

## NEAR EAST UNIVERSITY – COMMON COURSES COORDINATION UNIT



## Ders Bilgi Formu / Course Information Sheet

<b>Ders Kodu / Course Code</b> PHY201	<b>Ders Adı / Course Name</b> Introduction to Quantum Physics	<b>Kredi /Credit</b> 4	<b>AKTS /ECTS</b> 6				
<b>Önkoşul / Pre-requisite: None</b>							
<b>Ders Dili / Language:</b> English		<b>Ders Türü /Course Type:</b> Must	<b>Öğretim Ortamı / Mode of Instruction:</b> Online				
<b>Haftalık Ders Saati / Weekly Hours</b>	<b>Sınıf Saati / Class Hours</b>	<b>Laboratuvar / Laboratory</b>	<b>Uygulama / Practicum</b>	<b>Öğretim Oturumları / Learning Sessions</b>			
				<b>PÇ / PS</b>	<b>P / C</b>	<b>D / R</b>	<b>Ö / T</b>
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<b>Öğrenim Çıktıları / Learning Outcomes</b>		<p>Bu dersin sonunda öğrenciler: After the completion of this course, the student will be able to:</p> <ul style="list-style-type: none"> <li>▶ Use of evaluation criteria for an assessment of quantum physics</li> <li>▶ Demonstrate and reconstruct a specific quantum physics problems</li> <li>▶ Apply quantum physics principles for verification of the problems</li> <li>▶ Analyze variables of quantum physics problems</li> </ul>					
<b>Ders Tanımı / Course Description</b>		This is an introductory quantum physics course for faculty of engineering. Its covers basic quantum physics subjects..					
<b>Dersin Amaçları / Course Objectives</b>		The objectives of this course are to provide the students with the fundamental principles of quantum physics to enable them to gain skills for problem solving and a scientific thinking, and to establish the foundations for further studies in engineering.					
<b>Kullanılan Materyaller / Textbooks and/or References</b>		1. Quantum physic,Stephen Gasiorowicz.3 <sup>rd</sup> Edition, 2003 2. Materials on UZEM					
<b>Ders İçeriği / Course Content</b>		1. Introduction, Black body radiation 2. Photoelectric effect, The Comptom effect 3. Photoelectric effect, The Comptom effect 4. Wave packets and uncertainty relations 5. Wave packets and uncertainty relations 6. The Schrödinger equation 7. The Schrödinger equation 8. Free particle equation 9. Eigenfunctions and eigenvalues, the energy eigenvalue equation 10. Eigenfunctions and eigenvalues, the energy eigenvalue equation 11. one dimensional potentials 12. The potential Barriers					