

**Department of Political Science
University of the Punjab, Lahore
Course Outline**



Programme	Diplomacy and Strategic Studies	Course Code		Credit Hours	3
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Course Title	Developments and History of Air warfare				
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Course Introduction

In the nearly hundred years since the revolutionary new dimension began to lift off the surface of the earth, air power has played a crucial role in warfare. It is defined as a nation's "capacity to impose its will through the medium of air or aerospace and includes the employment of all its aviation resources, civil and military, public and private, potential and existing". Attributes of high speed, long reach, quick response, and termination, technological intensity, precision fire power and shock-effect-without regard to frontiers and coastlines-have made air power a formidable component of national military power. Many zealots have been wont to claim that air power could win a war by itself-these assertions may be driven by hyperbole. But the foremost lesson of the twentieth century is that no war can be prosecuted successfully without air power and that it would doubtless be lost without befitting application of air power.

It need hardly be underscored that warfare primarily involves generation and successful enforcement of favorable asymmetry. This is a role air power has historically performed with a great deal of success. In evolutionary terms, air power progressed rapidly from its infancy of being a peripheral component during the First World War to its pervasive contribution in World War II. The German Blitzkrieg, Battle of Britain, Battle of Atlantic, Pearl Harbor, strategic bombing offensive and allied offensive in Europe constitute some of the clinching successes air power notched up. In the numerous wars since then in East-Southeast Asia, South Asia and West Asia air power achieved decisive results. At the same time disregard of fundamental air doctrines, lack of political support and well-known environmental constraints have often hampered its exploitation. The air power pendulum in the figure that follows explains the multifarious dimensions of its application. Looking at the conflict paradigm for the next couple of decades, it is possible that air power will make a greater impact on warfare in its second century than it did in the first.

This centennial appraisal of air power aims to examine the concepts of air power germane to the air campaigns of modern warfare. Related lessons, mega-trends and pointers that are likely to impact application of air power in future will also be briefly addressed.

This course examines the Developments and History of Air Warfare". It involves structuring the material to cover the evolution of air combat, significant conflicts, technological advancements, and key figures.

Learning Outcomes

On the completion of the course, the students will:

- Be equipped with sufficient knowledge of prevalent issues
- Understand the historical context and motivations for Air-Warfare
- Analyze key events and developments in the relevant course
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Course Content		Assignments/Readings
Week 1	<p>Introduction to Air Warfare</p> <ul style="list-style-type: none"> • Overview of Air Warfare <ul style="list-style-type: none"> ○ Definition and scope of air warfare ○ Importance in modern military strategy 	<p>Air Power. A Global History by Jeremy Black</p> <p>Introduction</p> <p>Black, J. (2022). <i>Air power: A global history</i>. Yale University Press.</p>
Week 2	<p>Introduction to Air Warfare</p> <ul style="list-style-type: none"> • Early Concepts and Innovations <ul style="list-style-type: none"> ○ Pioneers of aviation: Wright Brothers, early experiments ○ Initial military applications of aircraft 	<p>Chapter 1: Introduction</p> <p>Black, J. (2022). <i>Air power: A global history</i>. Yale University Press.</p>
Week 3	<p>World War I – The Dawn of Aerial Combat</p>	<p>Chapter 2: Start of a new Arm</p>

