

**Fourth-year students at the College of Education for Pure Sciences and supervisors of (BSc) graduation projects for the academic year 2021-2022- Morning studies**

Students names	Supervisor	Research Title	No
1-Iman Fares+ Rahman Othman + Taiba Zafer 2-Shahla Ahmed + walaa Khaled + Mays Ziyad	Prof. Dr. Saeed Nayef	1-Study the optical properties of Borophene by Brus Model 2-Study the electrical properties of Borophene by Brus Model	1
1-Haneen Star + Iyad Sabah + Barakat Zia 2- Abdelkader Zuhair + Esraa Emad + Suleiman Khaled	Prof. Dr. Walid Badawi	1-The use of CD residues in the manufacture of structural sections. 2-Study some of the mechanical properties of polyester supported by waste particles of Cedar leaves. 3- Use hazelnut peels to support unsaturated polyester.	2
Muhammad Talal + Saad Hashem + Jassim Muhammad	Assist. Prof. Dr. Bilal Kamal	1-Effects of thermal energy on materials	3
1-Ahmed Mohamed + Othman Mahmoud + Ibrahim Jamal 2-Jabbar Abed + Safaa Suhaib + Mohamed Abdel Basset	Assist. Prof. Dr.Ali Khalaf	1-Calculating the probability of quad-pole electrical transmissions B(E2) for the ground band of samarium Sm nucleus. 2-Calculate the four-pole torque of the Nd nedmium core of the ground state .	4
1-Dina Bassem + Afaq Hamid + Zainab Sabah 2-Muhammad Sahab + Abdullah Abdul Rahman + Muhammad Tariq	Assist. Prof. Dr. Walid Sobhi	1-positives and negatives of nuclear decays. 2- using mirror nuclei to study of differences between neutron and proton	5
1-Najwa Negm + Mays Ahmed + Shaima Saud 2-Maryam Deraa + Marwa Nazim + Istabraq Abdullah	Assist. Prof. Dr. Jamal Fadel	1-The role of nanotechnology in the development of solar cell performance. 2-Use transparent conductive oxides as a conductive layer in electro-optical devices.	6
1-Sheba Basir + Successful Hagar + Sarah Eid 2- Jenan + Ayat Suhail + Rand	Assist. Prof. Dr. Anmar Dirar	1- Booz Einstein statistics. 2-Fermi Dirac statistics.	7
Athraa Naseer + .1 Saba Khudair + Nabaa Mustafa Abbas + .2Ali Osama Hussein + Nouf	Assist. Prof. Farid Mosaheb	1-Global warming - causes - results and solutions. 2-Using solar energy in Iraq as renewable alternative energy	8
1-Bilqis Ayoub + Mona Shehab 2-Abdullah Omar + Heba Mohsen + Shelan Ali 3-Khadija + Ola Samer + Hanan Obaid	Assist. Prof. Dr. salaam Khalaf	1-solid state lasers ,their structure, properties, and their types. 2-The polarized light, it's production methods and it's types. 3-The light waves interference,it's conditions it's types	9

