

The workshop showcased RMarkdown's capabilities, allowing users to write text using LaTeX, insert graphs and links, and control the execution and display of code outputs. This tool enables participants to create dynamic reports and presentations in various formats, such as PDF, Word, and HTML, in addition to presentation formats like PowerPoint, HTML, and PDF, with the possibility to use Shiny for adding interactivity to files and presentations.

The use of RMarkdown helps faculty streamline the presentation of applied statistics lectures and helps students in submitting their assignments and reports professionally. Skills in RMarkdown and Shiny are highly sought in the job market for statisticians and data scientists.



```
1 ---
2 title: "R Markdown report"
3 date: "r format(Sys.Date())"
4 ---
5
6 This is an [R Markdown](http://rmarkdown.rstudio.com) document.
7 You can write a combination of markdown and code.
8
9 ## Writing R Markdown in DSS
10
11 ### R code
12
13 You can use Dataiku R API.
14
15 ```{r}
16 library(dataiku)
17 df <- iris
18 #df <- dkuReadDataset("YOUR_DATASET_NAME", samplingMethod="
19 plot(df)
20
21
22 <!-- The R environment is shared across blocks -->
```

**R Markdown report**

2024-08-06

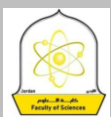
This is an R Markdown document. You can write a combination of **markdown** and **code**.

## Writing R Markdown in DSS

### R code

You can use Dataiku R API.

```
library(dataiku)
df <- iris
#df <- dkuReadDataset("YOUR_DATASET_NAME", samplingMethod="head", nbRows=100000)
plot(df)
```



# Quality Assurance Workshops

Recently, three key workshops on quality assurance were organized to enhance faculty members' skills in documentation, evaluation, and compliance with institutional standards. The first workshop, led by Yarmouk University's Quality Assurance Unit, was dedicated to guiding faculty on preparing their profiles for evaluation, with an emphasis on best practices for documenting academic achievements, research contributions, and professional development activities. This session provided a foundational understanding of how to structure profiles to meet evaluation criteria effectively.



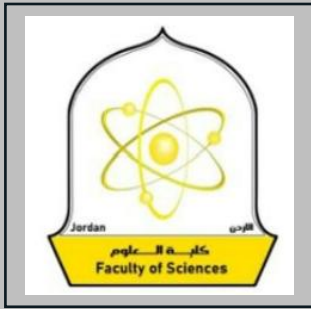
Following this, the Dean of the Faculty of Science conducted two more workshops tailored to more specific areas of quality assurance. The first of these workshops focused on the preparation of self-evaluation reports. Faculty members were trained in accurately completing electronic forms, understanding key reporting metrics, and compiling critical evidence that reflects their academic and administrative contributions. This hands-on session clarified the types of evidence required, from teaching evaluations to publications and community engagement, ensuring that reports are comprehensive and meet the standards for self-evaluation.



The second workshop centered on the organization and maintenance of course portfolios and individual faculty portfolios, addressing the essential components and required documentation for each. Faculty members were introduced to best practices for creating and updating these portfolios, with specific attention to course syllabi, teaching materials, assessments, and reflective documents that illustrate continuous improvement. This workshop highlighted the

importance of consistency, clarity, and thoroughness in documentation, equipping faculty to create portfolios that showcase their commitment to teaching excellence and alignment with quality standards.

