

Course Name **COLOR IN DESIGN**

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Module 1: "Introduction to Color"

Lecture 1: "Introduction"

The Lecture Contains:

- Introduction
- About Color
- Color in Light
- Light wave
- Light decoration during celebrations
- Traffic Light
- Light in Performing Arts

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Module 1: "Introduction to Color"

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Introduction

Color is one of the most fascinating things that human beings have experienced from the dawn of human existence. The course intends to introduce various aspects of color perception and human feeling related to art and design. Human perception and feeling encompasses color's objective and subjective application in design. It may involve specification of all relevant properties of color either subjectively or objectively. It is found that there are many experiences of colors that could be quantified and many remains under qualitative judgment.

Color of a product does not always depend on simply visual perception. Sometime it goes beyond its phenomenological visual perception alone. People have experienced the illusionistic appearance of color as well. Aesthetic appreciation of a product depends on various complex choices of human mind. Color plays a major role in creating attraction. Attractive color may be perceived in subjective way or objective manner. Color has a strong power of communication. Because of globalization human beings have expanded their horizon drastically within a short period of time. While the global interaction has become every day affairs, we could not create a common interactive language at the same pace. In the recent years it is understood that color is one of the most powerful tools for communication that helps to communicate with least effort. However, understanding color and its application requires in-depth studies subjectively as well as objectively.

Human beings have observed and gained immense knowledge from color in natural environment. The color in natural environment has taught us in developing color scheme for their various usages. Socio-cultural influence has played important role in human civilizations. Artistic application of color has represented various moods and feelings through highly abstract to symbolic representations.

Color has helped human beings to express their emotion and feelings through social values, cultural heritage, ethos, etc. Color and Emotional has become a major subject of study to learn more about the cognitive and physical relationship and its application through design. The course would explore through various interdisciplinary (subjective and objective) application of color in the field of art and design.

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About Color

Color of a product does not depend on simply visual perception. The aesthetic appreciation of a product depends on various complex choice of human mind. In order to understand color first we need to clarify some of the basic fundamentals of color so that it becomes easy to follow the relationship between color and its application in design.

Color may be experienced in distinct three ways-

- Light may be defined based on scientific rules and phenomenon
- Chemistry
- Sensation - understood based on human perception and interpretation by brain.

Color sensation is the most challenging area that judged subjectively. Technically, the eye 'sees' and the brain 'perceives'. Brain perceives through the process of assimilation by seeing things through eyes. The retina or back parts of the eye on which the images are focused contain two kinds of cells- *rods* and *cones*. The cells are related to value (rods) and color (cones). We would discuss about the functioning of *rods* and *cones* in detail at a later stage.

Human beings experience color through 'light' and 'pigments'. Extensive research is conducted by scientists based on the principles of light-theory. Color as pigment is experienced by mankind that is related to chemistry of color. The application of color pigment is related to various works of art and artifacts, product surface applications and chemistry/ chemical compound. However, our understanding of color on the basis of 'sensation' is one of the most fascinating and intriguing experiences. Perception of color and its sensation and feeling is one of the most challenging areas of research because sensation of color is not just perception but its cognitive interpretation that has raised most fascinating experience. The emotion in color has made enormous contribution in art and design through ages.

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Color in Light

Color reveals fascinating experience while we perceive with the help of 'light'. The eye sees while the brain perceives. Brain interprets the meaning of what we perceive. The color of light is being extensively used in various purposes- decoration, safety, entertainment, signage, communication – information, etc. Modern day civilization has applied the science and technique of light efficiently. Following are some of the examples of application of light in human life.

Light wave



Plate1. Light wave



Plate2. Multi-color Light Effect

The *wave theory* of light experimented and found that human beings perceives the visible light or white light based on the electromagnetic radiation. "Visible light (commonly referred to simply as light) is electromagnetic radiation that is visible to the human eye, and is responsible for the sense of sight." Ref: (http://en.wikipedia.org/wiki/Light#Wave_theory ; May 22, 2012). The above experiment (Plate 1) shows the wave of light can create amazing visual effect that may be great interest to art and design professionals. Such effects of light waves are popularly applied in performing art to create special effects. Similarly the effect of multi-color spot-lights (Plate 2) on a stage may create a very special effect and environment.

