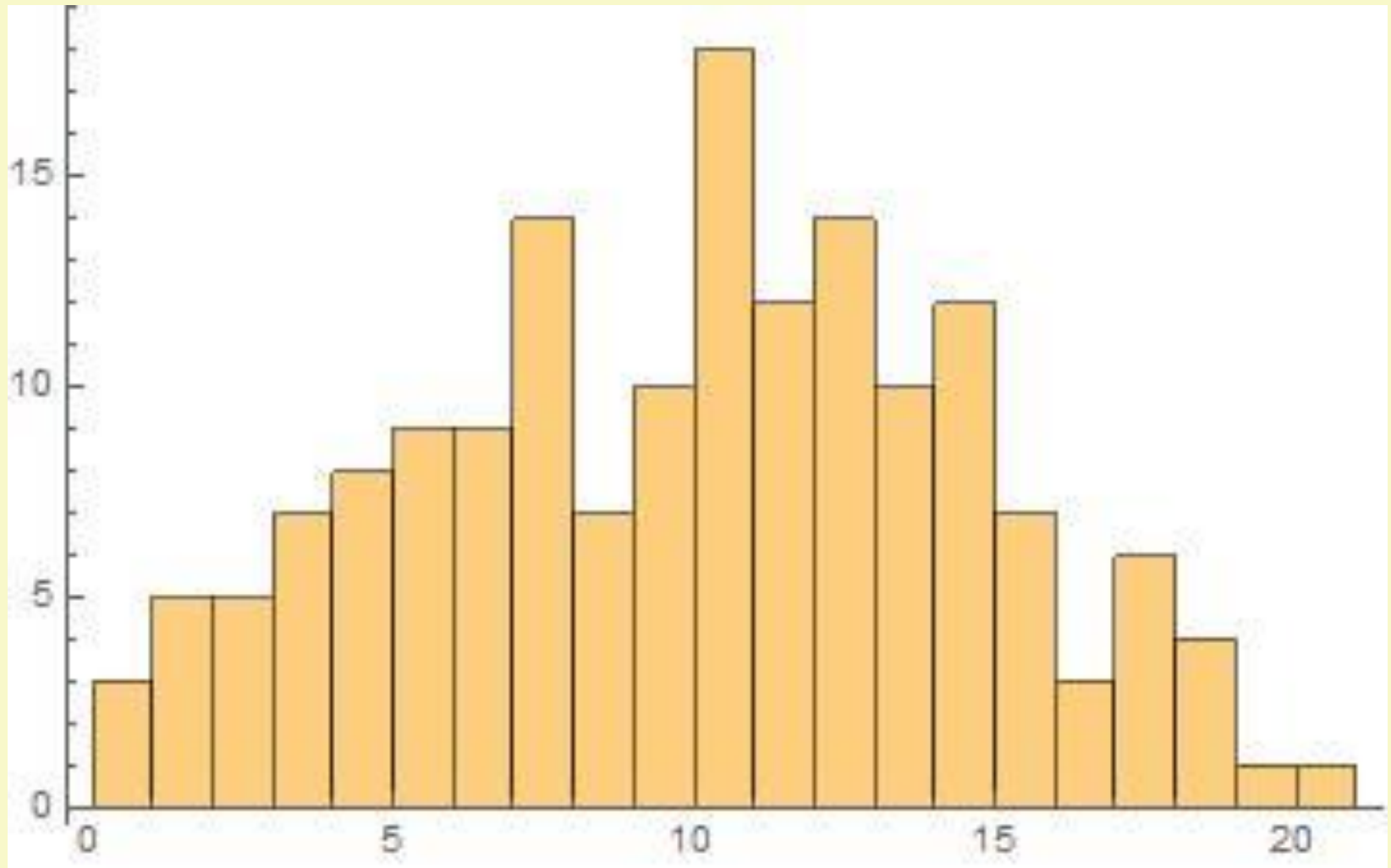
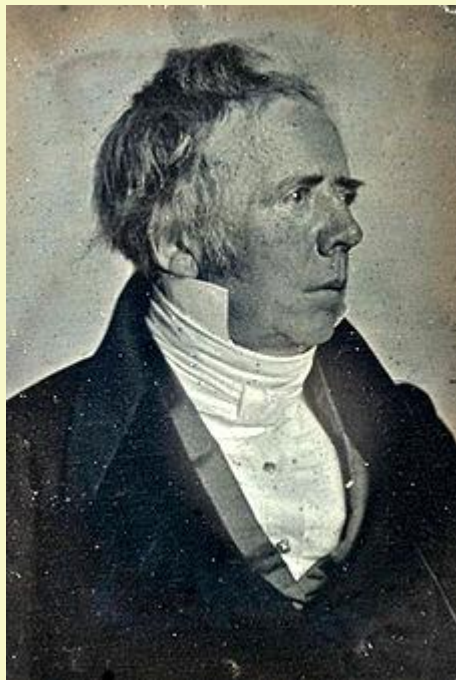


Average 78.4% ('18), 82.6% ('17) 81.4% ('16), 83.8%('15) 80.8% ('14) 87%('13)  
 83.2%('12) 83.1% ('11)  
 Ave Time: 1hr 15min ('18), 1 hr 13 min ('17) 1 hr 6 min ('16) 1hr 20min ('15)  
 1 hr 12 min ('14), 1hr 15min ('13) 1hr 13min ('12) 1 hr 15min ('11)