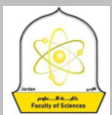
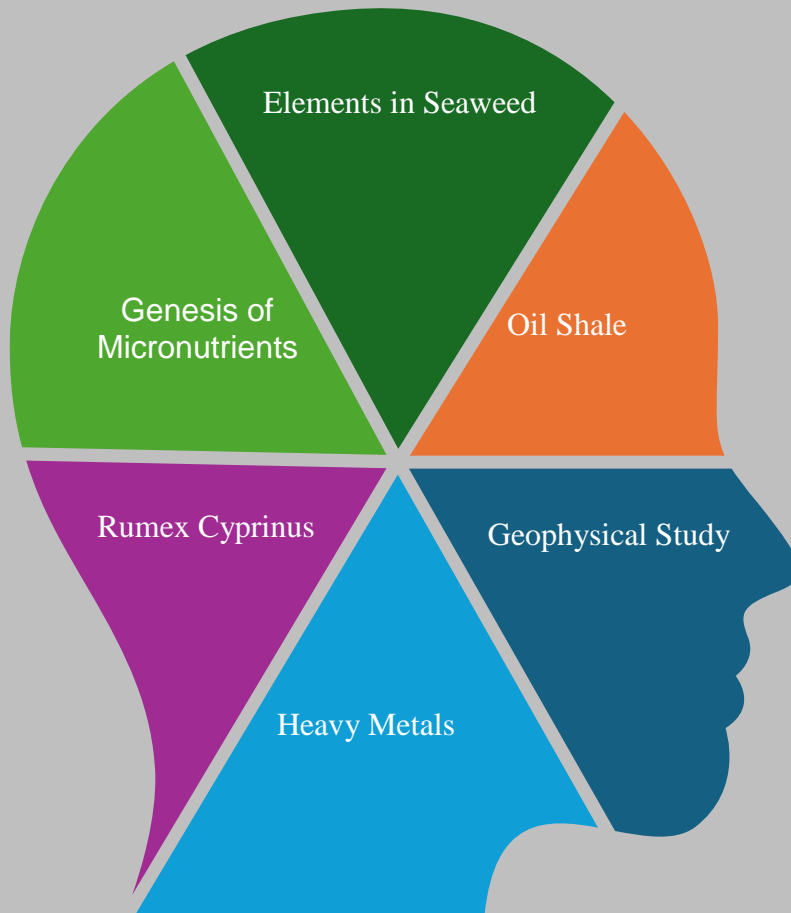
Together, these workshops empowered faculty members with practical tools and insights, promoting a culture of quality and accountability that supports Yarmouk University's mission to uphold high academic and institutional standards.



Yarmouk University  
Faculty of Science



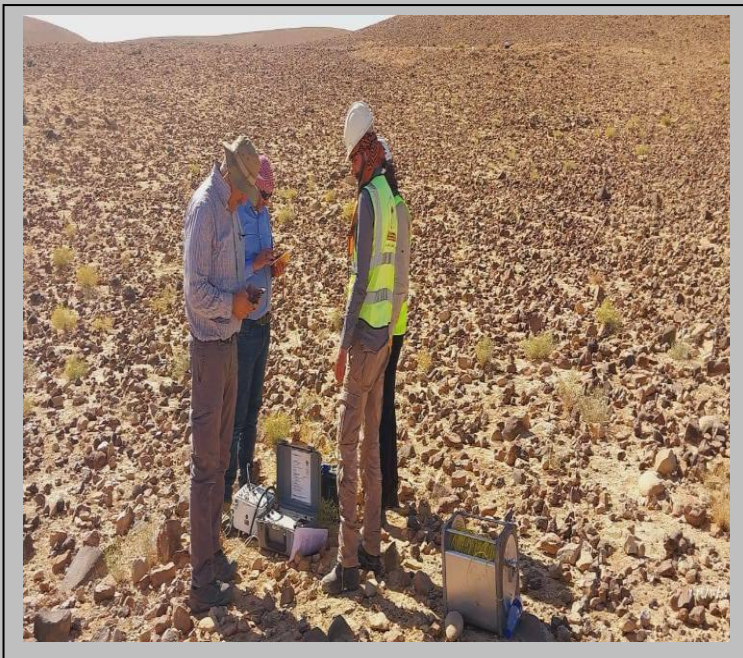
# Research Projects News



## Exploring Oil Shale Deposits In Central Jordan

A research team from the Geophysical and Geomatics Studies Laboratory in the Department of Earth and Environmental Sciences at Yarmouk University has launched a significant study to examine oil shale deposits in Block B, El-Lajjun Area, Al-Karak, central Jordan. Conducted in partnership with Al-Majara Oil Shale and Natural Resources Company, the study uses Time-Domain Electromagnetic (TDEM) survey techniques at 80 sounding points to gather essential data on subsurface conditions, oil shale layer distribution, and the characteristics of the overburden. These insights will support the company's future exploration and development efforts in the region.

The dedicated team comprises Dr. Rasheed Jaradat (Principal Investigator) and Abdullah Rawabdeh from the Department of Earth and Environmental Sciences, along with Dr. Anis Albis, Geologist Wasim Al-Azam, and Geologist Husam Tawalbeh.



This initiative reflects Yarmouk University's commitment to community service and fostering partnerships with the private sector. The team extends its appreciation to Al-Majara Oil Shale and Natural Resources Company for their confidence and collaboration in this impactful project, as well as to the university administration and the Faculty of Sciences for their support in facilitating the research.