	<ul style="list-style-type: none"> • Early Aerial Reconnaissance and Bombing <ul style="list-style-type: none"> ○ Role of reconnaissance in WWI ○ First use of aircraft for bombing missions ○ 	Black, J. (2022). <i>Air power: A global history</i> . Yale University Press
Week 4	<p>World War I – The Dawn of Aerial Combat</p> <ul style="list-style-type: none"> • Famous Aircraft and Pilots <ul style="list-style-type: none"> ○ The Sopwith Camel, Fokker Dr.I, etc. ○ Notable pilots: Red Baron, Eddie Rickenbacker 	<p>Chapter 2: Start of a new Arm</p> <p>Black, J. (2022). <i>Air power: A global history</i>. Yale University Press</p>
Week 5	<ul style="list-style-type: none"> • Air Warfare Tactics and Strategies <ul style="list-style-type: none"> ○ Development of fighter tactics and dogfights ○ Impact on ground and naval operations 	<p>Chapter 3: The First World War</p> <p>Black, J. (2022). <i>Air power: A global history</i>. Yale University Press</p>
Week 6	<p>Interwar Period – Technological and Tactical Evolution</p> <ul style="list-style-type: none"> • Advancements in Aircraft Design and Technology <ul style="list-style-type: none"> ○ Introduction of monoplane designs, improvements in engines ○ Rise of air races and technological competition 	<p>Chapter 3: The First World War</p> <p>Black, J. (2022). <i>Air power: A global history</i>. Yale University Press</p>

<p>Week 7</p>	<p>Interwar Period – Technological and Tactical Evolution</p> <p>Strategic Bombing Concepts</p> <ul style="list-style-type: none"> ○ Theories of strategic bombing by figures like Giulio Douhet ○ Development of bomber aircraft: Boeing B-17, Heinkel He 111 	<p>Chapter 4: 1920,s</p> <p>Black, J. (2022). <i>Air power: A global history</i>. Yale University Press</p>
<p>Week 8</p>	<p>World War II – The Golden Age of Air Warfare</p> <ul style="list-style-type: none"> • Major Air Campaigns and Battles <ul style="list-style-type: none"> ○ Battle of Britain, Pearl Harbor, Eastern Front air operations ○ Strategic bombing of Germany and Japan 	<p>Chapter 5:1930’s</p> <p>Black, J. (2022). <i>Air power: A global history</i>. Yale University Press</p>
<p>Week 9</p>	<p>World War II – The Golden Age of Air Warfare</p> <p>Impact of Air Superiority on WWII Outcomes</p> <ul style="list-style-type: none"> ○ Role of airpower in shaping the outcome of battles and the war 	<p>Chapter 6: The Second World War</p> <p>Black, J. (2022). <i>Air power: A global history</i>. Yale University Press</p>
<p>Week 10</p>	<p>Post-War Developments – The Cold War Era</p> <ul style="list-style-type: none"> • Jet Age and Nuclear Strategy <ul style="list-style-type: none"> ○ Development of supersonic aircraft and intercontinental bombers ○ Strategic Air Command and the role of airpower in deterrence 	<p>Chapter 7: Th early Cold War 1946-1962</p> <p>Chapter 7: Th early Cold War 1946-1962</p>

		Black, J. (2022). <i>Air power: A global history</i> . Yale University Press
Week 11	<p>Post-War Developments – The Cold War Era</p> <p>Conflicts and Airpower Utilization</p> <ul style="list-style-type: none"> ○ Korean War, Vietnam War, and their impact on air warfare ○ Evolution of air tactics and the role of air support 	<p>Chapter 8: The Cold War : The Middle Period</p> <p>Black, J. (2022). <i>Air power: A global history</i>. Yale University Press</p>
Week 12	<p>Modern Air Warfare – Technological Innovations and New Challenges</p> <ul style="list-style-type: none"> • Stealth Technology and Precision Strikes <ul style="list-style-type: none"> ○ Development and use of stealth aircraft: F-117, B-2 Spirit ○ Precision-guided munitions and their effects on modern combat 	<p>Chapter 8: The Cold War : The Middle Period</p> <p>Black, J. (2022). <i>Air power: A global history</i>. Yale University Press</p>
Week 13	<p>Drones and Unmanned Aerial Vehicles (UAVs)</p> <ul style="list-style-type: none"> • Evolution and applications of UAVs in modern warfare • Ethical and strategic implications of drone warfare 	<p>Chapter 9; The Late Cold War Black, J. (2022). <i>Air power: A global history</i>. Yale University Press</p>
Week 14		
Week 15	<p>Case Studies in Contemporary Air Conflicts</p> <ul style="list-style-type: none"> • Recent Conflicts and Airpower 	<p>The Late Cold War</p>

