

MATERIAL SCIENCES

With the name "material sciences" we can easily understand that it's a study something about the materials emphasizing the solids. It includes the detailed study how materials are constructed, how they are applicable in our routine life, the manufacturing and properties of materials. This study makes it possible to understand the behavior of materials in a very systematic manner. It's quite interesting to study how a material is obtained, why we obtained that kind of structure, and the facts that how and why the material in behaving or reacting in a peculiar behavior. Material sciences make you aware of how to establish a fabric by correlating the properties of materials with their structures. It is the field of science that explains the application of diverse materials in science and technology for example the plastics, metals and ceramics. The use of this field of science is quite expanded. It covers almost everything that we use in our daily routines. From the construction of huge buildings to tiny silicon chips a material sciences expert is needed to analyze and determine the optimal usage of each and every material. Manufacturing of giant girders, even the Nano machines comes under the branch of material sciences.

Material sciences cover many fields:

1. Chemistry
2. Physics
3. Engineering design
4. Mechanical engineering
5. Civil engineering
6. Architecture product and design
7. Chemical engineering
8. Bio and environmental science
9. Crystallography

Material sciences overlap with all these branches very strongly. Some of them are explained how both branches work together to give the perfect results in shape of new innovations.

CHEMISTRY:

In this branch the study of substance at atomic and molecular level is done. Improved and new products are manufactured by researching how substances will react with each other.

PHYSICS:

This department gave you answers for the questions that how materials react and what are their physical properties. This study involves the analysis and characterization or computational study of materials and the physical behavior. In this field two different branches of science are overlapped.

ENGINEERING DESIGNS:

By the use of new technologies, devices, machine or structure we are influenced towards the material sciences and engineering. A material may be selected for its strength, its electrical properties, resistance to heat or corrosion, or a host of other reasons; but they all relate to properties. We study how this structure and the resultant properties are controlled by the handling of the material.

MECHANICAL ENGINEERING:

It is one of the most diversified branches of science. Designing and building of machines and devices is done under the studies of this branch of science. Like other fields this also relates with the study of material sciences.

CIVIL ENGINEERING:

Civil engineering is considered incomplete if you do not have any knowledge of materials. For improving the construction of any infrastructure it is necessary to learn and analyze about the materials. Material scientists are necessarily needed on sites of construction.

Like these fields material sciences has a deep impact on all fields of sciences.