

## Air quality

Qassim University plays a vital role in air quality research through several initiatives and efforts aimed at understanding and improving air quality in the Qassim region and the Kingdom of Saudi Arabia in general.

### Air Quality Research Center:

This center is one of Qassim University's most prominent efforts in this field.

The center monitors air pollutant levels, collects and analyzes data, and conducts scientific research and studies on air quality and its impact on public health and the environment.

The center aims to develop innovative solutions to reduce air pollution and improve air quality, raise awareness of the importance of air quality, and educate the community.

The Air Quality Research Center at Qassim University's primary objectives are:

**Monitoring and Analysis:** Measuring air pollutants and providing periodic reports.

**Scientific Research:** Conducting studies on the impact of air pollution and developing monitoring technologies.

**Innovative Solutions:** Finding solutions to reduce pollution and improve air quality.

**Community Awareness:** Spreading awareness of the importance of clean air.

**Collaboration and Partnerships:** Working with various entities to achieve goals.

**Supporting Vision 2030:** Contributing to achieving environmental sustainability.

### Air quality researchers

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## Water and sanitation

Qassim University supports a research center specialized in the field of water and sanitation.

Qassim University pays great attention to research in the field of water and sanitation, through:

**Qualified research teams:** The university includes qualified research teams of professors and researchers specialized in water and sanitation sciences, who work to conduct advanced studies and research in this field.

### Focus areas:

- Water quality analysis and pollution sources assessment.
- Development of innovative technologies for wastewater treatment and reuse.
- Study of water resources management and rationalization of water consumption.
- Evaluation of the impact of climate change on water resources.
- Water desalination studies.
- Studies in sewerage networks and water infrastructure.

## Objectives:

- Provide accurate and reliable data on water quality in Qassim region.
- Contribute to developing effective policies and strategies for water resources management.
- Raise awareness of the importance of water and rationalize its consumption.
- Provide scientific and practical solutions to water and sanitation problems.
- Develop innovative water treatment technologies.

## Water and Sanitation Researchers

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## Renewable energy

The Energy Sciences Center, located within the Department of Education, is a key pillar of the university's efforts to achieve sustainable development and diversify energy sources. It aims to establish an advanced scientific center in the field of modern energy, deploy clean energy access technologies, and train specialized personnel in this field.

Qassim University is paying increasing attention to renewable energy research and is working to develop innovative solutions in this vital field through Qualified research teams: The university includes qualified research teams of professors and researchers specializing in renewable energy, working to conduct advanced studies and research in this field.

### Focus areas:

- **Solar energy:** Study and development of solar energy technologies and improving the efficiency of solar cells.
- **Wind Energy:** Study and evaluate wind energy potential in the Qassim region and develop wind turbine technologies.
- **Bioenergy:** Study and analysis of bioenergy sources, and development of technologies for converting biomass into energy.
- **Energy Storage:** Study and develop renewable energy storage technologies to improve the stability of electrical grids.
- **Energy Efficiency:** Study and analyze energy systems and develop solutions to improve energy efficiency.

- **Objectives:**
- **Develop innovative solutions for renewable energy generation in the Qassim region.**
- **Contribute to achieving the goals of Saudi Vision 2030 in the field of renewable energy.**
- **Provide accurate and reliable data on the region's renewable energy potential.**
- **Raise awareness of the importance of renewable energy and its impact on the environment.**
- **Develop sustainable energy-saving technologies.**

### Renewable energy researchers

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## Sustainability of cities

The Sustainable Development Research Center at Qassim University is a pioneering center that aims to promote the concept of sustainable development in the region and the Kingdom as a whole. The center seeks to achieve a balance between economic, social, and environmental needs.

Qassim University is paying increasing attention to sustainable city research and is working to develop innovative solutions to achieve sustainable urban development in the Qassim region, through Multidisciplinary research teams: The university comprises qualified research teams from various disciplines, such as architecture, urban planning, environment, and economics, conducting advanced studies and research in this field.

### Focus areas:

- **Sustainable Urban Planning:** Developing sustainable urban planning models that take into account environmental, economic, and social aspects.
- **Green Buildings:** Designing and implementing green buildings that consume fewer resources and provide a healthier environment for residents.
- **Sustainable Transportation:** Developing sustainable transportation solutions that reduce traffic congestion and air pollution.
- **Waste Management:** Developing sustainable waste management systems that reduce waste and increase recycling.

- **Renewable energy:** Integrating renewable energy systems into urban infrastructure.
- **Green spaces and increasing agricultural land within cities.**
- **Developing smart infrastructure.**

#### Objectives:

- **Achieving the goals of Saudi Vision 2030 in the field of sustainable cities.**
- **Improving the quality of life in the cities of the Qassim region.**
- **Reducing the environmental impact of cities.**
- **Promoting sustainable economic growth in the region.**
- **Developing innovative solutions to urban challenges.**
- **Preserving the region's urban identity.**



## Researchers in urban sustainability

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