## Comprehensive Geophysical Study In The Dead Sea Area

Driven by its commitment to community service and strengthening partnerships with the private sector, the Department of Earth and Environmental Sciences at Yarmouk University has completed an extensive geophysical study in the Dead Sea area. This study aimed to assess subsurface geological conditions and identify potential hazards, including underground cavities, fractures, and faults. The project involved comprehensive surveys covering 10,688 meters using the Multichannel Analysis of Surface Waves (MASW) method, along with 9,448 meters of Electrical Resistivity Tomography (ERT) profiles.

The research team included Dr. Rasheed Jaradat and Dr. Abdulla Al-Rawabdeh from the Department of Earth and Environmental Sciences, along with Dr. Anis Albis, Dr. Abdullah Alawneh, and Geologist Wasim Al-Azam.



The team extends their heartfelt thanks to the President of Yarmouk University, Prof. Islam Masad, for his ongoing support, as well as to Prof. Amjad Al-Naser, Dean of the Faculty of Sciences; Prof. Wisam Al-Khateeb, Associate Dean of the Faculty of Sciences; and Prof. Abdel Baset Athamneh, Director of the Queen Rania Center for Jordanian Studies and Community Service, for their invaluable assistance.

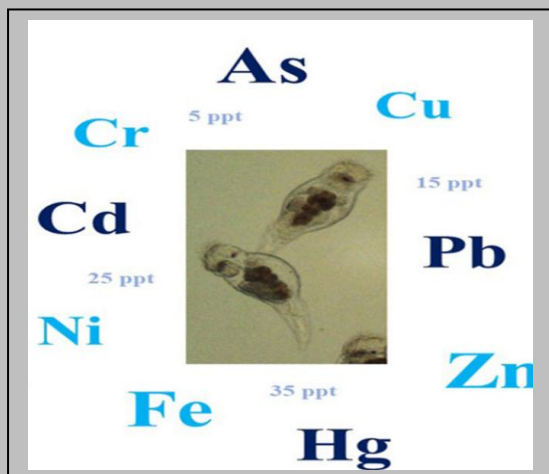


## Clarifying Toxic Heavy Metals In Cosmetic Products In Jordan: A Hidden Health Risk

Prof. Idrees Al-Momani, a researcher from the Department of Chemistry, conducted a study on the presence of toxic heavy metals in cosmetic products, which are integral to our daily routines but may contain more than just beauty-enhancing ingredients. The study analyzed 112 commercially available cosmetics in Jordan, testing for heavy metals such as nickel (Ni), cadmium (Cd), lead (Pb), and mercury (Hg). Findings reveal potential health risks associated with these hidden contaminants, highlighting the need for increased awareness and regulation.

### Key Findings:

- **Nickel (Ni):** The most prevalent metal, found in 93% of products, with 11.6% containing levels above 5 ppm—enough to trigger allergic reactions, especially in individuals with sensitive skin.



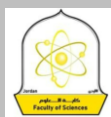
- **Cadmium (Cd):** Detected in 77% of products, with 14.3% exceeding the 3 ppm safety threshold. Prolonged exposure to cadmium is associated with kidney damage and bone weakening.

- **Lead (Pb):** A known neurotoxin, present in 73% of products, with 18% surpassing the recommended limit of 10 ppm, posing risks to cognitive health.

- **Mercury (Hg):** The most toxic metal in the study, mainly detected in skin-lightening creams, with some samples containing up to 1,008 ppm—far above safe levels.

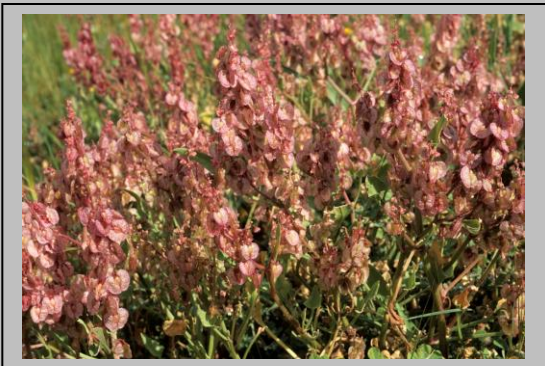
### Why This Matters:

Heavy metals in cosmetics can accumulate in the body over time, potentially causing skin irritation, organ damage, or neurological disorders. This issue is particularly concerning for products like skin-lightening creams, which are often used frequently and in large quantities, heightening the risk of toxicity.



