



## Al-Nahrain University



## Annual report for sustainability

### **SUPERVISED BY:**

**Prof.Dr.Omer.F.Abdul-Rasheed**

### **DESIGNED AND SUBMITTED BY:**

**Asst.Prof.Dr.Zaid Akram Thabit**

**Asst.Lec.Aoday.H.Ali**

**Asst.Lec. Enas.F.Yahya**



University : Al –Nahrain University  
Country : Iraq

## **INTRODUCTION:**

Al-Nahrain University is an educational public university established in 1987 and located in Baghdad, Iraq. The university offers undergraduate and postgraduate education as well as research opportunities. Its current name "Nahrain" meaning The Two Rivers (as in the two rivers of Iraq: Tigris and Euphrates).

The vision ,message, goals, values are undergone exact revision and execution ,committees were started formulating to predetermine the priorities ,check and revision of the performance and outcomes of the aiming teaching, computerize the administrative work preparing to enter the University in the World Ranking.

Primary works cent rerate on encouraging the teaching body by using and adopting the multimedia means of teaching of the modern age ,and develop the infrastructure to achieve the goals of University according to the number of its students for pioneering careers to achieve the balance between the basic and practical researches, encouraging the practical side towards the invention, manufacture and marketing the researches , develop them by the means , procedures and tools .Besides ,it encourages the business incubators inside and outside the University and investing the scientific research to ensure an economic environment for the University to depend on its auto-spending in the future.

Al-Nahrain University remains a spring of the science and knowledge characterized by its serious work and openness to the new thoughts; and it is regarded as a light of society and a factory of creation, a laboratory of science and culture and it remains a title of renaissance and one of the outstanding Iraqi Universities.



University : Al –Nahrain University  
Country : Iraq

# Setting and Infrastructure (SI)



University : Al –Nahrain University  
Country : Iraq

### 1.3 Number of campus site







University : Al –Nahrain University  
Country : Iraq





University : Al –Nahrain University  
Country : Iraq

Al-Nahrain University has two sites, the first site is the Al-Jadriya campus in the Al-Jadriya area, with an area of (**669878.24 m sq**), with a distance of (**15.5689 km**), which is located in the heart of the capital, and the second site is the site of the Al-Kadhimiya campus, located in Al-Kadhimiya area, with an area of (**95339.79 m sq**) and a distance of (**8.493 km**).

Additional evidence link :<https://www.youtube.com/watch?v=mEirNtxmcxA>

Additional evidence link :<https://nahrainuniv.edu.iq/ar/node/7954>



University : Al –Nahrain University  
Country : Iraq

#### 1.4 Campus setting





University : Al –Nahrain University  
Country : Iraq

Al-Nahrain University is one of the Iraqi universities that was established in Baghdad in 1987. The campus of Al-Nahrain University is one of the largest, most beautiful and attractive sites, as it is surrounded by wide green spaces in addition to the special location in the Iraqi capital (Baghdad).





University : Al –Nahrain University  
Country : Iraq

### 1.5 Total campus area (m<sup>2</sup>)



Total Campus Area of Southern campus

Total Area of Southern campus = **669878.24 m sq**

Total distance/circumference of Southern campus = **15.5689 km**

Total Area of Northern campus = **95339.79 m sq**

Total distance/circumference of Northern campus = **8.493 km**



University : Al –Nahrain University  
Country : Iraq

**Total area of all campus in Al –Nahrain University**

campus	Distance	Area
Southern campus	15.5689 km	669878.24 m sq
Northern campus	8.493 km	95339.79 m sq
<b>Total</b>	<b>24.062 km</b>	<b>765218.03 m sq</b>



University : Al –Nahrain University  
Country : Iraq

**1.6** Total campus ground floor area of buildings (m<sup>2</sup>)

Campus	Distance	Buildings
Southern campus	6.36594 km	546253.24 m sq
Northern campus	3.51228 km	26773.06 m sq
<b>Total</b>	<b>9.87822 km</b>	<b>573026.3 m sq</b>



University : Al –Nahrain University  
Country : Iraq

### 1.7 Total campus buildings area (m<sup>2</sup>)

Buildings area
<b>1719078. 9 m sq</b>





University : Al –Nahrain University  
Country : Iraq







University : Al –Nahrain University  
Country : Iraq





University : Al –Nahrain University  
Country : Iraq

Al-Nahrain University was established in 1987 and it includes two campus, one of them in Jadriya, which includes the College of Engineering, Science, Political Science, Information Engineering, Business Economics, Biology, Biotechnology Research Center, Forensic DNA Center for Research and Training, Al-Nahrain Research Center for Nano Renewable Energy, Electronic computer Center, and the other in Al-Kadhimiya includes Faculties of Medicine, Pharmacy and the Higher Institute for Infertility Diagnosis and Assisted Reproductive Technologies.



University : Al –Nahrain University  
Country : Iraq

**1.8 (SI.1)** The ratio of open space to total area

Formula:  $((1.5-1.6/1.5)*100\%)$

$((765218.03 \text{ m sq} - 573026.3 \text{ m sq} / 765218.03 \text{ m sq}) * 100\%)$

$= (192191.73 \text{ m sq} / 765218.03 \text{ m sq}) * 100\%$

**=25.1159%**



Where (765218.03 m sq) represent the total area of the Al-Nahrain university (southern and northern campus), (573026.3 m sq) represent the building area of the university. Finally, **(25.1159%)** represent the ratio of open space to total area of the Al –Nahrain University.



University : Al –Nahrain University  
Country : Iraq

**1.9** (SI.2) Total area on campus covered in forest vegetation

Forests	
Distance	Area
<b>4494.46 M</b>	<b>76454.30 m sq</b>







University : Al –Nahrain University  
Country : Iraq







University : Al –Nahrain University  
Country : Iraq





University : Al –Nahrain University  
Country : Iraq





University : Al –Nahrain University  
Country : Iraq







University : Al –Nahrain University  
Country : Iraq





University : Al –Nahrain University  
Country : Iraq

Where **(76454.30 m sq)** represent the total area on campus covered in forest vegetation and **(4494.46m)** represents the Total distance/circumference of the Al-Nahrain university (Southern and Northern campus).

Additional evidence link: <https://nahrainuniv.edu.iq/ar/node/8087>





University : Al –Nahrain University  
Country : Iraq

### 1.10 (SI.3) Total area on campus covered in planted vegetation

Planting	
Distance	Area
<b>10.32805 km</b>	<b>156,122.29 m sq</b>





University : Al –Nahrain University  
Country : Iraq





University : Al –Nahrain University  
Country : Iraq





University : Al –Nahrain University  
Country : Iraq







University : Al –Nahrain University  
Country : Iraq







University : Al –Nahrain University  
Country : Iraq





University : Al –Nahrain University  
Country : Iraq

Where (156,122.29m sq) represents the total area on campus covered in forest vegetation and (10.32805km) represents the Total distance/circumference of Al-Nahrain University (Southern and Northern campus).



University : Al –Nahrain University  
Country : Iraq

**1.11** (SI.4) Total area on campus for water absorption be sided forest and planted vegetation





University : Al –Nahrain University  
Country : Iraq



The water of the Tigris River is an important element that Al-Nahrain University uses to water and irrigate plants on campus

The southern campus of Al-Nahrain University is adjacent to the Tigris River on the southern side of the campus by a distance of (2.33 Km).while the area of the water that sided southern campus its equal to (257.094.74 m sq) in approximation.

Total **water absorption** area: 167,339.30 m<sup>2</sup>

Total Area: 765218 m<sup>2</sup>

Percentage area: 21%



University : Al –Nahrain University  
Country : Iraq

**1.12** Total number of regular students (part time and full time)

Total	7647
-------	------





University : Al –Nahrain University  
Country : Iraq

**1.13** Total number of online students (part time and full time)

Total	2294
-------	------



University : Al –Nahrain University  
Country : Iraq

**1.14** Total number of academic and administrative staff

Total	2437
-------	------



University : Al –Nahrain University  
Country : Iraq

**1.15 (SI.5)** The total open space area divided by total campus population

$$\begin{aligned}\text{Formula: } & ((1.5-1.6)/ (1.12+1.14)) \\ & ((765218.03 \text{ m sq} - 573026.3 \text{ m sq})/ 10084) \\ & = 192191.73 \text{ m sq}/ 10084 \\ & = 19.05\%\end{aligned}$$



University : Al –Nahrain University  
Country : Iraq

**1.16** Total university's budget (in US Dollars)

total	38778863\$
-------	------------



University : Al –Nahrain University  
Country : Iraq

**1.17** University's budget for sustainability effort (in US Dollars)

total	5816829\$
-------	-----------





University : Al –Nahrain University  
Country : Iraq

**1.18 (SI.6)** Percentage of University's budget for sustainability effort

Formula:  $((1.17/1.16)*100\%)$

$$1,19 = (5816829/38778863)*100\% \\ = 15 \%$$



University : Al –Nahrain University  
Country : Iraq

### 1.19 (SI.7) Percentage of Operation and Maintenance activities

Al-Nahrain University has an annual and periodic strategy to re-maintain buildings inside the university campus, including classrooms, electrical equipment, university gardens, public and health facilities, and it is under the supervision of the Dean of the College.