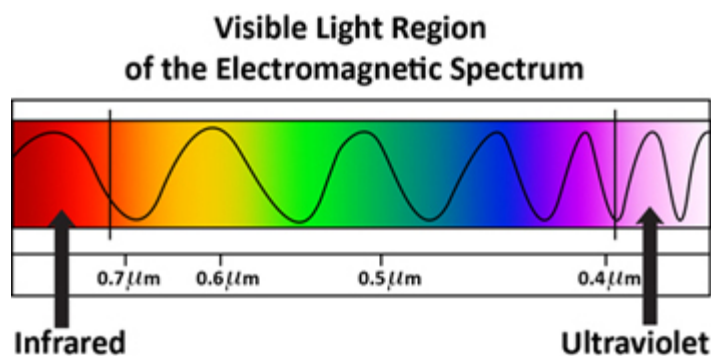


Plate3

Human beings can see *electromagnetic waves* that we identify as Visible light (Plate3). We perceive these waves in the form of rainbow. Each color has a different wavelength. Red has the longest wavelength and violet has the shortest wavelength. When all the waves are seen together, they make white light. 'Cones' in our eyes receives these light waves through the process of reflective light from the

surface because of which we perceive colors.

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Light decoration during celebrations



Plate4. Dewali Celebration with light



Plate5. Golden Temple, Dewali Celebration

Application of light in celebration is popularly used around the world. The hues of yellows to oranges to reds are commonly utilized in celebration. The multicolour decoration naturally creates the mood of the celebration and fun. The choice of color harmonizes with the happy feeling and enriches the ethos of the occasion.

Traffic Light



Plate6. Traffic Lights

Traffic lights are common in our daily life. Traffic light communicates to us for various safety reasons. It is a signalling device that is posted in road intersections. In 1868 traffic light was first installed in London which is now seen all over the world.

Color in modern days has established as one of the most powerful mode of non-verbal communications. Application of symbolic color for the navigation of traffic is accepted around the world. 'Red' as stop sign or 'green' for safety color is understood universally irrespective of nations. Color, thus symbols communicate to express certain meaning which is accepted globally by all nations. People have realized the strength of color as communication medium is applied in various ways in our life. Along with the standard traffic lights countries have inducted new graphic symbols based on the local habitats to follow.

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Light in Performing Arts



Plate 7. Light in Performing Art

Source: (http://www.google.co.in/search?hl=en&q=Lights%20in%20Performing%20Arts&bav=on.2.or.r_gc.r_pw..cf.osb&biw=1272&bih=577&um=1&ie=UTF-8&tbn=isch&source=og&sa=N&tab=wi&ei=pm27T-jxEoPKrAe7I-zTBw)

One cannot imagine without the effect of light in performing art (plate 7). Performing art- dance, theatre, music concert, etc would remain incomplete without the effective use of light-color. Static and dynamic lights have created some of the most amazing effects in creating 3-D space effect. Light-graffiti is a new concept that is being installed by designers and artists in varied environmental conditions.



Plate 8. Special light effect in Performing Arts

Source: (<http://www.google.co.in/imgres?q=Special+light+effect+in+performing+arts&start=74&um=1&hl=en&sa=N&tbn=isch&tbnid=zBroEOXGuh560M:&imgrefurl=http://www.artsjournal.com/dancebeat/2012/04/deconstructing-fame/&docid=le5APqSBtdy9M&imgurl=http://www.artsjournal.com/dancebeat/wp-content/uploads/2012/04/AJ-green-light-229.jpg&w=550&h=367&ei=9nC7T8TjH9DnrAfV9rD0Bw&zoom=1&iact=hc&vpx=937&vpy=220&dur=1465&hovh=183&hovw=275&tx=150&ty=104&sig=10325355112485800334&page=4&tbnh=125&tbnw=145&ndsp=28&ved=1t:429.r:27.s:74.i:62&biw=1272&bih=577>)

The amazing effect of light creates special effect (plate 8) for the audience. Intensity, color, pattern and focus are the four key qualities of lighting. Intensity is determined by how far away a lighting fixture is from the lit area, lamp strength, the fixture's design, presence of color gels or specials, the

type of color to be lit, beam or angle of the lamp and the overall lighting scheme of the stage. Intensity is measured in *lux* (unit of illumination), lumens and foot-candles. Similarly various elements of light-colors are manipulated to create imaginaries beyond real world. Technically light-colors are applied to enhance the mood, illumination, draw focus, establish location and time and create a composition.

(Read more: [Theater Lighting Effects | eHow.com http://www.ehow.com/info_8080679_theater-lighting-effects.html#ixzz1ve2kNkxb](http://www.ehow.com/info_8080679_theater-lighting-effects.html#ixzz1ve2kNkxb)

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