

ACI Student Chapter Activity (Sustainability Team)

Pervious Concrete Competition

Under the patronage of the Dean of Hijjawi Faculty for Engineering Technology, the ACI Student Chapter at Yarmouk University recently organized a remarkable event that brought together budding civil engineers to showcase their skills and creativity. The Pervious Concrete Competition was held on the university campus, with 12 teams from the Department of Civil Engineering. The competition aimed to promote awareness and understanding of pervious concrete, a sustainable material that allows water to pass through its porous structure, reducing stormwater runoff and recharging groundwater. It served as a platform for students to demonstrate their knowledge of the material and apply their engineering skills to create high-performing pervious concrete specimens.



Design of Sustainable Concrete

Yarmouk University students made an impactful contribution to the sustainable concrete competition by innovatively designing concrete with significant proportions of waste silica, coal ash, and limestone powder. This approach aimed to raise awareness about reducing the carbon footprint associated with cement manufacturing. Their participation showcased the potential to transform the construction industry towards more eco-friendly practices. By combining the power of waste materials and minimizing cement usage, they demonstrated a proactive step in mitigating environmental impacts. The students' dedication and creativity in promoting sustainable solutions have inspired the construction sector to prioritize greener alternatives, fostering a more sustainable future.

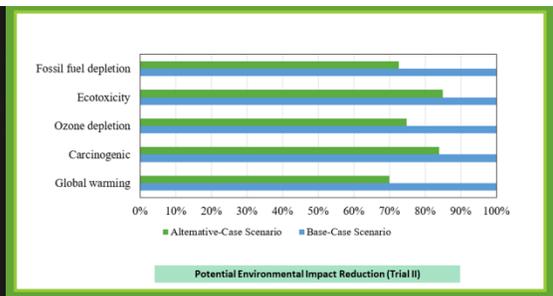


Table 1. Ingredients mix proportions for one cubic meter of concrete

| Materials | Quantity (Kg/m ³) |
|--------------------------|-------------------------------|
| Portland Cement | 250 |
| Coal fly ash | 125 |
| Silica Fume | 87.5 |
| Limestone Powder | 37.5 |
| Coarse Aggregate 9-mm | 625 |
| Coarse Aggregate 4.75-mm | 625 |
| Silica Sand | 675 |
| Water (w/b=0.46) | 230 |

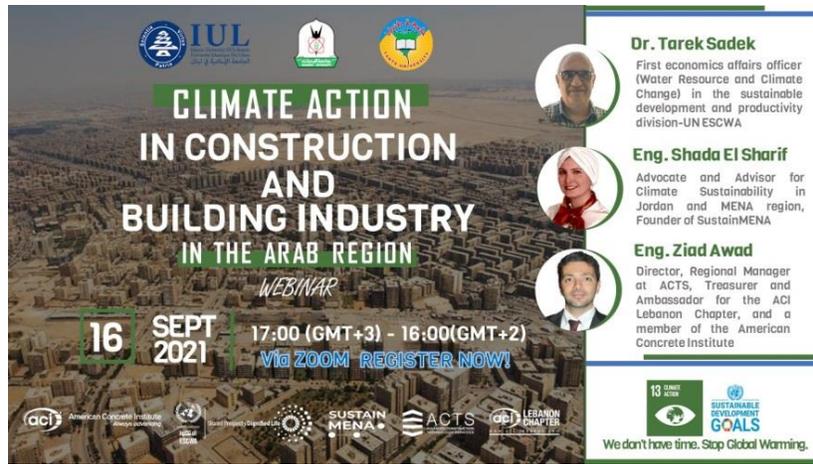
Eco-Concrete Competition (USA)

Yarmouk University's student team achieved an impressive eighth-place ranking in the ECO Concrete competition organized by the American Concrete Institute. The competition aimed to promote environmentally friendly concrete mixes in line with global sustainability efforts. Using coal ash, silica dust, and iron industry waste, the team designed innovative eco-friendly concrete blends. They provided a detailed report with environmental impact, cost analysis, and shelf life data using computer simulation software, along with a compelling explanatory video. Their participation showcased dedication to sustainable construction practices and emphasized the significance of waste material integration in reducing environmental impact, contributing to the global pursuit of greener construction solutions.