## Research On In Vitro Preservation Of *Rumex Cyprius* L.

A dedicated research team from the Biology Department, consisting of Prof. Dr. Wissam Al-Khatib and Prof. Dr. Khaled Batayneh from the Department of Life Sciences, along with Dr. Tareq Al-Shaboul from the Department of Scientific Service Courses, is focused on the in vitro preservation of the plant *Rumex cyprius* L. This species, native to the Jordanian regions around the Dead Sea and Tafileh, is highly valued for its numerous medicinal and pastoral applications.



The research aims not only to conserve *Rumex cyprius* but also to explore its potential benefits across various fields, including herbal medicine, agriculture, and environmental restoration. The team is utilizing advanced tissue culture techniques to ensure the viability and genetic integrity of the plant under controlled laboratory conditions. This approach allows for the efficient propagation of the species, safeguarding it against habitat loss and climate change impacts.

Furthermore, the team is conducting phytochemical analyses to identify and isolate the bioactive compounds present in *Rumex cyprius*. These compounds may possess anti-inflammatory, antioxidant, or antimicrobial properties, making the plant a candidate for further investigation in pharmaceuticals and nutraceuticals.

The project emphasizes the importance of preserving native plant species, not only for their ecological roles but also for their cultural significance and traditional uses in local communities. By documenting the medicinal uses and exploring the applications of *Rumex cyprius*, the research contributes to the conservation of biodiversity and the promotion of sustainable practices in plant utilization.

Through this initiative, the team aspires to create a repository of *Rumex cyprius* that can serve as a resource for future research, education, and conservation efforts, ensuring that its valuable properties are preserved for generations to come. This work reflects a commitment to advancing scientific knowledge while supporting local heritage and ecological integrity.

## Investigate Radiation And Trace Elements In Seaweed

A multidisciplinary team of researchers from the Faculty of Science at Yarmouk University—including Dr. Manal Abdallah from the Physics Department, Dr. Tagreed Aljazazy from the Chemistry Department, and Prof. Dr. Wissam Al-Khatib from the Biological Science Department—are engaged in an important study examining the risks associated with radiation and the presence of trace elements in seaweed from the Gulf of Aqaba, Jordan. This research aims to investigate the potential effects of these elements on DNA damage, focusing on understanding the broader environmental and health implications.



The study involves comprehensive sampling and analysis of various seaweed species collected from the Gulf of Aqaba. The researchers are employing advanced techniques, such as gamma spectroscopy and atomic absorption spectrometry, to accurately measure radiation levels and trace element concentrations. By analyzing both biological and environmental samples, the team seeks to establish a correlation between the accumulation of these elements and potential genetic damage in marine organisms.

This research is crucial for assessing the ecological risks linked to radiation exposure in marine environments. The Gulf of Aqaba, known for its rich biodiversity, is facing increasing anthropogenic pressures, including pollution and climate change. Understanding how radiation and trace elements affect seaweed is vital, as these organisms are key components of marine ecosystems, serving as primary producers and providing habitat for various marine life.

Ultimately, this collaborative effort highlights the importance of interdisciplinary research in addressing complex environmental challenges. By combining expertise from physics, chemistry, and biological sciences, the team aspires to provide valuable insights into the ecological risks associated with radiation exposure and its potential impact on the health of marine organisms and, by extension, human health. The outcomes of this study could lead to recommendations for monitoring and managing marine resources in the Gulf of Aqaba, ensuring the preservation of this vital ecosystem for future generations.

## Genesis of Micronutrients in the Gulf of Aqaba: A Combined Geochemical and Magnetic Approach

Under the leadership of Dr. Mohammad Alqudah, an ambitious collaborative research project has been launched as a joint initiative between international and national teams under the Higher Council for Science and Technology (HCST). This project, titled “Genesis of Micronutrients in the Gulf of Aqaba: A Combined Geochemical and Magnetic Approach,” aims to investigate the origins and distribution of essential micronutrients in the Gulf of Aqaba by employing cutting-edge biological, geochemical, and magnetic analysis methods. Funding for this study has been generously provided by the Deanship of Research and Higher Education at Yarmouk University.