1	Total campus buildings area	17.190.789m <sup>2</sup>
2	Total operated building	14612170 m <sup>2</sup>
	Percentage building that operated and maintenance	85%





University : Al –Nahrain University  
Country : Iraq





University : Al –Nahrain University  
Country : Iraq





University : Al –Nahrain University  
Country : Iraq



The university buildings are periodically and comprehensively maintained for study halls, rehabilitating bathrooms, maintaining cooling devices, and rehabilitating gardens.

**Additional link:** <https://www.colmed-alnahrain.edu.iq/index.php?do=view&type=topic&id=13306527>

**Additional link:** <https://www.nahrainuniv.edu.iq/ar/node/25298>

**Additional link:** <https://youtu.be/GJ-5XHt7yU0>





University : Al –Nahrain University  
Country : Iraq

#### 1.20 (SI.8) Campus facilities for disable maternity care

Al-Nahrain University offers students with disabilities the following:

- 1- A specialized staff to follow up the needs and requirements of students with disabilities in all its faculties.
- 2- Educational and psychological staff for people with disabilities inside the university campus

Al-Nahrain University has prepared a plan to meet the requirements of students with disabilities, and a central unit has been established for them to deal with the following:

- 1- Providing curricula for the blind based on touch
- 2- Providing headphones to listen to lectures for deaf students
- 3- Providing a hall for people with disabilities with a screen to display the curricula in audio and video.
- 4- Providing a recreational club for people with disabilities.
- 5- Providing wheelchairs to facilitate their movement between buildings
- 6- Parking for people with disabilities.





University : Al –Nahrain University  
Country : Iraq





University : Al –Nahrain University  
Country : Iraq

### 1.21 (SI.9) Security and safety facilities



Fire extinguishers



Fire truck





University : Al –Nahrain University  
Country : Iraq



gramophone



Cameras inside the buildings





University : Al –Nahrain University  
Country : Iraq



Alarms System

Al-Nahrain University uses security and safety policies on campus.

1. The university has a gramophone to report emergency cases inside the university buildings.
2. CCTV monitoring cameras inside and outside buildings.
3. fire system (Alarms System, Fire truck, fire hydrant, Fire extinguishers).



University : Al –Nahrain University  
Country : Iraq

### 1.22 (SI.10) Health infrastructure facilities for students and academic and administrative staff wellbeing



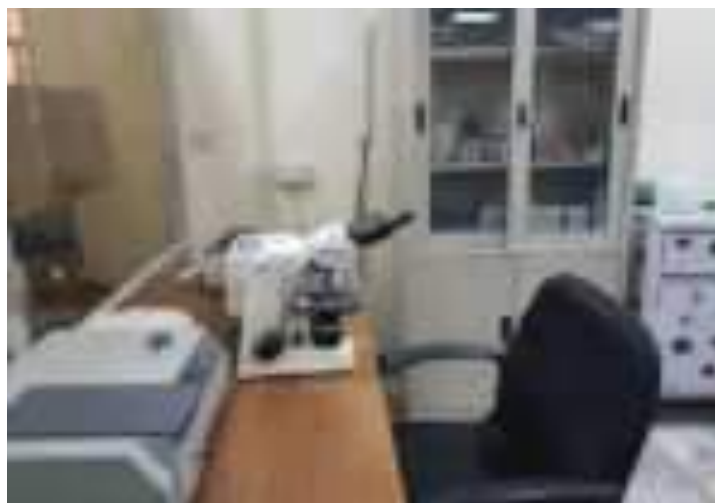
Health care center



A dental examination and treatment unit



An ultrasound examination unit



A sample examination unit



University : Al –Nahrain University  
Country : Iraq

## The High Institute for Infertility Diag-nosis and Assisted Reproductive Tech-nologies





University : Al –Nahrain University  
Country : Iraq



The High Institute for Infertility Diag-nosis and Assisted Reproductive Technologies is among the formations of our university. The Institute owns consulting clinics to provide health and reproductive counseling to patients from within the university (campus residents, including students and staff) or from abroad.

Al-Nahrain University has two health centers on campus to provide the following services without fees to staff and students on campus. These services include a specimen examination unit, dental examination and treatment unit, an ultrasound examination unit and an infertility consulting clinic. Al-Nahrain University has a pharmacy within the health center and provides first aid and treatments for special cases that are provided to students and staff. It also has a specialized laboratory and a center for conducting operations, and the university has launched an electronic clinic for students and employees with the activation of the global InSimu patient application to simulate real patients.

As in the following links:

**Additional evidence link:** <https://colmed-alnahrain.edu.iq/index.php?do=view&type=topic&id=13305909>

**Additional evidence link:** <https://colmed-alnahrain.edu.iq/index.php?do=view&type=page&id=341&lang=en>

**Additional evidence link:** <https://colmed-alnahrain.edu.iq/index.php?do=view&type=page&id=318&lang=en>

**Additional evidence link:** <https://colmed-alnahrain.edu.iq/index.php?do=view&type=page&id=320&lang=en>



University : Al –Nahrain University  
Country : Iraq

### 1.23 (SI.11) Conservation

1- Al-Nahrain University owns greenhouses for the cultivation, keeping, and maintenance of green plants that are periodically planted inside the campus.







University : Al –Nahrain University  
Country : Iraq



Green houses at AL-Nahrain university



University : Al –Nahrain University  
Country : Iraq



Greenhouse for growing plants out of season

Al-Nahrain University has green houses for the seeding and conservation of plants grown for the residents of the campus, and the university also produces honey for the residents of the campus through the university's apiaries.

Cultivation of different types of medicinal and ornamental plants within the greenhouse atmosphere in the winter season, as he urged field work, which is a scientific achievement in keeping pace with global development in the cultivation of a group of medicinal herbs in an environment other than their natural environment, as well as the cultivation of ornamental plants in greenhouses designated for the growth of plants in a way It is functional and aesthetic. It is mentioned that the completion of the work in building the greenhouse and providing the appropriate environment for the growth of young plants under the influence of a flashing electric lamp and appropriate humidity and ventilation in accordance with this design, which aims to provide plants with the light and heat necessary for growth, and give the



University : Al –Nahrain University  
Country : Iraq

house a beautiful natural luster and create suitable ventilation for plants and benefit It is for research and aesthetic purposes.

2- During the year 2022, Al-Nahrain University periodically produced a good crop of honey and absorbed it to cover the largest possible number of requests within the university's beehives for the campus residents and the community.

Additional link:

<https://www.facebook.com/100064089368390/posts/pfbid02DdbPZw9DqF4UWLC61rBnCHxcW2atidozz65pyvPGe5nb5NHKw5eP3DgER4E2DsCwl/?mibextid=K8Wfd2>

Additional link:

<https://www.facebook.com/100064089368390/posts/pfbid0263obaZBhSsVq918AhL7rt3BvuYd37tCwWT2iqzVKdDuSsNazimGPxGoC7sH992EXl/?mibextid=K8Wfd2>





University : Al –Nahrain University  
Country : Iraq



The university's apiaries



University : Al –Nahrain University  
Country : Iraq

# Energy and Climate Change (EC)

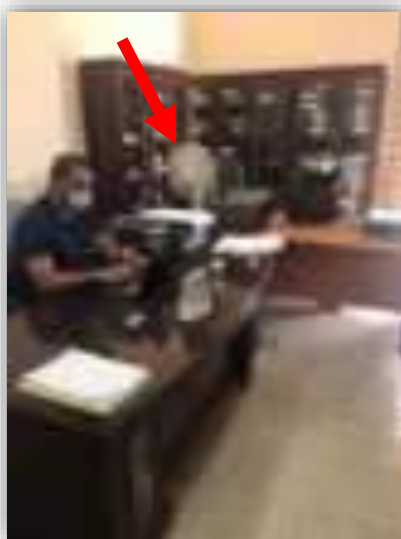




University : Al –Nahrain University  
Country : Iraq

## 2.1 (EC.1) Energy efficient appliances usage

Al-Nahrain University seeks to save energy through the use of many energy-saving devices in all buildings within the campus (south and north).





University : Al –Nahrain University  
Country : Iraq

No.	Details	Total Number	Total number energy Efficient appliances	Percentage
1	Standard air conditioner	580	418	72%
2	Standard air conditioner(inverter)			
3	Standard lamps	7156	5654	79%
4	Standard lamps(LED)			
5	Desktop computers	660	400	60%
6	Desk top computers(Laptop)			
7	Stand Fan	200	150	75%
8	Refrigerator	150	100	66%
Average Percentage				70%



University : Al –Nahrain University  
Country : Iraq

## 2.2 (EC.2) Total campus smart building area (m<sup>2</sup>)

Total campus smart building area
507706.152 m sq



University : Al –Nahrain University  
Country : Iraq

2.3 (EC.2) Smart Building implementation (percentage of the total floor area of smart building to the total all floors building area (smart and non-smart buildings area).





