2014
Air Force
Master Studies List
The Royal Australian Air Force defines professional mastery as ‘the sum of an individual’s depth and breadth of knowledge and understanding of the profession of Air Power, combined judiciously with the ability to apply it through the lens of personal experience and intellect’. Professional mastery provides the means for members of the Air Force to apply their technical mastery in the employment of air power, enables the optimal employment of air power within a joint campaign in support of national interests, and facilitates cogent and relevant internal and public debate on air power issues of importance.

It is the intent of the Chief of Air Force and the Senior Leadership Team that the Air Force evolve from an organisation of ‘stovepiped’ capabilities into a truly integrated, networked force - delivering precise effects across the spectrum of operations within any potential operational environment. Professional mastery encourages critical evaluation of past and present activities and is essential in developing and testing new concepts for both existing and emerging capabilities. The ability to develop new concepts and doctrine is critical, with Air Force in the process of inducting an unprecedented range of systems and capabilities, some transformational, in the next decade. This major recapitalisation of Air Force systems will require an equally unprecedented amount of intellectual effort to ensure that the new acquisitions realise their full potential. This effort is recognised in significant CAF-directed activities such as Plan JERICHO, and is a key focus of Air Force and the Air Power Development Centre as the new capabilities are brought into service.

It is then not surprising that Air Force seeks to attain a high level of individual and collective professional mastery within its ranks, primarily through the formal Professional Military Education and Training (PMET) continuum. Air Force members are encouraged to supplement their formal PMET program with informal activities that will enhance their knowledge and understanding of not only air power doctrine and capabilities, but also in key areas that support the effective, precise, discriminate and appropriate application of air power. These may include studying national security issues at the strategic level; developing an understanding of other services, government and non-government agencies both in Australia and overseas; examining significant regional issues; looking to the future; and, studying the past.
The Air Force Master Studies List has been developed to assist Air Force members seeking topics for research or discussion during formal or informal professional development activities. The Air Force Master Studies List provides themes and questions that have been identified by Chief of Air Force as important to the future successful development of the Air Force. The themes and topics are suitable for research and analysis in the following contexts:

a. Chief of Air Force Essay Competitions;
b. Chief of Defence Force and Chief of Air Force Fellowship papers;
c. Essays on the Australian Command and Staff Course and Defence Strategic Studies Courses, and their overseas equivalents;
d. Papers submitted in Air Force Professional Military Education and Training; and
e. Study in relevant tertiary degree and post-graduate courses.

Whilst the topics in the Air Force Master Studies List have been endorsed by CAF, the List is designed for guidance only and does not seek to capture all existing and future Air Force issues. Users of the list may wish to adapt the themes or questions to meet individual course or submission requirements. The Air Force Master Studies List is administered by the Air Power Development Centre and will be updated periodically. The Air Force Master Studies List complements and supports both Plan JERICHO and PMET, and should be used in conjunction with policy guidance documents where available.


Suggestions and recommendations for future Air Force Master Studies Lists should be forwarded to the Air Power Development Centre.

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Theme 1: Strategic Air Power

Critical to the successful application of air power is an understanding of national security at the strategic level. Air power is one of a number of elements of national power that contribute to the security of Australia and its interests, and it is essential that air power professionals develop an understanding of not only the contribution air power makes, but also how it can best be synchronised with the other military, information, diplomatic and economic elements that Australia can employ.

Additionally, the benefits of technical mastery and tactical or operational success are lost if the strategic objectives of a campaign are not achieved. Examining these objectives in context is an essential field of study, particularly for Air Force members undertaking postgraduate or command and staff development activities. The air power questions in this section are designed to encourage Air Force members to challenge existing frameworks and perceptions, and question their relevance in the future, as well as to promote the development of new ideas and concepts that will better suit future strategic requirements and operating environments.
S-1  How will the Air Force’s future operating environment differ from the past and the present?
S-2  What strategic air power effects will Air Force be required to deliver in the future operating environment?
S-3  How can Air Force’s emerging capabilities be best employed to deliver these effects?
S-4  What changes in Air Force organisation, doctrine, command and control and culture will be required to enable the optimum use of emerging capabilities?

S-5  How might future Government expectations of Air Force differ from the present?
S-6  Will the planned future force deliver strategic air power effects to meet Government objectives and expectations in the future operating environment?
S-7  Is the current Air Force an Air Force of strategic influence?
S-8  Is Air Force best postured to operate successfully at the strategic level in joint, combined and cross-Government contexts?
The Australian Approach to War requires ADF capabilities to be integrated through coordinated joint operations across all domains, and to be able to operate in coalitions to increase force effectiveness, contribute to a particular cause or lend support to a nation according to Australia’s international policy objectives. While interoperability in both equipment and doctrine is critical to the realisation of joint and combined operations, many questions need to be answered on how a practical level of interoperability can be achieved and maintained, taking cognisance of domestic and global developments and resource constraints.
I-1  How can Air Force transform to operate seamlessly with the other Services and/or allies and partners in the future joint and combined operating environment?