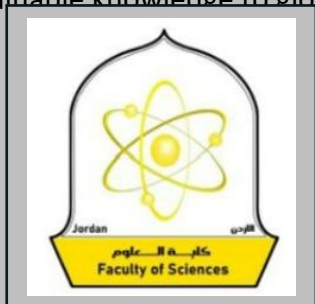
The international team is composed of esteemed researchers, including Professor M. Ligi from the Institute of Marine Science – CNR, Bologna, Italy; Professor A. Sanfilippo from the University of Pavia, Italy; and Dr. N. Rasul from Geological and Geophysical Research System, Mississauga, Canada. Working in close collaboration with them is a distinguished national team, including professors from Yarmouk University, the University of Jordan, Al Albayt University, and experts from the Jordanian Uranium

Company (Jumco).

The project is pioneering in its approach, combining biological, geochemical, and magnetic analysis techniques on sediment, dust, and rock samples from the Aqaba region. By integrating these methods, the research team aims to reconstruct the historical deposition of nutrients in the area, with a specific focus on nutrients transported via atmospheric deposition. This multidisciplinary approach promises to yield comprehensive insights into how nutrient contributions shape the region’s marine ecosystem and influence its environmental health. Preliminary results from the project, analyzed in both national and international laboratories, have shown significant potential. These findings were recently discussed in a series of workshops at HCST, bringing together experts and stakeholders to evaluate the outcomes and strategize the next phases of the study. The ongoing collaboration and exchange of ideas between international and national scientists in these



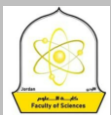
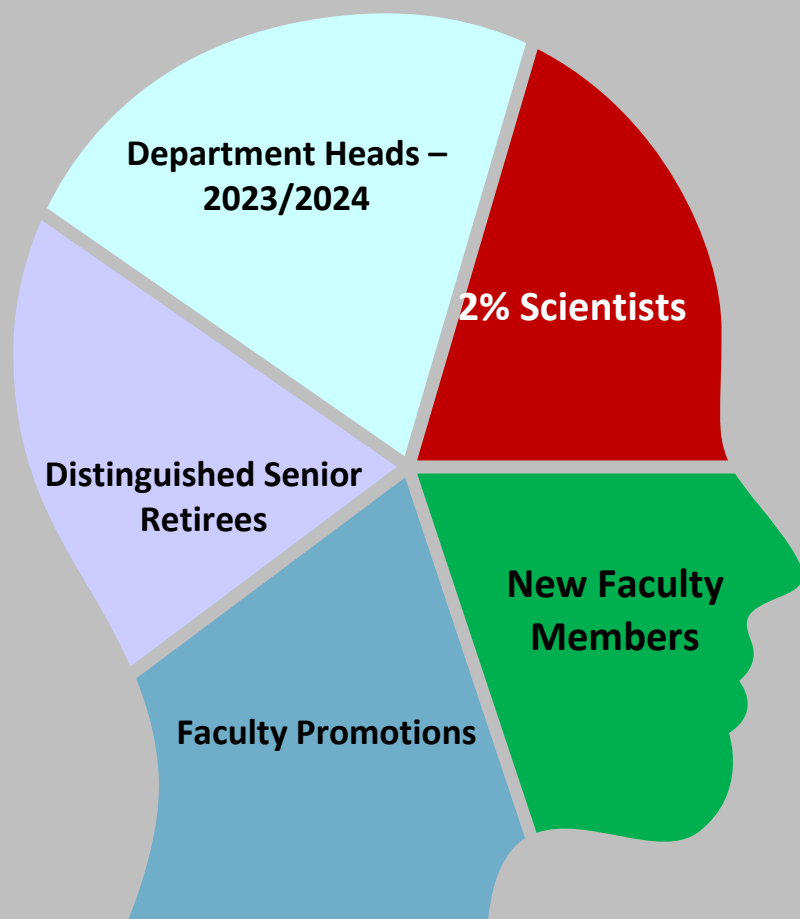
workshops underscore the project's commitment to advancing scientific understanding and contributing valuable knowledge to global and regional environmental research.