University : Al –Nahrain University  
Country : Iraq







University : Al –Nahrain University  
Country : Iraq



No.	Name	Place	automation		Safety				energy		water		Indoor environment				lighting				Building Area (m <sup>2</sup> )
			B1	B2	S1	S2	S3	S4	E1	E2	A1	A2	I1	I2	I3	I4	L1	L2	L3	L4	
1	University of AL-Nahrain; sothren campus buildings	Jadriah,Iraq	x		x	x	x		x			x	x	x			x		x	x	491627.916 m2
2	University of AL-Nahrain; northern campus buildings	Kadhmiya,Iraq	x		x	x	x		x			x	x	x			x		x	x	16078.236 m2
Total																					507706.152 m2

***total building area=1719078. 9 m sq***

***total smart building area=507706.152 m2***

***(total smart building area/total building area)×100%***

***(507706.152 m2/1719078. 9 m2)\*100***

***= 0.295***

***=29.5%***



University : Al –Nahrain University  
Country : Iraq

## 2.4 (EC.3) Number of renewable energy sources in campus

### **Four sources:**

- 1- wind power**
- 2- solar power**
- 3- bio diesel**
- 4- Clean Biomass**





University : Al –Nahrain University  
Country : Iraq

## 2.5 Renewable energy sources in campus and provide capacity produced in kilowatt-hour

Biodiesel=2500 kilowatt-h



*Biodiesel*



*Solar Power*

Solar power = 1000 kilowatt-h



University : Al –Nahrain University  
Country : Iraq



windmill = 1000 kilowatt-h



Clean Biomass = 100 kilowatt-h



University : Al –Nahrain University  
Country : Iraq

The refrigeration, heating and power unit at Al-Nahrain University that uses biodiesel as fuel the heat can be used to heat water that used daily in campus.

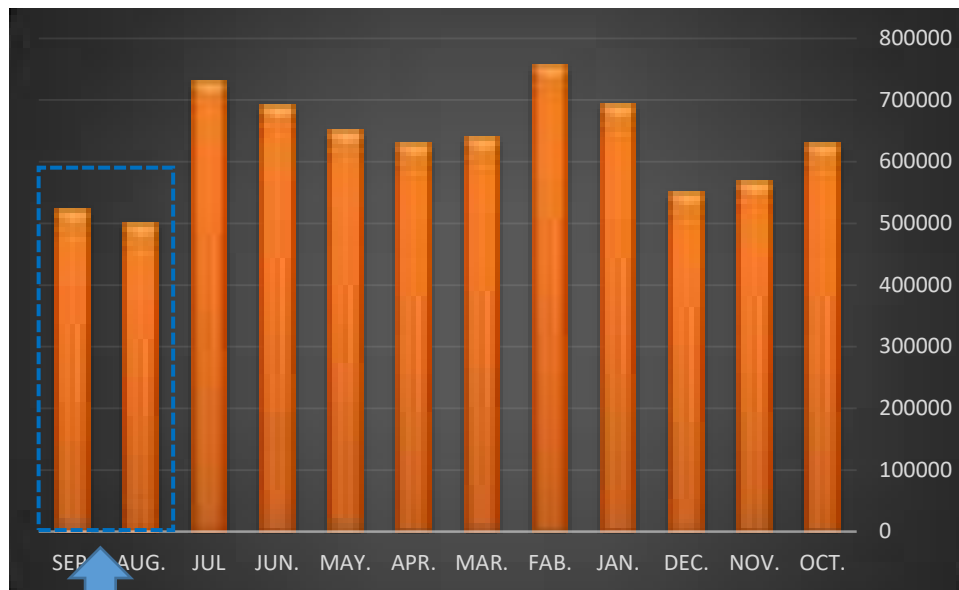




University : Al –Nahrain University  
Country : Iraq

## 2.6 Electricity usage per year (in kilowatt-hour)

Electricity usage per year	7559973 kilowatt-hour
----------------------------	-----------------------



Where in these two months there is a holiday for the under graduate students only



University : Al –Nahrain University  
Country : Iraq

**2.7** (EC.4) The total electricity usage divided by total campus population (kWh per person).

Formula:  $(2.6) / 1.12 + 1.14$

$7559973 \text{ kWh} / 10084$

$749,699 = \text{(kwh per person)}$



University : Al –Nahrain University  
Country : Iraq

2.8 (EC.5) The ratio of renewable energy production divided by  
total energy usage per year

No	Renewable Energy	Production (in kWh)
1	Biodiesel	2500
2	Clean Biomass	100
3	Solar panel	1000
4	Windmill	1000
	Total	4600

$4600 / 7559973$  (Electricity usage) =0.06%



University : Al –Nahrain University  
Country : Iraq

## 2.9 (EC.6) Elements of green building implementation as reflected in all construction and renovation policies

1- Al-Nahrain University uses the central cooling and heating system inside the campus buildings.





University : Al –Nahrain University  
Country : Iraq

## 2- Natural ventilation

The buildings of Al-Nahrain University were designed according to systems that support natural ventilation for the campus residents, and the pictures below illustrate this.







University : Al –Nahrain University  
Country : Iraq

3- The buildings of Al-Nahrain University were designed according to systems that support natural lighting for the campus residents, and the pictures below illustrate this.





University : Al –Nahrain University  
Country : Iraq

## 2-10 (EC.7) Greenhouse gas emission reduction program

Al-Nahrain University uses various means to reduce greenhouse gas emissions such as

- 1- Planting trees and plants on the campus, such as a program to plant one million trees to increase the green spaces on the campus.
- 2- Using energy-saving devices, such as electronic car garages, using electronic cards.
- 3- Using solar energy to produce energy in |( solar irrigation, solar-powered cooling, Water purification using solar energy Planting trees and plants, chargers for mobile phones).
- 4- Using a windmill to generate electric power.





University : Al –Nahrain University  
Country : Iraq



### Electronic car garage





University : Al –Nahrain University  
Country : Iraq

### Solar watering device



This device has been prepared for the following reasons

- 1- Using technology (renewable energies) and benefiting from solar energy
- 2- Special parking to reduce the number of vehicles on campus.
- 3- Ride share is designed to encourage riders to adopt healthy and sustainable transportation options.
- 4- Reducing the workforce, as irrigation is done via the Internet.

The parts of the device are plastic tubes, holes are made as desired, and a little soil and fibers are placed in them. Capillary hoses are connected to each anvil built in one side of the device Connected to a water bottle that determines its size according to the device



University : Al –Nahrain University  
Country : Iraq

and a developer connected to power charging strips where drip irrigation is programmed each time It is determined by the type of plant.







University : Al –Nahrain University  
Country : Iraq





University : Al –Nahrain University  
Country : Iraq

[2.11] Please provide the total carbon footprint (CO<sub>2</sub> emission in the last 12 months, in metric tons)

**CO<sub>2</sub> (electricity)**

$$\begin{aligned} &= \frac{\text{electricity usage per year (kWh)}}{1000} \times 0,84 \\ &= (7559973 \text{ kW}/1000) \times 0.84 \\ &= 6,350.43 \text{ metric tons} \end{aligned}$$

**CO<sub>2</sub> (bus)**

$$\begin{aligned} &= \frac{\text{number of shuttle bus in your university} \times \text{total trips for shuttle bus service each day} \times \text{approximate travel distance of vehicle each day inside campus only (KM)} \times 240}{100} \times 0,01 \\ &= ((20 \times 2 \times 2 \text{ km} \times 240)/100) \times 0.01 \\ &= (19200/100) \times 0.01 \\ &= 1,92 \text{ metric tons} \end{aligned}$$

**CO<sub>2</sub> (cars)**

$$\begin{aligned} &= \frac{\text{number of cars entering your university} \times 2 \times \text{approximate travel distance of vehicle each day inside campus only (KM)} \times 240}{100} \times 0,02 \\ &= ((250 \times 2 \times 2 \text{ km} \times 240)/100) \times 0.02 \\ &= (240000/100) \times 0.02 \\ &= 48 \text{ metric tons} \end{aligned}$$

**CO<sub>2</sub> (motorcycle)**

$$\begin{aligned} &= \frac{\text{number of motorcycle entering your university} \times 2 \times \text{approximate travel distance of vehicle each day inside campus only (KM)} \times 240}{100} \times 0,01 \\ &= ((10 \times 2 \times 2 \text{ km} \times 240)/100) \times 0.01 \\ &= (9600/100) \times 0.01 \\ &= 0,96 \text{ metric tons} \end{aligned}$$

**CO<sub>2</sub> (total)**

$$\begin{aligned} &= 6,350.43 + 1,92 + 48 + 0,96 \\ &= 6,398.43 \text{ metric tons} \end{aligned}$$

**Carbon footprint in 2022** = 6,398.43 metric tons



University : Al –Nahrain University  
Country : Iraq

2-12 (EC.8) The total carbon footprint divided by total campus population (metric tons per person).