I-2  How can Air Force operate more effectively in a multi-agency environment, interacting with other Australian and overseas government departments and non-government organisations?

I-3  How can Air Force best contribute to emerging joint concepts in supporting the Australian Maritime Strategy?

I-4  How well does the ADF and Air Force ensure joint and combined interoperability?

I-5  How best can Air Force contribute to future operating concepts, particularly in the joint arena?

I-6  How can Air Force maximise the benefits of international training and exercises?
Theme 3: Air Force in the Future

The application of air power is not only affected by developments in technology, but also influenced by changes in the political, social, economic and physical environments. The human dimension in future operations must also be considered, not only in friendly forces, but also in potential adversaries or in any population or group involved, including local populations or international actors. Air Force must develop an understanding of the nature and impact of these developments to ensure it can anticipate and respond to them—either through the development of new capabilities and doctrine, or the adaptation of existing ones—to meet the demands of the future. While flawlessly accurate prediction of the future remains an impossible task, identifying and responding to warnings and indicators, as well as developing adaptive cultures and frameworks, remain critical tasks for Air Force.

Of particular importance to the future Air Force is the ability to integrate air systems across both air and joint elements within and across domains. This will enable decision superiority and optimal use of physical assets, human resources and information—a key theme of Plan JERICHO. The questions in this section encourage Air Force members to examine the future through multiple lenses so that opportunities and threats can be anticipated and either exploited or managed, thereby developing an adaptive and responsive culture to support the introduction of new (some transformational) capabilities.

F-1 What key technological developments can be best exploited by Air Force to deliver air power effects in the future?

F-2 What key emerging concepts and doctrinal innovations can be best exploited by Air Force in the future?

F-3 How can Air Force monitor and exploit developments in the understanding of the human domain to optimise the delivery of air power effects in the future?

F-4 What is the best framework (including but not limited to organisation, personnel and procedures) for managing Air Force modernisation?

F-5 What will be the impact of non-kinetic capabilities of air power in the future?
F-6 How will non-kinetic capabilities impact the planning and conduct of ADF and Air Force operations?
F-7 How can Air Force best integrate future capabilities to achieve maximum air power effect?
F-8 How can Air Force best exploit simulation and virtual and constructive training to maximise future air power capabilities?
F-9 How can Air Force best manage its information as a key resource in the future?
F-10 Does Air Force need to transform its Command and Control, logistics and engineering capabilities and processes to best support the future force? If so, how?
F-11 How can Air Force best attract, recruit, train, educate and retain the required future workforce?
F-12 How will Air Force best develop the skilled and balanced workforce needed to support future requirements for:
• the physical dimension, including emerging technologies such as unmanned and non-kinetic systems;
• the human dimension, including command, leadership, culture, decision-making and cognitive performance; and/or
• the information dimension, including the processing, exploitation and dissemination of intelligence, surveillance and reconnaissance information.
Theme 4: Air Force in the Region

The last three decades have seen profound and significant changes to Australia’s region. Of these, Asia’s economic transformation, and the resulting change in strategic balance and rate of military modernisation has had widespread effects on Air Force. While the US remains Australia’s most important military partner, regional developments will continue to shape the role air power, and Air Force, will play in the region.
R-1 What future regional developments will most influence the employment of air power in the Australian context?
R-2 How should Australia, the ADF and Air Force respond to regional military modernisation plans?
R-3 What is Australia’s role as a regional power? How can Air Force best contribute to Australia’s role in the broader context of regional security?
R-4 What is the role of Air Forces in the region?
R-5 Are the Five Power Defence Arrangements and HQ Integrated Area Defence System still relevant now and into the future?
R-6 How can Australia and regional countries make optimum use of combined capabilities such as air mobility for Humanitarian Aid and Disaster Relief response?
R-7 What role should Air Force play in the Southern Ocean and Antarctica in the future?
R-8 Will the greater deployments of US Forces into Australia have any affects on Air Force’s relationships in the region? If so, how best can these affects be managed?
Theme 5: Air Power History and Lessons Learnt

The concept of *understanding the experience of our past in order to gain from that knowledge* lies at the heart of applied history. Through applied history, the Air Force gains access to a virtual laboratory of Air Force lessons learned—in our history we find an opportunity to shape our thinking, experiment with options and to test our ideas.

H-1 What experiences and lessons from past air campaigns and operations can best inform Air Force’s journey to transform to a fifth-generation enabled Air Force?

H-2 What examples of air power successes in past conflict best illustrate the importance of adaption, innovation, integration and/or cultural change?

H-3 How can Air Force effectively apply lessons learnt from past exercises and operations into future operations?

H-4 What are the similarities and differences in air operations from Vietnam to the present day?

H-5 What air power lessons from the pre-jet era are still appropriate to today?