# PHYS1022 Mid term test marks – average 9.5/20







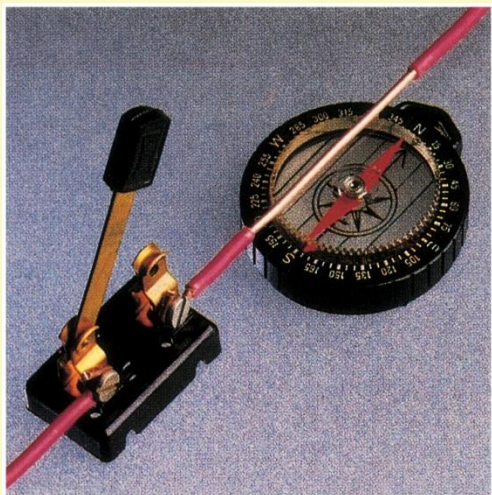
**Hans Christian Ørsted** (often rendered **Oersted** in English; 14 August 1777 – 9 March 1851) was a Danish [physicist](#) and [chemist](#) who discovered that [electric currents](#) create [magnetic fields](#).

Ørsted was a close friend of [Hans Christian Andersen](#).

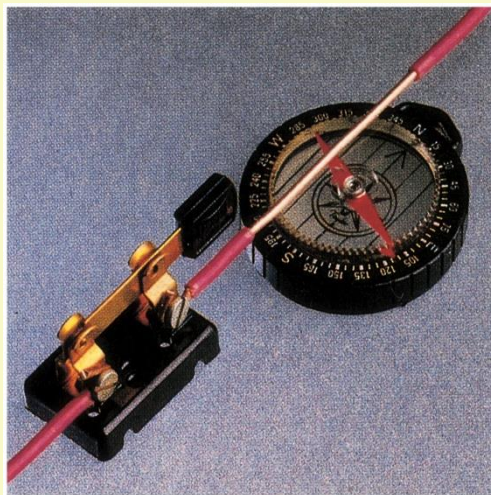
He earned his doctorate in 1799 for a dissertation based on the works of [Kant](#) entitled "The Architectonicks of Natural Metaphysics"

On 21 April 1820, during a lecture, Ørsted noticed a [compass](#) needle deflected from magnetic north when an electric current from a battery was switched on and off, confirming a direct relationship between electricity and magnetism. His initial interpretation was that magnetic effects radiate from all sides of a wire carrying an electric current, as do light and heat. Three months later he began more intensive investigations and soon thereafter published his findings, showing that an electric current produces a circular magnetic field as it flows through a wire. This discovery was not due to mere chance, since Ørsted had been looking for a relation between electricity and magnetism for several years.

His poetry series *Luftskibet* ("The Airship") was inspired by the balloon flights of fellow physicist and stage magician [Étienne-Gaspard Robert](#)



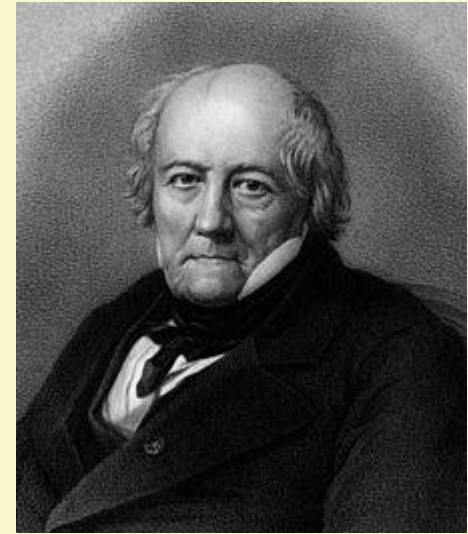
no current



current flows

**Jean-Baptiste Biot** (1774 – 1862) was a [French physicist](#), [astronomer](#), and [mathematician](#) who established the reality of [meteorites](#), made an early balloon flight, and studied the [polarization of light](#).

In 1803 Biot was sent by the French Academy to report back on 3000 [meteorites](#) that fell on [L'aigle, France](#). He found that the meteorites, or stones at the time, were from outer space.



**Felix Savart (1791 – 1841)**

The topic for his thesis was varicose veins. In 1817 he became fascinated with a study of sound, in particular the acoustics of musical instruments such as the violin.

Developed their law together in 1820.





**André-Marie Ampère** (20 January 1775 – 10 June 1836) was a [French physicist](#) and [mathematician](#).

In later life Ampère claimed that he knew as much about mathematics and science when he was eighteen as ever he knew

During the [French Revolution](#), Ampère's father stayed at [Lyon](#) expecting to be safer there. Nevertheless, after the revolutionaries had taken the city he was captured and executed.

On 11 September 1820 he heard of [H. C. Ørsted's](#) discovery that a [magnetic needle](#) is acted on by a voltaic current. Only a week later, on 18 September, Ampère presented a paper to the Academy containing a much more complete exposition of that and kindred phenomena. On the same day, Ampère also demonstrated before the Academy that parallel wires carrying currents attract or repel each other