Formula:  $(2.11)/(1.12+1.14)$

$= 6,398.43/10,084$

$= 0.63451309$



University : Al –Nahrain University  
Country : Iraq

## 2-13 (EC.9) Number of innovative program in Energy and Climate Change

### 1- sterilization operations





University : Al –Nahrain University  
Country : Iraq



Al-Nahrain University is carrying out continuous campaigns to sterilize university buildings and classrooms by specialized cadres to limit the spread of Covid 19

evidence link : <https://youtu.be/rf9VK5d6788>

evidence link : <https://youtu.be/W63rDyKplZg>

evidence link : <https://youtu.be/XJ1AuispxTU>



University : Al –Nahrain University  
Country : Iraq







University : Al –Nahrain University  
Country : Iraq

## 2- Book sterilizer device

Al-Nahrain University has a book sterilizer that works on the principle of ultraviolet sterilization

The device sterilizes books and thesis to prevent corona virus and protect teaching and study staff.

## 3- Hand sanitizer device



Al-Nahrain University has deployed hand sanitizers in all campus buildings at the entrances to the main gates of each building for use by campus residents to limit the spread of COVID-19.



University : Al –Nahrain University  
Country : Iraq



#### 4- Electric sterilizer device

Al-Nahrain University uses an electric sterilizer to ensure the sterilization of the atmosphere and surfaces to ensure the safety of the campus residents.



University : Al –Nahrain University  
Country : Iraq

#### 5- air sanitizer filter



Al-Nahrain University uses filters to sanitize the air from viruses, bacteria and gases emitted from outside or inside the building to preserve the building environment from pollutants.



University : Al –Nahrain University  
Country : Iraq

## 2-14 (EC.10) Impactful university program on climate change



Windmill at AL-Nahrain university

Al-Nahrain University is building windmills as a power station and is in the process of constructing other windmills and distributing them throughout the campus to generate electricity for buildings using wind energy.



University : Al –Nahrain University  
Country : Iraq

## Waste (WS)



University : Al –Nahrain University  
Country : Iraq

### 3.1 (WS.1) 3R (Reduce, Reuse, Recycle) program for university's waste







University : Al –Nahrain University  
Country : Iraq



Sorting plastic on campus



University : Al –Nahrain University  
Country : Iraq



Al-Nahrain University follows a policy of sorting waste such as paper, plastic, electronic and chemical materials scattered on campus and recycling them in cooperation with a local institution affiliated with the capital Baghdad (Amanat Baghdad) and using them in the future to produce metals. Baghdad paper and used in the future to produce metal and paper.



University : Al –Nahrain University  
Country : Iraq

### 3.2 (WS.2) Program to reduce the use of paper and plastic on campus



**Correspondence via internet**



**Print on two sides of the paper**



University : Al –Nahrain University  
Country : Iraq



**Use a glass cup**

Al-Nahrain University supports systems that reduce paper use by:

- 1- Print on two sides of the paper.
- 2- Using of e-mail for correspondence over the Internet or via social media site.
- 3- Reuse of plastic bags and use a glass cup instead of a plastic cup to reduce waste.
- 4- Smart board.





University : Al –Nahrain University  
Country : Iraq

### **smart board**

Al-Nahrain University uses the electronic board (smart board) to give lectures to students, compared to traditional boards in most of the university's faculties.

**Additional evidence link :**

<https://sc.nahrainuniv.edu.iq/viewnews.php?art=1481&prn=15#news>

**Additional evidence link :**

<https://sc.nahrainuniv.edu.iq/viewnews.php?art=1383#news>



University : Al –Nahrain University  
Country : Iraq

### 3.3 Total volume organic waste produced

Type of organic waste	Total Produced (ton)
- food waste	90
- leaf	30





University : Al –Nahrain University  
Country : Iraq

### 3.4 Total volume organic waste treated

Type of waste	amuount (ton)			
	total	reduced	reused	recycled
<b>organic</b>	120	24	30	
- food waste	90	18	22.5	
- leaf	30	6	7.5	



University : Al –Nahrain University  
Country : Iraq

### 3.5 (WS.3) Organic waste treatment

Al-Nahrain University uses two types of organic waste recycling:

- 1- Nahrain University has a cooperation program with the Baghdad Municipality to manage organic waste. The method of disposing of the waste inside Al-Nahrain University is by transporting it outside the city to designated places in cooperation with the Municipality of the Capital.





University : Al –Nahrain University  
Country : Iraq

2- Al-Nahrain University formed a periodic committee to follow up on the implementation of the decomposing organic waste disposal program. The decomposition of plants and animals in all their solid and liquid states for use as fertilizer for trees and herbs on campus.





University : Al –Nahrain University  
Country : Iraq

### Recycling organic waste at Al-Nahrain University

The recycling process for organic waste consists of three stages:

The first stage: collecting plant and weed waste





University : Al –Nahrain University  
Country : Iraq

The second stage: burial and fermentation of plant remains, tree leaves, and weeds



The third stage: obtaining organic fertilizer (peat moss).





University : Al –Nahrain University  
Country : Iraq







University : Al –Nahrain University  
Country : Iraq

### 3.6 Total volume inorganic waste produced

Type of inorganic waste	Total Produced (ton)
- paper	144
- soft plastic	48
- hard plastic	36
- etc	12



University : Al –Nahrain University  
Country : Iraq

### 3.7 Total volume inorganic waste treated

Type of waste	amuount (ton)				
	total	reduced	reused	down-cycled	up-cycled
inorganic non-toxic	240	12	96		
- paper	144	7	50		
- soft plastic	48	3	40		
- hard plastic	36	2	6		
- etc	12				



University : Al –Nahrain University  
Country : Iraq

### 3.8 (WS.4) Inorganic waste treatment



Al-Nahrain University formed a periodic committee to follow up on the disposal of inorganic waste in all its cases and types.

The method of managing inorganic waste inside Al-Nahrain University is done through a biological incinerator. This incinerator specializes in destroying biological models, microorganisms, blood bottles, and others resulting from laboratory tests and laboratory analyzes, as they can be used in the future in energy production.



University : Al –Nahrain University  
Country : Iraq

### 3.9 Total volume toxic waste produced

Type of toxic waste	Total Produced (ton)
- electronics	0.5
- lab. Chemicals	1
- etc	



University : Al –Nahrain University  
Country : Iraq

### 3.10 Total volume toxic waste treated

Type of waste	amuount (ton)				
	total	reduced	reused	down-cycled	up-cycled
toxic	1.5	0.1			
- electronics	0.5	0.01			
- lab. Chemicals	1	0.04			
- etc					



University : Al –Nahrain University  
Country : Iraq

### 3.11 (WS.5) Toxic waste treatment



Al-Nahrain University has formed a periodic committee to follow up on the management of toxic biological waste, which must be dealt sufficient care to ensure that it does not affect public health because it poses a health risk as a result of pollution.

The management method is carried out inside Al-Nahrain University through a thermal incinerator and takes place in two stages:

- 1- The first stage is the burning of toxic medical waste.
- 2- The second stage is to burn the gases emitted from those wastes resulting from the first stage to bring out the damaged materials in a safe and environmentally friendly manner.





University : Al –Nahrain University  
Country : Iraq

### 3.12 (WS.6) Sewage disposal



Sewage is dealt with at Al-Nahrain University by draining this water through large underground pipes and connecting them with the public sewage pipes that were prepared by the Capital Municipality.



University : Al –Nahrain University  
Country : Iraq

# Water (WR)



University : Al –Nahrain University  
Country : Iraq

#### 4.1 (WR.1) Water conservation program and implementation

Al-Nahrain University has several water conservation programs:

- 1- Al-Nahrain University exploits rain water and uses it to irrigate and wash cars by providing a large tank to store rainwater and distribute it through water channels on the campus for use at any time during the year.



Tank to store rainwater



University : Al –Nahrain University  
Country : Iraq



Water channels on the campus

- 2- The university buildings also have a separate sewage system for clean water (rain water). Thus rainwater is collected from the rooftops of the university buildings and then drained into local ponds and canals surrounding the buildings to irrigate the plants on the campus.





University : Al –Nahrain University  
Country : Iraq

- 3- Another system is the use of drift, which helps water flow to trees and grasses through channels to exploit rainwater at no cost on the Al-Nahrain University campus.





University : Al –Nahrain University  
Country : Iraq

#### 4.2 (WR.2) Water recycling program implementation

Al-Nahrain University has a water recycling system by filtering the water from impurities and storing it in a tank for use in irrigation and car washing.



filters for water treatment



Tank of treated water





University : Al –Nahrain University  
Country : Iraq

#### 4.3 (WR.3) Water efficient appliance usage

Al-Nahrain University uses water-saving measures in sanitation devices such as automatic control devices, low-flow toilets, and faucets with low floats to reduce the consumption of used water in addition to the use of treated water and rainwater to reduce the consumption of clean water.