<p>1-Ali Mohamed + Ali Ahmed + Ahmed Asaad</p> <p>2-Samar Mahmoud + Reem Sabah + Alaa Mohamed</p> <p>3-Ayman Hussein + Ahmed Mahmoud + Mustafa Shaker</p> <p>4-Sadiq Khaled + Alaa Kazem + Raja Sabah</p>	<p>Dr. Mazen Hamed</p>	<p>1-Changing the size and surface area of porous silicon using lasers.</p> <p>2-Deposition of thin films using pulse laser.</p> <p>3-Study the impact of communication towers on human health.</p> <p>4-Impact of the intensity of light on blood pressure, heart beats and oxygen concentration in blood.</p>	<p>10</p>
<p>1-Baha + Abu Bakr + Abdullah Muhammad</p> <p>2-Hala Hamed + Raja Hassan + Mustafa Kamal + Ahmed Obaid</p>	<p>Dr. Mustafa Zain</p>	<p>1-Study of hybrid junction types and it's applications.</p> <p>2- Study of transparent oxides (CdO, ZnO, NiO) and their applications.</p>	<p>11</p>
<p>1-Omar Ali + Asmaa Fadel + Shaima Suleiman</p> <p>2-Rania Abdullah + Amal Abed + Yaqeen tired</p>	<p>Dr. Adel Sobhi</p>	<p>1-Renewable Energies role in achieving sustainable development.</p> <p>2-Study of electrical conduction in metals</p>	<p>12</p>
<p>1-Alaa Hamid + Marwa Daoud</p> <p>2-Abdullah Salah + Mohamed Mahdi + Ahmed Ibrahim</p> <p>3-Hadeel Suleiman + Sawsan Zughayer + Shahd Ahmed</p>	<p>Dr. Omar Mahidi</p>	<p>1-Solar water distillation.</p> <p>2-Study of the electrical properties of graphene</p> <p>3-Principle and applications of PIN junction</p>	<p>13</p>
<p>1-Abdul Qadir Khalil + Abdullah Siddiq + Miqdad Muhammad</p> <p>2-Mufaz Hamad + Maryam Yassin + Russell Hamed</p> <p>3-Sadeq Lafta + Abbas Jabbar + Yusr Badawi</p>	<p>Dr. Maher Nouri</p>	<p>1- Piezoelectricity phenomena.</p> <p>2-The role of nanotechnology in disasters reduction.</p> <p>3-Medical application of Nanotechnology.</p>	<p>14</p>
<p>1-Ali Mahmoud + Mohamed Ahmed + Ahmed Alaa</p> <p>2-Shahd Ismail + Hiam Jabbar + Sarah Thaer</p> <p>3-Zeina Seif El Din + Maryam Saleh + Wissam Hussein</p>	<p>Omar Abdulaziz</p>	<p>1-Global warming causes and its impact on the environment and ways to reduce its effects.</p> <p>2-Noise pollution sources, its effect, and ways to prevent it.</p> <p>3-Nuclear waste effects and disposal methods</p>	<p>15</p>
<p>Ibtihal Fawzy + Zainab Muhammad + Nissim Youssef</p>	<p>Samira Adnan</p>	<p>1-Scientific culture among students of the Department of Physics</p>	<p>16</p>

**Fourth-year students at the College of Education for Pure Sciences and supervisors of (BSc) graduation projects for the academic year 2021-2022- Evening studies**

<b>Students names</b>	<b>Supervisor</b>	<b>Research Title</b>	<b>No</b>
<b>Salaam Jameel + Ahmed Khalifa</b>	<b>Prof. Dr. Saeed Nayef</b>	<b>Study the physical properties of some types of paints within the near infrared spectral area.</b>	<b>1</b>
<b>Hadiya Naji + Musab Jamal</b>	<b>Prof. Dr. Walid Badawi</b>	<b>Use orange peels to strengthen PMMA</b>	<b>2</b>
<b>Esraa Adnan + Doaa Shawky</b>	<b>Assist. Prof. Bilal Kamal</b>	<b>Study the electronic properties of boron nitride using density function theory.</b>	<b>3</b>
<b>Ali Abd + Abdullah Omar</b>	<b>Assist. Prof. Dr. Ali Khalaf</b>	<b>Calculating the levels of nuclear power of the barium nuclei.</b>	<b>4</b>
<b>Silwan Khalaf + Muhaimin Muhammad</b>	<b>Assist. Prof. Dr. Walid Sobhi</b>	<b>Nuclear reactors between positive and negative applications</b>	<b>5</b>
<b>Fatima Tariq + Hajar Saadi</b>	<b>Assist. Prof. Dr. Jamal Fadel</b>	<b>Nanomaterials and their characterization methods.</b>	<b>6</b>
<b>Laith Abed + Abdel Qader Khalifa</b>	<b>Assist. Prof. Dr. salaam Khalaf</b>	<b>Fiber optic composition - types and applications</b>	<b>7</b>
<b>Mohamed Rahim + Abeer Khaled</b>	<b>Dr. Mazen Hamed</b>	<b>Study of super electrical conductivity in materials and their applications.</b>	<b>8</b>
<b>Ammar Sarhan + Ghadeer Karim</b>	<b>Dr. Omar Mahidi</b>	<b>Preparation of nanoscale thin films using chemical vapor deposition method.</b>	<b>9</b>
<b>Youssef Abdel Baset + Yahya Khaled</b>	<b>Dr. Ibrahim Qais</b>	<b>Semiconductor laser and its applications.</b>	<b>10</b>