**Yarmouk University**  
**Faculty of Science**



# Faculty Members News

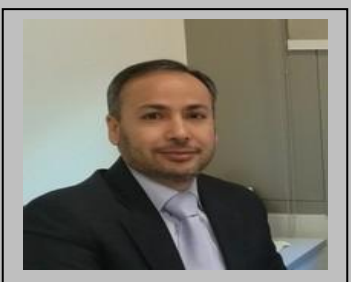


## 2% Scientists: Global Recognition for Researchers

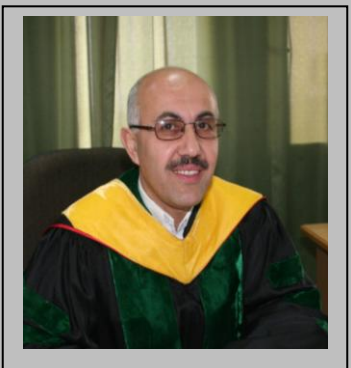
In a notable accomplishment, three professors from the Faculty of Science have been ranked among the top 2% of influential scientists worldwide in their respective disciplines, according to the latest annual rankings. This prestigious recognition underscores their significant contributions to the field and highlights the impactful research being conducted within the faculty.



Prof. Mahmoud A. Al-Qudah, professor of organic chemistry in the chemistry department at Yarmouk University, has been a faculty member since 2009. Throughout his tenure, he has held various administrative positions, including Head of the Department of Chemistry and Assistant Dean of Science Faculty. Prof. Al-qudah earned his Ph.D. in Organic Chemistry—Natural Products from the Department of Chemistry, University of Jordan, in 2008.

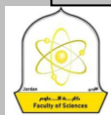


**Prof. Mohammed Al-Refai**, hold a Ph.D. degree in Applied Mathematics from McGill University in 2000. Since then, he worked at different schools in the Middle East, at Jordan University of Science and Technology, at United Arab Emirates University and currently at Yarmouk University. Prof. Al-Refai chaired the Department of Training and Academic Development, Accreditation and Quality Assurance Center at Yarmouk University in 2019, and he is an authorized Assessor of higher education quality accredited by the authority of "Accreditation and Quality Assurance Commission for Higher Education Institutions", Jordan since 2020. He is the Editor-in-Chief of the Jordan Journal of Mathematics and Statistics. <https://jjms.yu.edu.jo/index.php/jjms>



Prof. Idrees Faleh Al-Momani has a solid academic foundation, earning his B.Sc. and M.Sc. in Chemistry from Yarmouk University, Jordan, and his Ph.D. in Analytical Chemistry from the Middle East Technical University in Turkey. He served as a Visiting Professor at Carleton University in Canada from 2000 to 2001. His research focuses on developing innovative analytical methods for pharmaceutical compounds and conducting chemical analyses of pharmaceutical and environmental samples using techniques such as Atomic Absorption Spectroscopy (AAS), Inductively Coupled Plasma-Optical Emission Spectroscopy (ICP-OES), High-Performance Liquid Chromatography (HPLC), Gas Chromatography (GC), Ion Chromatography (IC), and Fluorescence Spectroscopy.

The Dean of the Faculty of Science “Prof. Amjad Al-Nasser” honored the Faculty’s outstanding researchers for their achievements this year in a special ceremony held in their recognition.



## Faculty of Science Welcomes New Faculty Members

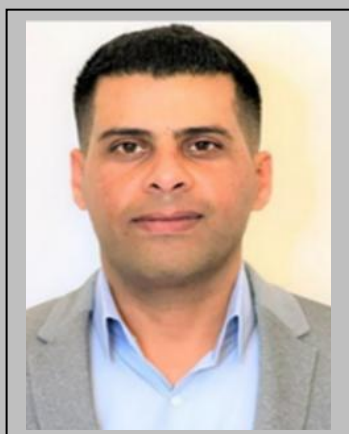
We are excited to welcome our new faculty members, who bring a wealth of expertise in Applied Statistics, Mathematics and Chemistry.



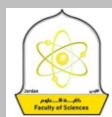
Dr. Ayman Baklizi has been a faculty member since 1998, with experience at Yarmouk University and Qatar University, where he also served as an Evaluation Consultant for the Ministry of Education and Higher Education in Qatar. He has held key positions, including Coordinator of the Statistics Program and Coordinator of the Accreditation Committee, successfully leading efforts to secure accreditation for the Statistics Program from the Royal Statistical Society in the United Kingdom. Dr. Baklizi earned his BSc and MSc degrees in Statistics from Yarmouk University in Jordan in 1991 and 1994, respectively, and completed his PhD in Statistics at Universiti Putra Malaysia in 1998, a prestigious institution ranked 123rd globally by QS World University Rankings in 2023. His research interests encompass Nonparametric Statistics, Survival Analysis, Reliability Theory, and Likelihood Inference, resulting in over 90 publications in specialized statistical journals and many contributions to international conferences. In recognition he was awarded the Gold Medal by the ISOSS in 2012.



