

**University of Baghdad / College of Science/ Department of Astronomy and Space**

**Academic Curricula / PhD in Astronomy**

<b>1<sup>st</sup> semester</b>		<b>2<sup>nd</sup> semester</b>	
<b>subject</b>	<b>Units</b>	<b>subject</b>	<b>Units</b>
Space Dynamics	2	Cosmological Plasma	3
Advanced Space Physics	2	Physics of Shock wave	2
Astro-Mathematics	3	Astronomical Image compression	2
Thermal and Radio Astronomy	3	Extragalactic Astronomy	2
Astronomical Adaptive Optics	3	English Language	1
English Language	1	Scientific Research Methodology	2
Seminar	Pass	Special Topic	2

<b>Special topics</b>
1- Modeling and Analysis of Eclipsing Binary Stars
2- Orbital Maneuvers of Satellites
3- Fundamentals of Plasma Space Propulsion
4- Fourier Optics
5- Radio Interferometers Technique in Radio Observation

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**Academic Curricula / MSc in Astronomy**

<b>1<sup>st</sup> semester</b>		<b>2<sup>nd</sup> semester</b>	
<b>subject</b>	<b>Units</b>	<b>subject</b>	<b>Units</b>
Mathematical Physics 1	2	Mathematical Physics 2	3
Astronomical Spectroscopy	2	Advanced Stellar Physics	2
Astronomical Observations and Astrometry	2	Space Physics Communication	2
Optical and Non Optical Astronomy	2	Space Weather	2
Advanced Astronomy	2	English Language	1
English Language	1	Scientific Research Methodology	2
Stellar Dynamics	3	Special Topic	2
Seminar	Pass	-----	-----

<b>Special topics</b>
1- Spectrometer Parameter in 3-meter Radio Telescope
2- Applications of Gravitational Lensing
3- Stellar Dynamics in Globular Clusters
4- Astrophysics of the Moon
5- Plasma Space Applications