University : Al –Nahrain University  
Country : Iraq





University : Al –Nahrain University  
Country : Iraq

#### 4.4 (WR.4) Treated water consumed

The university uses a reverse osmosis water purification system that works on direct and alternating current and works on solar energy and national electricity.

Filters are also used to treat and purify water for reuse, thus the university consumes more than 75% of the treated water and is consumed by students and staff.





University : Al –Nahrain University  
Country : Iraq





University : Al –Nahrain University  
Country : Iraq

#### 4.5 (WR.5) Water pollution control in campus area



Al-Nahrain University follows the policy of periodically checking the percentage of water pollution by conducting laboratory operations to separate polluting materials within the laboratories of the university through medical staff so that samples are collected and analyzed periodically to ensure the safety of water from pollutants.

Additional evidence link: [https://brc.nahrainuniv.edu.iq/?page\\_id=5032&lang=en](https://brc.nahrainuniv.edu.iq/?page_id=5032&lang=en)

Additional evidence link: [https://brc.nahrainuniv.edu.iq/?page\\_id=5203&lang=en](https://brc.nahrainuniv.edu.iq/?page_id=5203&lang=en)



University : Al –Nahrain University  
Country : Iraq

# Transportation (TR)





University : Al –Nahrain University  
Country : Iraq

5.1 Number of cars actively used and managed by University

61 cars

5.2 Number of cars entering the university daily

250 cars

5.3 Number of motorcycles entering the university daily

10 motorcycles



University : Al –Nahrain University  
Country : Iraq

5.4 (TR.1) The total number of vehicles (cars and motorcycles)  
divided by total campus population.

$$\begin{aligned}\text{Formula: } (5.1+5.2+5.3)/ (1.12+ 1.14) &= (61+250+10)/ 10,084 \\ &= 321/10,084 \\ &= 0.0318\end{aligned}$$





University : Al –Nahrain University  
Country : Iraq

### 5.5 (TR.2) Shuttle service



- 1- Al-Nahrain University provides special buses to transport its students on campus, in addition to providing an external means of transportation for employees to their homes.



University : Al –Nahrain University  
Country : Iraq

2- The university provides small government cars to perform their field work on campus.





University : Al –Nahrain University  
Country : Iraq

5.6 Number of shuttles operated in your university

20

5.7 Average number of passengers of each shuttle

20

5.8 Total trips of shuttle services each day

2



University : Al –Nahrain University  
Country : Iraq

### 5.9 (TR.3) Zero Emission Vehicles (ZEV) policy on campus

Al-Nahrain University is looking to buy hybrid cars in agreement with car manufacturers such as Toyota, which in turn helps reduce toxic emissions on campus.





University : Al –Nahrain University  
Country : Iraq

5.10 Average number of Zero Emission Vehicles (e.g. bicycles, cano, snowboard, electric car, etc.) on campus per day



University : Al –Nahrain University  
Country : Iraq

5.11 (TR.4) The total number of Zero Emission Vehicles (ZEV) divided by total campus population.

Formula:  $(5.10)/(1.12+1.14)$



University : Al –Nahrain University  
Country : Iraq

### 5.12 Total ground parking area (m<sup>2</sup>)

Total ground parking area = 16572.29 sq m



University : Al –Nahrain University  
Country : Iraq

5.13 (TR.5) Ratio of parking area to total campus area.

$$\begin{aligned} &\text{Formula: } ((5.12/1.5) \times 100\%) \\ &= ((16572.29 \text{ sq m}/765218.03 \text{ m sq}) * 100\%) \\ &= 0.0216 \end{aligned}$$



Southern campus in Al-nahrain University  
Total area=11544 sq m



University : Al –Nahrain University  
Country : Iraq



Northern campus in Al-nahrain University  
Total area=5028.29 sq m



University : Al –Nahrain University  
Country : Iraq



Evidence link: <https://n9.cl/my6x4>





University : Al –Nahrain University  
Country : Iraq

5.14 (TR.6) Transportation program designed to limit or decrease the parking area on campus for the last 3 years (from 2020 to 2022)

### Electronic car garage



- 1- Al-Nahrain University uses an electronic parking garage using electronic cards to reduce the parking area.
- 2- Designating specific student parking areas.
- 3- Encourage campus residents to walk.

Al-Nahrain University also created a new electronic park to limit the parking space on campus, as shown in the picture below.



University : Al –Nahrain University  
Country : Iraq





University : Al –Nahrain University  
Country : Iraq

5.15 (TR.7) Number of transportation initiatives to decrease private vehicles on campus (e.g. car sharing, charging high parking fees, metro / tram / bus services and etc)





University : Al –Nahrain University  
Country : Iraq



Al-Nahrain University is working to reduce the number of vehicles on campus by implementing initiatives, including:

1. Shuttle/bus campus inside campus
3. Walking
4. Car sharing



University : Al –Nahrain University  
Country : Iraq

### 5.16 (TR.8) Pedestrian path on campus





University : Al –Nahrain University  
Country : Iraq



Al-Nahrain University provides pedestrian paths with paths for people with disabilities and night lighting for campus residents.







University : Al –Nahrain University  
Country : Iraq







University : Al –Nahrain University  
Country : Iraq

5.17 Approximate daily travel distance of a vehicle inside campus only (in Kilometers)

Daily travel distance of a vehicle inside campus = 2 Kilometers



University : Al –Nahrain University  
Country : Iraq

## Education (ED)



University : Al –Nahrain University  
Country : Iraq

## 6.1 Number of courses/subjects related to sustainability offered

Number of courses (2022) = 58

Department: Chemical Engineering

courses
Renewable and nonrenewable energy
Solar energy
Wind energy
Geothermal energy
Ocean energy
Hydropower energy
Energy from Biomass
Production of hydrogen and storage
Fuel cell

Department of Biotechnology

courses
Plant physiology
Bio fuel
Phytoremediation



University : Al –Nahrain University  
Country : Iraq

Republic of Iraq  
The Ministry of Higher Education  
& Scientific Research

University: Al Nahrain

College: Engineering college

Department: Architecture

Stage: Master

Instructor name: Shaimaa Hameed Hussein

Academic status: Assistant Professor

Qualification: Doctorate

Place of work: Architectural Engineering Dep

## Urban Sustainability

### Course Weekly Outline

Week	Topics Covered	Note
1	Sustainable Urban Design Strategies.	
2	Tactical Urbanism	books review
3	Green & Sustainable Cities	books review
4	Smart City Design Principles	books review
5	Resilient Design Principles & compact cities	books review
6	Sustainable Urban Dynamics	books review
7	Sustainable urban form& good city form	books review
8	Public good in the city	books review
9	LEED for Neighborhood Development	books review
10	Urban sprawl & high density	books review
11	Sustainable Urban Landscape - Theory and Method	books review
12	Biomimicry and urban design	books review
13	Exam	
14	Social responsibility	books review
15	Vibrant city	
16	Final exam	



University : Al –Nahrain University  
Country : Iraq

Department: Electronic and Communication Engineering

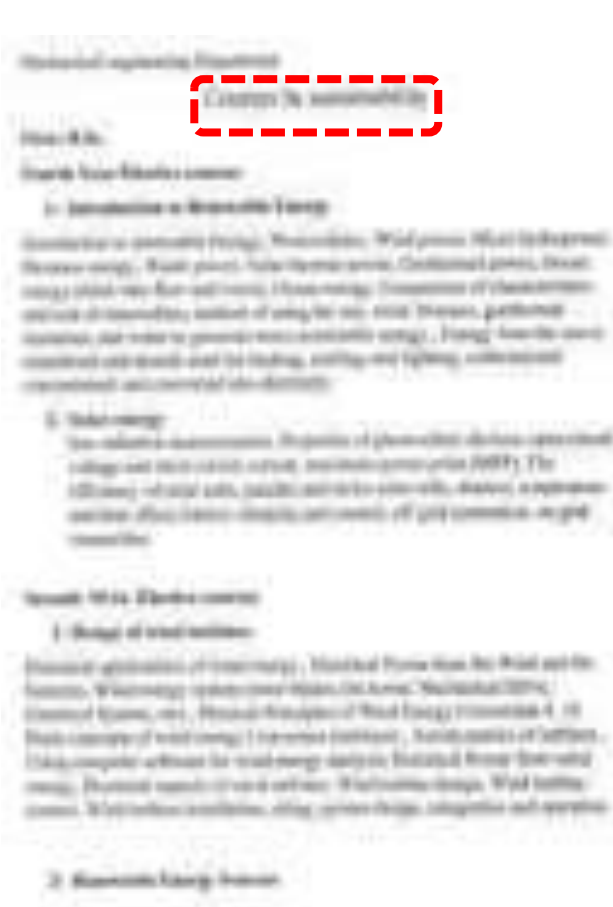
Department Name College of Engineering Department of Electrical and Communications Engineering		Year Plan for the year Academic year 2018-2019	
		The Department	
Detailed Semester			
No.	Code	Subject	ECTS
1	EE1001	Engineering Mathematics I	5
2	EE1002	Engineering Mathematics II	5
3	EE1003	Engineering Mathematics III	5
4	EE1004	Engineering Mathematics IV	5
5	EE1005	Engineering Mathematics V	5
6	EE1006	Engineering Mathematics VI	5
7	EE1007	Engineering Mathematics VII	5
8	EE1008	Engineering Mathematics VIII	5
9	EE1009	Engineering Mathematics IX	5
10	EE1010	Engineering Mathematics X	5
Total			50