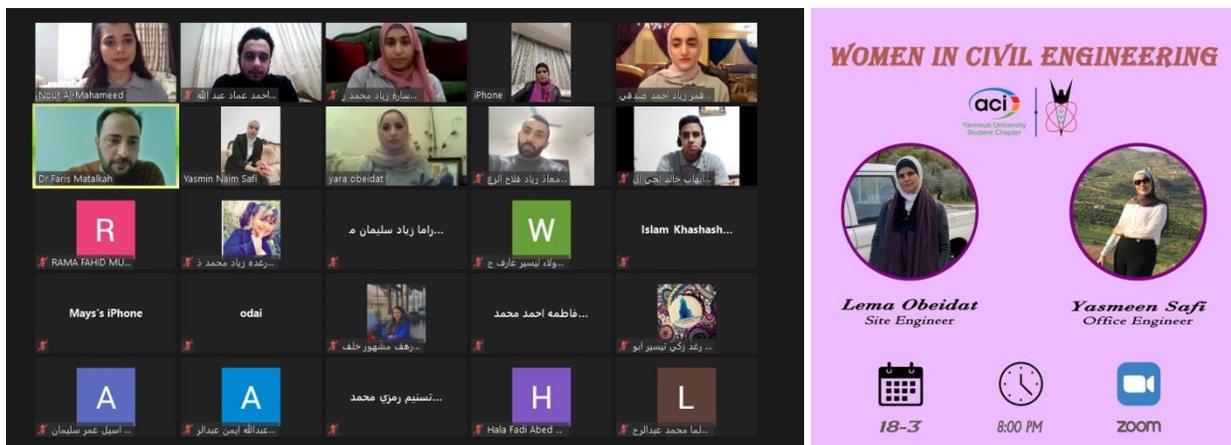
Climate Change Webinar

Yarmouk University students hosted a webinar on "Climate Change in Construction," igniting vital conversations about sustainable practices in the industry. This impactful online event gathered experts, professionals, and participants to address the environmental challenges specific to construction. Through engaging presentations and insightful discussions, the webinar emphasized the urgency of climate action in this sector. Attendees gained valuable insights into eco-friendly building materials, energy-efficient designs, and innovative construction techniques that reduce carbon footprints. By championing awareness on climate-conscious construction, the students demonstrated their dedication to fostering a greener future and inspiring positive change within the building industry.



Online workshop on Women in Civil Engineering

Yarmouk University students organized a compelling online webinar titled "Women in Civil Engineering," celebrating the vital role of women in the field. This empowering event highlighted the achievements and contributions of female civil engineers, inspiring participants to break barriers and pursue careers in this traditionally male-dominated industry. Through engaging presentations and panel discussions, the webinar showcased success stories, challenges faced, and opportunities for women in civil engineering. The event aimed to foster gender equality, diversity, and inclusivity in the engineering sector, encouraging aspiring female engineers to thrive and make a lasting impact in the field.



Jordan Youth and Climate Conference 2021

A prominent student from Yarmouk University served as a speaker at the Jordanian Youth and Climate Conference 2021, standing out as a key figure in youth-driven climate action. Organized by the Green Generation Association, the conference aimed to empower young individuals in addressing environmental and climate challenges, aiming for sustainability. The student's speech highlighted the impact of concrete manufacturing on carbon dioxide and greenhouse gas emissions, underscoring the urgent need for eco-friendly alternatives. Yarmouk University's American Concrete Institute chapter actively researched and developed concrete using medical waste ash, showcasing their commitment to finding greener solutions to environmental problems.