Mohammed Alaroud is an Assistant Professor of Mathematics at the Faculty of Science at Yarmouk University. During 2020-2024, he worked at Amman Arab University as an assistant professor of applied mathematics and has held Head of the Department of Basic Science. In 2019, he received his PhD in Applied Mathematics from the National University of Malaysia. It is ranked among the top 9% of universities and academic institutions around the world and was recently ranked 138th globally in the QS rankings for the year 2024. Dr. Alaroud published more than 25 articles in peer-reviewed journals with h-index of 12 and more than 350 citations according to Scopus database and more than 400 according to google scholar database. research interests include



Dr. Mahmoud Al-Joumay obtained both his BSc and master's degrees in chemistry from Yarmouk University in Jordan before pursuing a PhD at Jacobs University Bremen in Germany. His doctoral research concentrated on Organo-Boron Chemistry, particularly the design and synthesis of heptamethine cyanine dyes for ophthalmological applications. Following his PhD, he joined Professor Dr. Delef Gabel's research group as a postdoctoral scientist. Dr. Al-Joumay then took on the role of Assistant Professor of Chemistry at the AUIB. His research currently focuses on the functionalization of polyhedral borane 3D motifs. Through a Pd-catalyzed cross-coupling with halo-functionalized undecahydro-closo-dodecaborate, he is creating novel hetero-functionalized species, resulting in the synthesis of organo-boron, water-soluble clusters with unique electronic and steric properties, thereby enhancing their applications in medicinal and supramolecular chemistry



## Congratulations to the Department of Mathematics on Five Faculty Promotions to Full Professor

We are thrilled to announce the promotion of five esteemed faculty members from the department of Mathematics to the rank of Full Professor (Prof. Shadi Shqaqha; Prof. Raed Al-Momani; Prof. Wathiq Bani Domi; Prof. Mostafa Hayajneh and Prof. Mohammed Al-Jamal)



This significant achievement recognizes their exceptional contributions to research, teaching, and service within the academic community. These faculty members have demonstrated outstanding commitment and dedication throughout their careers, consistently exceeding expectations in their respective fields.

We extend our heartfelt congratulations to these distinguished faculty members on this well-deserved recognition and look forward to their continued contributions to our academic community and beyond. Their dedication to advancing knowledge and education will undoubtedly leave a lasting legacy for future scholars.



## Administrative Appointments



Yarmouk University is pleased to announce the appointment of Prof. Mohammed Shakhtreh, Professor of Mathematics, as the new Director of Al Hussein Bin Talal Library, starting this semester (2024/2025). Prof. Shakhtreh brings extensive administrative experience to this role, having previously served as Vice Dean of the Faculty of Science and Vice Dean for Student Affairs. Established in 1976, Al Hussein Bin Talal Library is a cornerstone of Yarmouk University's academic community, providing extensive resources and fostering collaborations with libraries and educational institutions both locally and internationally.



Dr. Rasheed Jaradat, an Associate Professor of Geophysics with more than 25 years of academic and industrial experience in geophysical and geological investigations, has been appointed as the new Director of the Department of International Relations and Projects (DIRP) at Yarmouk University. This significant appointment underscores the university's dedication to strengthening its esteemed international reputation and showcasing its commitment to excellence in education and research. In addition to his new role, Dr. Jaradat has made noteworthy contributions to the academic community, having served as the chair and founder of the Department of Scientific Service Courses in the Faculty of Science during the 2017/2018 academic year.



Prof. Abdel Monem M. Rawashdeh has been appointed as the Deputy Director of the Department of International Relations and Projects. He is a distinguished academic and researcher specializing in computational chemistry, having earned his Ph.D. from the University of Missouri in 2003. In addition to his teaching responsibilities in the Chemistry Department, Prof. Rawashdeh has been managing the Applied Scientific Research Fund (<http://www.asrf.jo>) for the past three years, a non-profit organization he co-founded in 2011.