Republic of Iraq The Ministry of Higher Education & Scientific Research			Technical Institute Erbil - Erbil Governorate Department of Electrical Engineering Erbil - Erbil Governorate
---	--	---	--



University : Al –Nahrain University  
Country : Iraq

Department: Mechanical Engineering



- **INTRODUCTION:** Energy demand growth and supply ; Historical Perspectives ; Food Safety, Consumption and Resources ; Environmental Impacts of Burning of Fossil Fuels ; Sustainable Development and Role of U.S. Renewable Energy
- **WIND ENERGY SOURCE:** Solar resources ; Principles and feasibility ; Solar energy utilization of Wind Energy ; Characteristics advantages and disadvantages ; Low temperature applications : solar water heating, space heating, drying
- **SOLAR THERMAL ELECTRICITY GENERATION:** Solar concentrators and tracking ; Dish and Parabolic trough concentrating generating systems ; Central tower solar thermal power plants ; Solar towers
- **SOLAR PHOTOVOLTAIC SYSTEMS:** Basic principle of solar generation in a PV cell ; Band gap and efficiency of PV cells ; Manufacturing methods of monocrystalline and polycrystalline cells ; Amorphous silicon thin film cells ; Single and multi junction cells ; Application of PV ; Basic types of solar PV installation system design ; Storage and Release of energy
- **WIND ENERGY SYSTEMS:** Types of systems ; Coefficients of Thrust, Tip Speed, Wake velocity parameters ; Power curve, wind characteristics and site selection ; Windflow for bulk power supply to grid ; Potential of wind energy generation in India and its current problems
- **BIOGAS ENERGY:** Biomass sources and characteristics ; Biogas plants ; Biogas gasifier ; Classification and Operating characteristics ; Updraft and Downdraft gasifiers ; Gasifier based electricity generating systems ; Maintenance of gasifier
- **OCEAN ENERGY:** Tidal power plants ; single beam and two beam plants ; Variation in generation level ; Ocean Thermal Electricity Conversion (OTEC) ; Floating generation from Waves ; Storage and floating wave systems
- **GEOTHERMAL ENERGY:** Geothermal sites in India ; High temperature and low temperature sites ; Conventional technologies ; Direct and Binary systems ; Geothermal power plants

The number of sustainability-related courses that Al-Nahrain University studies for students during the academic year, which includes the following departments:

# Chemical Engineering

## Biotechnology



University : Al –Nahrain University  
Country : Iraq

Architecture Engineering

Electronic and Communication Engineering

Mechanical Engineering

The links below represent the subjects and units of the Faculty of Business Economics at Al-Nahrain University related to sustainable development

Evidence: <https://eco.nahrainuniv.edu.iq/en/wp-content/uploads/2021/09/%D9%86%D8%B8%D8%A7%D9%85-%D8%A7%D9%84%D9%83%D9%88%D8%B1%D8%B3%D8%A7%D8%AA-%D9%84%D9%85%D9%86%D8%A7%D9%87%D8%AC-%D9%82%D8%B3%D9%85-%D8%A7%D9%82%D8%AA%D8%B5%D8%A7%D8%AF%D9%8A%D8%A7%D8%AA-%D8%A7%D8%AF%D8%A7%D8%B1%D8%A9-%D8%A7%D9%84%D8%A7%D8%B3%D8%AA%D8%AB%D9%85%D8%A7%D8%B1-%D9%88%D8%A7%D9%84%D9%85%D9%88%D8%A7%D8%B1%D8%AF-1.pdf>

Evidence: <https://eco.nahrainuniv.edu.iq/wp-content/uploads/2021/09/%D9%86%D8%B8%D8%A7%D9%85-%D8%A7%D9%84%D9%83%D9%88%D8%B1%D8%B3%D8%A7%D8%AA-%D9%84%D9%85%D9%86%D8%A7%D9%87%D8%AC-%D9%82%D8%B3%D9%85-%D8%A7%D9%82%D8%AA%D8%B5%D8%A7%D8%AF%D9%8A%D8%A7%D8%AA-%D8%A7%D8%AF%D8%A7%D8%B1%D8%A9-%D8%A7%D9%84%D9%85%D8%B5%D8%A7%D8%B1%D9%81.pdf>

Evidence: <https://eco.nahrainuniv.edu.iq/wp-content/uploads/2021/09/%D9%86%D8%B8%D8%A7%D9%85-%D9%83%D9%88%D8%B1%D8%B3%D8%A7%D8%AA-%D9%84%D9%82%D8%B3%D9%85-%D8%A7%D9%84%D8%B1%D9%82%D8%A7%D8%A8%D8%A9.pdf>



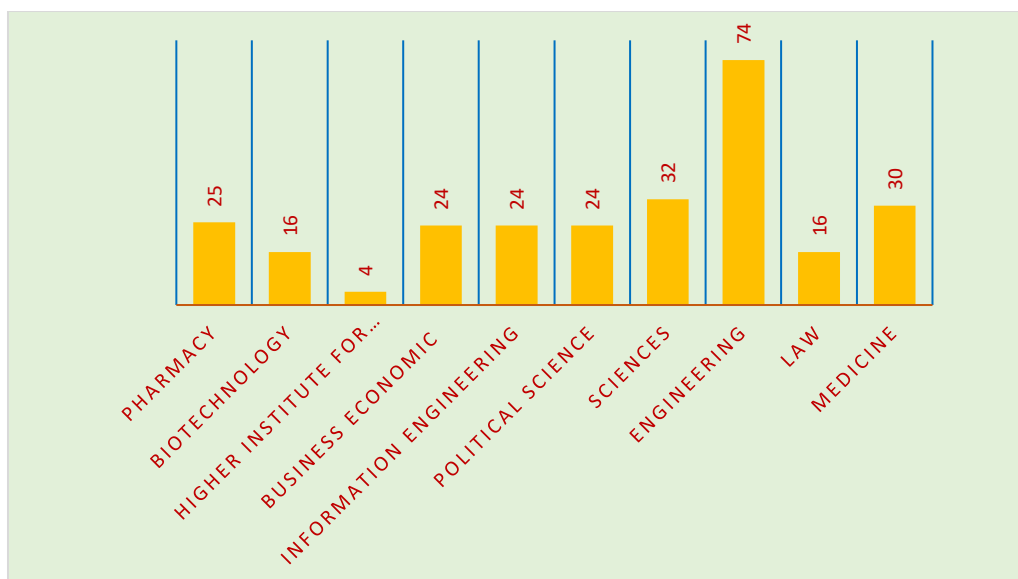


University : Al –Nahrain University  
 Country : Iraq

## 6.2 Total number of courses/subjects offered

Total number=269

Number of colleges	Number of Dep.	Courses
medicine	1	30
Law	2	16
engineering	9	74
Sciences	4	32
political science	3	24
Information engineering	3	24
business Economic	3	24
Higher Institute for Infertility Diagnosis and ARTs	1	4
Biotechnology	2	16
Pharmacy	1	25
<b>Total</b>	<b>29</b>	<b>269</b>





University : Al –Nahrain University  
Country : Iraq

Al-Nahrain University guideline, which contains courses and units of all faculties of the university

The link below is the latest version of the guide:

<https://qa.nahrainuniv.edu.iq/sites/default/files/Al%20Nahrain%20Guideline.pdf>



University : Al –Nahrain University  
Country : Iraq

### 6.3 (ED.1) The ratio of sustainability courses to total courses/subjects

The ratio= 21,56 %



University : Al –Nahrain University  
Country : Iraq

#### 6.4 Total research funds dedicated to sustainability research (in US Dollars) (average per annum over the last 3 years)

Total research fund dedicated to sustainability research in 2020 =  
4029 US Dollars

Total research fund dedicated to sustainability research in 2021 =  
7667 US Dollars

Total research fund dedicated to sustainability research in 2022 =  
29084 US Dollars

Total = 40780

The average annum last 3 years of research fund dedicated to  
sustainability research =13593.33 US Dollars



University : Al –Nahrain University  
Country : Iraq

#### 6.5 Total research funds (in US Dollars) (average per annum over the last 3 years)

Total research fund in 2020 = 33201 US Dollars

Total research fund in 2021 = 89757 US Dollars

Total research fund in 2022 = 38778 US Dollars

Total = 161736

The average annum last 3 years of research fund = 53912 US Dollars



University : Al –Nahrain University  
Country : Iraq

6.6 (ED.2) The ratio of sustainability research funding to total research funding

$$(6.4/6.5) \times 100\% = 13593.33/53912 \times 100\% \\ = 25\%$$



University : Al –Nahrain University  
Country : Iraq

### 6.7 (ED.3) Number of scholarly publications on sustainability



Number of events **scholarly publications on sustainability** in the academic year 2020 - 2022.

