The Military Technology course will consist of the following 3 modules:

1. **Module 1: Communication Networks and Security**
   
   This module provides an overview and basic understanding of today’s communication networks including data communication networks and wireless communication networks. Emerging communications networks related to military operations will be covered as well. The basic concept of data communications will be given first. Then, various types of communications networks for personal coverage, such as Bluetooth in personal area network (PAN), to global coverage, such as satellite communication networks, will be delivered. In addition, this module provides the fundamental concept and technologies of security used in communication networks.

2. **Module 2: Sensors, Devices and Navigation**

   This module introduces basic concepts and principles of sensors and sensing, tracking and positioning, marking and mapping. These are the basic components and technologies that enable advanced modern military systems. Sensors to be covered include RADAR, Synthetic Aperture Radar (SAR), Optical Imaging device, Inertial Measurement Unit (IMU), GYRO, Laser Scanner, Camera, GPS and many others. Basic MEMS technology is introduced for design of sensors and devices. Students will be able to appreciate the associated technologies and underlying principles in the Blue Force Tracking, Identification Friend and Foe, remote sensing surveillance and weapons, stealth technology, intelligent systems and robotics.

3. **Module 3: Military Platform Technologies**

   The objectives of this module are to provide students with the fundamentals of some key technologies that are used in some of the military platforms currently or are likely to be deployed. By the end of this module, students will have learnt about the basics of unmanned systems, their propulsions, alternative energy source that can be used and the physics of payloads that can be used to inhibit and or deny mobility. This module comprises 4 components: missiles/projectile systems, alternative energy sources, unmanned robotics systems and ballistics impact and explosives. The module will provide the basic sciences of such systems, their strengths and weaknesses and their possible uses in the military.
operations, organisations and the 21st century military profession.

Besides learning key leadership-related concepts and issues, students will also be exposed to key events, institutions and social-behavioural scientific research programmes that have shaped contemporary military leadership doctrines and systems (e.g., leadership selection, leadership and team training and development, organizational learning and change, etc).

<table>
<thead>
<tr>
<th>COURSE CODE</th>
<th>TITLE</th>
<th>CONTACT HOURS (AU)</th>
<th>SCHOOL</th>
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<tbody>
<tr>
<td>SF0003</td>
<td>MILITARY STUDIES</td>
<td>40 hours (3.0)</td>
<td>RAJARATNAM SCHOOL OF INTERNATIONAL STUDIES (RSIS)</td>
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The geopolitical region of Southeast Asia is Singapore’s security environment in times of both peace and war. This largely decolonized patchwork of 10 nation-states still strives to overcome by ‘nation-building’ the deeply-ingrained limitations of traditional ways of organizing society and government, as well as divisive legacies of Western colonialism, which previously strategized to secure the region’s resources against rival powers both global and local. Ironically, the modern and competing nationalisms that defined these nation-states would at times worsen the climate of insecurity and conflict. Crucially, this context has shaped not only the security perceptions and priorities of defence planners in Singapore, but also the developmental trajectories of the Singapore Armed Forces from its inception to today’s Third-Generation force. Galvanized by the political forces that continue to transform Southeast Asia, the evolving security landscape presents new security challenges that the Singapore Armed Forces must respond to.

This course enables students to appreciate why Southeast Asian states cannot divorce their international relations from their indigenous context of pursuing development amid political and economic struggle. The nature of Southeast Asian regionalism today bears these hallmarks of domestic politicization, even as external powers contend with regional states for leadership. Equally, preparing for war in times of peace, students acquire a proper contextual understanding of the Singapore Armed Forces, its evolving shape, and likely missions and challenges.