Dr. Nazem M. El-Radaideh  
Jordanian Natural History  
Applied Geology in the  
at Yarmouk University in  
Geology-Sedimentology  
Geological Sciences from  
specializes in  
particular interests in the  
bottom reservoir sediments, sediment transport, and environmental geochemistry.



has been appointed as the Director of the Museum. He is currently an Associate Professor of Department of Earth and Environmental Sciences Jordan. Dr. El-Radaideh earned his MSc in from Yarmouk University and his Ph.D. in the University of Jordan in Amman. His research sedimentological and geochemical topics, with quality monitoring and assessment of water and

## Honoring Our Distinguished Senior Retirees

In a heartfelt ceremony, the Faculty of Science gathered to honor its eight distinguished senior retirees from various departments, celebrating their invaluable contributions and dedication over the years.

With heartfelt speeches and warm tributes, colleagues expressed deep gratitude for the knowledge, mentorship, and inspiration provided by these retirees, ensuring that their legacy will continue to resonate within the university for years to come.

Department of Physics	Prof. Khalid Abumurad
	Prof. Abdelraouf Aldiri
Department of Chemistry	Prof. Mahmoud Al-Talib
	Prof. Hasan Tashtoush
	Mrs. Jamelah Jabarah
Department of Biology	Prof. Ahmad Meslit
	Prof. Ahmad Khalil
Department of Statistics	Mrs. Nuha Anagreh

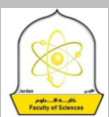


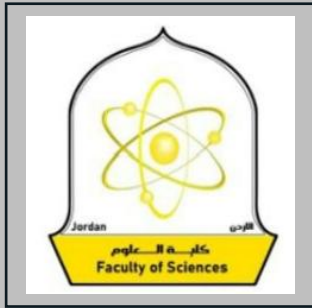
## Honoring Former Department Heads – 2023/2024

In a special ceremony, the Dean of the Faculty of Science recognized the former department heads for their exemplary leadership and dedicated efforts in managing their departments. He praised their commitment and contributions to the growth and success of the college, acknowledging the pivotal roles they played in maintaining academic excellence. During his speech, the Dean also highlighted the significant achievement of the Department



of Statistics in earning ABET international accreditation, underscoring the department's commitment to maintaining high standards in education and preparing students for successful careers. Additionally, he announced that this year, three more departments—Mathematics, Physics, and Chemistry—are in the process of obtaining ABET accreditation. This initiative reflects the college's ongoing dedication to enhancing academic quality and ensuring that all programs meet the rigorous standards set by the Accreditation Board for Engineering and Technology. The Dean expressed optimism that these efforts would further strengthen the college's reputation and provide students with the best possible educational experience.





**Yarmouk University  
Faculty of Science**

**HAPPY NEW ACADEMIC YEAR 2024/2025**

**Faculty of Science Management 2024/2025**



Wishing everyone a joyful and inspiring academic year ahead! May this year be filled with new knowledge, growth, and unforgettable experiences!



**Prof. Amjad D. Al-Nasser**  
Dean of Faculty



**Dr. Mohammad A. Al-Kadiri**  
Vice Dean



**Prof. Wesam M. Al-Khateeb**  
Vice Dean



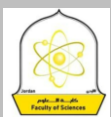
**Dr. Laiali Al-Quraan**  
Dean Assistant for public Relations



**Dr. Alla Al-Khateeb**  
Dean Assistant for student affairs



**Dr. Ayat Al-Momani**  
Dean Assistant For Quality Assurance





**Dr. Basem Khmaiseh**  
Head of Department of  
Mathematics



**Prof. Muhammad Bawa'aneh**  
Head of Department of Physics



**Dr. Taher Ababneh**  
Head of Department of  
Chemistry



**Dr. Mohammad Obeidat**  
Head of Department of  
Statistics



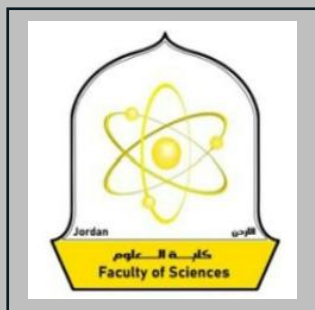
**Dr. Mohammad Jowarneh**  
Head of Department of Biology



**Dr. Abdulla Al-Rawabdeh**  
Head of Department of Earth  
and Environmental Sciences



**Dr. Tarq Al-Shboul**  
Head of Department of  
Scientific Service Courses



Yarmouk University  
Faculty of Science



Newsletters  
Faculty of Science

Issue. 1  
November 2024

<https://online.flippingbook.com/view/1032074112/>