A total average per annum over the last 3 years of **702 publications**.

**evidence link :** [https://scholar.google.com/scholar?q=%22al+-nahrain+university%22+%26+green+%26+sustainability&hl=en&as\\_sdt=0&as\\_ylo=2020&as\\_yhi=2022&as\\_vis=1](https://scholar.google.com/scholar?q=%22al+-nahrain+university%22+%26+green+%26+sustainability&hl=en&as_sdt=0&as_ylo=2020&as_yhi=2022&as_vis=1)





University : Al –Nahrain University  
Country : Iraq

## 6.8 (ED.4) Number of Events Related to Sustainability

Total number= 146 events





University : Al –Nahrain University  
Country : Iraq

Number of events related to environment and sustainability hosted or organized by the University in the academic year 2019-2021.

Total number of sustainability/environment related events in:

2020: 5

2021: 67

2022 : 74

A total average per annum over the last 3 years of **48 events** .



University : Al –Nahrain University  
Country : Iraq

## 6.9 (ED.5) Number of student organizations related to sustainability

Number of student organizations related to sustainability= 5

### 1- The campaign to plant a million trees

Al-Nahrain University launches continuous campaigns that include agricultural activities with the participation of university students who have an active role in these campaigns. These campaigns include planting a group of seedlings and roses.





University : Al –Nahrain University  
Country : Iraq

## 2- Organized agricultural awareness campaigns

Al-Nahrain University joins organized awareness campaigns. These campaigns include planting seedlings and flowers on the university campus. These campaigns aim to spread environmental and service awareness among students.



3- Dakhka Organization is a support group that calls for equality and support for students with low incomes. Organized annually to support students, meet their needs and contribute to building a green campus in cooperation with the President of Al-Nahrain University.



University : Al –Nahrain University  
Country : Iraq



Evidence link: [https://web.facebook.com/grouplaugh/?\\_rdc=1&\\_rdr](https://web.facebook.com/grouplaugh/?_rdc=1&_rdr)

4- The Nahrain Blowers Organization is an annual organization led by Al-Nahrain University students to welcome a new academic year by launching a large number of blowers, where a large part of this festival goes as humanitarian aid.



Evidence link: <https://nahrainuniv.edu.iq/ar/node/11831>



University : Al –Nahrain University  
Country : Iraq

- 5- A student organization consisting of representatives from all faculties of Al-Nahrain University participates in internal and external activities related to agriculture, industry, art and annual sports competitions with government ministries and universities.





University : Al –Nahrain University  
Country : Iraq

## 6.14 (ED.8) Number of cultural activities on campus







University : Al –Nahrain University  
Country : Iraq



Total number of **cultural activities on campus** organized by the University : more than 3 **events**

The Faculty of Business Economics at Al-Nahrain University has held a number of workshops, seminars, programs and volunteer activities on campus to achieve the following:

#### **A- Poverty eradication**

- 1- Providing financial aid to people with limited income
- 2- Campaigns to visit the nursing home
- 3- Blood donation campaigns

#### **B- Zero Hunger**

- 1- Providing a food basket for people with limited income for employees and students
- 2- Organizing a food exhibition to support the national product

#### **C- Ensuring a healthy life**

- 1- Visiting hospitals to provide logistical support to health personnel
- 2- Blood donation campaigns and the provision of sterilization supplies



University : Al –Nahrain University  
Country : Iraq

3- Encouraging the establishment of sports activities inside the university campus in addition to the use of a specific policy to prevent smoking

#### **D- Quality of education**

1- Organizing electronic seminars and workshops targeting general societal groups and providing them with appropriate technical and professional skills

#### **E- Clean energy**

1- Replacing the light bulbs with others that work with economic lighting technology

2- Organizing seminars and lectures on the activation of renewable energy

Evidance: [https://web.facebook.com/media.eng87/photos/?ref=page\\_internal&\\_rdc=1&\\_rdr](https://web.facebook.com/media.eng87/photos/?ref=page_internal&_rdc=1&_rdr)

Evidance: <http://engar.nahrainuniv.edu.iq/>

Evidance: <https://nahrainuniv.edu.iq/ar/node/3697>

Evidance: <https://eco.nahrainuniv.edu.iq/?p=12505>

Evidance: <https://eco.nahrainuniv.edu.iq/?p=13318>

Evidance: <https://eco.nahrainuniv.edu.iq/?p=12285>

Evidance: <https://nahrainuniv.edu.iq/ar/node/8771>



University : Al –Nahrain University  
Country : Iraq

6.15 (ED.9) Number of university program(s) with international collaborations

Number of university program =7

**1- Al-Nahrain University has developed an evaluation system for the staff and faculty members through an electronic form based on the following indicators:**

- 1- Teaching efficiency and number of courses
- 2- Scientific activity, which represents published research
- 3- Participation in international conferences, seminars, and workshops
- 4- Participation in the service of state institutions
- 5- Job commitment, job skills, and participation in volunteer work





University : Al –Nahrain University  
Country : Iraq

## **2- Helpdesk group for E-Learning**

Switching to E-Learning. This mission has as objective to maintain the relationship with the students locked down home and reassure them as well as their families about the fate of the courses and the diplomas. Nevertheless, professors were not ready to switch to total distance learning and some were completely not familiar with eLearning platforms and or software.

For this, the Pedagogic Innovation Cell of Al-Nahrain University of worked very hard to identify the needs very quickly and to organise distance lectures to professors for eLearning discovering and mastering. An e-learning unit were created for supporting teachers and students as well, through online workshops (Zoom, Google Meet), emergency e-mails, e-learning website, operation rooms, social media such as telegram groups, and through the classes (Google Classroom & Moodle). A google classroom for students was created for online discussion and immediate supporting with some teaching manuals as well as the recorded training materials. The used applications and tools were imposed to teachers to reduce technological constraints or teachers/students apprehension.



University : Al –Nahrain University  
Country : Iraq



Helpdesk group for E-Learning  
(Al-Nahrain University, Iraq)

evidences link:

- <http://e-learning.nahrainuniv.edu.iq/ar>
- <https://mdl.coie-nahrain.edu.iq/course/index.php>



University : Al –Nahrain University  
Country : Iraq





University : Al –Nahrain University  
Country : Iraq



(Online Teaching Methods – Zoom, Google Meet, EdPuzzle, Google Classroom & Moodle)





University : Al –Nahrain University  
Country : Iraq





University : Al –Nahrain University  
Country : Iraq

Year	Ranking	Category	Score	Ranking	Category	Score	Ranking	Category	Score
2019	100	Overall	4.5	100	Overall	4.5	100	Overall	4.5
2018	100	Overall	4.5	100	Overall	4.5	100	Overall	4.5
2017	100	Overall	4.5	100	Overall	4.5	100	Overall	4.5
2016	100	Overall	4.5	100	Overall	4.5	100	Overall	4.5
2015	100	Overall	4.5	100	Overall	4.5	100	Overall	4.5
2014	100	Overall	4.5	100	Overall	4.5	100	Overall	4.5
2013	100	Overall	4.5	100	Overall	4.5	100	Overall	4.5
2012	100	Overall	4.5	100	Overall	4.5	100	Overall	4.5
2011	100	Overall	4.5	100	Overall	4.5	100	Overall	4.5
2010	100	Overall	4.5	100	Overall	4.5	100	Overall	4.5

Supporting Tools (E-learning website, operations rooms, emergency e-mails)  
<https://e-learning.nahrainuniv.edu.iq/>

### **3- Virtual Workshop, symposium, & conference**

Many workshops, symposium & conferences have been held virtually, and below are some of them:

1. An electronic practical symposium entitled Errors and traps in laparoscopic cholecystectomy:

The Surgery Branch of the College of Medicine at Al-Nahrain University held an electronic scientific symposium on the errors and traps in laparoscopic cholecystectomy, through the zoom application, with the participation of several faculty members in the college and several doctors from the Imam Al-Kazimin (P) Medical City.

The symposium, which was given by Dr. Bashar Abbas Abdel Hassan, aimed to identify the traps and mistakes that the surgeon makes during the procedure for removing the gallbladder bag.