	<ul style="list-style-type: none"> ○ Analysis of air operations in Iraq, Afghanistan, and Syria ○ Role of coalition air forces and international cooperation 	Black, J. (2022). <i>Air power: A global history</i> . Yale University Press
Week 16	<p>Case Studies in Contemporary Air Conflicts</p> <ul style="list-style-type: none"> • Lessons Learned and Future Trends <ul style="list-style-type: none"> ○ Evaluation of air warfare strategies and effectiveness ○ Predictions for the future of air combat and technology 	<p>Chapter:10 -13</p> <p>Revolution in Military Affairs – Conclusion</p> <p>Black, J. (2022). <i>Air power: A global history</i>. Yale University Press</p>

Textbooks and Reading Material

The lectures will supplement discussions through books and online academic material. The objective would be to engage students in reading and listening to expert opinions to develop their own understanding of various concepts that are essential in the subject. The curriculum will not depend on a fixed set of readings and online lectures but will diversify to accommodate research articles and opinions as well as interviews to provide a broad spectrum analysis and discourse.

Recommended Books (material can be provided as lectures proceed)

The First World War in the Air by Peter Hart **Hart, P.** (2014). *The First World War in the Air*. The History Press.

Fighter Combat: Tactics and Maneuvering by Robert L. Shaw Shaw, R. L. (1985). *Fighter combat: Tactics and maneuvering*. Naval Institute Press.

The Influence of Air Power upon History" by Walter J. Boyne Boyne, W. J. (1998). *The influence of air power upon history*. Smithsonian Books.

The Battle of Britain: Five Months That Changed History; May–October 1940" by James Holland Holland, J. (2020). *The battle of Britain: Five months that changed history; May–October 1940*. St. Martin’s Press.

The Rise of American Air Power: The Creation of Armageddon by Michael S. Sherry Sherry, M. S. (1987). *The rise of American air power: The creation of armageddon*. Yale University

Duel of Eagles: The War in the Air, 1939-1945 by David Nicolle Nicolle, D. (2007). *Duel of eagles: The war in the air, 1939-1945*. Osprey Publishing.

The Korean War: A History by Bruce Cumings Cumings, B. (2010). *The Korean war: A history*. Modern Library.

Into the Blue: The Forgotten Wars of the Pacific by Dan Kurzman Kurzman, D. (1999). *Into the blue: The forgotten wars of the Pacific*. HarperCollins

Teaching Learning Strategies

1. Relevant material will be provided beforehand to the class both in printed and electronic form to match with the course contents designed
2. Reciprocal teaching method can be implemented to allow students a chance to speak their mind and discuss their problems
3. Brainstorming sessions will be encouraged with instructional scaffolding to allow students to develop their intellectual capabilities before being introduced to technical subjects
4. Didactic questioning by the instructor will be a viable teaching tool to initiate small group discussions in a think-pair-share collaborative teaching environment.
5. Individual presentations may also be assigned to exclusively focus on students with learning difficulties or exceptional students with a potential to offer more to the class environment.

Assignments: Types and Number with Calendar

1. Week Four: Student report submission for previous lectures taught
2. Week Six-Eight: Surprise Quiz or Show-and-Tell Presentation on topics covered
3. Week Eleven: Research Report post-Midterms
4. Week Fifteen: Grouped presentations of Poster Competition on topics assigned

Assessment

Sr. No.	Elements	Weightage	Details
1.	Midterm Assessment	35%	Written Assessment at the mid-point of the semester.
2.	Formative Assessment	25%	Continuous assessment includes: Classroom participation, assignments, presentations, viva voce, attitude and behavior, hands-on-activities, short tests, projects, practical, reflections, readings, quizzes etc.

3.	Final Assessment	40%	Written Examination at the end of the semester. It is mostly in the form of a test, but owing to the nature of the course the teacher may assess their students based on term paper, research proposal development, field work and report writing etc.
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