



**FLORIDA ATLANTIC UNIVERSITY**  
**AEROSPACE EXPERIMENTAL ASSOCIATION**  
**STANDARD OPERATING PROCEDURES**  
**SOP-3: LIST OF UNIT TITLES AND METRIC PREFIXES**

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**DEFINITION:** Common S.I. Units Utilized and Their Titles

**PURPOSE:** This document explains common units used in the aerospace industry and hence, the Aerospace Experimental Association, and their definitions .

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Stefano Ciccolella

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**REVISIONS**

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**Chapter 1****LIST OF UNITS AND TITLES****1.1. ENGINEERING MECHANICS**

- 1.1.1. **Axial Angle** – radian (rad)
- 1.1.2. **Force** – newton (N)
- 1.1.3. **Length** – meter (m)
- 1.1.4. **Mass** – gram (g)
- 1.1.5. **Plane angle** – degree (°)
- 1.1.6. **Pressure** – pascal (pa)
- 1.1.7. **Stress** – unitless
- 1.1.8. **Weight** – newton (N)

**1.2. ELECTROMAGNETICS**

- 1.2.1. **Capacitance** – farad (F)
- 1.2.2. **Electric Charge** – coulomb (C)
- 1.2.3. **Electric Current** – ampere (A)
- 1.2.4. **Electric Potential** – volt (V)
- 1.2.5. **Electrical Conductance** – siemens (S)
- 1.2.6. **Electrical Resistance** – ohm ( $\Omega$ )
- 1.2.7. **Equivalent Dose of Ionizing Radiation** – sievert (Sv)
- 1.2.8. **Frequency** – hertz (Hz)
- 1.2.9. **Illuminance** – lux (lx)
- 1.2.10. **Impedance** – ohm ( $\Omega$ )
- 1.2.11. **Luminous Intensity** – candela (cd)
- 1.2.12. **Magnetic Flux** – weber (Wb)
- 1.2.13. **Magnetic Flux Density** – tesla (T)
- 1.2.14. **Wavelength** – meter (m)

**1.3. ENERGY**

- 1.3.1. **Energy** – joule (J)
- 1.3.2. **Power** – watt (W)
- 1.3.3. **Temperature** – kelvin (K)

## Chapter 2

### LIST OF METRIC PREFIXES

#### *1.1. LARGE ORDERS OF MAGNITUDE*

- 1.3.4. **Yotta** –  $10^{24}$
- 1.3.5. **Zetta** –  $10^{21}$
- 1.3.6. **Exa** –  $10^{18}$
- 1.3.7. **Peta** –  $10^{15}$
- 1.3.8. **Tera** –  $10^{12}$
- 1.3.9. **Giga** –  $10^9$
- 1.3.10. **Mega** –  $10^6$
- 1.3.11. **Kilo** –  $10^3$

#### *1.4. SMALL ORDERS OF MAGNITUDE*

- 1.4.1. **Milli** –  $10^{-3}$
- 1.4.2. **Micro** –  $10^{-6}$
- 1.4.3. **Nano** –  $10^{-9}$
- 1.4.4. **Pico** –  $10^{-12}$
- 1.4.5. **Femto** –  $10^{-15}$
- 1.4.6. **Atto** –  $10^{-18}$
- 1.4.7. **Zepto** –  $10^{-21}$
- 1.4.8. **Yocto** –  $10^{-24}$