The workshop included several axes, including a review of mistakes and traps that the surgeon may fall into during laparoscopic excision of the gallbladder



University : Al –Nahrain University  
Country : Iraq

bag, its side effects as it is one of the most common operations, and the new surgical methods and means through which mistakes can be avoided.





University : Al –Nahrain University  
Country : Iraq

2- Annual electronic conference under the slogan of education and electronic platforms in Iraq.

The Continuing Education Center at Al-Nahrain University held an annual electronic conference under the title Education and Electronic Platforms in Iraq.

The Director of the Center said that the conference aims to unify efforts and knowledge integration between relevant institutions in Iraq, neighboring countries and the world, and to exchange and update information to enhance scientific contributions to the development of continuing education tools and related axes, especially the e-learning axis.

The Director of the Center stressed the importance of higher education in Iraq through academic and continuing education centers to lay the correct foundations for the concepts of modern society and look forward with great optimism for the coming period.

The conference included several axes, the axis of continuing education (visions and horizons), the axis of education and electronic platforms (academic future), the axis of languages and skills development, the axis of modern teaching methods and teaching aids, the administrative and legal axis in higher education, and the axis of psychological and social sciences.





University : Al –Nahrain University  
Country : Iraq

3- Training workshop entitled (The latest procedural methods in managing the Google Workspace platform):

The Continuing Education Center / Al-Nahrain University held a training workshop entitled (The latest procedural methods in managing the Google Workspace platform) for platform managers in all colleges, and on the Google Meet video platform, in preparation for the new school year.



4- First applied research conference ARIE 2021 at COIE:

Under the patronage of His Excellency the Minister of Higher Education and Scientific Research, Prof. Dr. Nabil Kazem Abdel-Saheb, and under the supervision of the President of Al-Nahrain University, Prof. Dr. Ali Abdel Aziz Al-Shawi, under the slogan (Scientific Research – Continuing Despite Challenges).

The Faculty of Information Engineering was inaugurated this morning, Tuesday 29-6-2021, in cooperation with the Islamic University of Lebanon.

5- Al-Nahrain University, in cooperation with Damas Scientific Office, organizes a lecture entitled “Role of Ultrasound in prediction of endometrial receptivity”:



University : Al –Nahrain University  
Country : Iraq






تحت رعاية السيد رئيس جامعة النهرين الأستاذ الدكتور  
**محمد صادق جودي المعظم**  
 وبإشراف السيدة عميدة المعهد العالي للتخصصات  
 التطبيقية المساعدة على الأبحاث الأستاذ المساعد الدكتور  
**سائل فهد العبيدي المعظم**  
 وبالتعاون مع مكتب تامين العلم - الوكيل المعصري  
**شركة اتاني**

بدعمكم المعهد العالي للتخصصات العلم و التعليلات  
 المساعدة على الأبحاث لعضو مساعدة بعلوم  
**Role Of Ultrasound in prediction of endometrial  
 receptivity**

وذلك في يوم الجمعة الموافق 2020-6-24 في تمام  
 الساعة العاشرة - العاشرة عشر صباحاً بتوقيت العراق

**Dr. Samal Paschal**

- Consultant ultrasonically operating at the Department for Obstetrics and GYN, Minneapolis
- Professor, Graduate International University, Canada
- Master of Ultrasound in Obstetrics and Gynecology, San Diego State University School of Medical Ultrasound, completed in January 2016
- Faculty for Medical Ultrasound Courses in Minneapolis, USA and Mexico's courses in Mexico (Honduras)



Website Registration/viewer link -  
[www.stscongo.in/webcme-danndpaschal](http://www.stscongo.in/webcme-danndpaschal)

6- Final projects that are submitted using the e-learning platform





University : Al –Nahrain University  
Country : Iraq



**4- Some teaching videos for teachers and students were published on YouTube channel:**





University : Al –Nahrain University  
Country : Iraq

[https://www.youtube.com/channel/UCCVuhVOOfKgt4athkA\\_B8VUQ/playlists](https://www.youtube.com/channel/UCCVuhVOOfKgt4athkA_B8VUQ/playlists)

### **5- Some online Quizzes:**



### **6- Virtual workshop of setup a classroom & creating online quiz in a Google G-Suite platform.**

**The teachers' guide was prepared by the Higher Institute for Infertility Diagnostics at Al-Nahrain University “Google Classroom”**



University : Al –Nahrain University  
Country : Iraq



**7- Tealemoo web site**

<https://tealemoo.com/wp-content/uploads/2020/04/%D8%AF%D9%84%D9%8A%D9%84-%D8%B4%D8%A7%D9%85%D9%84-%D8%B9%D9%86-%D9%81%D8%A7%D9%8A%D8%B1%D9%88%D8%B3-%D9%83%D9%88%D8%B1%D9%88%D9%86%D8%A7.pdf>



University : Al –Nahrain University  
Country : Iraq

6.16 (ED.10) Number of sustainability community services project organised and/or involving students

Project type	Project name	number of projects	participants	Project area
conference	Student Research on Sustainability	2	40	SI, ED
Courses and subjects	Total Quality Management	3	56	SI, EC, WS, WR, TR, ED
Workshop	Waste treatment	2	30	WS

Al-Nahrain University donated books, cars, agricultural equipment, plants, and forest during the year 2020/2021 to universities within the same country.



University : Al –Nahrain University  
Country : Iraq

6-17 (ED.11) Number of sustainability – related startups

Number of sustainability – related startups = 7

1- Scientific Advisory Office at the College of Science, Al-Nahrain University



Evidence link: [https://sc.nahrainuniv.edu.iq/viewpage.php?page\\_id=8](https://sc.nahrainuniv.edu.iq/viewpage.php?page_id=8)

2- The legal advisory office at the College of Science, Al-Nahrain University



University : Al –Nahrain University  
Country : Iraq



Evidence link: [https://web.facebook.com/alnahrain.law.advisory/?\\_rdc=1&\\_rdr](https://web.facebook.com/alnahrain.law.advisory/?_rdc=1&_rdr)

3- Engineering Consulting Office at the College of Science, Al-Nahrain University



Evidence : [https://mobile.facebook.com/profile.php?id=100063959866056&\\_rdc=1&\\_rdr](https://mobile.facebook.com/profile.php?id=100063959866056&_rdc=1&_rdr)

4- Al-Nahrain University owns many greenhouses and produces large quantities of ornamental trees, various outside trees, and many types of roses, and distributes them to universities and most departments of the Iraqi state.



University : Al –Nahrain University  
Country : Iraq



5- Al-Nahrain University owns apiaries to produce honey and produce large quantities of it, and the university sells honey on campus.



The university's apiaries

6- Cultivation of different types of medicinal and ornamental plants within the greenhouse atmosphere in the winter season, as he urged field work,



University : Al –Nahrain University  
Country : Iraq

which is a scientific achievement in keeping pace with global development in the cultivation of a group of medicinal herbs in an environment other than their natural environment, as well as the cultivation of ornamental plants in greenhouses designated for the growth of plants in a way It is functional and aesthetic. It is mentioned that the completion of the work in building the greenhouse and providing the appropriate environment for the growth of young plants under the influence of a flashing electric lamp and appropriate humidity and ventilation in accordance with this design, which aims to provide plants with the light and heat necessary for growth, and give the house a beautiful natural luster and create suitable ventilation for plants and benefit It is for research and aesthetic purposes.







University : Al –Nahrain University  
Country : Iraq

7- The Million Trees Project is carried out annually by Al-Nahrain University during the summer and winter seasons, with the participation of students and all campus residents



## Visions and future goals of Al-Nahrain University according to the indicators of the green metric classification

### The first axis:

Al-Nahrain University seeks to increase the green spaces on the campus by planting forest trees, small plants and roses

We have a strategic future plan that helps improve the climate at the university level and the surrounding area, and use the students in community service activities to contribute to the agricultural process and to spread and achieve a culture of sustainability.

We have a plan to establish two artificial lakes inside the university campus to take advantage of the rainwater collected during the year and use it in the irrigation process in the coming seasons.

There is a future plan at Al-Nahrain University to increase the maximization of water resources and benefit from them in the development of sustainable development items related to the environment and climate change through the Al-Nahrain Research Center for Renewable Energy and the Biotechnology Research Center, which are within the formations of Al-Nahrain University.

### The second axis:

We have a five-year plan to fully supply the university buildings with solar energy.

We have a plan to construct four buildings with a range from 2022 to 2027, including smart building specifications.

The Sustainability Unit in the College of Business Economics at Al-Nahrain University is responsible for developing a plan for spreading

shade and climbing plants inside and outside the buildings to achieve the principle of green buildings.

The third axis:

We are in the process of conducting a feasibility study to recycle the university's organic and inorganic waste and offer it for investment to the private sector.

fourth Axis :

We have a plan to establish several rainwater drainage channels in the corridors of the university and within five years

Sixth Axis:

Al-Nahrain University is working to develop study materials for university students related to the environment and food that support the culture of sustainable development for students of Al-Nahrain University.