



**UNIVERSITY OF TECHNOLOGY & APPLIED SCIENCES  
COLLEGE OF ENGINEERING & TECHNOLOGY MUSCAT**



**Engineering Department**

**Section: Mechanical and Industrial Engineering**

**Site Visit Plan**

**Course:** Water and Wastewater Treatment

**Code:** EGCH4261

**Site visit to:** The Central Laboratory (The Central Lab, Food Safety & Quality Center), Ministry of Agriculture, Fisheries and Water Recourses.

**Faculty:** Dr. Amira Al Gharibi.

**Email Address:** [me141@utas.edu.om](mailto:me141@utas.edu.om)

**Phone number:** [98161549](tel:98161549)

**i. Visit Plan:**

This visit plan is designed for a group of 35 students, split into two batches. Half of the students will visit the site on Monday, November 27, 2023, and the other half will visit on Tuesday, November 28, 2023.

**ii. Objective:**

The objective of this visit is to provide an engaging and educational opportunity for all students to explore different equipment and latest facilities related to water and wastewater characterization tools, highlight key features and functionalities, allow students to ask questions and interact, therefore fostering a deeper understanding of the field and its practical applications.

**iii. Visit Schedule:**

- **9:00 AM - 9:30 AM: Arrival and Registration**
  - Students assemble at the designated meeting point.
  - Check attendance.
- **9:30 AM - 11:00 AM: First Batch**
  - The first batch of students is divided into two smaller groups.
  - Group A proceeds to department 1.
  - Group B proceeds to department 2.
- **11:00 AM - 12:30 AM: Break and Group Rotation**
  - Group A and Group B switch to explore the other department.
  - Short break and discussions.
- **12:30 PM - 1:00 PM: Conclusion**
  - All students gather for a debriefing session.
  - Share insights and experiences from the visit.
  - Thank the hosts and wrap up the visit.

**iv. Characterization tools expected to learn:**

1. **ICP-OES:** The multi-element analysis of water is one of the major applications for ICP-OES. This report demonstrates that the new SPECTRO ARCOS has the required analytical capabilities in terms of sensitivity, precision and accuracy to perform the analysis of metals and trace elements in drinking water.
2. **Ion chromatography:** Ion chromatography is used for water chemistry analysis. Ion chromatographs are able to measure concentrations of major anions, such as fluoride, chloride, nitrate, nitrite, and sulfate, as well as major cations such as lithium, sodium, ammonium, potassium, calcium, and magnesium in the parts-per-billion (ppb) range.
3. **Autotitrater:** This Autotitrater is primarily used for total alkalinity titrations. Alkalinity is a measure of the capacity of water to neutralize acids.

4. **Direct mercury analyzer:** The mercury analyzer is used to determine mercury concentrations in liquid and solid samples. This technique requires no sample preparation and delivers results in as little as six (6) minutes per sample, making it significantly faster than traditional wet chemistry techniques.
5. **Hach system:** has optimized colorimetric technology by offering highly accurate and efficient portable solutions to analyze such key water quality parameters as: chlorine, iron, manganese, chemical oxygen demand (COD), ozone and phosphate among others.

**v. Instructions for the students:**

Please take note of the following instructions to ensure a smooth and productive visit:

- **Time Management:**  
Be punctual and arrive at the site by 8:00 AM sharp. Punctuality is crucial for a well-organized and efficient visit.
- **Dress Code:**  
Wear a lab coat and safety shoes for the duration of the visit. This is essential to adhere to safety protocols and ensure a secure learning environment. Girls, please avoid wearing high heels for your own safety.
- **Food and Drinks:**  
Strictly no food or drinks are allowed inside the lab. This is to maintain a clean and safe working environment.
- **Note-taking:**  
Bring a notebook and pen to note down important information during the visit. Effective note-taking will aid you in the report-writing process afterward.
- **Report Writing:**  
Be prepared for report writing after the visit. Ensure that your notes are organized and detailed, as they will be valuable in completing this task.
- **Preparation:**  
Formulate questions in advance to make the most out of the site visit. Engage actively, participate in discussions, and seek clarification on any concepts that may be unclear.

## Water and Wastewater Treatment (EGCH4261)

### First Batch Student's List

Sl No	Student No	Name	Date of the Visit
1.	62J1947	Aaisha Abdallah Salim Al Balushi	<b>Monday,</b> <b><u>November 27, 2023</u></b>
2.	12S17101	Mohammed Saif Hamed Saif Al-Farsi	
3.	22S18163	Ahoud Mohammed Nasser Said Al Hinai	
4.	12S1885	Al Abjar Mahmood Khalfan Al Hadidi	
5.	22S1836	Al Ghaliya Ahmed Said Al Tamimi	
6.	12J19339	Aya Zayid Hashil Al-Siyabi	
7.	14S2023462	Ammar Mohammed Said AL-Badi	
8.	26S1768	Bashair Mohammed Salam Al-Nabhani	
9.	32J19103	Bayan Mohammed 'Abdallah Al-Yazeedi	
10.	22S1871	Daa Mansoor Mohammed Al Tubi	
11.	12S18294	Fatema Hamdan Said Al-Shamsi	
12.	12S19121	Hamed Mohamed Hamed Al Mahruqi	
13.	12J19113	Jamila Jamal Nasser Al-Maskari	
14.	12S18155	Khalid Issa Ahmed Al Bulushi	
15.	12J19219	Lamya Nasser Ali Al Siyabi	
16.	62S1882	Maryam Salim Mohammed Al-Makhmari	
17.	12S17290	Maryam Khalid Hamed Al- Mahairi	
18.	12S18213	Mohammed Ahmed Salim Al-Salmi	

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### Second Batch Student's List

Sl No	Student No	Name	Date of the Visit
19.	12J18206	Abdul Majeed Hamood Saleem Al-Shukairi	<b>Tuesday,</b> <b><u>November 28, 2023.</u></b>
20.	12J1919901	Mwinyi Ally Mwinyi	
21.	12J181	Najwa Khalfan Mohamed Al Wahaibi	
22.	12S2025474	Nassr Nasser Khamis Al-Salmi	
23.	12J1939	Reem Abdul Aziz Abdullah Al Yaarubi	
24.	12S18362	Ruqaya Khalfan Said Nasser Al Aamri	
25.	12S18105	Said Abdullah Said Al-Barwani	
26.	52S178	Sara Khamis Sultan Al-Masaoudi	
27.	12J18332	Sara Saif Jaaid Al Hidabi	
28.	22J1894	Shadha Saif Hamed Saif Al-Rawahi	
29.	52S18115	Sheikha Saif Rashid Al Ghafri	
30.	72S1886	Sumaya Nasser Khalifa Salim Al Muqarshi	
31.	72S1921050	Sultan Mal Allah Salim Al-Balushi	
32.	12S1922563	Sumaiya Khamis Ibrahim Al Balushi	
33.	12J19419	Tasneem Mohamed Salim Al Hadi	
34.	12S18357	Tasneem Mohamed Hussain Al Balushi	
35.	12S18160	Zuhoor Badar Saud Al-Julandani	